



Budge Budge College

Estd. 1971

NAAC Accredited B+ & UGC 12B, 2(f)

Affiliated to the University of Calcutta

Ref. No.....

Date ..12.04.2024

As per DVV query for 7.1.3, the clarification is as follows:-

7.1.3: Quality audits on environment and energy regularly undertaken by the Institution. The institutional environment and energy initiatives are confirmed through the following

1. Green audit / Environment audit
2. Energy audit
3. Clean and green campus initiatives
4. Beyond the campus environmental promotion activities

HEI Input: A. All of the above

DVV Response: A. All of the above

Documents enclosed:

1. Energy Management Policy of the college.
2. Year-wise Report on Clean and green campus initiatives with geo-tagged photographs.
3. Green Audit and Energy Audit Reports.
4. Supporting documents for beyond the campus environmental promotion activities.

[Handwritten signature of Dr. Debjani Datta]
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Energy Management Policy

The management of this college has established an energy policy for the organisation. The policy provides the management's view on energy efficiency improvement as well as providing a commitment to continually improve the energy performance.

The college is committed to conserve, review and continuously improve the use of energy by:

- Supporting purchase of energy efficient goods and to meet this objective clear directives are given to the Finance Committee on all procurements
- Reducing energy consumption through efficient use of energy
- Constantly upgrading technology and improving efficiency of equipment
- Encourage energy awareness amongst all through internal communication

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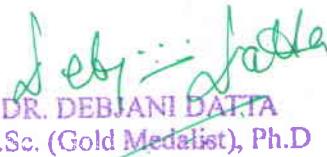
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Green and Clean Campus Policy

We, at Budge Budge College are committed to enhance the quality of Environment within the campus premises. Various initiatives would be undertaken in this context as listed below.

- Providing appropriate training to employees and students to enhance their awareness on environmental aspects
- Landscaping of college premises through plantation
- Segregation of waste within college premises using color-coded bins
- Reuse of waste e.g. waste water of AC is used for watering plants
- Reuse of bio-waste e.g. use of cooking waste for manuring the plants
- Use of electronic notice display board
- Providing a framework for future formulation of an Environmental policy for the Institution
- Ensuring that students also play an active part in maintenance of the Environment of the Organization
- Identifying the prominent floral and faunal species in the college


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7.1.2: The Institution has facilities and initiatives for:

- (1) Alternate sources of energy and energy conservation measures**
- (2) Management of the various types of degradable and nondegradable waste**
- (3) Water conservation**
- (4) Green campus initiatives**
- (5) Disabled-friendly, barrier free environment**

2022-23



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Certificated ISO based

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1. Introduction:

The results and conclusions and suggestions from a thorough green audit carried out at BUDGE BUDGE COLLEGE are presented in the report that continues. The audit's goals were to evaluate the college's environmental impact and spot areas where sustainability may be improved. The audit addressed topics like journeys, disposal of trash, water use, electricity consumption, and general environmental awareness.

2. Green Audit Working Team (2022-23):

1	Dr. Debjani Datta	Principal
2	Dr. Sandip Singha	IQAC Convenor and Joint NAAC Coordinator, Associate Professor, Commerce
3.	Dr. Gautam Das	Bursar, Joint NAAC Coordinator, Associate Professor, Commerce
4.	Dr. Dipak Mandal	Associate Professor, History
5.	Dr. Anup Kumar Sahoo	Assistant Professor, Physics
6.	Dr. Kishore Naskar	Assistant Professor, Economics
7.	Dr. Papia Das	Assistant Professor, Zoology
8.	Dr. Samiran Pandey	Assistant Professor, Botany
9.	Dr. Barnali Bera	SACT, Zoology
10.	Smt. Piyali Das	SACT, Botany
11.	Dr. Uttariya Roy	SACT, Environmental Science
12.	Dr. Shreya Chakravorty	Assistant Professor, English
13.	Shri Somnath Bose	Office Staff
14.	Shri Anis Ahmed	Office Staff

3. Need for Green Audit:

Green audits, also known as environmental audits or sustainability audits, are becoming more and more necessary in today's society for several reasons:

(a) Environmental Impact: Green audits assist in evaluating and reducing an organization's negative environmental impact. They assess variables like energy use, waste production, water use, and emissions, identifying areas that might be improved to lessen environmental harm.

- (b) Regulatory Compliance:** Businesses must abide by the environmental laws and standards that have been set in many nations. Green audits assist businesses in complying with regulations and avoiding fines or other legal repercussions for non-compliance.
- (c) Cost Reduction:** Green audits can reveal inefficiencies and wasteful behaviours within a company, opening up chances for cost savings. Businesses can apply methods to save operational costs and boost overall efficiency by analyzing energy usage, resource consumption, and waste management.
- (d) Reputation and Stakeholder Expectations:** Consumers and other stakeholders now demand more environmentally conscious company practices. Green audits offer organization transparency and prove its dedication to sustainability, strengthening its reputation and fostering trust among clients, staff, investors, and communities.
- (e) Risk Management:** Environmental hazards can have serious financial and reputational ramifications for firms, including pollution events, regulatory non-compliance, and supply chain interruptions. By evaluating environmental management systems, ensuring sufficient controls are in place, and putting preventative measures in place to deal with possible problems, green audits assist in identifying and mitigating these risks.
- (f) Continuous Improvement:** Green audits encourage a continuing commitment to sustainability rather than being one-time events. Organizations can see trends, set goals, and implement improvement initiatives by routinely evaluating and tracking environmental performance. This iterative process promotes a culture of sustainability and propels long-lasting transformation.
- (g) Sustainable Development Goals (SDGs):** An international framework for solving urgent environmental and social issues is provided by the Sustainable Development Goals. Organizations can better align their operations with these objectives with the aid of green audits, paving the way for a more just and sustainable future. To evaluate, enhance, and confirm environmental performance, green audits are essential. They allow companies to control risks, comply with rules, cut costs, improve reputations, and support sustainable development.

4. Methodology for Green Audit:

Audits of an organization's environmental performance and practices are known as "green," "environmental," or "sustainability" audits. They entail assessing the company's influence on the environment, resource usage, waste management, and adherence to environmental legislation. Here is a procedure for carrying out a green audit:

- (a) Planning:
- (b) Identify audit team and resources:
- (c) Develop an audit plan: Create a detailed plan outlining audit activities, timelines, responsibilities, and communication channels.
- (d) Data Collection:
- (e) Gather information:
- (f) Conduct site visits and interviews:
- (g) Review documentation:
- (h) Evaluation and Analysis:
- (i) Assess environmental impacts:
- (j) Evaluate compliance:

- (k) Identify strengths and weaknesses:
- (l) Quantify results:
- (m) Reporting:
- (n) Prepare an audit report:
- (o) Communicate results:
- (p) Follow-up and Improvement:
- (q) Develop an action plan:
- (r) Monitor progress:
- (s) Continuous improvement:

The methodology adopted to conduct the Green Audit of the Institution had the following components.

4.1. On-site Visit:

The Green Audit Team carried out the five-day field trip. The tour's main goal was to evaluate the Institution's waste management procedures, energy conservation tactics, and other aspects of its green cover. The protocols for sample collection, preservation, and analysis were followed scientifically.

4.2. Focus Group Discussion:

The nature club, staff, and management members participated in focus group discussions on various facets of the green audit. Identification of attitudes and awareness towards environmental issues at the institutional and local levels was the main topic of discussion.

4.3. Energy and waste management Survey:

The audit team evaluated the college's waste generation, disposal, and treatment facilities as well as its energy usage pattern with the assistance of teachers and students. A comprehensive questionnaire survey method was used to carry out the monitoring.

5. Target Areas of Green Auditing:

A process for resource management includes a green audit. The actual usefulness of green audits lies in the fact that they are conducted at predetermined intervals and that the results might show improvement or change over time, even though they are individual events. The concept of an eco-campus primarily emphasizes the effective use of energy and water, the reduction of waste output or pollution, and economic efficiency.

These indications are evaluated during the "Green Auditing of this Educational Institute" procedure. In order to reduce emissions, obtain a reliable and affordable energy supply, promote personal responsibility, encourage and improve energy conservation, reduce the institute's energy and water use, reduce waste going to landfills, and incorporate environmental considerations into all contracts and services deemed to have significant environmental impacts, Eco-campus focuses on these goals. Water, energy, trash, and green campus are the focus topics for this green audit.

5.1. Energy Consumption:

5.1.1. Lighting: The audit showed that many of the college's lighting fixtures were ineffective and outdated. It is advised to use natural light whenever possible, add occupancy sensors, and swap out conventional light bulbs for energy-efficient LED ones.

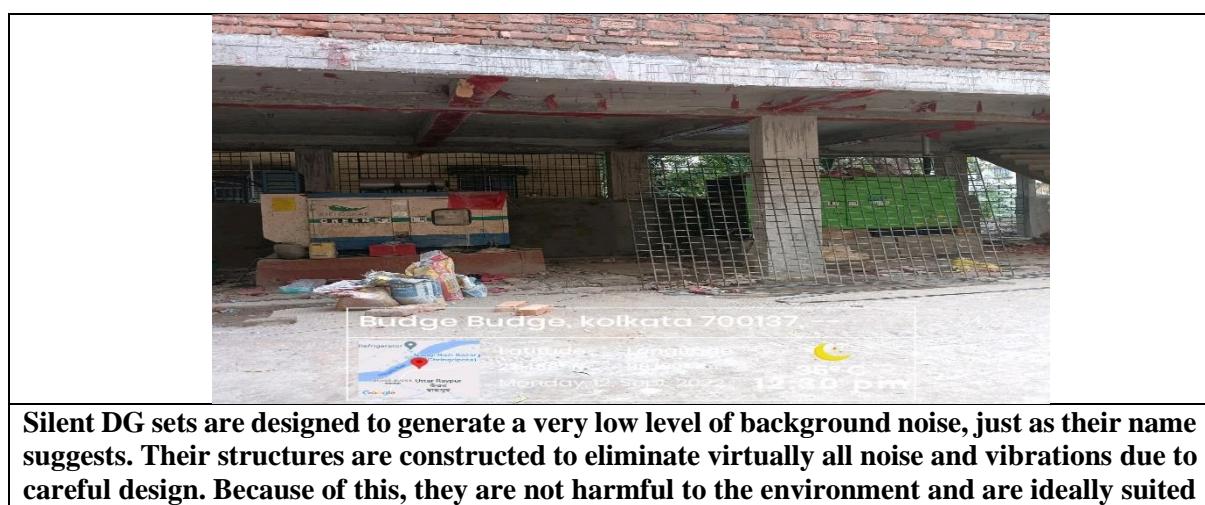
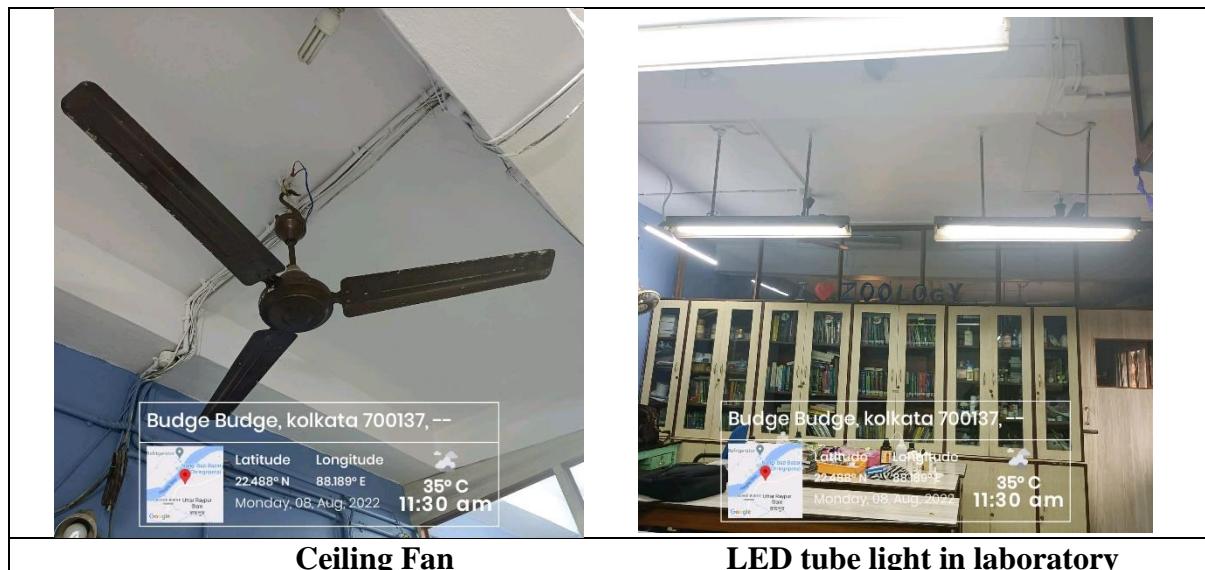
5.1.2. Heating, Ventilation, and Air Conditioning (HVAC):

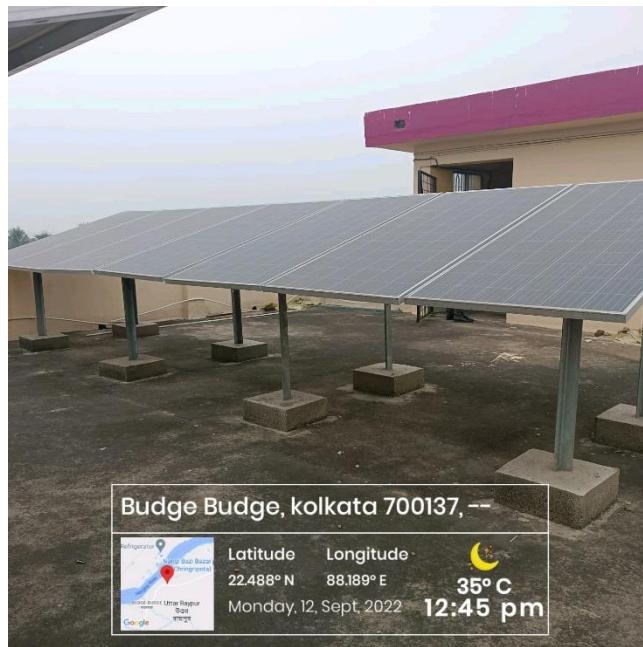
The HVAC systems were discovered to be working less efficiently than necessary. Energy usage can be considerably decreased by switching to energy-efficient HVAC equipment, using programmable thermostats, and performing routine maintenance.

5.1.3. Energy Awareness: The college should promote energy conservation practices among employees and students. Campaigns, educational activities, and financial incentives for energy-saving projects can all help achieve this.

Details electrical requirements:

Electrical device/items	Number	Power (watt)	Usage time (hr/day)
Normal Tubelight	50	2000	10:00 am to 5:00 pm
LED Tubelight	350	7000	Do
Normal Bulb	0	0	Do
LED Bulb	0	0	Do
Ceiling Fan	130	7800	Do
Wall fan	40	2400	Do





College has installed solar panels on the roof of college building to reduce carbon footprint and pollution in the local community

5.2 Waste Management:

5.2.1. Recycling: Although there were recycling containers all across the campus, the audit showed that there was a lack of effective separation and information about recyclable products. Increased recycling rates can be achieved by upgrading signage, giving clear instructions and implementing a comprehensive recycling education programme.

5.2.2. Composting: The institution can set up a composting system to handle the organic waste produced by Hostel members (Boys & Girls Hostel). Composting can help drastically reduce the quantity of garbage dumped in landfills while also producing beneficial compost for campus landscaping and gardening.

Table: Different types of waste generated in the college and their disposal

Types of waste	Particulars	Disposal method
E-Waste	Computers, electrical and electronic parts	Store these in a separate tank, and we can start selling them directly after a certain amount of time.
Plastic waste	Pen, Refill, Plastic water bottles and other plastic containers, wrappers etc	Items made of plastic that are only intended to be used once, such as bottles, jars, and bags. Encourage people to use water bottles and other containers that may be reused. Establish distinct recycling containers for plastic garbage, and after a predetermined period of time, we will be able to begin

		selling the collected recyclables directly.
Solid wastes	Paper waste, Damaged furniture, paper plates, food wastes	Reuse after maintenance energy conversion. Installing composting systems on a college campus will allow for the conversion of discarded food into nutrient-dense compost that may be used in the campus landscaping or in community gardens. Another option is for institutions to form partnerships with farmers in the surrounding area to collect food waste.
Chemical wastes	Laboratory waste	Water should be used to neutralise. When dealing with hazardous garbage, adhere strictly to all safety regulations.
Wastewater	Washing, urinals, bathrooms	Soak pits
Glass waste	Broken glass wares from the labs	Glass debris should be kept separate from other recyclable materials and disposed of in containers that are specifically intended for glass recycling. Make sure that you recycle glass in the correct manner by coordinating with the local recycling centers.
Sanitary Napkin	-	Napkin Incinerators



Separate waste baskets for disposal of different types of wastes generated in college campus

5.3. Water Usage:

5.3.1. Water Fixtures: Numerous locations within the college had outdated and ineffective water fixtures, which caused excessive water use. Water resources can be saved by swapping these fixtures for low-flow models and encouraging staff and students to practice water-saving habits.

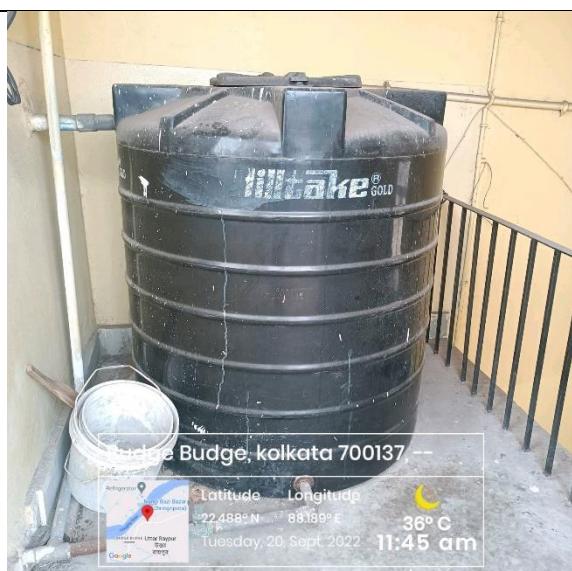
Water management table:

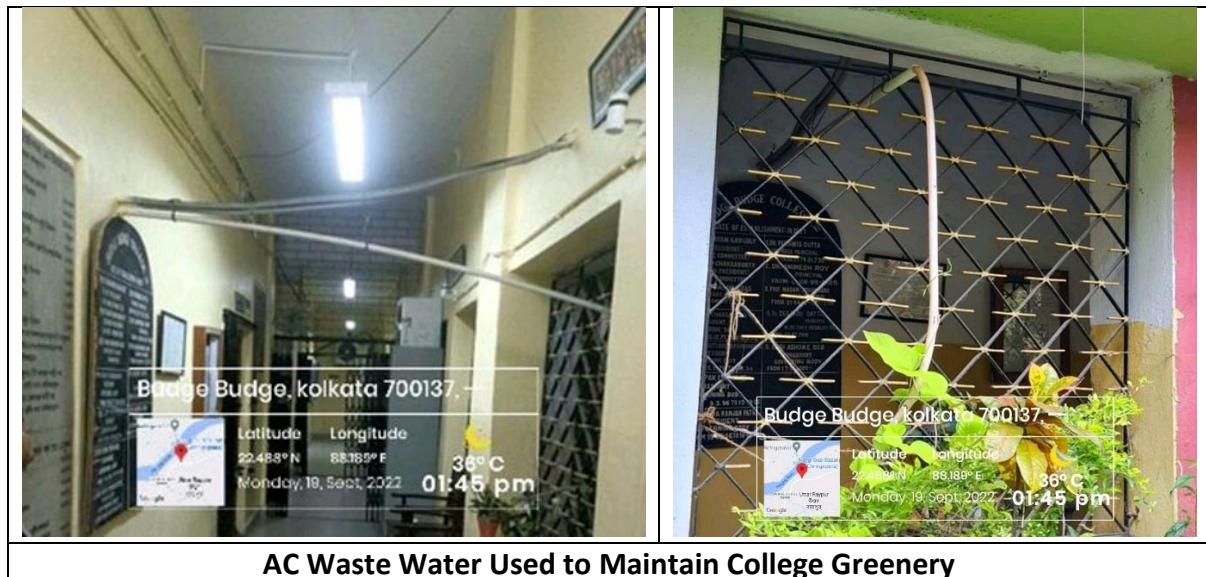
Water Management Tasks	Frequency	Responsible Party
Routine examination of water supplies	Monthly	Green Audit Working Team
Testing for drinking water quality	Half-yearly	Do
Awareness of water conservation	Half-yearly	Green Audit Working Team & various department
Infrastructure for water distribution that needs upkeep and repair	As needed	Caretaker
Reporting and analysis of water use	Annually	Green Audit Working Team & Caretaker
Learn what causes excessive water consumption.	As needed	Caretaker

Tabular data detailing the subject at hand:

Sl No	Parameters	Response
1	Source of water	Municipality, Underground, Pond (10889.84 sqft) Note: Only Municipality water serves as a drinking water supply for around 3,550 people, including students and staff members. Pond and ground water is used for gardening, maintenance work and cleaning of washrooms
2	Source of Drinking Water	Municipality water
3	Any treatment for drinking water	Nil Note: Water purifiers have been installed in 1-2 numbers at all floors and are maintained for 3–4 months afterward.
4	What is the total number of motors that are used?	02 numbers
5	What is the total number of water tanks? Capacity of tank	Underground tank- 02@ 2000litres Top tank- 04@ 1000litres
6	Tap water	90 numbers
	Quantity of water pumped every day	4000 liters/per day

7	Do you waste water, and if so, why?	No
8	How much water is required for gardening purposes?	400 to 600 liters/per day
9	How many water coolers are there in total?	01
10	Do you have access to rainwater harvesting?	No
11	The number of units harvested and the total volume of water	Nil
12	Any leaky taps	None
13	Daily amount of water that is lost.	Not applicable
14	Is there any kind of plan for the management of water?	Raise public awareness regarding the importance of water conservation, the prevention of pollution, and the implementation of sustainable water management practices. Unambiguous water rights and equitable water allocation regulations should be established to ensure that water is distributed fairly among the many different users.
15	Have any methods for conserving water been implemented?	Yes. All water taps and fixtures in the college premises are maintained and serviced regularly to stop water spillage to conserve water. AC waste water used to maintain college greenery.

	
Water purifier	Water reservoir



AC Waste Water Used to Maintain College Greenery

6. Transportation:

6.1. Public Transport: The college's carbon footprint can be significantly reduced by encouraging employees and students to use public transport. Sustainable transport solutions can be promoted by offering cheap bus passes, encouraging carpooling, and supporting bicycle infrastructure.

	Students	Employee	Total
Average numbers over 6 days in a peak session			
 GPS Map Camera Maheshtala, West Bengal, India 7, Deshbandhu Chittaranjan Das Rd, Shyampur, Budge Budge, Maheshtala, West Bengal 700137, India Lat 22.488356° Long 88.189177° 17/05/23 02:40 PM GMT +05:30	Girls-120 Boys-55	01	176

7. Overall Environmental Awareness:

7.1. Curriculum Integration: The institution can integrate environmental awareness and sustainability into its curriculum across various subject areas. This strategy will guarantee that students receive instruction and training in environmental stewardship, encouraging sustainable thinking.

Environmental awareness across different subjects	Parameters	Program time
Language Arts	Discuss texts from literature that are in some way connected to topics concerning the environment, such as conservation or environmental advocacy. Compose poetry or essays that argue for the protection of the environment and use persuasion. Conduct research on a variety of environmental topics, then present your findings. Through various awareness programs, they understand the environmental laws and regulations that apply on the local, national, and international levels. Discuss the roles that governments, NGOs, and people play in the effort to solve environmental problems. Investigate the environmental concerns from both a historical and cultural point of view.	Whole year
Arts	Investigate the causes of climate change and possible solutions to the problem. Analyse the impact that human activities have had on different landscapes as well as the distribution of natural resources. Studies should be done on urbanization, logging, and industry's impact on the natural environment. Investigate geographical approaches to resolving environmental issues, such as environmentally responsible land management planning.	Whole year
Pure Science	Conduct studies on environmental issues, such as assessing water quality, soil analysis, power consumption or recycling. To better comprehend environmental patterns and forecasts, consider using mathematical models. Investigate the repercussions of environmental actions on the economy, such as doing cost-benefit analyses for environmentally friendly projects.	Half-yearly/ each program
Bio-Science	Study subjects include ecosystems, biodiversity, and the interconnectedness of all living things.	Whole year
Physical Education	Encourage students to develop an appreciation for the natural world by having them participate in outdoor sports and activities. Talk about the significance of physical activity for both one's own health and the health of the environment (for example, taking bike instead of the car).	Whole year
NSS	To enhance the amount of green cover and fight deforestation, organizing tree-planting	Whole year

	<p>events in local communities and educational institutions is important. To combat littering and to encourage a clean environment, it is important to organize routine clean-up efforts in public places like parks and beaches. To educate both students and members of the general public about environmental issues such as climate change, waste management, renewable energy, and conservation, workshops and seminars should be organized. It should be a priority to create opportunities for individuals to engage with the natural world and develop a sense of ownership over its preservation through participating in hikes and other outdoor activities. To raise awareness about environmental issues and motivate people to take action, you might use social media, posters, and booklets.</p>	
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Plantation Programmes



College Campus Cleaning Programme

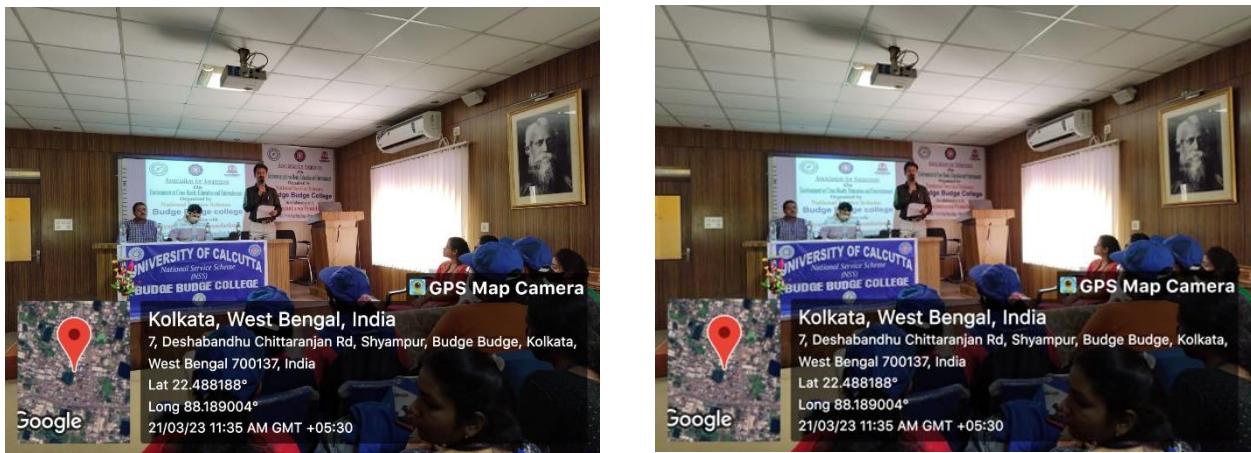
7.2. Student Engagement: A culture of sustainability can be promoted among students by supporting student-led projects, creating environmental groups, and holding awareness events and workshops.



Department of Zoology organised field trip to aware students about biodiversity and its conservation



Student of Zoology department participated in rally to aware people about the biodiversity and its conservation



NSS Unit organised seminar to raise awareness about the wild life and environmental issues

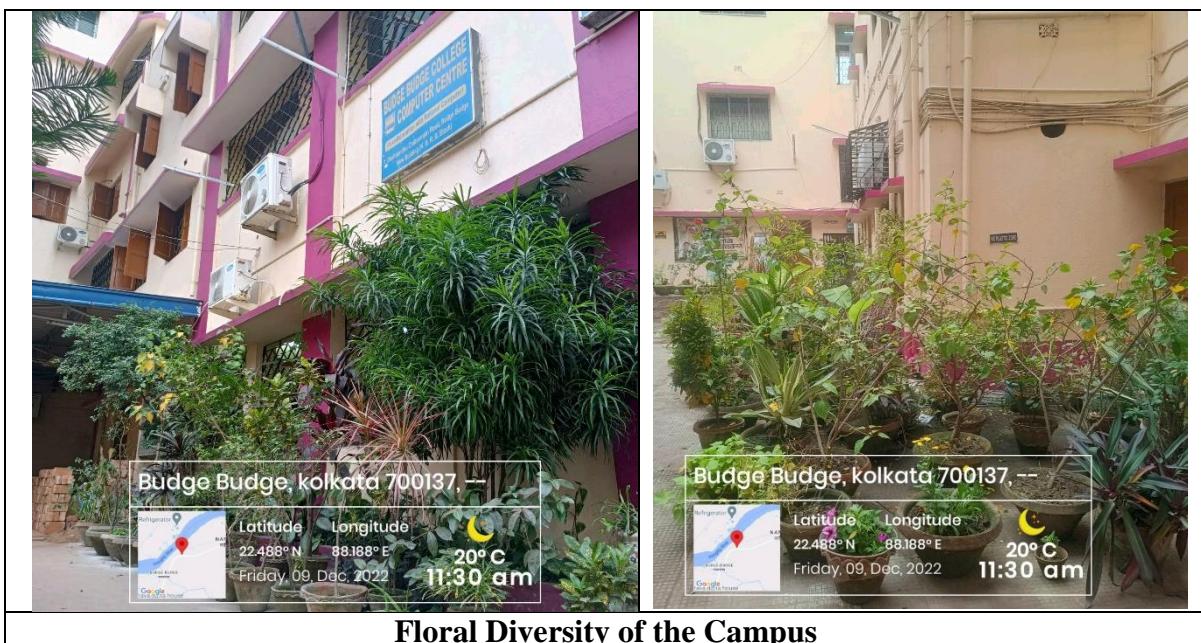
8. Green Campus:

8.1. Floral Diversity:

The following are some actions to take into account when setting up a plantation programme at your college:

- Organise a group of academics, employees, and students who are interested in managing the plantation programme. Assign roles and duties to make the execution go smoothly.
- Consult with local forestry professionals or environmental groups to discover native or adapted tree species that are well-suited to the climate, soil, and goal of the plantation programme. Research and choose suitable tree species.
- To obtain the necessary approvals or permits for planting trees on campus or in the neighborhood, check with the college administration or other appropriate authorities.
- Look into possible funding options, including grants, sponsorships, or collaborations with nearby companies or environmental organizations. This will aid in defraying the price of buying trees, equipment, and other required supplies.

- Establish the plantation event's date, time, and venue. Plan the delivery of the trees, tools, and equipment to the planting location. Make sure that safety precautions are in place, including appropriate instruction on planting methods and equipment use.
- Promote the planting programme within the campus community by using various communication channels, such as posters, social media, emails, and word-of-mouth, in order to raise awareness and find volunteers. Encourage everyone to volunteer, including alumni, faculty, staff, and students.
- Volunteers should be gathered at the planting site on the appointed planting day. Give them the equipment, instructions, and direction they need to plant trees correctly. Foster a sense of accomplishment and community pride while fostering teamwork.
- Stress the significance of taking care of the freshly planted trees. This could entail routine weeding, mulching, watering, and pest or disease inspection. To guarantee the long-term well-being and survival of the trees, think about setting up a system for volunteers or staff members.
- After the plantation programme, evaluate the impact and accomplishment of the effort. Keep an eye on the trees' growth and survival rate. To determine areas for improvement and to organize upcoming plantation programmes, collect participant and stakeholder input.





Putting a name plate on the plants. Both the common and scientific names, as well as the family, are given for each plant.



Ponds are extremely important to the campus's ability to sustain a healthy ecological balance. They help to reduce erosion, contribute to the recharging of groundwater supplies, and support the surrounding ecology by providing a habitat for a wide range of plants and animals.

8.2. Faunal Diversity:

Studying faunal diversity can increase awareness about environmental challenges and conservation's significance. Colleges that are home to a wide variety of animal species may be more likely to adopt environmentally friendly policies and methods of operation to safeguard the campus environment and the people who live there.

Birds Diversity:

A population of birds that is rich in variety is indicative of an ecosystem that is robust and thriving. Seed dispersal, the control of insect populations, and pollination are just a few of the

many important functions that different species of birds perform to help maintain ecological equilibrium. They provide a contribution to the campus's general diversity of flora and fauna. The following bird species are observed inside the college campus:

SL NO.	LOCAL NAME	ENGLISH NAME	SCIENTIFIC NAME
1.	Tile ghughu	Spotted dove	<i>Spilopelia chinensis</i>
2.	Payra	Pigeon	<i>Columba livia</i>
3.	Kak	House Crow	<i>Corvus splendens</i>
4.	Deshi Kani Bak	The Indian Pond Heron	<i>Ardeola grayii</i>
5.	Machranga	White throated king fisher	<i>Halcyon smyrnensis</i>
6.	Salik	Common Myna	<i>Acridotheres tristis</i>
7.	Doyel	Oriental Magpie Robin	<i>Copsychus saularis</i>
8.	Pecha	Barn Owl	<i>Tyto alba</i>
9.	Charui	House Sparrow	<i>Passer domesticus</i>
10.	Bulbuli	Red vented Bulbul	<i>Pycnonotus cafer</i>
11.	Bashpati	Asian Green bee-eater	<i>Merops orientalis</i>
12.	Tuntuni	Tailor Bird	<i>Orthotomus sutorius</i>
13.	Phinge	Black Drongo	<i>Dierurus adsimilis</i>
14.	Chatare	Jungle Babbler	<i>Turdoides striatus</i>
15.	Kokil	Asian Koel	<i>Eudynamys scolopacea</i>
16.	Dahuk	White breasted waterhen	<i>Amaurornis phoenicurus</i>
17.	Benebou	Black Hooded Oriole	<i>Oriolus xanthornus</i>
18.	Harichacha	Rufous Treepie	<i>Dendrocitta vagabunda</i>
19.	Pankouri	Little Cormorant	<i>Phalacrocorax niger</i>



ORIENTAL MAGPIE ROBIN



RED VENTED BULBUL



GREEN BEE-EATER



LITTLE CORMORANT



COMMON MYNA



ASIAN KOEL (MALE)



WHITE BREASTED KINGFISHER



WHITE BREASTED WATER HEN

Butterfly:

Table:1 List of butterfly species observed in winter in and around College premises

SL NO.	COMMON NAME	SCIENTIFIC NAME	FREQUENCY
FAMILY:-Nymphalidae			
1	COMMON CROW	<i>Euploea core</i>	28
2	BLUE TIGER	<i>Tirumala limniace</i>	18
3	COMMON FIVE – RING	<i>Ypthima baldus</i>	25
4	STRIPED TIGER	<i>Danaus genutia</i>	27
5	COMMON SAILOR	<i>Neptis hylas</i>	8
6	PEACOCK PANSY	<i>Junonia almana</i>	9
7	GREY PANSY	<i>Junonia atlites</i>	15
8	COMMON BUSHBROWN	<i>Mycalesis perseus</i>	20
9	DARKBAND BUSHBROWN	<i>Mycalesis mineus</i>	15
10	PLAIN TIGER	<i>Danaus chrysippus</i>	31
FAMILY:-Pieridae			
11	COMMON GRASS YELLOW	<i>Eurema hecabe</i>	43
12	COMMON JEZEBEL	<i>Delias eucharis</i>	10
13	PSYCHE	<i>Leptosia nina</i>	29
14	MOTTLED EMIGRANT	<i>Catopsilia pyranthe</i>	12
15	STRIPED ALBATROSS	<i>Appias libythea</i>	8
FAMILY:- Papilionidae			
16	COMMON MORMON	<i>Papilio polytes</i>	24
17	COMMON ROSE	<i>Atrophaneura aristolochiae</i>	14
18	LIME BUTTERFLY	<i>Papilio demoleus</i>	3

FAMILY:- Hesperiidae			
19	RICE SWIFT	<i>Borbo cinnara</i>	15
20	COMMON HEDGE BLUE	<i>Acytolepis puspa</i>	20
21	COMMON PIERROT	<i>Castalius rosimon</i>	5
TOTAL			379

Table:2. List of butterfly species observed in summer in and around college premises

<u>NO. OF SPECIES</u>	<u>COMMON NAME</u>	<u>SCIENTIFIC NAME</u>	<u>FREQUENCY</u>
FAMILY:- Nymphalidae			
1	COMMON CROW	<i>Euploea core</i>	44
2	BLUE TIGER	<i>Tirumala limniace</i>	25
3	PLAIN TIGER	<i>Danaus chrysippus</i>	25
4	PEACOCK PANSY	<i>Junonia almanac</i>	6
5	GLASSY TIGER	<i>Parantica aglea</i>	15
FAMILY:- Pieridae			
6	LARGE CABBAGE WHITE	<i>Pieris brassica</i>	13
7	PIONEER	<i>Belenois aurota</i>	4
8	COMMON GRASS YELLOW	<i>Eurema hecabe</i>	46
9	COMMON JEZEBEL	<i>Delias eucharis</i>	7
10	SMALL GRASS YELLOW	<i>Eurema brigitta</i>	40
11	THREE SPOT GRASS YELLOW	<i>Eurema blanda</i>	48
12	COMMON EMIGRANT	<i>Catopsilia pomana</i>	41
13	MOTTLED EMIGRANT	<i>Catopsilia pyranthe</i>	46
FAMILY:- Papilionidae			
14	COMMON MORMON	<i>Papilio polytes</i>	18

FAMILY:- Hesperiidae			
15	RICE SWIFT	<i>Borbo cinnara</i>	10
TOTAL			388

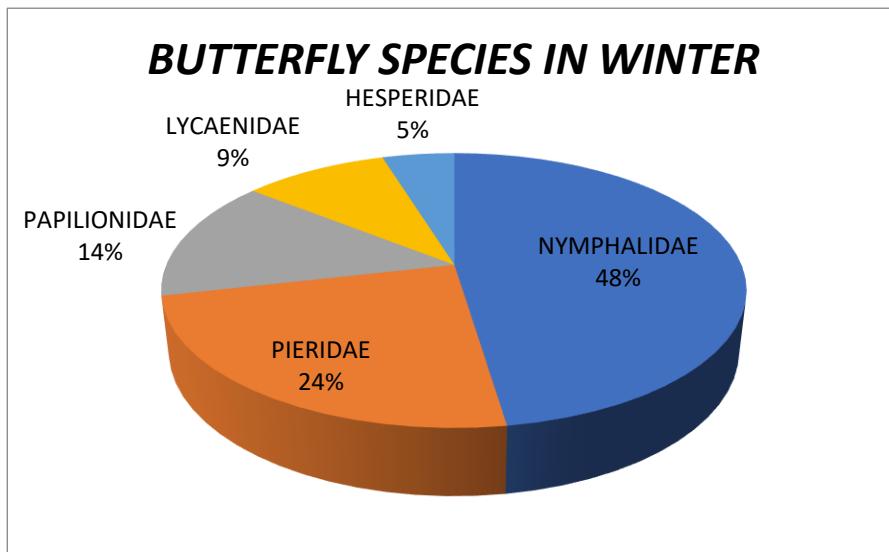


Fig1. Pie chart showing the percentage of distribution of different families of butterflies observed during winter

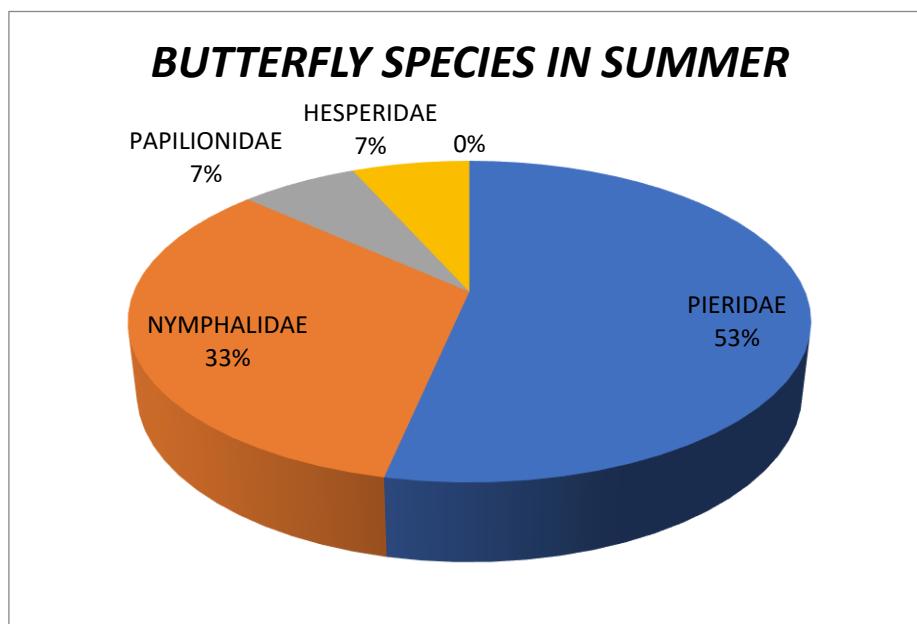


Fig2. Pie chart showing the percentage of distribution of different families of butterflies observed during summer

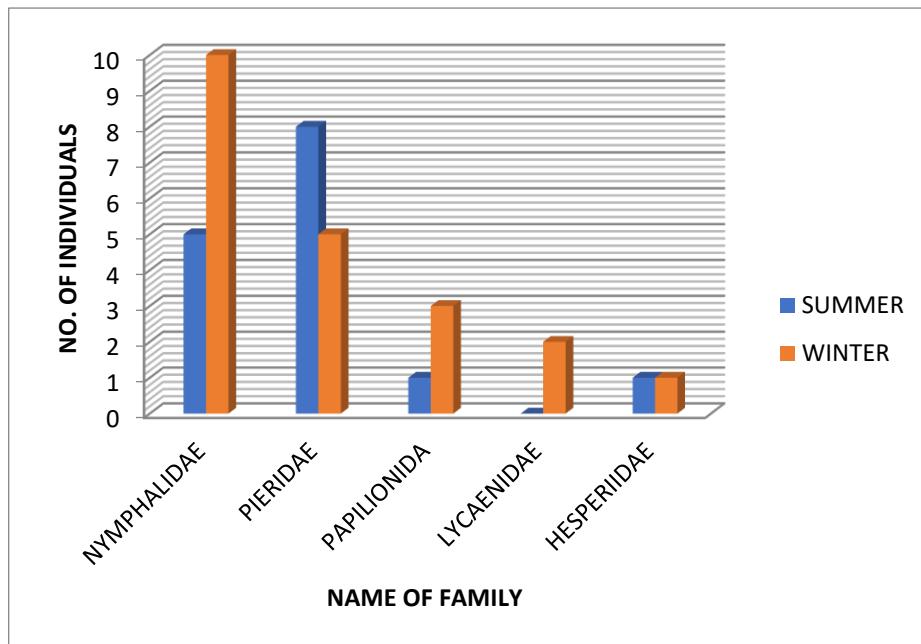


Fig 3. Bar diagram showing the frequency distribution of different families of butterflies observed in the present study area during winter and summer seasons

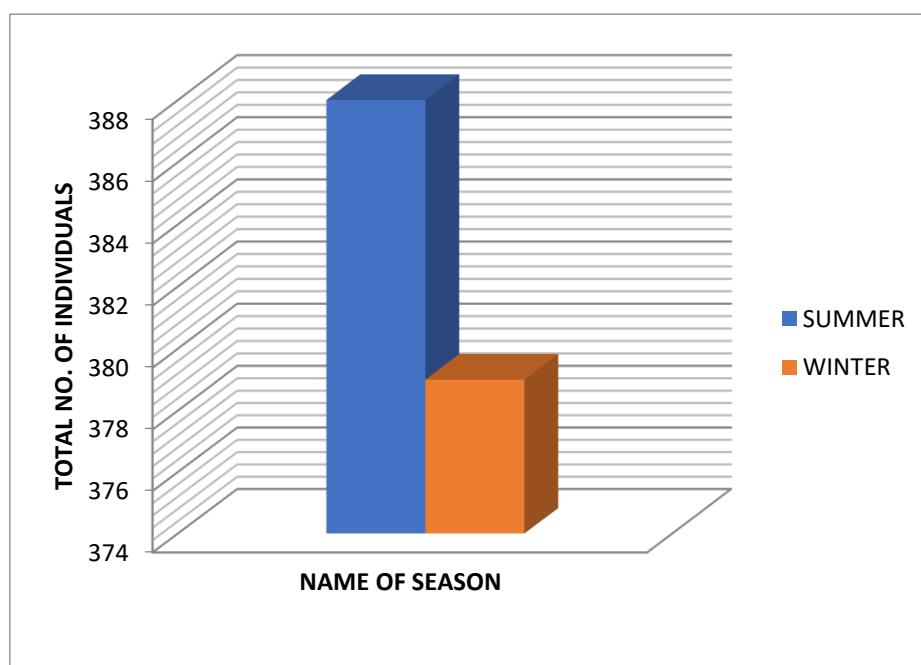
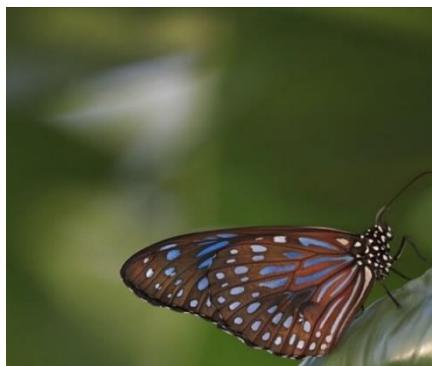


Fig4. Bar diagram showing the abundance of butterfly species in summer and winter seasons



Small Grass Yellow



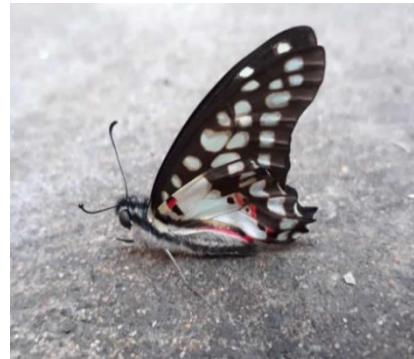
Glassy Tiger



Psyche



Common Sailor



Lime Butterfly



Common Five-ring



Peacock Pansy



Pioneer



Plain Tiger



Grey Pansy



Striped Albatross



Darkband Bushbrown

Mammals:

The following mammals were observed inside the college campus

SL NO.	LOCAL NAME	ENGLISH NAME	SCIENTIFIC NAME
1.	Chamchika	Indian pipistrelle	<i>Pipistrellus coromandra</i>
2.	Kathbirali	Fivestriped Palm Squirrel	<i>Funambulus pennant</i>
3.	Beral	Cat	<i>Felis catus</i>
4.	Indur	Lesser Bandicoot Rat	<i>Bandicota bengalensis</i>
5.	Kukur	Dog	<i>Canis familiaris</i>

Plantation of Wild type Medicinal plants:

On the grounds of our college, we planted different medicinal plants. Every day, more and more wild medicinal plant kinds are becoming extinct as a direct result of human activity and pollution. Once we have determined the species of these plants, we will work to preserve them by creating medicinal garden in our college campus. A medical garden is a specific location on the grounds of an educational institution that is devoted to the growth and maintenance of a large variety of different kinds of medicinal plants. Medical gardens are often found on university campuses. Students, staff members, and researchers all have access to it as a resource for teaching and study, which makes it possible for them to investigate and learn about the many different qualities and applications that medicinal plants can have. The cultivation of a medicinal garden on a college campus has the potential to confer significant value and benefits on the surrounding academic community as well as on society.

Table: List of wild types of medicinal plants at the premises of Budge Budge College

Plant Name	Uses
<i>Terminalia arjuna</i>	It is cardiac stimulant and commonly used in cardiac diseases. Powdered bark is used to get relieve from hypertension.
<i>Azadirachta indica</i>	Neem leaf is used for leprosy, eye disorders, stomach upset, loss of appetite, skin ulcers, gum diseases and liver problem
<i>Nyctanthes arbortristis</i>	The leaves are useful in fever and rheumatism. The fresh juice of leaves is given with honey in chronic fever.
<i>Oscimum sanctum</i>	It is used for cold and cough, heart diseases, kidney stone etc.

List of Floral groups:

Sl. No.	Scientific name	Vernacular Name	Family	No. of plants
1.	<i>Terminalia arjuna</i>	Arjun	Combretaceae	1
2.	<i>Acacia auriculiformis</i>	Aakashmoni	Mimosaceae	1
3.	<i>Cocos nucifera</i>	Narikel	Arecaceae	4
4.	<i>Azadirachta indica</i>	Neem	Meliaceae	1
5.	<i>Ficus religiosa</i>	Aswatha	Moraceae	1
6.	<i>Mangifera indica</i>	Aam	Anacardiaceae	1
7.	<i>Nerium indicum</i>	Karabi	Apocynaceae	2
8.	<i>Thebetia pelviana</i>	Kolke	Apocynaceae	2
9.	<i>Murraya paniculata</i>	Kamini	Rutaceae	2
10.	<i>Psidium guajava</i>	Peyara	Myrtaceae	1
11.	<i>Musa paradisiaca</i>	Kola	Musaceae	5
12.	<i>Areca catechu</i>	Supari	Arecaceae	4
13.	<i>Hibiscus rosa-sinensis</i>	Jaba	Malvaceae	2
14.	<i>Zizyphus jujuba</i>	Kul	Rhamnaceae	1
15.	<i>Nyctanthus arbortristis</i>	Shiuli	Oleaceae	1
16.	<i>Araucaria heterophylla</i>	Chrismas Tree	Araucariaceae	2
17.	<i>Roystonea regia</i>	Royal Palm	Arecaceae	5
18.	<i>Swietenia macrophylla</i>	Mahogoni	Meliaceae	2
19.	<i>Ixora coccinea</i>	Rangan	Rubiaceae	1
20.	<i>Clitoria ternatea</i>	Aparajita	Papilionaceae	1
21.	<i>Rhoeo discolor</i>	-	Commelinaceae	1
22.	<i>Agave angustifolia</i>	-	Agavaceae	1
23.	<i>Aloe vera</i>	Ghritokumari	Liliaceae	1

24.	<i>Dracaena angustifolia</i>	-	Liliaceae	1
25.	<i>Dracaena marginata</i>	-	Liliaceae	1
26.	<i>Andrographis paniculata</i>	Kalmegh	Acanthaceae	1
27.	<i>Cycas sp.</i>	-	Cycadaceae	1
28.	<i>Ocimum sanctum</i>	Tulsi	Lamiaceae	1
29.	<i>Euphorbia millii</i>	Mili	Euphorbiaceae	1
30.	<i>Bougainvillea spectabilis</i>	Bougainvillea	Nyctaginaceae	1
31.	<i>Jasminum sambac</i>	Belful	Oleaceae	1
32.	<i>Codiaeum variegatum</i>		Euphorbiaceae	1
33.	<i>Sansevieria trifasciata</i>	Snake plant	Liliaceae	1
34.	<i>Scindapsus officinalis</i>	Money plant	Araceae	1
35.	<i>Rosa chinensis</i>	Rose	Rosaceae	1



10. Conclusion: The BUDGE BUDGE COLLEGE 's green audit identifies some areas that should be improved to advance sustainability initiatives on campus. Reduced energy use, better waste management, optimized water use, sustainable transportation options, and raised environmental awareness can all result from implementing the suggested solutions. BUDGE BUDGE COLLEGE can set an example of environmental stewardship for its students and contribute to a cleaner future by implementing these improvements.

2021-22



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Certificated ISO based

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1. Introduction:

The results and conclusions and suggestions from a thorough green audit carried out at BUDGE BUDGE COLLEGE are presented in the report that continues. The audit's goals were to evaluate the college's environmental impact and spot areas where sustainability may be improved. The audit addressed topics like journeys, disposal of trash, water use, electricity consumption, and general environmental awareness.

2. Green Audit Working Team (2021-22):

1	Dr. Debjani Datta	Principal
2	Dr. Sandip Singha	Joint NAAC Coordinator, Associate Professor, Commerce
3.	Dr. Gautam Das	Bursar, Joint NAAC Coordinator, Assistant Professor, Commerce
4.	Dr. Dipak Mandal	Assistant Professor, History
5.	Dr. Anup Kumar Sahoo	IQAC Convenor, Assistant Professor, Physics
6.	Dr. Kishore Naskar	Assistant Professor, Economics
7.	Dr. Papia Das	Assistant Professor, Zoology
8.	Dr. Samiran Pandey	Assistant Professor, Botany
9.	Dr. Barnali Bera	SACT, Zoology
10.	Smt. Piyali Das	SACT, Botany
11.	Dr. Uttariya Roy	SACT, Environmental Science
12.	Dr. Shreya Chakravorty	Assistant Professor, English
13.	Shri Somnath Bose	Office Staff
14.	Shri Anis Ahmed	Office Staff

3. Need for Green Audit:

Green audits, also known as environmental audits or sustainability audits, are becoming more and more necessary in today's society for several reasons:

(a) Environmental Impact: Green audits assist in evaluating and reducing an organization's negative environmental impact. They assess variables like energy use, waste production, water use, and emissions, identifying areas that might be improved to lessen environmental harm.

- (b) Regulatory Compliance:** Businesses must abide by the environmental laws and standards that have been set in many nations. Green audits assist businesses in complying with regulations and avoiding fines or other legal repercussions for non-compliance.
- (c) Cost Reduction:** Green audits can reveal inefficiencies and wasteful behaviours within a company, opening up chances for cost savings. Businesses can apply methods to save operational costs and boost overall efficiency by analyzing energy usage, resource consumption, and waste management.
- (d) Reputation and Stakeholder Expectations:** Consumers and other stakeholders now demand more environmentally conscious company practices. Green audits offer organization transparency and prove its dedication to sustainability, strengthening its reputation and fostering trust among clients, staff, investors, and communities.
- (e) Risk Management:** Environmental hazards can have serious financial and reputational ramifications for firms, including pollution events, regulatory non-compliance, and supply chain interruptions. By evaluating environmental management systems, ensuring sufficient controls are in place, and putting preventative measures in place to deal with possible problems, green audits assist in identifying and mitigating these risks.
- (f) Continuous Improvement:** Green audits encourage a continuing commitment to sustainability rather than being one-time events. Organizations can see trends, set goals, and implement improvement initiatives by routinely evaluating and tracking environmental performance. This iterative process promotes a culture of sustainability and propels long-lasting transformation.
- (g) Sustainable Development Goals (SDGs):** An international framework for solving urgent environmental and social issues is provided by the Sustainable Development Goals. Organizations can better align their operations with these objectives with the aid of green audits, paving the way for a more just and sustainable future. To evaluate, enhance, and confirm environmental performance, green audits are essential. They allow companies to control risks, comply with rules, cut costs, improve reputations, and support sustainable development.

4. Methodology for Green Audit:

Audits of an organization's environmental performance and practices are known as "green," "environmental," or "sustainability" audits. They entail assessing the company's influence on the environment, resource usage, waste management, and adherence to environmental legislation. Here is a procedure for carrying out a green audit:

- (a) Planning:
- (b) Identify audit team and resources:
- (c) Develop an audit plan: Create a detailed plan outlining audit activities, timelines, responsibilities, and communication channels.
- (d) Data Collection:
- (e) Gather information:
- (f) Conduct site visits and interviews:
- (g) Review documentation:
- (h) Evaluation and Analysis:
- (i) Assess environmental impacts:
- (j) Evaluate compliance:

- (k) Identify strengths and weaknesses:
- (l) Quantify results:
- (m) Reporting:
- (n) Prepare an audit report:
- (o) Communicate results:
- (p) Follow-up and Improvement:
- (q) Develop an action plan:
- (r) Monitor progress:
- (s) Continuous improvement:

The methodology adopted to conduct the Green Audit of the Institution had the following components.

4.1. On-site Visit:

The Green Audit Team carried out the five-day field trip. The tour's main goal was to evaluate the Institution's waste management procedures, energy conservation tactics, and other aspects of its green cover. The protocols for sample collection, preservation, and analysis were followed scientifically.

4.2. Focus Group Discussion:

The nature club, staff, and management members participated in focus group discussions on various facets of the green audit. Identification of attitudes and awareness towards environmental issues at the institutional and local levels was the main topic of discussion.

4.3. Energy and waste management Survey:

The audit team evaluated the college's waste generation, disposal, and treatment facilities as well as its energy usage pattern with the assistance of teachers and students. A comprehensive questionnaire survey method was used to carry out the monitoring.

5. Target Areas of Green Auditing:

A process for resource management includes a green audit. The actual usefulness of green audits lies in the fact that they are conducted at predetermined intervals and that the results might show improvement or change over time, even though they are individual events. The concept of an eco-campus primarily emphasizes the effective use of energy and water, the reduction of waste output or pollution, and economic efficiency.

These indications are evaluated during the "Green Auditing of this Educational Institute" procedure. In order to reduce emissions, obtain a reliable and affordable energy supply, promote personal responsibility, encourage and improve energy conservation, reduce the institute's energy and water use, reduce waste going to landfills, and incorporate environmental considerations into all contracts and services deemed to have significant environmental impacts, Eco-campus focuses on these goals. Water, energy, trash, and green campus are the focus topics for this green audit.

5.1. Energy Consumption:

5.1.1. Lighting: The audit showed that many of the college's lighting fixtures were ineffective and outdated. It is advised to use natural light whenever possible, add occupancy sensors, and swap out conventional light bulbs for energy-efficient LED ones.

5.1.2. Heating, Ventilation, and Air Conditioning (HVAC):

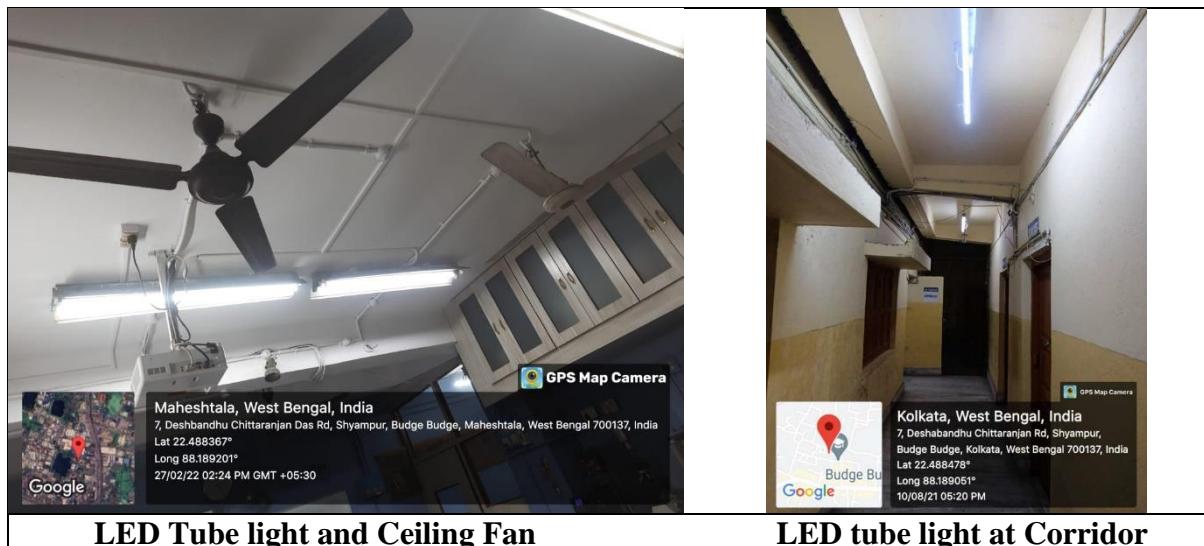
The HVAC systems were discovered to be working less efficiently than necessary. Energy usage can be considerably decreased by switching to energy-efficient HVAC equipment, using programmable thermostats, and performing routine maintenance.

5.1.3. Energy Awareness: The college should promote energy conservation practices among employees and students. Campaigns, educational activities, and financial incentives for energy-saving projects can all help achieve this.

Details electrical requirements:

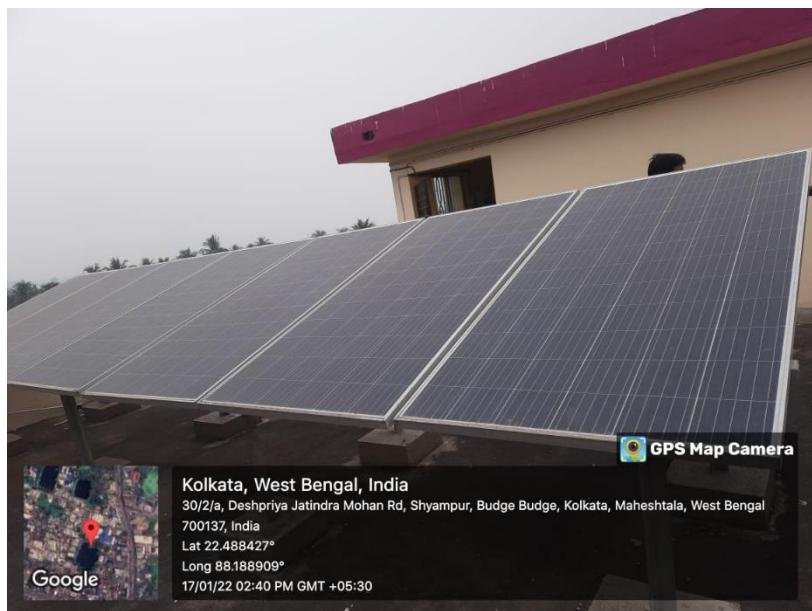
Electrical device/items	Number	Power (watt)	Usage time (hr/day)
Normal Tubelight	10	400	3-4 hours *
LED Tubelight	50	2000	Do
Normal Bulb	0	0	Do
LED Bulb	0	0	Do
Ceiling Fan	20	1200	Do
Wall fan	10	600	Do

* College was closed due to corona pandemic





Silent DG sets are designed to generate a very low level of background noise, just as their name suggests. Their structures are constructed to eliminate virtually all noise and vibrations due to careful design. Because of this, they are not harmful to the environment and are ideally suited for use in residential areas.



College has installed solar panels on the roof of college building to reduce carbon footprint and pollution in the local community

5.2 Waste Management:

5.2.1. Recycling: Although there were recycling containers all across the campus, the audit showed that there was a lack of effective separation and information about recyclable products. Increased recycling rates can be achieved by upgrading signage, giving clear instructions and implementing a comprehensive recycling education programme.

5.2.2. Composting: The institution can set up a composting system to handle the organic waste produced by Hostel members (Boys & Girls Hostel). Composting can help drastically reduce the quantity of garbage dumped in landfills while also producing beneficial compost for campus landscaping and gardening.

Table: Different types of waste generated in the college and their disposal

Types of waste	Particulars	Disposal method
E-Waste	Computers, electrical and electronic parts	Store these in a separate tank, and we can start selling them directly after a certain amount of time.
Plastic waste	Pen, Refill, Plastic water bottles and other plastic containers, wrappers etc	Items made of plastic that are only intended to be used once, such as bottles, jars, and bags. Encourage people to use water bottles and other containers that may be reused. Establish distinct recycling containers for plastic garbage, and after a predetermined period of time, we will be able to begin selling the collected recyclables directly.
Solid wastes	Paper waste, Damaged furniture, paper plates, food wastes	Reuse after maintenance energy conversion. Installing composting systems on a college campus will allow for the conversion of discarded food into nutrient-dense compost that may be used in the campus landscaping or in community gardens. Another option is for institutions to form partnerships with farmers in the surrounding area to collect food waste.
Chemical wastes	Laboratory waste	Water should be used to neutralise. When dealing with hazardous garbage, adhere strictly to all safety regulations.
Wastewater	Washing, urinals, bathrooms	Soak pits
Glass waste	Broken glass wares from the labs	Glass debris should be kept separate from other recyclable materials and disposed of in containers that are specifically intended for glass recycling. Make sure that you recycle glass in the

		correct manner by coordinating with the local recycling centers.
Sanitary Napkin	-	Napkin Incinerators



Separate waste baskets for disposal of different types of wastes generated in college campus

5.3. Water Usage:

5.3.1. Water Fixtures: Numerous locations within the college had outdated and ineffective water fixtures, which caused excessive water use. Water resources can be saved by swapping these fixtures for low-flow models and encouraging staff and students to practice water-saving habits.

Water management table:

Water Management Tasks	Frequency	Responsible Party
Routine examination of water supplies	Monthly	Green Audit Working Team
Testing for drinking water quality	Half-yearly	Do
Awareness of water conservation	Half-yearly	Green Audit Working Team & various department
Infrastructure for water distribution that needs upkeep and repair	As needed	Caretaker
Reporting and analysis of water use	Annually	Green Audit Working Team & Caretaker
Learn what causes excessive water consumption.	As needed	Caretaker

Tabular data detailing the subject at hand:

Sl No	Parameters	Response
1	Source of water	Municipality, Underground, Pond (10889.84 sqft) Note: Only Municipality water serves as a drinking water supply for around 3,500 people, including students and staff members. Pond and ground water is used for gardening, maintenance work and cleaning of washrooms
2	Source of Drinking Water	Municipality water
3	Any treatment for drinking water	Nil Note: Water purifiers have been installed in 1-2 numbers at all floors and are maintained for 3–4 months afterward.
4	What is the total number of motors that are used?	02 numbers
5	What is the total number of water tanks? Capacity of tank	Underground tank- 02@ 2000litres Top tank- 04@ 1000litres
6	Tap water	90 numbers
	Quantity of water pumped every day	4000 liters/per day
7	Do you waste water, and if so, why?	No
8	How much water is required for gardening purposes?	400 to 600 liters/per day
9	How many water coolers are there in total?	01
10	Do you have access to rainwater harvesting?	No
11	The number of units harvested and the total volume of water	Nil
12	Any leaky taps	None
13	Daily amount of water that is lost.	Not applicable
14	Is there any kind of plan for the management of water?	Raise public awareness regarding the importance of water conservation, the prevention of pollution, and the implementation of sustainable water management practices. Unambiguous water rights and equitable water allocation regulations should be established to ensure that water is distributed fairly among the many different users.

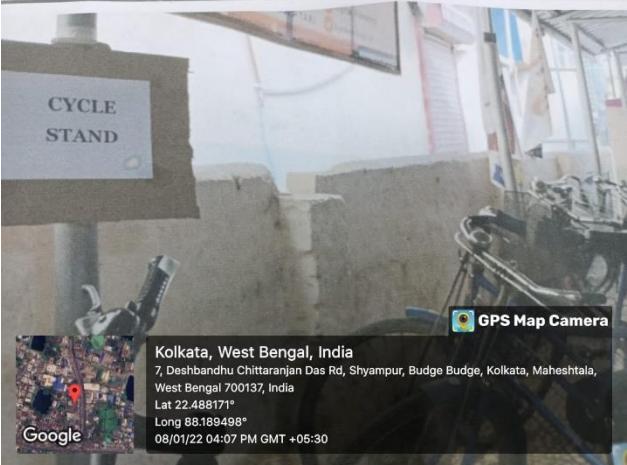
15	Have any methods for conserving water been implemented?	Yes. All water taps and fixtures in the college premises are maintained and serviced regularly to stop water spillage to conserve water. AC waste water used to maintain college greenery.
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 <p>Water purifier</p>	 <p>Water reservoir</p>
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 <p>AC Waste Water Used to Maintain College Greenery</p>	 <p>Budge College, Kolkata, West Bengal, India 7 Deshabandhu Chittaranjan Road, Shyampur, Budge Budge, Kolkata, West Bengal 700137, India Latitude: 22.488445 Degrees N Longitude: 88.189119 Degrees E Date: 12/08/2021</p>
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6. Transportation:

6.1. Public Transport: The college's carbon footprint can be significantly reduced by encouraging employees and students to use public transport. Sustainable transport solutions can be promoted by offering cheap bus passes, encouraging carpooling, and supporting bicycle infrastructure.

	Students	Employee	Total
Average numbers over 6 days in a peak session			
Bicycles are being used as modes of transportation for getting to and around the college by students mostly	Girls- 115 Boys-50	01	166

7. Overall Environmental Awareness:

7.1. Curriculum Integration: The institution can integrate environmental awareness and sustainability into its curriculum across various subject areas. This strategy will guarantee that students receive instruction and training in environmental stewardship, encouraging sustainable thinking.

Environmental awareness across different subjects	Parameters	Program time
Language Arts	Discuss texts from literature that are in some way connected to topics concerning the environment, such as conservation or environmental advocacy. Compose poetry or essays that argue for the protection of the environment and use persuasion. Conduct research on a variety of environmental topics, then present your findings. Through various awareness programs, they understand the environmental laws and regulations that apply on the local, national, and international levels. Discuss the roles that governments, NGOs, and people play in the effort to solve environmental problems. Investigate the environmental concerns from both a historical and cultural point of view.	Whole year
Arts	Investigate the causes of climate change and possible solutions to the problem. Analyse the impact that human activities have had on different landscapes as well as the distribution of natural resources. Studies should be done on urbanization, logging, and industry's impact on the natural environment. Investigate	Whole year

	geographical approaches to resolving environmental issues, such as environmentally responsible land management planning.	
Pure Science	Conduct studies on environmental issues, such as assessing water quality, soil analysis, power consumption or recycling. To better comprehend environmental patterns and forecasts, consider using mathematical models. Investigate the repercussions of environmental actions on the economy, such as doing cost-benefit analyses for environmentally friendly projects.	Half-yearly/ each program
Bio-Science	Study subjects include ecosystems, biodiversity, and the interconnectedness of all living things.	Whole year
Physical Education	Encourage students to develop an appreciation for the natural world by having them participate in outdoor sports and activities. Talk about the significance of physical activity for both one's own health and the health of the environment (for example, taking bike instead of the car).	Whole year
NSS	To enhance the amount of green cover and fight deforestation, organizing tree-planting events in local communities and educational institutions is important. To combat littering and to encourage a clean environment, it is important to organize routine clean-up efforts in public places like parks and beaches. To educate both students and members of the general public about environmental issues such as climate change, waste management, renewable energy, and conservation, workshops and seminars should be organized. It should be a priority to create opportunities for individuals to engage with the natural world and develop a sense of ownership over its preservation through participating in hikes and other outdoor activities. To raise awareness about environmental issues and motivate people to take action, you might use social media, posters, and booklets.	Whole year



College Campus Cleaning Programme

7.2. Student Engagement: A culture of sustainability can be promoted among students by supporting student-led projects, creating environmental groups, and holding awareness events and workshops.



Department of Zoology organised field trip to aware students about biodiversity and its conservation

8. Green Campus:

8.1. Floral Diversity:

The following are some actions to take into account when setting up a plantation programme at your college:

- Organise a group of academics, employees, and students who are interested in managing the plantation programme. Assign roles and duties to make the execution go smoothly.
- Consult with local forestry professionals or environmental groups to discover native or adapted tree species that are well-suited to the climate, soil, and goal of the plantation programme. Research and choose suitable tree species.
- To obtain the necessary approvals or permits for planting trees on campus or in the neighborhood, check with the college administration or other appropriate authorities.
- Look into possible funding options, including grants, sponsorships, or collaborations with nearby companies or environmental organizations. This will aid in defraying the price of buying trees, equipment, and other required supplies.
- Establish the plantation event's date, time, and venue. Plan the delivery of the trees, tools, and equipment to the planting location. Make sure that safety precautions are in place, including appropriate instruction on planting methods and equipment use.
- Promote the planting programme within the campus community by using various communication channels, such as posters, social media, emails, and word-of-mouth, in order to raise awareness and find volunteers. Encourage everyone to volunteer, including alumni, faculty, staff, and students.
- Volunteers should be gathered at the planting site on the appointed planting day. Give them the equipment, instructions, and direction they need to plant trees correctly. Foster a sense of accomplishment and community pride while fostering teamwork.
- Stress the significance of taking care of the freshly planted trees. This could entail routine weeding, mulching, watering, and pest or disease inspection. To guarantee the long-term well-being and survival of the trees, think about setting up a system for volunteers or staff members.
- After the plantation programme, evaluate the impact and accomplishment of the effort. Keep an eye on the trees' growth and survival rate. To determine areas for improvement and to organize upcoming plantation programmes, collect participant and stakeholder input.



Floral Diversity of the Campus



Putting a name plate on the plants. Both the common and scientific names, as well as the family, are given for each plant.



Ponds are extremely important to the campus's ability to sustain a healthy ecological balance. They help to reduce erosion, contribute to the recharging of groundwater supplies, and support the surrounding ecology by providing a habitat for a wide range of plants and animals.

8.2. Faunal Diversity:

Studying faunal diversity can increase awareness about environmental challenges and conservation's significance. Colleges that are home to a wide variety of animal species may be more likely to adopt environmentally friendly policies and methods of operation to safeguard the campus environment and the people who live there.

Birds Diversity:

A population of birds that is rich in variety is indicative of an ecosystem that is robust and thriving. Seed dispersal, the control of insect populations, and pollination are just a few of the many important functions that different species of birds perform to help maintain ecological equilibrium. They provide a contribution to the campus's general diversity of flora and fauna. The following bird species are observed inside the college campus:

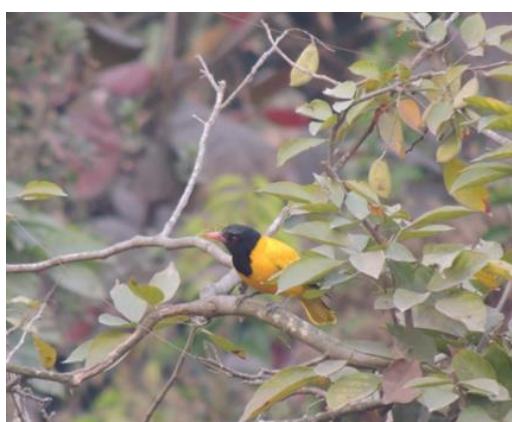
SL NO.	LOCAL NAME	ENGLISH NAME	SCIENTIFIC NAME
1.	Tile ghughu	Spotted dove	<i>Spilopelia chinensis</i>
2.	Payra	Pigeon	<i>Columba livia</i>
3.	Kak	House Crow	<i>Corvus splendens</i>
4.	Deshi Kani Bak	The Indian Pond Heron	<i>Ardeola grayii</i>
5.	Machranga	White throated king fisher	<i>Halcyon smyrnensis</i>
6.	Salik	Common Myna	<i>Acridotheres tristis</i>
7.	Doyel	Oriental Magpie Robin	<i>Copsychus saularis</i>
8.	Pecha	Barn Owl	<i>Tyto alba</i>
9.	Charui	House Sparrow	<i>Passer domesticus</i>
10.	Bulbuli	Red vented Bulbul	<i>Pycnonotus cafer</i>
11.	Bashpati	Asian Green bee-eater	<i>Merops orientalis</i>
12.	Tuntuni	Tailor Bird	<i>Orthotomus sutorius</i>
13.	Phinge	Black Drongo	<i>Dierurus adsimilis</i>
14.	Chatare	Jungle Babbler	<i>Turdoides striatus</i>
15.	Kokil	Koel	<i>Eudynamys scolopacea</i>
16.	Dahuk	White breasted waterhen	<i>Amaurornis phoenicurus</i>
17.	Benebou	Black Hooded Oriole	<i>Oriolus xanthornus</i>
18.	Harichacha	Rufous Treepie	<i>Dendrocitta vagabunda</i>



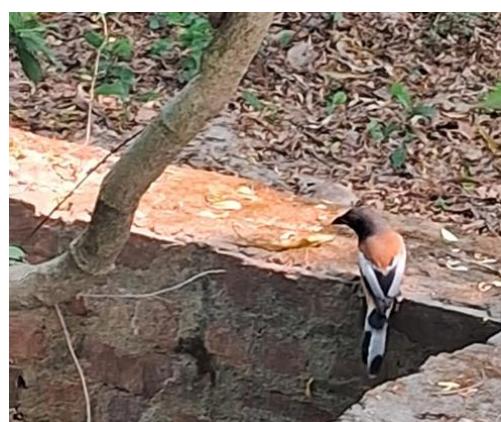
The Indian Pond Heron



White-breasted Waterhen



Black Hooded Oriole

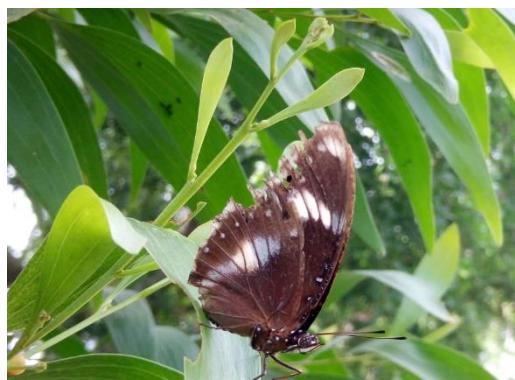


Rufous Treepie

Butterfly:

Seasonally found the following butterflies-

SL NO.	COMMON NAME	SCIENTIFIC NAME
1.	Peacock Pansy	<i>Junonia almanac</i>
2.	Plain Tiger	<i>Danaus chrysippus</i>
3.	Grey Pansy	<i>Junonia atlites</i>
4.	Blue tiger	<i>Tirumala limniace</i>
5.	Common Grass Yellow	<i>Eurema hecabe</i>
6.	Common Mormon	<i>Papilio polytes</i>
7.	Oriental Great Eggfly	<i>Hypolimnas bolina</i>
8.	Common evening brown	<i>Melanitis leda</i>
9.	Psyche	<i>Leptosia nina</i>
10.	Common Jezebel	<i>Delias eucharis</i>
11.	Common emigrant	<i>Catopsilia pomana</i>
12.	Lime butterfly	<i>Papilio demoleus</i>
13.	Great Eggfly	<i>Hypolimnas bolina</i>



Great Eggfly



Plain Tiger

Mammals:

The following mammals were observed inside the college campus

SL NO.	LOCAL NAME	ENGLISH NAME	SCIENTIFIC NAME
1.	Chamchika	Indian pipistrelle	<i>Pipistrellus coromandra</i>
2.	Kathbirali	Fivestriped Palm Squirrel	<i>Funambulus pennant</i>
3.	Beral	Cat	<i>Felis catus</i>
4.	Indur	Lesser Bandicoot Rat	<i>Bandicota bengalensis</i>
5.	Kukur	Dog	<i>Canis familiaris</i>

Plantation of Wild type Medicinal plants:

On the grounds of our college, we planted different medicinal plants. Every day, more and more wild medicinal plant kinds are becoming extinct as a direct result of human activity and

pollution. Once we have determined the species of these plants, we will work to preserve them by creating medicinal garden in our college campus. A medical garden is a specific location on the grounds of an educational institution that is devoted to the growth and maintenance of a large variety of different kinds of medicinal plants. Medical gardens are often found on university campuses. Students, staff members, and researchers all have access to it as a resource for teaching and study, which makes it possible for them to investigate and learn about the many different qualities and applications that medicinal plants can have. The cultivation of a medicinal garden on a college campus has the potential to confer significant value and benefits on the surrounding academic community as well as on society.

Table: List of wild types of medicinal plants at the premises of Budge Budge College

Plant Name	Uses
<i>Terminalia arjuna</i>	It is cardiac stimulant and commonly used in cardiac diseases. Powdered bark is used to get relieve from hypertension.
<i>Azadirachta indica</i>	Neem leaf is used for leprosy, eye disorders, stomach upset, loss of appetite, skin ulcers, gum diseases and liver problem
<i>Nyctanthes arbortristis</i>	The leaves are useful in fever and rheumatism. The fresh juice of leaves is given with honey in chronic fever.
<i>Oscimum sanctum</i>	It is used for cold and cough, heart diseases, kidney stone etc.

List of Floral groups:

Sl. No.	Scientific name	Vernacular Name	Family	No. of plants
1.	<i>Terminalia arjuna</i>	Arjun	Combretaceae	1
2.	<i>Acacia auriculiformis</i>	Akashmoni	Mimosaceae	1
3.	<i>Cocos nucifera</i>	Narikel	Arecaceae	4
4.	<i>Azadirachta indica</i>	Neem	Meliaceae	1
5.	<i>Ficus religiosa</i>	Aswatha	Moraceae	1
6.	<i>Mangifera indica</i>	Aam	Anacardiaceae	1
7.	<i>Nerium indicum</i>	Karabi	Apocynaceae	2
8.	<i>Thevetia peruviana</i>	Kolke	Apocynaceae	2
9.	<i>Murraya paniculata</i>	Kamini	Rutaceae	2
10.	<i>Psidium guajava</i>	Peyara	Myrtaceae	1
11.	<i>Musa paradisiaca</i>	Kola	Musaceae	5

12.	<i>Areca catechu</i>	Supari	Arecaceae	4
13.	<i>Hibiscus rosa-sinensis</i>	Jaba	Malvaceae	2
14.	<i>Zizyphus jujuba</i>	Kul	Rhamnaceae	1
15.	<i>Nyctanthus arbortristis</i>	Shiuli	Oleaceae	1
16.	<i>Araucaria heterophylla</i>	Chrismas Tree	Araucariaceae	2
17.	<i>Roystonea regia</i>	Royal Palm	Arecaceae	5
18.	<i>Swietenia macrophylla</i>	Mahogoni	Meliaceae	2
19.	<i>Ixora coccinea</i>	Rangan	Rubiaceae	1
20.	<i>Clitoria ternata</i>	Aparajita	Papilionaceae	1
21.	<i>Rhoeo discolor</i>	-	Commelinaceae	1
22.	<i>Agave angustifolia</i>	-	Agavaceae	1
23.	<i>Aloe vera</i>	Ghritokumari	Liliaceae	1
24.	<i>Dracaena angustifolia</i>	-	Liliaceae	1
25.	<i>Dracaena marginata</i>	-	Liliaceae	1
26.	<i>Andrographis paniculata</i>	Kalmegh	Acanthaceae	1
27.	<i>Cycas sp.</i>	-	Cycadaceae	1
28.	<i>Ocimum sanctum</i>	Tulsi	Lamiaceae	1
29.	<i>Euphorbia millii</i>	Mili	Euphorbiaceae	1
30.	<i>Bougainvillea spectabilis</i>	Bougainvillea	Nyctaginaceae	1
31.	<i>Jasminum sambuc</i>	Belful	Oleaceae	1
32.	<i>Codiaeum variegatum</i>		Euphorbiaceae	1
33.	<i>Sansevieria trifasciata</i>	Snake plant	Liliaceae	1
34.	<i>Scindapsus officinalis</i>	Money plant	Araceae	1
35.	<i>Rosa chinensis</i>	Rose	Rosaceae	1

9. Conclusion: According to the results of a recent green audit, the BUDGE BUDGE COLLEGE has identified a few sites on campus that may use some work to further sustainability goals. Implementing the offered solutions has the potential to result in a number of positive environmental outcomes, including decreased energy consumption, improved waste management, enhanced water use efficiency, expanded sustainable transportation options, and heightened environmental consciousness. By putting these alterations into effect, BUDGE BUDGE COLLEGE will be able to demonstrate to its pupils how to responsibly care for the environment and make a contribution towards a more sustainable future.

2020-21



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1. Introduction:

Between the years 2020 and 2021, the Green Audit Committee at BUDGE BUDGE COLLEGE carried out a comprehensive environmental review of the institution. This audit's primary objective was to analyse the college's overall sustainability initiatives, as well as the college's ecological effect, energy consumption, waste management practices, and trash disposal procedures. This report provides an overview of the most important findings, recommendations, and a proposed action plan to enhance the environmental performance of the college.

2. Green Audit Working Team (2020-21):

1	Dr. Debjani Datta	Principal
2	Dr. Sandip Singha	Associate Professor, Commerce
3.	Dr. Gautam Das	NAAC Coordinator, Bursar, Assistant Professor, Commerce
4.	Dr. Dipak Mandal	Assistant Professor, History
5.	Dr. Anup Kumar Sahoo	IQAC Convenor, Assistant Professor, Physics
6.	Dr. Kishore Naskar	Assistant Professor, Economics
7.	Dr. Papia Das	Assistant Professor, Zoology
8.	Dr. Samiran Panday	Assistant Professor, Botany
9.	Dr. Barnali Bera	SACT, Zoology
10.	Dr. Uttariya Roy	SACT, Environmental Science
11.	Smt. Piyali Das	SACT, Botany
12.	Dr. Shreya Chakravorty	Assistant Professor, English
13.	Shri Somnath Bose	Office Staff
14.	Shri Anis Ahmed	Office Staff

3. The Necessity of a Green Audit:

The need for green audits, also known as environmental audits or sustainability audits, is rising in today's society for a number of reasons.

(a) Effects on the Environment: Green audits help to assess and lessen an organization's harmful environmental impact. They analyse factors such as energy consumption, trash

generation, water use, and emissions to find areas that could be improved to decrease environmental harm.

(b) Conformity with Regulations: The environmental regulations and rules that have been established in many countries must be followed by businesses. Green audits help companies adhere to standards so they can avoid penalties or other legal implications for non-compliance.

(c) Savings on Expenses: Green audits can identify inefficient practises and inefficiencies within a business, providing opportunities for cost savings. By studying energy use, resource consumption, and waste management, businesses can put strategies into practise to reduce operational costs and increase overall efficiency.

(d) Reputation and the Expectations of Stakeholders: Customers and other stakeholders now call organisations to adopt more environmentally friendly practises. Green audits promote trust among customers, employees, investors, and communities by demonstrating an organization's transparency and commitment to sustainability.

(e) Risk Management: Environmental hazards can have serious financial and reputational ramifications for firms, including pollution events, regulatory non-compliance, and supply chain interruptions. By evaluating environmental management systems, ensuring sufficient controls are in place, and putting preventative measures in place to deal with possible problems, green audits assist in identifying and mitigating these risks.

(f) Continuous Improvement: Green audits encourage a continuing commitment to sustainability rather than being one-time events. Organizations can see trends, set goals, and implement improvement initiatives by routinely evaluating and tracking environmental performance. This iterative process promotes a culture of sustainability and propels long-lasting transformation.

(g) Sustainable Development Goals (SDGs): An international framework for solving urgent environmental and social issues is provided by the Sustainable Development Goals. Organizations can better align their operations with these objectives with the aid of green audits, paving the way for a more just and sustainable future. Green audits are essential to evaluate, enhance, and confirm environmental performance. They allow companies to control risks, comply with rules, cut costs, improve reputations, and support sustainable development.

4. Methodology for Green Audit:

Audits of an organization's environmental performance and practices are known as "green," "environmental," or "sustainability" audits. They entail assessing the company's influence on the environment, resource usage, waste management, and adherence to environmental legislation. Here is a procedure for carrying out a green audit:

(a) Planning:

(b) Identify audit team and resources:

(c) Develop an audit plan: Create a detailed plan outlining audit activities, timelines, responsibilities, and communication channels.

(d) Data Collection:

(e) Gather information:

(f) Conduct site visits and interviews:

(g) Review documentation:

(h) Evaluation and Analysis:

- (i) Assess environmental impacts:
- (j) Evaluate compliance:
- (k) Identify strengths and weaknesses:
- (l) Quantify results:
- (m) Reporting:
- (n) Prepare an audit report:
- (o) Communicate results:
- (p) Follow-up and Improvement:
- (q) Develop an action plan:
- (r) Monitor progress:
- (s) Continuous improvement:

The methodology adopted to conduct the Green Audit of the Institution had the following components.

4.1. On-site Visit:

The Green Audit Team carried out the five-day field trip. The tour's main goal was to evaluate the Institution's waste management procedures, energy conservation tactics, and other aspects of its green cover. The protocols for sample collection, preservation, and analysis were followed scientifically.

4.2. Focus Group Discussion:

The nature club, staff, and management members participated in focus group discussions on various facets of the green audit. Identification of attitudes and awareness towards environmental issues at the institutional and local levels was the main topic of discussion.

4.3. Energy and waste management Survey:

The audit team evaluated the college's waste generation, disposal, and treatment facilities as well as its energy usage pattern with the assistance of teachers and students. A comprehensive questionnaire survey method was used to carry out the monitoring.

5. Target Areas of Green Auditing:

An environmental audit is one of the steps involved in the process of resource management. Green audits are useful despite the fact that they are one-off occurrences. This is due to the fact that they are carried out on a regular basis, and the results of the audits might shift or get better over time. The concept of an eco-campus centers primarily on making effective use of water and energy while simultaneously reducing pollution and the amount of trash produced.

Several indicators will be evaluated during the "Green Auditing of this Educational Institute" procedure. Eco-campus focuses on these goals in order to reduce emissions, obtain a reliable and affordable energy supply, encourage and improve energy conservation, decrease the institute's energy and water use, reduce the amount of waste that is sent to landfills, and incorporate environmental considerations into all contracts and services that are thought to have significant environmental impacts. Eco-campus also focuses on these goals in order to improve the quality of life on campus. The water, the electricity, the rubbish, and the green campuses are the key focuses of this environmental audit.

5.1. Energy Consumption:

5.1.1. Lighting: According to the findings of the audit, a significant number of the college's lighting fixtures are both inefficient and out of date. It is recommended to make advantage of natural light whenever it is feasible, to install occupancy sensors, and to replace traditional light bulbs with LED light bulbs that are more energy efficient.

5.1.2. Heating, Ventilation, and Air Conditioning (HVAC):

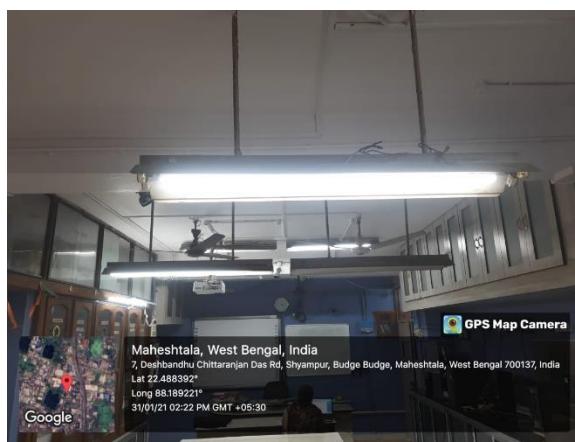
It was found that the HVAC systems were operating at a lower level of efficiency than was required. Switching to heating, ventilation, and air conditioning (HVAC) equipment that is more energy-efficient, installing thermostats that are programmable, and keeping up with normal maintenance can significantly cut energy consumption.

5.1.3. Energy Awareness: Both the faculty and the student body should be encouraged to engage in energy-saving behaviours by the college. Campaigns, instructional activities, and financial incentives for projects that save energy are all potential ways to assist in accomplishing this goal.

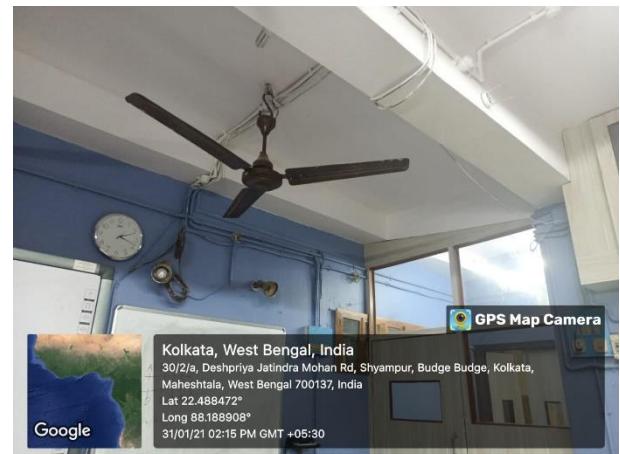
Details electrical requirements:

Electrical device/items	Number	Power (watt)	Usage time (hr/day)
Normal Tubelight	10	400	3-4 hours *
LED Tubelight	50	2000	Do
Normal Bulb	0	0	Do
LED Bulb	0	0	Do
Ceiling Fan	20	1200	Do
Wall fan	10	600	Do

* College was closed due to corona pandemic



LED Tubelight



Ceiling Fan



Silent DG sets are designed to generate a very low level of background noise, just as their name suggests. Their structures are constructed to eliminate virtually all noise and vibrations due to careful design. Because of this, they are not harmful to the environment and are ideally suited for use in residential areas.

6. Waste Management:

6.1. Recycling: Despite the fact that recycling canisters were located all around the campus, the audit indicated that there was insufficient separation of recyclable materials and inadequate information regarding products that might be recycled. This was the case despite the fact that recycling canisters were located everywhere. An increase in the percentage of materials that are recycled can be accomplished in a number of different ways; some of these ways include making the signs clearer, providing instructions that are free of ambiguity, and carrying out an intensive recycling education programme.

6.2. Composting: At the organisation, composting facilities can be established so that the organic waste that is produced by the residents of the hostel (both boys and girls) can be disposed of in an appropriate manner. Composting not only produces useful compost that can be utilised for campus landscaping and gardening, but it also contributes greatly to a reduction in the amount of waste that is dumped in landfills. This is one of the many benefits of composting.

Table: Different types of waste generated in the college and their disposal

Types of waste	Particulars	Disposal method
E-Waste	Computers, electrical and electronic parts	Store these in a separate tank, and we can start selling them directly after a certain amount of time.
Plastic waste	Pen, Refill, Plastic water bottles and other plastic containers, wrappers etc	Items made of plastic that are only intended to be used once, such as bottles, jars, and bags. Encourage people to use water bottles and other containers that may be reused. Establish distinct recycling containers for plastic garbage, and after a predetermined period of time, we will be able to begin

		selling the collected recyclables directly.
Solid wastes	Paper waste, Damaged furniture, paper plates, food wastes	Reuse after maintenance energy conversion. Installing composting systems on a college campus will allow for the conversion of discarded food into nutrient-dense compost that may be used in the campus landscaping or in community gardens. Another option is for institutions to form partnerships with farmers in the surrounding area to collect food waste.
Chemical wastes	Laboratory waste	Water should be used to neutralise. When dealing with hazardous garbage, adhere strictly to all safety regulations.
Wastewater	Washing, urinals, bathrooms	Soak pits
Glass waste	Broken glass wares from the labs	Glass debris should be kept separate from other recyclable materials and disposed of in containers that are specifically intended for glass recycling. Make sure that you recycle glass in the correct manner by coordinating with the local recycling centers.
Sanitary Napkin	-	Napkin Incinerators

 <p>GPS Map Camera Maheshtala, West Bengal, India 7/4, Dashbandhu Chittaranjan Das Rd, Shyampur, Budge Budge, Maheshtala, West Bengal 700137, India Lat 22.488299° Long 88.189391° 21/01/21 03:57 PM GMT +06:30</p>	<p>Separate waste baskets for disposal of different types of wastes generated in college campus</p>
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7. Water Usage:

7.1. Water Fixtures: Numerous locations within the college had outdated and ineffective water fixtures, which caused excessive water use. Water resources can be saved by swapping these fixtures for low-flow models and encouraging staff and students to practice water-saving habits.

Water management table:

Water Management Tasks	Frequency	Responsible Party
Routine examination of water supplies	Monthly	Green Audit Working Team
Testing for drinking water quality	Half-yearly	Do
Awareness of water conservation	Half-yearly	Green Audit Working Team & various department
Infrastructure for water distribution that needs upkeep and repair	As needed	Caretaker
Reporting and analysis of water use	Annually	Green Audit Working Team & Caretaker
Learn what causes excessive water consumption.	As needed	Caretaker

Tabular data detailing the subject at hand:

Sl No	Parameters	Response
1	Source of water	Municipality, Underground, Pond (10889.84 sqft) Note: Only Municipality water serves as a drinking water supply for around 3,500 people, including students and staff members. Pond and ground water is used for gardening, maintenance work and cleaning of washrooms.
2	Source of Drinking Water	Municipality water
3	Any treatment for drinking water	Nil Note: Water purifiers have been installed in 1-2 numbers at all floors and are maintained for 3–4 months afterward.
4	What is the total number of motors that are used?	02 numbers
5	What is the total number of water tanks? Capacity of tank	Underground tank- 02@ 2000litres Top tank- 04@ 1000litres
6	Tap water	90 numbers
	Quantity of water pumped every day	4000 liters/per day

7	Do you waste water, and if so, why?	No
8	How much water is required for gardening purposes?	400 to 600 liters/per day
9	How many water coolers are there in total?	01
10	Do you have access to rainwater harvesting?	No
11	The number of units harvested and the total volume of water	Nil
12	Any leaky taps	None
13	Daily amount of water that is lost.	Not applicable
14	Is there any kind of plan for the management of water?	Raise public awareness regarding the importance of water conservation, the prevention of pollution, and the implementation of sustainable water management practices. Unambiguous water rights and equitable water allocation regulations should be established to ensure that water is distributed fairly among the many different users.
15	Have any methods for conserving water been implemented?	Yes. All water taps and fixtures in the college premises are maintained and serviced regularly to stop water spillage to conserve water. AC waste water used to maintain college greenery.



Water reservoir	Water purifier
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7.2. Public Transport: Cycle, van, Ricksha, Train, bus etc.

	Students	Employee	Total
	Average numbers over 6 days in a peak session		
Bicycles are being used as modes of transportation for getting to and around the college by students, non-teaching staff and teaching staff.	Girls- 110 Boys-55	01	166

7.3. Overall Environmental Awareness:

7.3.1. Curriculum Integration: The institution can incorporate environmental consciousness and sustainable practices into its curriculum in a variety of topic areas. Students will be provided with teaching and training in environmental stewardship thanks to this technique, which will also encourage them to think in a sustainable manner.

Environmental awareness:

Environmental awareness across different subjects	Parameters	Program time
Language Arts	Discuss texts from literature that are in some way connected to topics concerning the environment, such as conservation or environmental advocacy. Compose poetry or essays that argue for the protection of the environment and use persuasion. Conduct research on a variety of environmental topics, then present your findings. Through various awareness programs, they understand the environmental laws and regulations that apply on the local, national, and international levels. Discuss the roles that governments, NGOs, and people play in the effort to solve environmental problems. Investigate the environmental concerns from both a historical and cultural point of view.	Whole year
Arts	Investigate the causes of climate change and possible solutions to the problem. Analyse the impact that human activities have had on	Whole year

	different landscapes as well as the distribution of natural resources. Studies should be done on urbanization, logging, and industry's impact on the natural environment. Investigate geographical approaches to resolving environmental issues, such as environmentally responsible land management planning.	
Pure Science	Conduct studies on environmental issues, such as assessing water quality, soil analysis, power consumption or recycling. To better comprehend environmental patterns and forecasts, consider using mathematical models. Investigate the repercussions of environmental actions on the economy, such as doing cost-benefit analyses for environmentally friendly projects.	Half-yearly/ each program
Bio-Science	Study subjects include ecosystems, biodiversity, and the interconnectedness of all living things.	Whole year
Physical Education	Encourage students to develop an appreciation for the natural world by having them participate in outdoor sports and activities. Talk about the significance of physical activity for both one's own health and the health of the environment (for example, taking bike instead of the car).	Whole year
NSS	To enhance the amount of green cover and fight deforestation, organizing tree-planting events in local communities and educational institutions is important. To combat littering and to encourage a clean environment, it is important to organize routine clean-up efforts in public places like parks and beaches. To educate both students and members of the general public about environmental issues such as climate change, waste management, renewable energy, and conservation, workshops and seminars should be organized. It should be a priority to create opportunities for individuals to engage with the natural world and develop a sense of ownership over its preservation through participating in hikes and other outdoor activities. To raise awareness about environmental issues and motivate people to take action, you might use social media, posters, and booklets.	Whole year



Plantation Programmes



Cleaning of college campus and surrounding area



Disposal of the garbage at the corporation garbage vat

7.3.2. Student Engagement: A culture of sustainability can be promoted among students by supporting student-led projects, creating environmental groups, and holding awareness events and workshops.

8. Green Campus:

8.1. Floral Diversity:

The following are some actions to take into account when setting up a plantation programme at your college:

- Organise a group of academics, employees, and students who are interested in managing the plantation programme. Assign roles and duties to make the execution go smoothly.
- Consult with local forestry professionals or environmental groups to discover native or adapted tree species that are well-suited to the climate, soil, and goal of the plantation programme. Research and choose suitable tree species.
- To obtain the necessary approvals or permits for planting trees on campus or in the neighbourhood, check with the college administration or other appropriate authorities.
- Look into possible funding options, including grants, sponsorships, or collaborations with nearby companies or environmental organizations. This will aid in defraying the price of buying trees, equipment, and other required supplies.
- Establish the plantation event's date, time, and venue. Plan the delivery of the trees, tools, and equipment to the planting location. Make sure that safety precautions are in place, including appropriate instruction on planting methods and equipment use.
- Promote the planting programme within the campus community by using various communication channels, such as posters, social media, emails, and word-of-mouth, in order to raise awareness and find volunteers. Encourage everyone to volunteer, including alumni, faculty, staff, and students.
- Volunteers should be gathered at the planting site on the appointed planting day. Give them the equipment, instructions, and direction they need to plant trees correctly. Foster a sense of accomplishment and community pride while fostering teamwork.
- Stress the significance of taking care of the freshly planted trees. This could entail routine weeding, mulching, watering, and pest or disease inspection. To guarantee the long-term well-being and survival of the trees, think about setting up a system for volunteers or staff members.
- After the plantation programme, evaluate the impact and accomplishment of the effort. Keep an eye on the trees' growth and survival rate. To determine areas for improvement and to organize upcoming plantation programmes, collect participant and stakeholder input.



Floral diversity of college campus



Ponds play a crucial role in the campus's ability to maintain a balanced ecological system. They serve the local environment by providing a habitat for a variety of plants and animals, assisting in the reduction of erosion, and assisting in the replenishment of groundwater supplies.

The ability of the campus to maintain a healthy ecological balance is greatly dependent on the presence of ponds. They contribute to the recharging of groundwater supplies, help to limit the amount of erosion that occurs in the surrounding area, and support the ecology of the area by providing a habitat for a diverse array of flora and fauna.

8.2. Faunal Diversity:

Studying faunal diversity can increase awareness about environmental challenges and conservation's significance. Colleges that are home to a wide variety of animal species may be more likely to adopt environmentally friendly policies and methods of operation to safeguard the campus environment and the people who live there.

Birds Diversity:

A population of birds that is rich in variety is indicative of an ecosystem that is robust and thriving. Seed dispersal, the control of insect populations, and pollination are just a few of the many important functions that different species of birds perform to help maintain ecological equilibrium. They provide a contribution to the campus's general diversity of flora and fauna.

The following bird species are observed inside the college campus:

SL NO.	LOCAL NAME	ENGLISH NAME	SCIENTIFIC NAME
1.	Tile ghughu	Spotted dove	<i>Spilopelia chinensis</i>
2.	Payra	Pigeon	<i>Columba livia</i>
3.	Kak	House Crow	<i>Corvus splendens</i>
4.	Deshi Kani Bak	The Indian Pond Heron	<i>Ardeola grayii</i>
5.	Machranga	White throated king fisher	<i>Halcyon smyrnensis</i>
6.	Salik	Common Myna	<i>Acridotheres tristis</i>
7.	Doyel	Oriental Magpie Robin	<i>Copsychus saularis</i>
8.	Pecha	Barn Owl	<i>Tyto alba</i>
9.	Charui	House Sparrow	<i>Passer domesticus</i>

10.	Bulbuli	Red vented Bulbul	<i>Pycnonotus cafer</i>
11.	Bashpati	Asian Green bee-eater	<i>Merops orientalis</i>
12.	Tuntuni	Tailor Bird	<i>Orthotomus sutorius</i>
13.	Phinge	Black Drongo	<i>Dierurus adsimilis</i>
14.	Chatare	Jungle Babbler	<i>Turdoides striatus</i>
15.	Kokil	Koel	<i>Eudynamys scolopacea</i>
16.	Dahuk	White breasted waterhen	<i>Amaurornis phoenicurus</i>

Butterfly:

Seasonally found the following butterflies-

SL NO.	COMMON NAME	SCIENTIFIC NAME
1.	Peacock Pansy	<i>Junonia almanac</i>
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4.	Blue tiger	<i>Tirumala limniace</i>
5.	Common Grass Yellow	<i>Eurema hecabe</i>
6.	Common Mormon	<i>Papilio polytes</i>
7.	Oriental Great Eggfly	<i>Hypolimnas bolina</i>
8.	Common evening brown	<i>Melanitis leda</i>
9.	Psyche	<i>Leptosia nina</i>
10.	Common Jezebel	<i>Delias eucharis</i>
11.	Common emigrant	<i>Catopsilia pomona</i>
12.	Lime butterfly	<i>Papilio demoleus</i>

Mammals:

The following mammals were observed inside the college campus

SL NO.	LOCAL NAME	ENGLISH NAME	SCIENTIFIC NAME
1.	Chamchika	Indian pipistrelle	<i>Pipistrellus coromandra</i>
2.	Kathbirali	Fivestriped Palm Squirrel	<i>Funambulus pennant</i>
3.	Beral	Cat	<i>Felis catus</i>
4.	Indur	Lesser Bandicoot Rat	<i>Bandicota bengalensis</i>
5.	Kukur	Dog	<i>Canis familiaris</i>

Plantation of Wild type Medicinal plants:

On the grounds of our college, we planted different medicinal plants. Every day, more and more wild medicinal plant kinds are becoming extinct as a direct result of human activity and pollution. Once we have determined the species of these plants, we will work to preserve them by creating medicinal garden in our college campus. A medical garden is a specific location on the grounds of an educational institution that is devoted to the growth and maintenance of a

large variety of different kinds of medicinal plants. Medical gardens are often found on university campuses. Students, staff members, and researchers all have access to it as a resource for teaching and study, which makes it possible for them to investigate and learn about the many different qualities and applications that medicinal plants can have. The cultivation of a medicinal garden on a college campus has the potential to confer significant value and benefits on the surrounding academic community as well as on society.

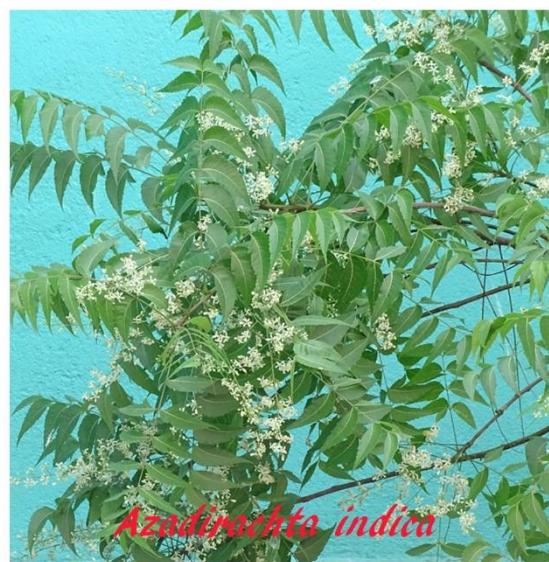
Table: List of wild types of medicinal plants at the premises of Budge Budge College

Plant Name	Uses
<i>Terminalia arjuna</i>	It is cardiac stimulant and commonly used in cardiac diseases. Powdered bark is used to get relieve from hypertension.
<i>Azadirachta indica</i>	Neem leaf is used for leprosy, eye disorders, stomach upset, loss of appetite, skin ulcers, gum diseases and liver problem
<i>Nyctanthes arbortristis</i>	The leaves are useful in fever and rheumatism. The fresh juice of leaves is given with honey in chronic fever.
<i>Oscimum sanctum</i>	It is used for cold and cough, heart diseases, kidney stone etc.

List of Floral groups:

Sl. No.	Scientific name	Vernacular Name	Family	No. of plants
1.	<i>Terminalia arjuna</i>	Arjun	Combretaceae	1
2.	<i>Acacia auriculiformis</i>	Aakashmoni	Mimosaceae	1
3.	<i>Cocos nucifera</i>	Narikel	Arecaceae	4
4.	<i>Azadirachta indica</i>	Neem	Meliaceae	1
5.	<i>Ficus religiosa</i>	Aswatha	Moraceae	1
6.	<i>Mangifera indica</i>	Aam	Anacardiaceae	1
7.	<i>Nerium indicum</i>	Karabi	Apocynaceae	2
8.	<i>Thebetia pelviana</i>	Kolke	Apocynaceae	2
9.	<i>Murraya paniculata</i>	Kamini	Rutaceae	2
10.	<i>Psidium guajava</i>	Peyara	Myrtaceae	1
11.	<i>Musa paradisiaca</i>	Kola	Musaceae	5
12.	<i>Areca catechu</i>	Supari	Arecaceae	4
13.	<i>Hibiscus rosa-sinensis</i>	Jaba	Malvaceae	2

14.	<i>Zizyphus jujuba</i>	Kul	Rhamnaceae	1
15.	<i>Nyctanthus arbortristis</i>	Shiuli	Oleaceae	1
16.	<i>Araucaria heterophylla</i>	Chrismas Tree	Araucariaceae	2
17.	<i>Roystonea regia</i>	Royal Palm	Arecaceae	5
18.	<i>Swietenia macrophylla</i>	Mahogoni	Meliaceae	2
19.	<i>Ixora coccinea</i>	Rangan	Rubiaceae	1
20.	<i>Clitoria ternata</i>	Aparajita	Papilionaceae	1
21.	<i>Rhoeo discolor</i>	-	Commelinaceae	1
22.	<i>Agave angustifolia</i>	-	Agavaceae	1
23.	<i>Aloe vera</i>	Ghritokumari	Liliaceae	1
24.	<i>Dracaena angustifolia</i>	-	Liliaceae	1
25.	<i>Dracaena marginata</i>	-	Liliaceae	1
26.	<i>Andrographis paniculata</i>	Kalmegh	Acanthaceae	1
27.	<i>Cycas sp.</i>	-	Cycadaceae	1
28.	<i>Ocimum sanctum</i>	Tulsi	Lamiaceae	1
29.	<i>Euphorbia millii</i>	Mili	Euphorbiaceae	1
30.	<i>Bougainvillea spectabilis</i>	Bougainvillea	Nyctaginaceae	1
31.	<i>Jasminum sambuc</i>	Belful	Oleaceae	1
32.	<i>Codiaeum variegatum</i>		Euphorbiaceae	1
33.	<i>Sansevieria trifasciata</i>	Snake plant	Liliaceae	1
34.	<i>Scindapsus officinalis</i>	Money plant	Araceae	1
35.	<i>Rosa chinensis</i>	Rose	Rosaceae	1



Some of the plants present in the college campus

9. Conclusion: According to the findings of a recent green audit, the BUDGE BUDGE COLLEGE has identified a few locations on campus that can benefit from some additional work in order to advance its sustainability goals. The application of the proposed solutions has the potential to result in a number of beneficial consequences for the environment, such as a reduction in energy consumption, an improvement in waste management, an increase in the efficiency with which water is used, an expansion of sustainable transportation options, and a heightened environmental consciousness. By putting these changes into effect, BUDGE BUDGE COLLEGE will be able to show its students how to appropriately care for the environment and contribute towards a more sustainable future. In addition, the college will be able to better prepare its students for the world of the future.

2019-20



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Certificated ISO based

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1. Introduction:

Budge Budge College was established on 10th December' 1971. Initially the college was located in a different location with few classrooms. Later it was shifted to its present position. This College was lucky to have the famous writer late Narayan Ganguly as its Founder President of the Governing Body and the founder principal was late Prof. Prithwis Dutta. The college has played its role since all these years for the development of education in the suburbs of Kolkata. The township of Budge Budge itself has its own significance in the field of culture and freedom movement of India. The College is located in the vicinity of Budge Budge Railway Station and occupies an important position in the locality. Hence to serve the students in the larger area has been possible for the College. Day by day this College has created its own aura and significance in spreading education in West Bengal particularly to the middle class & lower middle-class families. Students of this College come from all spheres of society. We have large numbers of female students to take care of. Most of our students are well established in their life and playing their role as good citizens.

2. Green Audit Working Team (2019-20):

1	Dr. Debjani Datta	Principal
2.	Dr. Gautam Das	NAAC coordinator, Bursar, Associate Professor, Commerce
3.	Dr. Dipak Mandal	Associate Professor, History
4.	Dr. Anup Kumar Sahoo	Assistant Professor, Physics
5.	Dr. Kishore Naskar	Assistant Professor, Economics
6.	Dr. Papia Das	Assistant Professor, Zoology
7.	Dr. Samiran Panday	Assistant Professor, Botany
8.	Dr. Barnali Bera	SACT, Zoology
9.	Dr. Uttariya Roy	SACT, Environmental Studies
10.	Smt. Piyali Das	SACT, Botany
11.	Dr. Shreya Chakravorty	Assistant Professor, English
12.	Shri Somnath Bose	Office Staff
13.	Shri Anis Ahmed	Office Staff

3. The Necessity of a Green Audit:

The need for green audits, also known as environmental audits or sustainability audits, is rising in today's society for a number of reasons.

(a) Effects on the Environment: Green audits help to assess and lessen an organization's harmful environmental impact. They analyse factors such as energy consumption, trash

generation, water use, and emissions to find areas that could be improved to decrease environmental harm.

(b) Conformity with Regulations: The environmental regulations and rules that have been established in many countries must be followed by businesses. Green audits help companies adhere to standards so they can avoid penalties or other legal implications for non-compliance.

(c) Savings on Expenses: Green audits can identify inefficient practises and inefficiencies within a business, providing opportunities for cost savings. By studying energy use, resource consumption, and waste management, businesses can put strategies into practise to reduce operational costs and increase overall efficiency.

(d) Reputation and the Expectations of Stakeholders: Customers and other stakeholders now call organisations to adopt more environmentally friendly practises. Green audits promote trust among customers, employees, investors, and communities by demonstrating an organization's transparency and commitment to sustainability.

(e) Risk Management: Environmental hazards can have serious financial and reputational ramifications for firms, including pollution events, regulatory non-compliance, and supply chain interruptions. By evaluating environmental management systems, ensuring sufficient controls are in place, and putting preventative measures in place to deal with possible problems, green audits assist in identifying and mitigating these risks.

(f) Continuous Improvement: Green audits encourage a continuing commitment to sustainability rather than being one-time events. Organizations can see trends, set goals, and implement improvement initiatives by routinely evaluating and tracking environmental performance. This iterative process promotes a culture of sustainability and propels long-lasting transformation.

(g) Sustainable Development Goals (SDGs): An international framework for solving urgent environmental and social issues is provided by the Sustainable Development Goals. Organizations can better align their operations with these objectives with the aid of green audits, paving the way for a more just and sustainable future. Green audits are essential to evaluate, enhance, and confirm environmental performance. They allow companies to control risks, comply with rules, cut costs, improve reputations, and support sustainable development.

4. Methodology for Green Audit:

Audits of an organization's environmental performance and practices are known as "green," "environmental," or "sustainability" audits. They entail assessing the company's influence on the environment, resource usage, waste management, and adherence to environmental legislation. Here is a procedure for carrying out a green audit:

(a) Planning:

(b) Identify audit team and resources:

(c) Develop an audit plan: Create a detailed plan outlining audit activities, timelines, responsibilities, and communication channels.

(d) Data Collection:

(e) Gather information:

(f) Conduct site visits and interviews:

(g) Review documentation:

- (h) Evaluation and Analysis:
- (i) Assess environmental impacts:
- (j) Evaluate compliance:
- (k) Identify strengths and weaknesses:
- (l) Quantify results:
- (m) Reporting:
- (n) Prepare an audit report:
- (o) Communicate results:
- (p) Follow-up and Improvement:
- (q) Develop an action plan:
- (r) Monitor progress:
- (s) Continuous improvement:

The methodology adopted to conduct the Green Audit of the Institution had the following components.

4.1. On-site Visit:

The Green Audit Team carried out the five-day field trip. The tour's main goal was to evaluate the Institution's waste management procedures, energy conservation tactics, and other aspects of its green cover. The protocols for sample collection, preservation, and analysis were followed scientifically.

4.2. Focus Group Discussion:

The nature club, staff, and management members participated in focus group discussions on various facets of the green audit. Identification of attitudes and awareness towards environmental issues at the institutional and local levels was the main topic of discussion.

4.3. Energy and waste management Survey:

The audit team evaluated the college's waste generation, disposal, and treatment facilities as well as its energy usage pattern with the assistance of teachers and students. A comprehensive questionnaire survey method was used to carry out the monitoring.

5. Target Areas of Green Auditing:

An environmental audit is one of the steps involved in the process of resource management. Green audits are useful despite the fact that they are one-off occurrences. This is due to the fact that they are carried out on a regular basis, and the results of the audits might shift or get better over time. The concept of an eco-campus centers primarily on making effective use of water and energy while simultaneously reducing pollution and the amount of trash produced.

Several indicators will be evaluated during the "Green Auditing of this Educational Institute" procedure. Eco-campus focuses on these goals in order to reduce emissions, obtain a reliable and affordable energy supply, encourage and improve energy conservation, decrease the institute's energy and water use, reduce the amount of waste that is sent to landfills, and incorporate environmental considerations into all contracts and services that are thought to have significant environmental impacts. Eco-campus also focuses on these goals in order to improve the quality of life on campus. The water, the electricity, the rubbish, and the green campuses are the key focuses of this environmental audit.

5.1. Energy Consumption:

5.1.1. Lighting: According to the findings of the audit, a significant number of the college's lighting fixtures are both inefficient and out of date. It is recommended to make advantage of natural light whenever it is feasible, to install occupancy sensors, and to replace traditional light bulbs with LED light bulbs that are more energy efficient.

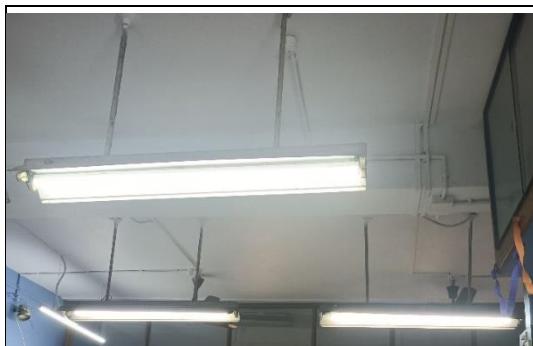
5.1.2. Heating, Ventilation, and Air Conditioning (HVAC):

It was found that the HVAC systems were operating at a lower level of efficiency than was required. Switching to heating, ventilation, and air conditioning (HVAC) equipment that is more energy-efficient, installing thermostats that are programmable, and keeping up with normal maintenance can significantly cut energy consumption.

5.1.3. Energy Awareness: Both the faculty and the student body should be encouraged to engage in energy-saving behaviours by the college. Campaigns, instructional activities, and financial incentives for projects that save energy are all potential ways to assist in accomplishing this goal.

Details electrical requirements:

Electrical device/items	Number	Power (watt)	Usage time (hr/day)
Normal Tubelight	50	2000	10:00 am to 5:00 pm
LED Tubelight	350	7000	Do
Normal Bulb	0	0	Do
LED Bulb	0	0	Do
Ceiling Fan	130	7800	Do
Wall fan	40	2400	Do



LED Tubelight and Wall fan



Silent DG sets are designed to generate a very low level of background noise, just as their name suggests. Their structures are constructed to eliminate virtually all noise and vibrations due to careful design. Because of this, they are not harmful to the environment and are ideally suited for use in residential areas.

6. Waste Management:

6.1. Recycling: Despite the fact that recycling canisters were located all around the campus, the audit indicated that there was insufficient separation of recyclable materials and inadequate information regarding products that might be recycled. This was the case despite the fact that recycling canisters were located everywhere. An increase in the percentage of materials that are recycled can be accomplished in a number of different ways; some of these ways include making the signs clearer, providing instructions that are free of ambiguity, and carrying out an intensive recycling education programme.

6.2. Composting: At the organisation, composting facilities can be established so that the organic waste that is produced by the residents of the hostel (both boys and girls) can be disposed of in an appropriate manner. Composting not only produces useful compost that can be utilised for campus landscaping and gardening, but it also contributes greatly to a reduction in the amount of waste that is dumped in landfills. This is one of the many benefits of composting.

Table: Different types of waste generated in the college and their disposal

Types of waste	Particulars	Disposal method
E-Waste	Computers, electrical and electronic parts	Store these in a separate tank, and we can start selling them directly after a certain amount of time.
Plastic waste	Pen, Refill, Plastic water bottles and other plastic containers, wrappers etc	Items made of plastic that are only intended to be used once, such as bottles, jars, and bags. Encourage people to use water bottles and other containers that may be reused. Establish distinct recycling containers for plastic garbage, and after a predetermined period of time, we will be able to begin selling the collected recyclables directly.
Solid wastes	Paper waste, Damaged furniture, paper plates, food wastes	Reuse after maintenance energy conversion. Installing composting systems on a college campus will allow for the conversion of discarded food into nutrient-dense compost that may be used in the campus landscaping or in community gardens. Another option is for institutions to form partnerships with farmers in the surrounding area to collect food waste.

Chemical wastes	Laboratory waste	Water should be used to neutralise. When dealing with hazardous garbage, adhere strictly to all safety regulations.
Wastewater	Washing, urinals, bathrooms	Soak pits
Glass waste	Broken glass wares from the labs	Glass debris should be kept separate from other recyclable materials and disposed of in containers that are specifically intended for glass recycling. Make sure that you recycle glass in the correct manner by coordinating with the local recycling centers.
Sanitary Napkin	-	Napkin Incinerators



Separate waste baskets for disposal of different types of wastes generated in college campus

7. Water Usage:

7.1. Water Fixtures: Numerous locations within the college had outdated and ineffective water fixtures, which caused excessive water use. Water resources can be saved by swapping these fixtures for low-flow models and encouraging staff and students to practice water-saving habits.

Water management table:

Water Management Tasks	Frequency	Responsible Party
Routine examination of water supplies	Monthly	Green Audit Working Team
Testing for drinking water quality	Half-yearly	Do
Awareness of water conservation	Half-yearly	Green Audit Working Team & various department
Infrastructure for water distribution that needs upkeep and repair	As needed	Caretaker
Reporting and analysis of water use	Annually	Green Audit Working Team & Caretaker
Learn what causes excessive water consumption.	As needed	Caretaker

Tabular data detailing the subject at hand:

SI No	Parameters	Response
1	Source of water	Municipality, Underground, Pond (10889.84 sqft) Note: Only Municipality water serves as a drinking water supply for around 3,300 people, including students and staff members. Pond and ground water is used for gardening, maintenance work and cleaning of washrooms.
2	Source of Drinking Water	Municipality water
3	Any treatment for drinking water	Nil Note: Water purifiers have been installed in 1-2 numbers at all floors and are maintained for 3-4 months afterward.
4	What is the total number of motors that are used?	02 numbers
5	What is the total number of water tanks? Capacity of tank	Underground tank- 02@ 2000litres Top tank- 04@ 1000litres
6	Tap water	90 numbers
	Quantity of water pumped every day	4000 liters/per day
7	Do you waste water, and if so, why?	No
8	How much water is required for gardening purposes?	400 to 600 liters/per day
9	How many water coolers are there in total?	01
10	Do you have access to rainwater harvesting?	No

11	The number of units harvested and the total volume of water	Nil
12	Any leaky taps	None
13	Daily amount of water that is lost.	Not applicable
14	Is there any kind of plan for the management of water?	Raise public awareness regarding the importance of water conservation, the prevention of pollution, and the implementation of sustainable water management practices. Unambiguous water rights and equitable water allocation regulations should be established to ensure that water is distributed fairly among the many different users.
15	Have any methods for conserving water been implemented?	Yes. All water taps and fixtures in the college premises are maintained and serviced regularly to stop water spillage to conserve water. AC waste water used to maintain college greenery. Besides seminars are organised by NSS to educate students on water conservation.



7.1.2. Public Transport: Cycle, van, Ricksha, Train, bus etc.

7.2. Overall Environmental Awareness:

7.2.1. Curriculum Integration: The institution can incorporate environmental consciousness and sustainable practices into its curriculum in a variety of topic areas. Students will be provided with teaching and training in environmental stewardship thanks to this technique, which will also encourage them to think in a sustainable manner.

Environmental awareness:

Environmental awareness across different subjects	Parameters	Program time
Language Arts	Discuss texts from literature that are in some way connected to topics concerning the environment, such as conservation or environmental advocacy. Compose poetry or essays that argue for the protection of the environment and use persuasion. Conduct research on a variety of environmental topics, then present your findings. Through various awareness programs, they understand the environmental laws and regulations that apply on the local, national, and international levels. Discuss the roles that governments, NGOs, and people play in the effort to solve environmental problems. Investigate the environmental concerns from both a historical and cultural point of view.	Whole year
Arts	Investigate the causes of climate change and possible solutions to the problem. Analyse the impact that human activities have had on different landscapes as well as the distribution of natural resources. Studies should be done on urbanization, logging, and industry's impact on the natural environment. Investigate geographical approaches to resolving environmental issues, such as environmentally responsible land management planning.	Whole year
Pure Science	Conduct studies on environmental issues, such as assessing water quality, soil analysis, power consumption or recycling. To better comprehend environmental patterns and forecasts, consider using mathematical models. Investigate the repercussions of environmental actions on the economy, such as doing cost-benefit analyses for environmentally friendly projects.	Half-yearly/ each program

Bio-Science	Study subjects include ecosystems, biodiversity, and the interconnectedness of all living things.	Whole year
Physical Education	Encourage students to develop an appreciation for the natural world by having them participate in outdoor sports and activities. Talk about the significance of physical activity for both one's own health and the health of the environment (for example, taking bike instead of the car).	Whole year
NSS	To enhance the amount of green cover and fight deforestation, organizing tree-planting events in local communities and educational institutions is important. To combat littering and to encourage a clean environment, it is important to organize routine clean-up efforts in public places like parks and beaches. To educate both students and members of the general public about environmental issues such as climate change, waste management, renewable energy, and conservation, workshops and seminars should be organized. It should be a priority to create opportunities for individuals to engage with the natural world and develop a sense of ownership over its preservation through participating in hikes and other outdoor activities. To raise awareness about environmental issues and motivate people to take action, you might use social media, posters, and booklets.	Whole year



Plantation Programmes and student participation in rally to aware people about the biodiversity and its conservation



Department of Botany and Zoology organised field trip to aware students about biodiversity and its conservation



NSS of Budge Budge College regularly organise campus cleaning programme to encourage a clean environment

7.2.2. Student Engagement: A culture of sustainability can be promoted among students by supporting student-led projects, creating environmental groups, and holding awareness events and workshops. Department of Zoology and Botany regularly organize field trips for the students which bring out the truest essence of learning directly from Mother Nature and aware them about the importance of conserving nature.

8. Green Campus:

8.1. Floral Diversity:

The following are some actions to take into account when setting up a plantation programme at your college:

-Organise a group of academics, employees, and students who are interested in managing the plantation programme. Assign roles and duties to make the execution go smoothly.

- Consult with local forestry professionals or environmental groups to discover native or adapted tree species that are well-suited to the climate, soil, and goal of the plantation programme. Research and choose suitable tree species.
- To obtain the necessary approvals or permits for planting trees on campus or in the neighborhood, check with the college administration or other appropriate authorities.
- Look into possible funding options, including grants, sponsorships, or collaborations with nearby companies or environmental organizations. This will aid in defraying the price of buying trees, equipment, and other required supplies.
- Establish the plantation event's date, time, and venue. Plan the delivery of the trees, tools, and equipment to the planting location. Make sure that safety precautions are in place, including appropriate instruction on planting methods and equipment use.
- Promote the planting programme within the campus community by using various communication channels, such as posters, social media, emails, and word-of-mouth, in order to raise awareness and find volunteers. Encourage everyone to volunteer, including alumni, faculty, staff, and students.
- Volunteers should be gathered at the planting site on the appointed planting day. Give them the equipment, instructions, and direction they need to plant trees correctly. Foster a sense of accomplishment and community pride while fostering teamwork.
- Stress the significance of taking care of the freshly planted trees. This could entail routine weeding, mulching, watering, and pest or disease inspection. To guarantee the long-term well-being and survival of the trees, think about setting up a system for volunteers or staff members.
- After the plantation programme, evaluate the impact and accomplishment of the effort. Keep an eye on the trees' growth and survival rate. To determine areas for improvement and to organize upcoming plantation programmes, collect participant and stakeholder input.



Floral Diversity of the Campus

The ability of the campus to maintain a healthy ecological balance is greatly dependent on the presence of ponds. They contribute to the recharging of groundwater supplies, help to limit the

amount of erosion that occurs in the surrounding area, and support the ecology of the area by providing a habitat for a diverse array of flora and fauna.



Ponds play a crucial role in the campus's ability to maintain a balanced ecological system. They serve the local environment by providing a habitat for a variety of plants and animals, assisting in the reduction of erosion, and assisting in the replenishment of groundwater supplies.

8.2. Faunal Diversity:

Studying faunal diversity can increase awareness about environmental challenges and conservation's significance. Colleges that are home to a wide variety of animal species may be more likely to adopt environmentally friendly policies and methods of operation to safeguard the campus environment and the people who live there.

Birds Diversity:

A population of birds that is rich in variety is indicative of an ecosystem that is robust and thriving. Seed dispersal, the control of insect populations, and pollination are just a few of the many important functions that different species of birds perform to help maintain ecological equilibrium. They provide a contribution to the campus's general diversity of flora and fauna.

The following bird species are observed inside the college campus:

SL NO.	LOCAL NAME	ENGLISH NAME	SCIENTIFIC NAME
1.	Tile ghughu	Spotted dove	<i>Spilopelia chinensis</i>
2.	Payra	Pigeon	<i>Columba livia</i>
3.	Kak	House Crow	<i>Corvus splendens</i>
4.	Deshi Kani Bak	The Indian Pond Heron	<i>Ardeola grayii</i>
5.	Machranga	White throated king fisher	<i>Halcyon smyrnensis</i>
6.	Salik	Common Myna	<i>Acridotheres tristis</i>
7.	Doyel	Oriental Magpie Robin	<i>Copsychus saularis</i>
8.	Pecha	Barn Owl	<i>Tyto alba</i>
9.	Charui	House Sparrow	<i>Passer domesticus</i>
10.	Bulbuli	Red vented Bulbul	<i>Pycnonotus cafer</i>

11.	Bashpati	Asian Green bee-eater	<i>Merops orientalis</i>
12.	Tuntuni	Tailor Bird	<i>Orthotomus sutorins</i>
13.	Phinge	Black Drongo	<i>Dierurus adsimilis</i>
14.	Chatare	Jungle Babbler	<i>Turdoides striatus</i>

Butterfly:

Seasonally found the following butterflies-

SL NO.	COMMON NAME	SCIENTIFIC NAME
1.	Peacock Pansy	<i>Junonia almanac</i>
2.	Plain Tiger	<i>Danaus chrysippus</i>
3.	Grey Pansy	<i>Junonia atlites</i>
4.	Blue tiger	<i>Tirumala limniace</i>
5.	Common Grass Yellow	<i>Eurema hecabe</i>
6.	Common Mormon	<i>Papilio polytes</i>
7.	Oriental Great Eggfly	<i>Hypolimnas bolina</i>
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5.	Kukur	Dog	<i>Canis familiaris</i>

Plantation of Wild type Medicinal plants:

On the grounds of our college, we planted different medicinal plants. Every day, more and more wild medicinal plant kinds are becoming extinct as a direct result of human activity and pollution. Once we have determined the species of these plants, we will work to preserve them by creating medicinal garden in our college campus. A medical garden is a specific location on the grounds of an educational institution that is devoted to the growth and maintenance of a large variety of different kinds of medicinal plants. Medical gardens are often found on university campuses. Students, staff members, and researchers all have access to it as a resource for teaching and study, which makes it possible for them to investigate and learn about the many different qualities and applications that medicinal plants can have. The cultivation of a medicinal garden on a college campus has the potential to confer significant value and benefits on the surrounding academic community as well as on society.

Table: List of wild types of medicinal plants at the premises of Budge Budge College

Plant Name	Uses
<i>Terminalia arjuna</i>	It is cardiac stimulant and commonly used in cardiac diseases. Powdered bark is used to get relieve from hypertension.
<i>Azadirachta indica</i>	Neem leaf is used for leprosy, eye disorders, stomach upset, loss of appetite, skin ulcers, gum diseases and liver problem
<i>Nyctanthes arbortristis</i>	The leaves are useful in fever and rheumatism. The fresh juice of leaves is given with honey in chronic fever.
<i>Oscimum sanctum</i>	It is used for cold and cough, heart diseases, kidney stone etc.

List of Floral groups:

Sl. No.	Scientific name	Vernacular Name	Family	No. of plants
1.	<i>Terminalia arjuna</i>	Arjun	Combretaceae	1
2.	<i>Acacia auriculiformis</i>	Akashmoni	Mimosaceae	1
3.	<i>Cocos nucifera</i>	Narikel	Arecaceae	4
4.	<i>Azadirachta indica</i>	Neem	Meliaceae	1
5.	<i>Ficus religiosa</i>	Aswatha	Moraceae	1
6.	<i>Mangifera indica</i>	Aam	Anacardiaceae	1
7.	<i>Nerium indicum</i>	Karabi	Apocynaceae	2
8.	<i>Thebetia pelviana</i>	Kolke	Apocynaceae	2
9.	<i>Murraya paniculata</i>	Kamini	Rutaceae	2
10.	<i>Psidium guajava</i>	Peyara	Myrtaceae	1
11.	<i>Musa paradisiaca</i>	Kola	Musaceae	5
12.	<i>Areca catechu</i>	Supari	Arecaceae	4
13.	<i>Hibiscus rosa-sinensis</i>	Jaba	Malvaceae	2
14.	<i>Zizyphus jujuba</i>	Kul	Rhamnaceae	1
15.	<i>Nyctanthus arbortristis</i>	Shiuli	Oleaceae	1
16.	<i>Araucaria heterophylla</i>	Chrismas Tree	Araucariaceae	2

17.	<i>Roystonia regia</i>	Royal Palm	Arecaceae	5
18.	<i>Swietenia macrophylla</i>	Mahogoni	Meliaceae	2
19.	<i>Ixora coccinia</i>	Rangan	Rubiaceae	1
20.	<i>Clitoria ternatia</i>	Aparajita	Papilionaceae	1
21.	<i>Rhoeo discolor</i>	-	Commelinaceae	1
22.	<i>Agave aungustifolia</i>	-	Agavaceae	1
23.	<i>Aloe vera</i>	Ghritokumari	Liliaceae	1
24.	<i>Dracaena aungustifolia</i>	-	Liliaceae	1
25.	<i>Dracaena marginata</i>	-	Liliaceae	1
26.	<i>Andrographis paniculata</i>	Kalmegh	Acanthaceae	1
27.	<i>Cycas sp.</i>	-	Cycadaceae	1
28.	<i>Ocimum sanctum</i>	Tulsi	Lamiaceae	1
29.	<i>Euphorbia millii</i>	Mili	Euphorbiaceae	1
30.	<i>Bougainvillea spectabilis</i>	Bougainvillea	Nyctaginaceae	1
31.	<i>Jasminum sambuc</i>	Belful	Oleaceae	1
32.	<i>Codiaeum variegatum</i>		Euphorbiaceae	1
33.	<i>Sansevieria trifosciata</i>	Snake plant	Liliaceae	1
34.	<i>Scindapsus officinalis</i>	Money plant	Araceae	1
35.	<i>Rosa chinensis</i>	Rose	Rosaceae	1

9. Conclusion: According to the results of a recent green audit, the BUDGE BUDGE COLLEGE has identified a few sites on campus that may use some work to further sustainability goals. Implementing the offered solutions has the potential to result in a number of positive environmental outcomes, including decreased energy consumption, improved waste management, enhanced water use efficiency, expanded sustainable transportation options, and heightened environmental consciousness. By putting these alterations into effect, BUDGE BUDGE COLLEGE will be able to demonstrate to its pupils how to responsibly care for the environment and make a contribution towards a more sustainable future.

2018-19



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Certificated ISO based

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1. Introduction:

Budge Budge College was established on 10th December' 1971. Initially the college was located in a different location with few classrooms. Later it was shifted to its present position. This College was lucky to have the famous writer late Narayan Ganguly as its Founder President of the Governing Body and the founder principal was late Prof. Prithwis Dutta. The college has played its role since all these years for the development of education in the suburbs of Kolkata. The township of Budge Budge itself has its own significance in the field of culture and freedom movement of India. The College is located in the vicinity of Budge Budge Railway Station and occupies an important position in the locality. Hence to serve the students in the larger area has been possible for the College. Day by day this College has created its own aura and significance in spreading education in West Bengal particularly to the middle class & lower middle-class families. Students of this College come from all spheres of society. We have large numbers of female students to take care of. Most of our students are well established in their life and playing their role as good citizens.

2. Green Audit Working Team (2018-19):

1.	Dr. Debjani Datta	Principal
2.	Dr. Gautam Das	NAAC coordinator, Bursar, Assistant Professor, Commerce
3.	Dr. Dipak Mandal	Assistant Professor, History
4.	Dr. Anup Kumar Sahoo	Assistant Professor, Physics
5.	Dr. Kishore Naskar	Assistant Professor, Economics
6.	Dr. Papia Das	Assistant Professor, Zoology
7.	Smt. Piyali Das	SACT, Botany
8.	Dr. Shreya Chakravorty	Assistant Professor, English
9.	Shri Somnath Bose	Office Staff
10.	Shri Anis Ahmed	Office Staff

3. The Necessity of a Green Audit:

The need for green audits, also known as environmental audits or sustainability audits, is rising in today's society for several reasons.

(a) Effects on the Environment: Green audits help to assess and lessen an organization's harmful environmental impact. They analyse factors such as energy consumption, trash generation, water use, and emissions to find areas that could be improved to decrease environmental harm.

(b) Conformity with Regulations: The environmental regulations and rules established in many countries must be followed by organizations. Green audits help colleges adhere to standards to avoid penalties or other legal implications for non-compliance.

(c) Savings on Expenses: Green audits can identify inefficient practices, providing opportunities for cost savings. By studying energy use, resource consumption, and waste management, businesses can put strategies into practice to reduce operational costs and increase overall efficiency.

(d) Reputation and the Expectations of Stakeholders: Customers and other stakeholders now call organisations to adopt more environmentally friendly practices. Green audits promote trust among customers, employees, investors, and communities by demonstrating an organization's transparency and commitment to sustainability.

(e) Risk Management: Environmental hazards can have serious financial and reputational ramifications for firms, including pollution events, regulatory non-compliance, and supply chain interruptions. By evaluating environmental management systems, ensuring sufficient controls are in place, and putting preventative measures in place to deal with possible problems, green audits assist in identifying and mitigating these risks.

(f) Continuous Improvement: Green audits encourage a continuing commitment to sustainability rather than being one-time events. Organizations can see trends, set goals, and implement improvement initiatives by routinely evaluating and tracking environmental performance. This iterative process promotes a culture of sustainability and propels long-lasting transformation.

(g) Sustainable Development Goals (SDGs): An international framework for solving urgent environmental and social issues is provided by the Sustainable Development Goals. Organizations can better align their operations with these objectives with the aid of green audits, paving the way for a more just and sustainable future. Green audits are essential to evaluate, enhance, and confirm environmental performance. They allow companies to control risks, comply with rules, cut costs, improve reputations, and support sustainable development.

4. Methodology for Green Audit:

Audits of an organization's environmental performance and practices are known as "green," "environmental," or "sustainability" audits. They entail assessing the company's influence on the environment, resource usage, waste management, and adherence to environmental legislation. Here is a procedure for carrying out a green audit:

- (a) Planning:
- (b) Identify audit team and resources:
- (c) Develop an audit plan: Create a detailed plan outlining audit activities, timelines, responsibilities, and communication channels.
- (d) Data Collection:
- (e) Gather information:
- (f) Conduct site visits and interviews:
- (g) Review documentation:
- (h) Evaluation and Analysis:
- (i) Assess environmental impacts:
- (j) Evaluate compliance:
- (k) Identify strengths and weaknesses:
- (l) Quantify results:
- (m) Reporting:

- (n) Prepare an audit report:
- (o) Communicate results:
- (p) Follow-up and Improvement:
- (q) Develop an action plan:
- (r) Monitor progress:
- (s) Continuous improvement:

The methodology adopted to conduct the Green Audit of the Institution had the following components.

4.1. On-site Visit:

The Green Audit Team carried out the five-day field trip. The tour's main goal was to evaluate the Institution's waste management procedures, energy conservation tactics, and other aspects of its green cover. The protocols for sample collection, preservation, and analysis were followed scientifically.

4.2. Focus Group Discussion:

The nature club, staff, and management members participated in focus group discussions on various facets of the green audit. Identification of attitudes and awareness towards environmental issues at the institutional and local levels was the main topic of discussion.

4.3. Energy and waste management Survey:

The audit team evaluated the college's waste generation, disposal, and treatment facilities as well as its energy usage pattern with the assistance of teachers and students. A comprehensive questionnaire survey method was used to carry out the monitoring.

5. Target Areas of Green Auditing:

Energy Consumption:

The college's electrical and HVAC usage trends are dissected in this section. It detects energy-efficient practices and points out places to make improvements, such as through lighting retrofits, HVAC system optimisation, and the introduction of energy-saving devices.

Waste Management:

Recycling initiatives, landfill diversion rates, and other waste management practices on campus are all part of the evaluation. It proposes measures to cut down on garbage, boost recycling, and promote eco-friendly behaviour all over campus.

Water Usage:

The college's water consumption, conservation initiatives, and opportunities for water savings are all evaluated in this report. It recommends promoting water conservation through the use of water-efficient fixtures, rainwater collection, and educational programmes.

Transportation:

In this section, we take a look at how the college neighbourhood gets around. Bicycle-sharing initiatives, financial incentives for carpooling, and collaborations with public transportation providers are some of the eco-friendly commute solutions investigated.

Green Spaces and Biodiversity:

The report assesses the school's green areas, biodiversity protection initiatives, and landscaping methods. Preserving natural areas, growing native species and supporting programmes that help pollinators are all possible suggestions.

Curriculum and Awareness:

This analysis considers the ways in which sustainability and environmental studies are taught and discussed on campus. It suggests fostering environmental awareness and green initiatives across all academic fields.

Stakeholder Engagement:

Student, professor, and staff participation in sustainability initiatives is assessed in this report. It suggests ways to increase participation and diversity in environmentally friendly activities.

Future Goals and Targets:

This section establishes attainable sustainability targets for the university based on audit findings. It lays out both immediate and far-off goals for improving the organization's environmental impact.

Conclusion:

The implementation plan details the steps to be taken, who will be responsible for them, and when they will be completed in order to meet the suggested sustainability targets. Budgetary constraints, collaboration with external organisations, and methods for assessing performance are all possibilities.

Yearly Records (2018-19):

Electrical device/items	Number	Power (watt)	Usage time (hr/day)
Normal Tubelight	50	2000	10:00 am to 5:00 pm
LED Tubelight	350	7000	Do
Normal Bulb	0	0	Do
LED Bulb	0	0	Do
Ceiling Fan	130	7800	Do
Wall fan	40	2400	Do



6. Waste Management:

6.1. Recycling: Even though recycling containers could be found all throughout campus, the audit discovered that there was insufficient separation of recyclable items and inadequate information regarding products that might be recycled. Raising the recycling rate can be done in a number of ways, including by enhancing the signs, providing clear instructions, and implementing a comprehensive recycling education programme.

6.2. Composting: To appropriately dispose of organic waste produced by Hostel occupants (both boys and girls), composting facilities might be set up at the organisation. Composting not only reduces the quantity of waste sent to landfills but also produces useful compost that may be utilised for campus landscaping and gardening.

Table: Different types of waste generated in the college and their disposal

Types of waste	Particulars	Disposal method
E-Waste	Computers, electrical and electronic parts	After a while, we can offer these from a separate tank.
Plastic waste	Pen, Refill, Plastic water bottles and other plastic containers, wrappers etc	Single-use plastic bottles, jars, and bags. Encourage reusable water bottles and other containers. Establish plastic recycling containers, and after a certain time, we can sell the recyclables directly.
Solid wastes	Paper waste, Damaged furniture, paper plates, food wastes	Maintenance energy conversion reuse. College composting systems turn food waste into nutrient-rich compost for campus landscaping and community gardens. Institutions can work with local farms to collect food waste.

Chemical wastes	Laboratory waste	Water neutralises. Follow safety rules when handling hazardous waste.
Wastewater	Washing, urinals, bathrooms	Soak pits
Glass waste	Broken glass wares from the labs	Glass should be recycled separately from other recyclables in glass recycling containers. Contact local recycling centres to recycle glass properly.
Sanitary Napkin	-	Burn

7. Water Usage:

7.1. Water Fixtures: Numerous locations within the college had outdated and ineffective water fixtures, which caused excessive water use. Water resources can be saved by swapping these fixtures for low-flow models and encouraging staff and students to practice water-saving habits.

Water management table:

Water Management Tasks	Frequency	Responsible Party
Routine examination of water supplies	Monthly	Green Audit Working Team
Testing for drinking water quality	Half-yearly	Do
Awareness of water conservation	Half-yearly	Green Audit Working Team & various department
Infrastructure for water distribution that needs upkeep and repair	As needed	Caretaker
Reporting and analysis of water use	Annually	Green Audit Working Team & Caretaker
Learn what causes excessive water consumption.	As needed	Caretaker

Tabular data detailing the subject at hand:

Sl No	Parameters	Response
1	Source of water	Municipality, Underground, Pond (10889.84 sqft) Note: Only Municipality water serves as a drinking water supply for around 3,200 people, including students and staff members. Pond and ground water is used for gardening, maintenance work and cleaning of washrooms.
2	Source of Drinking Water	Municipality water
3	Any treatment for drinking water	Nil Note: Water purifiers have been installed in 1-2 numbers at all floors and are maintained for 3-4 months afterward.
4	What is the total number of motors that are used?	02 numbers
5	What is the total number of water tanks? Capacity of tank	Underground tank- 02@2000litres Top tank- 04@1000litres
6	Tap water	90 numbers
	Quantity of water pumped every day	4000 liters/per day
7	Do you waste water, and if so, why?	No
8	How much water is required for gardening purposes?	400 to 600 liters/per day
9	How many water coolers are there in total?	01
10	Do you have access to rainwater harvesting?	No
11	The number of units harvested and the total volume of water	Nil
12	Any leaky taps	None
13	Daily amount of water that is lost.	Not applicable

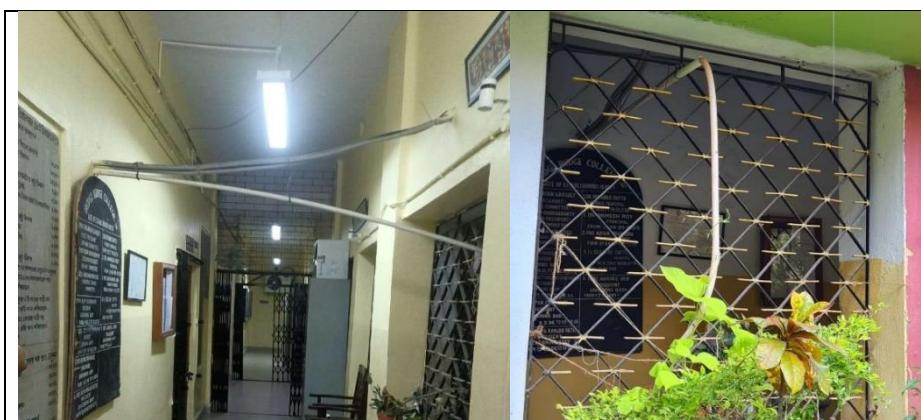
14	Is there any kind of plan for the management of water?	Promote water conservation, pollution reduction, and sustainable water management. Water rights and allocation procedures should be clear to distribute water fairly among multiple users.
15	Have any methods for conserving water been implemented?	Yes. All water taps and fixtures in the college premises are maintained and serviced regularly to stop water spillage to conserve water. Beside AC waste water used to maintain college greenery.



Water purifier used to filter drinking water



Water tank



AC waste water used to maintain college greenery

7.1.2. Public Transport: The college's carbon footprint can be significantly reduced by encouraging employees and students to use public transport. Sustainable transport solutions can be promoted by offering cheap bus passes, encouraging carpooling, and supporting bicycle infrastructure.

	Students	Employee	Total
Average numbers over 6 days in a peak session			
Bicycles are being used as modes of transportation for getting to and around the college by students, non-teaching staff and teaching staff.	Girls-100 Boys-50	01	151

7.2. Overall Environmental Awareness:

7.2.1. Curriculum Integration: The institution can integrate environmental awareness and sustainability into its curriculum across various subject areas. This strategy will guarantee that students receive instruction and training in environmental stewardship, encouraging sustainable thinking.

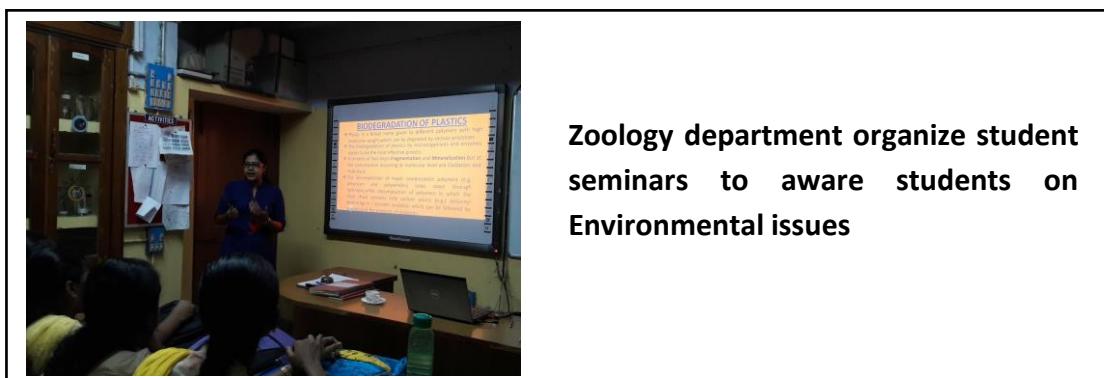
Environmental awareness across different subjects	Parameters	Program time
Language Arts	Discuss texts from literature that are in some way connected to topics concerning the environment, such as conservation or environmental advocacy. Compose poetry or essays that argue for the protection of the environment and use persuasion. Conduct research on a variety of environmental topics, then present your findings. Through various awareness programs, they understand the environmental laws and regulations that apply on the local, national, and international levels. Discuss the roles that governments, NGOs, and people play in the effort to solve environmental problems. Investigate the environmental concerns from both a historical and cultural point of view.	Whole year

Arts	Investigate the causes of climate change and possible solutions to the problem. Analyse the impact that human activities have had on different landscapes as well as the distribution of natural resources. Studies should be done on urbanization, logging, and industry's impact on the natural environment. Investigate geographical approaches to resolving environmental issues, such as environmentally responsible land management planning.	Whole year
Pure Science	Conduct studies on environmental issues, such as assessing water quality, soil analysis, power consumption or recycling. To better comprehend environmental patterns and forecasts, consider using mathematical models. Investigate the repercussions of environmental actions on the economy, such as doing cost-benefit analyses for environmentally friendly projects.	Half-yearly/ each program
Bio-Science	Study subjects include ecosystems, biodiversity, and the interconnectedness of all living things.	Whole year
Physical Education	Encourage students to develop an appreciation for the natural world by having them participate in outdoor sports and activities. Talk about the significance of physical activity for both one's own health and the health of the environment (for example, taking bike instead of the car).	Whole year
NSS	To enhance the amount of green cover and fight deforestation, organizing tree-planting events in local communities and educational institutions is important. To combat littering and to encourage a clean environment, it is important to organize routine clean-up efforts in public places like parks and beaches. To educate both students and members of the general public about environmental issues such as climate change, waste management, renewable energy, and conservation, workshops and seminars should be organized.	Whole year

	<p>It should be a priority to create opportunities for individuals to engage with the natural world and develop a sense of ownership over its preservation through participating in hikes and other outdoor activities. To raise awareness about environmental issues and motivate people to take action, you might use social media, posters, and booklets.</p>	
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Plantation Programmes organised by NSS Unit



Zoology department organize student seminars to aware students on Environmental issues



Students of zoology department participates in rally to aware people about the biodiversity and its conservation



NSS of Budge Budge College regularly organise campus cleaning programme to encourage a clean environment

7.2.2. Student Engagement: A culture of sustainability can be promoted among students by supporting student-led projects, creating environmental groups, and holding awareness events and workshops. Department of Zoology and Botany regularly organize field trips for the students which bring out the truest essence of learning directly from Mother Nature and aware them about the importance of conserving nature.

8. Green Campus:

8.1. Floral Diversity:

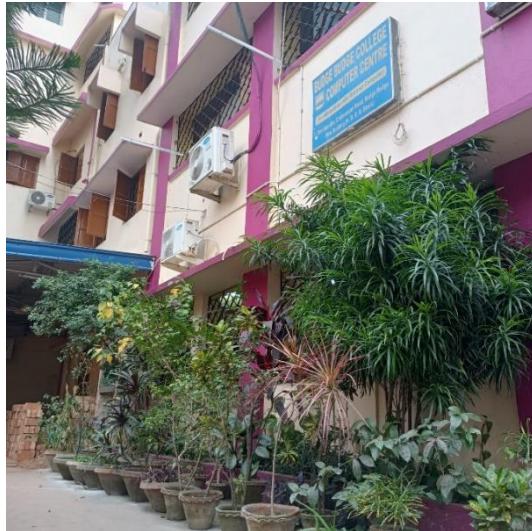
The following are some actions to take into account when setting up a plantation programme at your college:

- Organise a group of academics, employees, and students who are interested in managing the plantation programme. Assign roles and duties to make the execution go smoothly.
- Consult with local forestry professionals or environmental groups to discover native or adapted tree species that are well-suited to the climate, soil, and goal of the plantation programme. Research and choose suitable tree species.
- To obtain the necessary approvals or permits for planting trees on campus or in the neighbourhood, check with the college administration or other appropriate authorities.
- Look into possible funding options, including grants, sponsorships, or collaborations with nearby companies or environmental organizations. This will aid in defraying the price of buying trees, equipment, and other required supplies.
- Establish the plantation event's date, time, and venue. Plan the delivery of the trees, tools, and equipment to the planting location. Make sure that safety precautions are in place, including appropriate instruction on planting methods and equipment use.
- Promote the planting programme within the campus community by using various communication channels, such as posters, social media, emails, and word-of-mouth, in order to raise awareness and find volunteers. Encourage everyone to volunteer, including alumni, faculty, staff, and students.

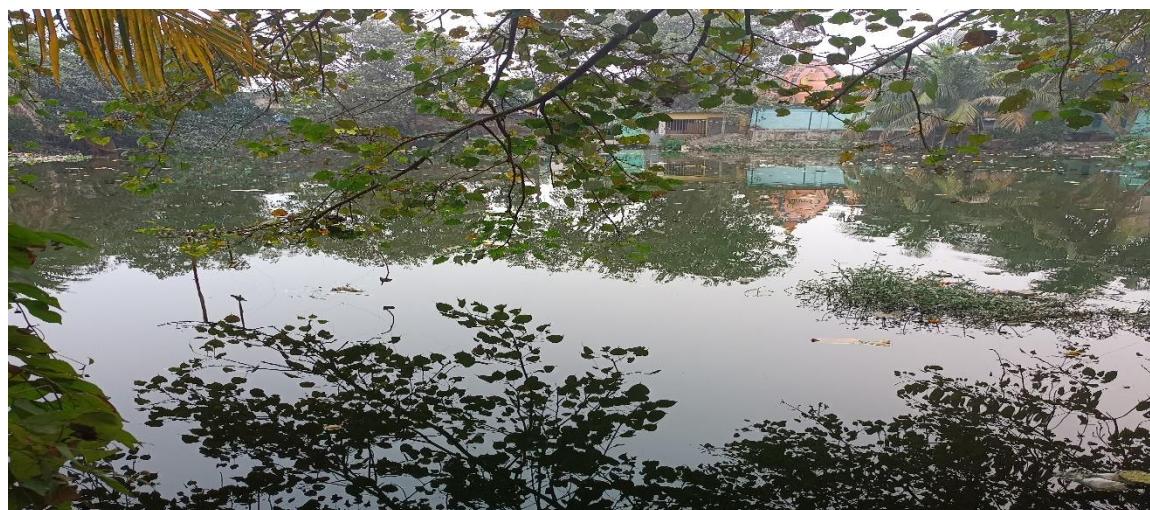
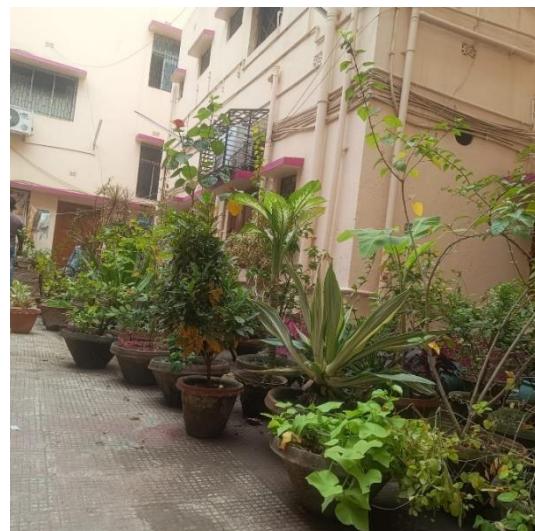
-Volunteers should be gathered at the planting site on the appointed planting day. Give them the equipment, instructions, and direction they need to plant trees correctly. Foster a sense of accomplishment and community pride while fostering teamwork.

-Stress the significance of taking care of the freshly planted trees. This could entail routine weeding, mulching, watering, and pest or disease inspection. To guarantee the long-term well-being and survival of the trees, think about setting up a system for volunteers or staff members.

-After the plantation programme, evaluate the impact and accomplishment of the effort. Keep an eye on the trees' growth and survival rate. To determine areas for improvement and to organize upcoming plantation programmes, collect participant and stakeholder input.



Floral diversity of the college



Ponds play a crucial role in the campus's ability to maintain a balanced ecological system. They serve the local environment by providing a habitat for a variety of plants and animals, assisting in the reduction of erosion, and assisting in the replenishment of groundwater supplies.



Students of Zoology Department regularly test physical parameters of the pond water to maintain and keep watch on the water quality of the pond.

8.2. Faunal Diversity:

The study of faunal diversity can help raise awareness about the issues facing the environment as well as the relevance of conservation. It is possible that educational institutions that are home to a large number of different animal species may be more likely to implement ecologically friendly policies and methods of operation in order to protect both the campus environment and the people who live there.

Birds Diversity:

A robust and flourishing ecosystem can be inferred from the presence of a large number of distinct bird species within its population. Birds of many various species play a significant role in the preservation of ecological balance by performing a variety of tasks, some of the most important of which are the spreading of seeds, the management of insect populations, and the act of pollination. They provide a contribution to the overall variety of plant and animal life that may be found on the site.

- House Crow (*Corvus splendens*) -Highest numbers in a day. Very common in the gardens
- Pigeon- *Columba livia*- Second highest numbers in a day. Very common on the college premises.
- The Indian Pond Heron (*Ardeola grayii*), is a species of heron that is very available
- White throated king fisher (*Halcyon smyrnensis*)-Common
- The Common Myna (*Acridotheres tristis*), is a species of bird that lives in college premises and is famous for its ability to imitate human speech as well as other sounds.
- Oriental Magpie Robin (*Copsychus saularis*) – Common
- House Sparrow (*Passer domesticus*) – Very common
- Spotted Dove- *Spilopelia chinensis*- Very available at our college campus
- Barn Owl (*Tyto alba*) - Very rare
- Red vented Bulbul (*Pycnonotus cafer*)- Common
- Asian Green bee-eater (*Merops orientalis*)- Common

Butterfly:

Seasonally found the following butterflies-

Peacock Pansy (*Junonia almanac*), Plain Tiger (*Danaus chrysippus*), Grey Pansy (*Junonia atlites*), Blue tiger (*Tirumala limniace*), Common Grass Yellow (*Eurema hecabe*), Common Mormon (*Papilio polytes*), Oriental Great Eggfly (*Hypolimnas bolina*), Common evening brown (*Melanitis leda*)

Plantation of Wild type Medicinal plants:

On the grounds of our college, we planted different medicinal plants. Every day, more and more wild medicinal plant kinds are becoming extinct as a direct result of human activity and pollution. Once we have determined the species of these plants, we will work to preserve them by creating medicinal garden in our college campus. A medical garden is a specific location on the grounds of an educational institution that is devoted to the growth and maintenance of a large variety of different kinds of medicinal plants. Medical gardens are often found on university campuses. Students, staff members, and researchers all have access to it as a resource for teaching and study, which makes it possible for them to investigate and learn about the many different qualities and applications that medicinal plants can have. The cultivation of a medicinal garden on a college campus has the potential to confer significant value and benefits on the surrounding academic community as well as on society.

Some important medicinal plants present in our college campus

Plant Name	Uses
<i>Terminalia arjuna</i>	It is cardiac stimulant and commonly used in cardiac diseases. Powdered bark is used to get relieve from hypertension.
<i>Azadirachta indica</i>	Neem leaf is used for leprosy, eye disorders, stomach upset, loss of appetite, skin ulcers, gum diseases and liver problem
<i>Nyctanthes arbortristis</i>	The leaves are useful in fever and rheumatism. The fresh juice of leaves is given with honey in chronic fever.

Most Floral groups of college campus are- *Ficus religiosa, Areca catechu, Terminalia arjuna, Acacia auriculiformis, Psidium guajava, Mangifera indica, Ziziphus jujuba, Nerium indicum, Hibiscus rosa-sinensis, Acacia auriculiformes, Cocos nucifera, Azadirachta indica, Thevetia peruviana, Murraya paniculata, Musa paradisiaca, Nyctanthes arbortristis, Cycas sp., Ixora coccinea, Clitoria ternatea, Jasminum sambac, Sansevieria trifasciata, Scindapsus officinalis*

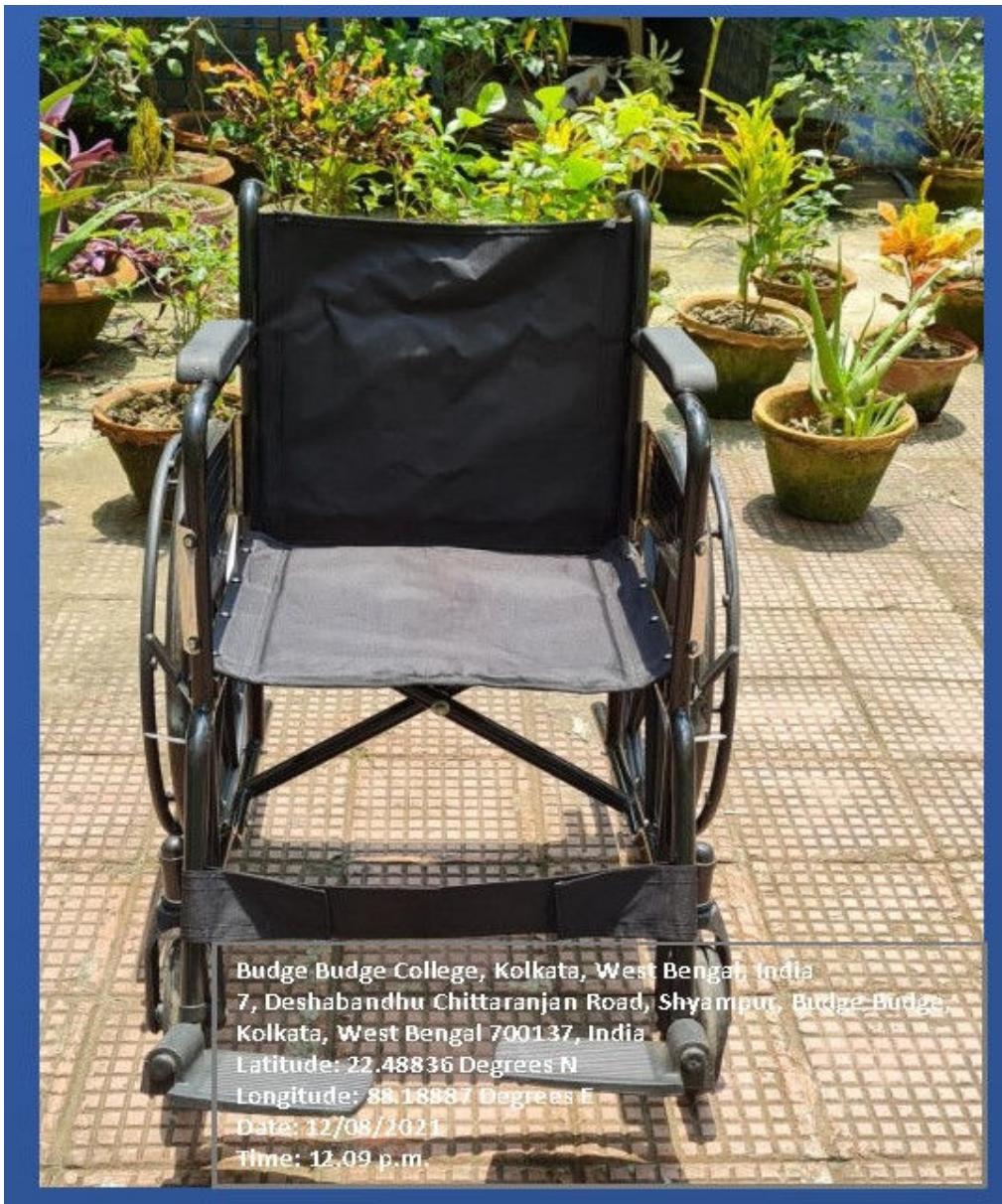
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Budge Budge College

7.1.2: The Institution has facilities and initiatives for Disabled-friendly, barrier free environment

The campus also maintains an inclusive environment by creating a Divyangjan- friendly atmosphere.

Divyangjan



Certificate of Registration

This is to Certify that
Quality Management System of

BUDGE BUDGE COLLEGE

7, DESHBANDHU CHITTARANJAN ROAD, BUDGE BUDGE, 24 PARGANAS (SOUTH), KOLKATA – 700137, WEST BENGAL, INDIA.

has been assessed and found to conform to the requirements of
ISO 9001:2015
for the following scope :

"TEACHING, LEARNING AND EVALUATION PROCESSES RELATING TO AWARDING OF BA, B.SC. & B.COM HONOURS AS WELL AS GENERAL CONSIDERING ENVIRONMENT FRIENDLY AND ENERGY EFFICIENCY MANNER IN COLLEGE GREEN CAMPUS,

IAF CODE : 37

Certificate No	24EQMI34	Issuance Date	: 16/02/2024
Initial Registration Date	: 16/02/2024	Date of Expiry	: 15/02/2027
1st Surv. Due	: 16/01/2025	2nd Surv. Due	: 16/01/2026



Director



(Scan to Verify)

Assurance Quality Certification LLC

Head Office: Sharjah Media City, SHAMS, Sharjah, UAE. e-mail: info@aqcworld.com,

Key Location: A-60, Sector - 2, Noida, Uttar Pradesh, 201301, India.

*Validity of the Certificate is subject to successful completion of surveillance audit on or before of due date. (in case surveillance audit is not allowed to be conducted, this certificate shall be suspended/withdrawn).

Certificate Verification: Please Re-check the validity of certificate at <http://www.aqcworld.com/activeclients.aspx> or www.aqcworld.com at Active Clients.

Certificate is the property of Assurance Quality Certification LLC and shall be returned immediately when demanded.

Name of the Organization	BUDGE BUDGE COLLEGE	
Address	7, Deshbandhu Chittaranjan Road, Budge Budge 24 Parganas (South), Kolkata – 700137.	
Site Address (If any)		
No. of Employees	Teaching = 41, Non-teaching = 12, House-keeping =2, Security =2, Electrician=1, Total = 58	
No. Of Shift	1	
E mail id	budgebudgecollege@gmail.com	
Contact Person	Dr. Debjani Datta	
Telephone/Fax	033 24701454, 033 24805168	
Scope	"Teaching, Learning and Evaluation processes relating to awarding of BA, B.Sc. & B.Com Honours as well as general considering Environment friendly and Energy efficiency manner in College Green Campus".	
Technical Area	Teaching, Learning and Evaluation, Capacity Building, Skill Enhancement, Institutional Social Responsibility	
Exclusions	Design and development	
Audit Team	Lead Auditor: Amalesh Kumar Mandal Auditor: Technical Expert	Audit duration Man day(s): Technical Expert
Starting date of Audit	21.06.2023	
End Date of Audit	21.06.2023	
Brief about the organization	<p>Budge Budge College was established on 10th December 1971. Initially the college was located in a different location with few classrooms. Later it was shifted to its present position. This College was lucky to have the famous writer late Narayan Ganguly as its Founder President of the Governing Body and the founder principal was late Prof. Prithwis Dutta. The college has played its role since all these years for the development of education in the suburbs of Kolkata.</p> <p>The township of Budge Budge itself has its own significance in the field of culture and freedom movement of India. The College is located in the vicinity of Budge Budge Railway Station and occupies an important position in the locality. Hence to serve the students in the larger area has been possible for the College. Day by day this College has created</p>	

	its own aura and significance in spreading education in West Bengal particularly to the middle class & lower middle class families. Students of this College come from all spheres of society. We have large numbers of female students to take care of. Most of our students are well established in their life and playing their role as good citizens.
Audit Objective	To evaluate the client's documented system, location & site-specific conditions and gather other details through discussions with the client's personnel to determine the organization's readiness for the Stage 2 Audit for Certification

CHANGE DETAIL

Audit Duration for Stage 1	
Are quoted man-days adequate?	Yes
Any change in employee detail?	None
Any Change in Scope?	None
Any additional Information:	None

ATTENDENCE SHEET:

NAME OF PERSON	DESIGNATION
Ismailekhan khan Mondal	Lead Auditor
Debjyoti das	PRINCIPAL
Sonali Sinha	Associate Professor, Commerce
Gautam Das	Associate Professor, Commerce
Diponk Mondal	Associate Professor, History
Anup Kumar Saha	Assistant Professor, Physics
Kishor Kumar	Assistant Professor, Economics
Papia Das	Assistant Professor, Zoology
Somnath Panday	Assistant Professor, Botany
Barnali Dera	SACT, ZOOLOGY
Uttariya Roy	SACT, Environmental Studies
Niyati das	SACT, Botany
Shreya Chatterjee	Assistant Professor, ENGLISH
Somerrath Dose	Electrician - acm Goutamker OFFICE
Anis Ahmed	Computer Assistant OFFICE

SUMMARY OF AUDIT

AREA OF IMPROVEMET

(Areas of Improvement Which May be Identified as Non Conformities During Stage 2 Audit)

1 Communication/Display of policy

2 Communication/Display of Objectives

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Non Conformities Raised

0 Minor/Major Nonconformance identified in the Stage 1 audit, details of Non Conformance in F50.

Please respond by using your own corrective action form and include the root cause analysis with systemic corrective action. Failure to include root cause analysis with systemic corrective action will result in your responses being rejected by Lead Auditor

Team Leader Declaration (Tick or cross Each Column as per applicability)

- Auditing is based on a sampling process of the available information
- Audit is combined, joint or integrated:
- The effectiveness of corrective actions taken regarding previously identified nonconformities has verified
- Outcomes are effective and complying.
- The internal audit and management review process are effective and complying with the requirements.
- The scope of certification is appropriate.
- The capability of the management system to meet applicable requirements and expected
- The audit objectives has been fulfilled and achieved.

RECOMMENDATION

- Recommended Proceeding With Stage 2 (within 60 days from this audit date)
- Recommend not proceeding to stage 2 until audit evidence has been submitted to AQC showing that the concerns raised by the auditor (s) have been rectified. A date for stage 2 will then be agreed.
- Recommend not proceeding without a further stage 1 Audit due to the severity of the concerns raised by the audit team

Sign Off : Date 21.06.2023

AQC Report Submission

Name of Auditor: Amalesh Kumar Mandal

Signature: *Amalesh Kumar Mandal*

Client Acceptance for Report

Name: Dr. Debjani Datta

Sign

Designation: Principal

DR. DEBJANI DATTA

M.Sc (Gold Medalist), Ph.D

Principal

Budge Budge College

7, D.B.C. Road, Kol-700137

West Bengal, India

AUDIT CHECKLIST

REQUIREMENTS	COMMENTS	Status C/NC/O
Is the Information is documented as required as per the ISO 9001:2015?	Manual and other documented information available.	C
Has the discussion held with personnel of the Client company for readiness for stage-2?	Yes	C
Has the Client site specific conditions are evaluated?	Yes	C
Has the company identified key performance, Process, Objectives and operation of Management System?	Established and implemented	C
Has the client having understanding with the ISO 9001:2015 Standard requirement?	Yes	C
Is the scope is having boundaries and specific to client organization?	Yes	C
Is client having Multisite then level of control is established.	Not applicable	C
Is process and Equipment used are adequate?	Yes	C
Has client identified Legal and Statutory Requirements applicable to Product and Organization?	Organization Approved by UGC Under 2(f) & 12(b), Affiliated to Calcutta University.	C
Is the resource are adequate for stage 2 audit?	Yes	C
Is Internal Audit planned and performed and effective?	Yes	C
Is MRM planned and performed and Effective?	Yes	C
Are Internal audits conducted as planned? Date of Last Internal Audit?	Yes/ 11.01.2023 to 12.01.2023	C
Are Management reviews conducted as planned?	Yes/ 18.01.2023	C

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Date of Last MRM?

END OF REPORT

Name of the Organization	BUDGE BUDGE COLLEGE	
Address	7, Deshbandhu Chittaranjan Road, Budge Budge 24 Parganas (South), Kolkata - 700137	
Site Address (If any)		
No. of Employees	Teaching = 41, Non-teaching = 12, House-keeping = 2, Security = 2, Electrician=1, Total = 58	
No. of Shift	1	
E-mail id	budgebudgecollege@gmail.com	
Contact Person	Dr. Debjani Datta	
Telephone/Fax	033 24701454, 033 24805168	
Scope	"Teaching, Learning and Evaluation processes relating to awarding of BA, B.Sc. & B.Com Honours as well as general considering Environment friendly and Energy efficiency manner in College Green Campus".	
Technical Area	Teaching, Learning and Evaluation, Capacity Building, Skill Enhancement, Institutional Social Responsibility	
Audit Team	Lead Auditor: Amalesh Kr. Mandal Auditor: Technical Expert	No of Mandays: 1
Starting date of Audit	12.07.2023	
End date of Audit	12.07.2023	
Brief about the organization	<p>Budge Budge College was established on 10th December' 1971. Initially the college was located in a different location with few classrooms. Later it was shifted to its present position. This College was lucky to have the famous writer late Narayan Ganguly as its Founder President of the Governing Body and the founder principal was late Prof. Prithwis Dutta. The college has played its role since all these years for the development of education in the suburbs of Kolkata.</p> <p>The township of Budge Budge itself has its own significance in the field of culture and freedom movement of India. The College is located in the vicinity of Budge Budge Railway Station and occupies an important position in the locality. Hence to serve the students in the larger area has been possible for the College. Day by day this College has created its own aura and significance in spreading education in West Bengal particularly to the middle class & lower middle class families. Students of this College come from all spheres of society. We have large numbers of female students to take care of. Most of our students are well established in their life and playing their role as good citizens.</p>	
Purpose of Audit	To verify the implementation of the Quality Management System as per the ISO 9001:2015 Standards Requirement, verification of records for the conformity of the implementation.	

CHANGE DETAIL:

Audit Duration for Stage 2	
Are quoted man-days adequate?	Yes
Any change in employee detail?	None
Any Change in Scope?	None
Any additional Information:	None

ATTENDENCE SHEET:

NAME OF PERSON	DESIGNATION
	Lead Auditor
Debjani Datta	PRINCIPAL
Landip Singh	Associate Professor, Commerce
Tarun Das	Associate Professor, Commerce
Dipom Mandal	Associate Professor, History
Anup Kumar Sahu	Assistant Professor, Physics
Kishor Kumar	Assistant Professor, Economics
Papia Das	Assistant Professor, Zoology
Samiran Panday	Assistant Professor, Botany
Barnali Bera	SACT, ZOOLOGY
Uttariya Roy	SACT, Environmental Studies
Biyali Das	SACT, Botany
Shreye Chakravarty	Assistant Professor, ENGLISH
Somenath Bose	Electrician-cum-Contractor OFFICE
Anis Ahmed	Computer Assistant OFFICE

SUMMARY OF AUDIT

AREA OF IMPROVEMENTS	
1	No such improvement points identified in current period.
2	Actual data control system observed

Non Conformities Raised

0 Minor/Major Non-conformance identified in the Stage 2 audit, details of Non Conformance in F50

Please respond by using your own corrective action form and include the root cause analysis with systemic corrective action. Failure to include root cause analysis with systemic corrective action will result in your responses being rejected by Lead Auditor

Team Leader Declaration (Tick or cross Each Column as per applicability)

- | | |
|-------------------------------------|--|
| <input checked="" type="checkbox"/> | Auditing is based on a sampling process of the available information |
| <input checked="" type="checkbox"/> | Audit is combined, joint or integrated; |
| <input checked="" type="checkbox"/> | The effectiveness of corrective actions taken regarding previously identified nonconformities has verified |
| <input checked="" type="checkbox"/> | Outcomes are effective and complying. |
| <input checked="" type="checkbox"/> | The internal audit and management review process are effective and complying with the requirements. |
| <input checked="" type="checkbox"/> | The scope of certification is appropriate. |
| <input checked="" type="checkbox"/> | The capability of the management system to meet applicable requirements and expected |
| <input checked="" type="checkbox"/> | The audit objectives has been fulfilled and achieved. |

Recommendation:

The quality system complies with the requirements of the reference standard: Congratulations, on the basis of the above summary, Lead Auditor is pleased to put forward a recommendation for Issuance of Certificate. The organization can use the AQC Mark.

The quality system complies with the requirements of the reference standard with exception of minor NC: Congratulations, Team Leader is pleased to put forward a recommendation for Issuance of the certificate of Organization upon off-site verification of closure of all minor NC within 60 days from the date of Stage 2 audit. Responses to the non-conformances should be submitted to AQC and must include supporting evidence of closure to allow for off-site verification. In responding to the non-conformances, the organization should consider the root cause of the non-conformance and the potential for related issues in other parts of system.

If all non-conformances are not closed within 60 days, a full reassessment may be required.

Evidence of major non conformities: Organization is not recommended for Issuance of Certificate and at this time. Follow-up audit will be scheduled to allow for on-site verification and closure of all issues within 60 days from the date of Stage 2.

Once all non-conformances are closed, the recommendation for Issuance of certification may recommended.

If all non-conformances are not closed within 60 days, a full reassessment may be required.

Not Recommended: Organization is not recommended for Issuance of certificate at this time. Full Stage 2 audit is required as the organisation has not implemented the system and process at pace .

Proposed Audit Date for 1st Surveillance Audit 11.07.2024 (mm/dd/yy)

Sign Off : (Date) 12.07.2023

AQC Report Submission

Name of Team Leader: Amalesh Kr. Mandal

Signature:

Client Acceptance for Report

Name: Dr. Debjani Datta

Sign

Designation: Principal

Debjani Datta

BR. DEBJANI DATTA

M.Sc. (Gold Medalist), Ph.D

Principal

Budge Budge College

7, D.B.C. Road, Kol-700137

West Bengal India

AUDIT CHECKLIST

VERIFICATION OF DOCUMENTED INFORMATION & RECORDS AS PER STD REQUIREMENT
(C- Conformity, NC-Non Conformity, O-Observation)

Clause Number	C/NC/O	Document Verification detail with statement of Conformity
4.1 understanding the organization and its context (Determination of external and Internal Issues)	C	Identified and included in Manual. (BBC /QMS/XXX/QMM/001)
4.2 Understanding the needs and expectations of interested parties (Determination, Monitor & Review of the Interested Parties)	C	Identified and included in Manual. (BBC /QMS/XXX/QMM/001)
4.3 Determining the scope of the quality management system (Boundaries and Type of Product and Services and any requirement not applicable)	C	Scope established and included in Manual. (Under 4.3, Page. No.13)
4.4 Quality management system and its processes (Established, Implement and maintained, process and Interaction of Process)	C	Process Flow found established.
5.1.1 Leadership & Commitment (Statement of ensurity)	C	Interviewed with Top Management. Respective project files found available.
5.1.2 Customer focus (statement of conformity)	C	Interviewed with Top Management. Their course delivery as per plan and guideline.
5.2 Quality policy (Establish, Implement, Maintain, communicated and understood)	C	Quality Policy established (Under clause no. 5.2.1 in Quality manual, page no. 15)
5.3 Organizational roles, responsibilities and authorities	C	Defined in Manual
6.0 Planning	C	
6.1 Actions to address risks and opportunities (Risk Assessment has done with prevention of undesirable effects)	C	Risk Register found maintain. (BBC /QMS/FRM/03). Initially they have identified 3 nos Quality related risk and probable action plan has taken. Review status will be checked in next Surveillance Audit.
6.2 Quality objectives and planning to achieve them (Documented, Measurable, Monitored and communicated)	C	Quality Objectives found established and planned to achieve action (MAP)- Doc. Ref. no. BBC/QMS/FRM/001
6.3 Planning of changes (As per 4.4) and Purpose, resource availability and allocation	C	Found available, as per committee decision and minutes.

7.1 Resources (Need of External resources, People, Infrastructure, Environment, Calibration records, Organizational Knowledge)	C	Green monitoring: Their Own monitoring data report in the form of "Green Audit" found maintained in every assessment year wise. Monitoring done against respective parameters.
7.2 Competence (Employee records & Competence skill matrix)	C	Related training records found available
7.3 Awareness (Quality Policy, Objectives & Effectiveness of QMS)	C	Done through training and display.
7.4 Communication (what, who, when, whom, how)	C	Done through display, mail, meeting minutes.
7.5 Documented information (External Origin, Creation, Updation, Distribution, Preservation, version control, Retention and disposition)	C	Control of documented information procedure established.
8.1 Operational planning and control (Plan, Implement and control of process, documented information for process carried out as planned and Conformity of product or services)	C	Operational procedures established supported with work instructions and related records.
8.2.1 Customer communication (Enquiries, Contract, order, feedback, complaints)	C	Feedback and complaint register available
8.2.2 Determining of Requirements for products and services (Objective evidence for record of contract review and approval, Record verification of Statutory & Regulatory shall be referred here, record for communication of changes, legal requirements need to be re-verified if any concerns identified in Stage 1 audit or any new product added)	C	Budge Budge College was established on 10th December' 1971. Initially the college was located in a different location with few classrooms. Later it was shifted to its present position. Organization Approved by UGC Under 2(f) & 12(b), Affiliated to Calcutta University.
8.2.3 Review of the requirements for products and services (Documented Information for Result of review and any new requirements for product or services)	C	Review methodology available.
8.2.4 Changes to requirements for products and services (the changed documents is aware and approved by relevant person)	C	Maintain
8.3 Design and Development (D&D)	C	Not Applicable
8.3.1 General Establish, Maintain and Implement the D&D Process	C	Not Applicable

8.3.2 D&D Planning (Record reference) 7.3.3 D&D Inputs (Record reference for the inputs) 8.3.4 D&D Controls (Record reference & Approval) 8.3.5 D&D Outputs (Record reference for outputs) 8.3.6 D&D Changes (Record reference for changes, approved, validated & verified before implementation & actions as necessary)	C	Not Applicable
8.4.1 Control of externally provided processes, products and services (documented Information for criteria for the evaluation, selection, monitoring of performance and re-evaluation)	C	Tendering process, Vendor enrolment and evaluation records found available.
8.4.2 Type and extent of control (Control Verification)	C	Evaluation records found available.
8.4.3 Information for external providers (Competence and qualification of external provider)	C	Available with user departments
8.5.1 Control of production and service provision (Records verified work instructions for the processing including delivery and post-delivery activities, characteristic of product, equipments use and availability for monitoring and measurement)	C	Work instructions/Specifications found available followed by relevant records.
8.5.2 Identification and Traceability (Records verified for identification batch no or serial no in process as well as final result)	C	Traceability maintained through online.
8.5.3 Property belonging to customers or external providers (Documented Information of Lost or damaged property)	C	Not applicable
8.5.4 Preservation of output (objective evidence for meeting the defined storage conditions for handling, packaging, storage and protection)	C	Maintained in Laboratory materials
8.5.5 Post-delivery activities (Result outcome)	C	Maintained.
8.5.6 Control of changes (Documented Information change review result, person who is authorized to changes)	C	Change control format found available.
8.6 Release of final outcome services (Planned Arrangement documented information for acceptance criteria and authorized person traceability)	C	Maintained through online

8.7 Control of nonconforming outputs (Documented Information for Non conformity, action taken, concession, authority deciding action)	C	Methods/Action plan found available
9.1.1 Monitoring, Measurement analysis and evaluation	C	Monitoring done against set criteria.
9.1.2 Customer Satisfaction (Analysis of Customer Satisfaction)	C	Customer satisfaction analysis process found available
9.1.3 Analysis and Evaluation	C	Done
9.2 Internal Audit (Frequency and Documented Information for Implementation of Audit Program and the audit result)	C	Yearly frequency and Internal Audit plan/records found available (11.01.2023 to 12.01.2023)
9.3 Management Review (Frequency, Input, Output, Documented Information for MRM Results)	C	MRM agenda and minutes found available. (Last done on 18.01.2023)
10.1 Improvement – General	C	Done and included in MRM
10.2 Nonconformity and Corrective action (Documented Information for nature of NC and result of action taken)	C	Procedure established.
10.3 Continual improvement	C	Objective and monitoring data found available.

END OF REPORT

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AQC

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Certificat
Initial Re
Date of E
1st Surv.

Certificate of Registration

*This is to Certify that
Environmental Management System of*

BUDGE BUDGE COLLEGE

7, DESHBANDHU CHITTARANJAN ROAD, BUDGE BUDGE, 24 PARGANAS
(SOUTH), KOLKATA – 700137, WEST BENGAL, INDIA.

has been assessed and found to conform to the requirements of
ISO 14001:2015
for the following scope :

"TEACHING, LEARNING AND EVALUATION PROCESSES RELATING TO AWARDING OF BA, B.SC. & B.COM HONOURS AS WELL AS GENERAL CONSIDERING ENVIRONMENT FRIENDLY AND ENERGY EFFICIENCY MANNER IN COLLEGE GREEN CAMPUS,

IAF CODE : 37

Certificate No

Initial Registration Date

Date of Expiry

1st Surv. Due

: 24EEMK29

: 16/02/2024

: 15/02/2027

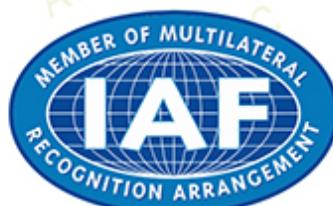
: 16/01/2025

Issuance Date : 16/02/2024

2nd Surv. Due : 16/01/2026

J. Park
AQC

Director



(Scan to Verify)

Assurance Quality Certification LLC

Head Office: Sharjah Media City, SHAMS, Sharjah, UAE. e-mail: info@gacworld.com.

Key Location: A-60, Sector - 2, Noida, Uttar Pradesh, 201301, India.

*Validity of the Certificate is subject to successful completion of surveillance audit on or before of due date. (in case surveillance audit is not allowed to be conducted, this certificate shall be suspended/treated as void)

Certificate Verification: Please Re-check the validity of certificate at <https://www.easycertificates.com> or www.easycert.com as Active Clients connected, this certificate shall be suspended/withdrawn.

Certificate verification: Please re-check the validity of certificate at <http://www.apcwORLD.com/activeclients.aspx>

AQC GLOBAL LLC**ISO 14001:2015****Stage 1 Environment Audit Report**

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Name of the Organization	BUDGE BUDGE COLLEGE	
Address	7, Deshbandhu Chittaranjan Road, Budge Budge 24 Parganas (South), Kolkata - 700137	
Site Address (If any)		
No. of Employees	Teaching = 41, Non-teaching = 12, House-keeping = 2, Security = 2, Electrician=1, Total = 58	
E-mail id	budgebudgecollege@gmail.com	
Contact Person	Dr. Debjani Datta	
Telephone/Fax	033 24701454, 033 24805168	
Scope	"Teaching, Learning and Evaluation processes relating to awarding of BA, B.Sc. & B.Com Honours as well as general considering Environment friendly and Energy efficiency manner in College Green Campus".	
Technical Area	Teaching, Learning and Evaluation, Capacity Building, Skill Enhancement, Institutional Social Responsibility	
Exclusions	None	
Audit Team	Lead Auditor: Amalesh Kr. Mandal Auditor: Technical Expert:	Audit duration Man day(s):
Start date of Audit	21.06.2023	
End Date of Audit	21.06.2023	
Brief about the organization	<p>Budge Budge College was established on 10th December' 1971. Initially the college was located in a different location with few classrooms. Later it was shifted to its present position. This College was lucky to have the famous writer late Narayan Ganguly as its Founder President of the Governing Body and the founder principal was late Prof. Prithwis Dutta. The college has played its role since all these years for the development of education in the suburbs of Kolkata. The township of Budge Budge itself has its own significance in the field of culture and freedom movement of India. The College is located in the vicinity of Budge Budge Railway Station and occupies an important position in the locality. Hence to serve the students in the larger area has been possible for the College. Day by day this College has created its own aura and significance in spreading education in West Bengal particularly to the middle class & lower middle class families. Students of this College come from all spheres of society. We have large numbers of female students to take care of. Most of our students are</p>	

AQC GLOBAL LLC**ISO 14001:2015****Stage 1 Environment Audit Report**F15 Issue
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CHANGE DETAIL

Audit Duration for Stage 1	
Are quoted man-days adequate?	Yes
Any change in employee detail?	None
Any Change in Scope?	None
Any additional Information:	None

AQC GLOBAL LLC

ISO 14001:2015

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ATTENDENCE SHEET:

NAME OF PERSON	DESIGNATION
Amalika Das Mondal	Lead auditor
Debjani Datta	PRINCIPAL
Landip Singh	Associate Professor, Commerce
Gautam Das	Associate Professor, Commerce
Dipankar Mandal	Associate Professor, History
Anup Kumar Sahoo	Assistant Professor, Physics
Kishore Nath Ray	Assistant Professor, Economics
Papia Das	Assistant Professor, Zoology
Sanniranjan Panday	Assistant Professor, Botany
Barnali Bhattacharya	SACT, ZOOLOGY
Uttariyo Roy	SACT, Environmental Studies
Piyali Das	SACT, Botany
Shreya Chakraborty	Assistant Professor, ENGLISH
Somenath Bera	Electrician cum Painter OFFICE
Aris Ahmed	Computer Assistant, OFFICE

SUMMARY OF AUDIT**AREA OF IMPROVEMNET**

(Areas Of Improvement Which May Be Identified As Non Conformities During Stage 2 Audit)

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2	Communication/Display of Objectives

AQC GLOBAL LLC

ISO 14001:2015

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Non Conformities Raised

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<input checked="" type="checkbox"/>	The effectiveness of corrective actions taken regarding previously identified
<input checked="" type="checkbox"/>	nonconformities has verified
<input checked="" type="checkbox"/>	Outcomes are effective and complying.
<input checked="" type="checkbox"/>	The internal audit and management review process are effective and complying with the requirements.
<input checked="" type="checkbox"/>	The scope of certification is appropriate.
<input checked="" type="checkbox"/>	The capability of the management system to meet applicable requirements and expected
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<input checked="" type="checkbox"/>	Recommended Proceeding With Stage 2 (within 60 days from this audit date)
<input checked="" type="checkbox"/>	Recommend not proceeding to stage 2 until audit evidence has been submitted to AQC showing that the concerns raised by the auditor (s) have been rectified. A date for stage 2 will then be agreed.
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Sign Off: Date 21.06.2023

AQC Report Submission

Name of Auditor: Amalesh Kumar Mandal
Signature: *Amalesh Kumar Mandal*

Client Acceptance for Report

Name: Dr. Debjani Datta

Signature:

Designation: Principal

DR. DEBJANI DATTA

M.Sc (Gold Medalist), Ph.D

Principal

Budge Budge College

7, D.B.C. Road, Kol-700137

West Bengal, India

AQC GLOBAL LLC

ISO 14001:2015

Stage 1 Environment Audit Report

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AUDIT CHECKLIST

REQUIREMENTS	COMMENTS	Status C/NC/O
Is the Information is documented as required as per the ISO 14001:2015?	Manual (EMS/001 dtd. 02.04.2022) and other documented information available.	C
Has the discussion held with personnel of the Client company for readiness for stage-2?	Yes. Within this month the Stage-2 need to be completed.	C
Are Process and support processes identified and determined?	Yes	C
Has the Client site specific conditions are evaluated?	Established and implemented	C
Has the company identified key performance, Process, Objectives, Impact and Aspect analysis and operation of Management System?	Yes. Environment related objectives and programs are found set and Environmental aspect/impact analysis found established.	C
Has the client having understanding with the ISO 14001:2015 Standard requirement?	Yes. They have hired external consultant for that too. Awareness done.	C
Is the scope is having boundaries and specific to client organization?	Yes	C
Is client having Multisite then level of control is established.	Not applicable	C
Is process and Equipment used are adequate?	Yes	C
Has client identified Legal and Statutory Requirements applicable to Product and Organization?	Budge Budge College was established on 10th December' 1971. Initially the college was located in a different location with few classrooms. Later it was shifted to its present position. Organization Approved by UGC Under 2(f) & 12(b). Affiliated to Calcutta	C

AQC GLOBAL LLC

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Stage 1 Environment Audit Report

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	University.	
Is the resource are adequate for stage 2 audit?	Yes	C
Is Internal Audit planned and performed and effective?	Last done on 11.03.2023 covering ISO 14001:2015 standards.	C
Is MRM planned and performed and Effective?	Yes last done on 23.03.2023, minutes are available.	C

END OF REPORT

Name of the Organization	BUDGE BUDGE COLLEGE	
Address	7, Deshbandhu Chittaranjan Road, Budge Budge 24 Parganas (South), Kolkata - 700137	
Site Address (If any)		
No. of Employees	Teaching = 54, Non-teaching = 8, House-keeping = 2, Security = 1, Electrician=1, Total = 66	
NO. of Shift	1	
E mail id	budgebudgecollege@gmail.com	
Contact Person	Dr. Debjani Datta	
Telephone/Fax	033 24701454, 033 24805168	
Scope	"Teaching, Learning and Evaluation processes relating to awarding of BA, B.Sc. & B.Com Honours as well as general considering Environment friendly and Energy efficiency manner in College Green Campus".	
Technical Area	Teaching, Learning and Evaluation, Capacity Building, Skill Enhancement, Institutional Social Responsibility	
Exclusion	None	
Audit Team	Lead Auditor: Amalesh Kumar Mandal Auditor: Technical Expert:	No of Mandays : 1
Starting Date of Audit	12.07.2023	
End Date of Audit	12.07.2023	
Brief about the organization	<p>Budge Budge College was established on 10th December' 1971. Initially the college was located in a different location with few classrooms. Later it was shifted to its present position. This College was lucky to have the famous writer late Narayan Ganguly as its Founder President of the Governing Body and the founder principal was late Prof. Prithwis Dutta. The college has played its role since all these years for the development of education in the suburbs of Kolkata.</p> <p>The township of Budge Budge itself has its own significance in the field of culture and freedom movement of India. The College is located in the vicinity of Budge Budge Railway Station and occupies an important position in the locality. Hence to serve the students in the larger area has been possible for the College. Day by day this College has created its own aura and significance in spreading education in West Bengal particularly to the middle class & lower middle class families. Students of this College come from all spheres of society. We have large numbers of female students to take care of. Most of our students are well established in their life and playing their role as good citizens.</p>	

Purpose of Audit

To verify the implementation of the Environmental Management System as per the Standards Requirement, verification of records for the conformity of the implementation.

CHANGE DETAIL:**Audit Duration for Stage 2**

Are quoted man-days adequate?	Yes
Any change in employee detail?	None
Any Change in Scope?	None
Any additional Information:	None

ATTENDENCE SHEET:

NAME OF PERSON	DESIGNATION
Dipak Mandal	Lead Auditor
Satyajit Saha	PRINCIPAL
Landip Singh	Associate Professor, Commerce
Gautam Das	Associate Professor, Commerce
Dipak Mandal	Associate Professor, History
Anup Kumar Sahoo	Assistant Professor, Physics
Kishor Narayan	Assistant Professor, Economics
Papia Das	Assistant Professor, Zoology
Samiran Panday	Assistant Professor, Botany
Barnali Baruah	SACT, ZOOLOGY
Uttoriya Roy	SACT, Environmental Studies
Prayali Das	SACT, Botany
Shreya Chakraborty	Assistant Professor, ENGLISH
Somenath Dose	Electrician -com-Caretaker - OFFICE
Amin Ahmed	Computer Assistant, OFFICE

SUMMARY OF AUDIT

AREA OF IMPROVEMENTS

1	No such improvement points identified in current period.

Non Conformities Raised

0 Minor/Major Non-conformance identified in the Stage 2 audit, details of Non Conformance in F50

Please respond by using your own corrective action form and include the root cause analysis with systemic corrective action. Failure to include root cause analysis with systemic corrective action will result in your responses being rejected by Lead Auditor

Team Leader Declaration (Tick or cross Each Column as per applicability)

<input checked="" type="checkbox"/>	Auditing is based on a sampling process of the available information
<input checked="" type="checkbox"/>	Audit is combined, joint or integrated;
<input checked="" type="checkbox"/>	The effectiveness of corrective actions taken regarding previously identified nonconformities has verified
<input checked="" type="checkbox"/>	Outcomes are effective and complying.
<input checked="" type="checkbox"/>	The internal audit and management review process are effective and complying with the requirements.
<input checked="" type="checkbox"/>	The scope of certification is appropriate.
<input checked="" type="checkbox"/>	The capability of the management system to meet applicable requirements and expected
<input checked="" type="checkbox"/>	The audit objectives has been fulfilled and achieved.

Recommendation:

<input checked="" type="checkbox"/>	The EMS complies with the requirements of the reference standard: Congratulations, on the basis of the above summary, Lead Auditor is pleased to put forward a recommendation for Issuance of Certificate. The organization can use the AQC Mark
<input checked="" type="checkbox"/>	The EMS complies with the requirements of the reference standard with exception of minor NC: Congratulations, Team Leader is pleased to put forward a recommendation for Issuance of the certificate of Organization upon off-site verification of closure of all minor NC within 60 days from the date of Stage 2 audit. Responses to the non-conformances should be submitted to AQC and must include supporting evidence of closure to allow for off-site verification. In responding to the non-conformances, the organization should consider the root cause of the non-conformance and the potential for related issues in other parts of system. If all non-conformances are not closed within 60 days, a full reassessment may be required.
<input checked="" type="checkbox"/>	Evidence of major non conformities: Organization is not recommended for Issuance of Certificate and at this time. Follow-up audit will be scheduled to allow for on-site verification and closure of all issues within 60 days from the date of Stage 2. Once all non-conformances are closed, the recommendation for Issuance of certification may be recommended. If all non-conformances are not closed within 60 days, a full reassessment may be required.
<input checked="" type="checkbox"/>	Not Recommended: Organization is not recommended for Issuance of certificate at this time. Full Stage 2 audit is required as the organisation has not implemented the system and process at pace. .
	<i>Proposed Audit Date for 1st Surveillance Audit 11.07.2024 (mm/dd/yy)</i>

Sign Off : (Date) 12.07.2023

AQC Report Submission

Name of Team Leader: Amalesh Kr. Mandal

Signature: 

Client Acceptance for Report

Name: Dr. Debjani Datta

Sign

Designation: Principal

DR. DEBJANI DATTA

M.Sc (Gold Medalist), Ph.D

Principal

Budge Budge College

7, D.B.C. Road, Kol-700137

West Bengal, India

AUDIT CHECKLIST
VERIFICATION OF DOCUMENTED INFORMATION & RECORDS AS PER STD REQUIREMENT
(C- Conformity, NC-Non Conformity, O-Observation)

Clause Number	C/NC/O	Document Verification detail with statement of Conformity
4.1 Understanding the organization and its context (Determination of external and Internal Issues)	C	Identified and included in Manual (Doc. Ref. No. EMS/001, Dtd. 02.04.2022)
4.2 Understanding the needs and expectations of interested parties (Determination, Monitor & Review of the Interested Parties)	C	Identified and included in Manual (Doc. Ref. No. EMS/001, Dtd. 02.04.2022)
4.3 Determine and maintained Documented Information the scope of the Environmental management system (Boundaries and Type of Product and Services and any requirement not applicable)	C	Scope established and included in Manual (Doc. Ref. No. EMS/001, Dtd. 02.04.2022), Section No. - EMS/11 Page. No. 12
4.4 Environmental management system and its processes (Established, Implement and maintained, process and Interaction of Process)	C	Process Flow found established. College operation predefined as per government norms.
5.1 Leadership & Commitment (Statement of ensurity)	C	Interviewed with Top Management (Principal) regarding Environment management system. Several Project has initiated and monitored as per plan.
5.2 Environmental policy (Documented Information, Establish, Implement, Maintain, communicated and understood)	C	Environmental Policy established (Section No. - EMS/15, Page no 16)
5.3 Organizational roles, responsibilities and authorities	C	Defined in Manual as per Governmental norms.
6.0 Planning		
6.1.1 Actions to address risks and opportunities (Risk Assessment has done with prevention of undesirable effects)	C	Risk Register found maintain and accordingly project taken. Initially they have identified 4 nos environment risk related to different environmental issues. Action plan established.
6.1.2 Determination and maintained documented information of Environmental Aspect, associated impacts Criteria Used and significant aspects and, of the activity and Environmental Impacts	C	Aspect/Impact Register found maintain. (DOC. NO: BBC/ASPECT/01). Initially they have identified 3 nos environment aspect to impact analysis with proper action plan.
6.1.3 Determination of the Compliances Obligation and maintained documented information how to comply.	C	Compliance register found available and complied as per accreditation and others norms. Budge Budge College was established on 10th December' 1971. Initially the college was located in a

			different location with few classrooms. Later it was shifted to its present position. Organization Approved by UGC Under 2(f) & 12(b), Affiliated to Calcutta University.
6.1.4 Planning action for Environmental aspect, Compliance Obligation and Risk and Opportunities.	C	Planning records found available (In the form of projects)	
6.2 Environmental objectives and planning to achieve them (Documented, Measurable, Monitored and communicated)	C	Environmental Objectives found established and planned to achieve action (MAP)- Doc. No. ENV/OBJ. 3 nos environment related KPI taken and related action plan initiated with Green Projects.	
7.1 Resources (Resource needed for Continual Improvement)	C	Found available	
7.2 Competence (Employee records & Competence skill matrix)	C	Related training records found available	
7.3 Awareness (Environmental Policy, Objectives & Effectiveness of EMS)	C	Done through training	
7.4 Communication (what, who, when, whom, how with retained documented information)	C	Done	
7.5 Documented information (External Origin, Creation, Updation, Distribution, Preservation, version control, Retention and disposition)	C	Document control done	
8.1 Operational planning and control (Plan, Implement and control of process, documented information for process carried out as planned and Conformity of product or services)	C	Operational procedures established supported with work instructions and related records.	
8.2 Emergency Prepared and Responses (Mitigation of Adverse Environmental Impact, Respond to Emergency situation, Periodically review and Training of the Emergency)	C	EPRP document and mock drill training given. There are no such exposure of emergency as per their work nature and campus conditions.	
9.1.1 Monitoring, Measurement analysis and evaluation	C	Environment monitoring: Their Own monitoring data report in the form of "Green Audit" found maintained in every assessment year wise. Monitoring done against respective parameters.	
9.1.2 Evaluation Of Compliances Documented (Frequency and Action on Evaluation)	C	Compliance register found available. The college is currently accredited with U.G.C. act 1956. Under section 2(f) and 12B.	
9.2 Internal Audit (Frequency and Documented Information for Implementation of Audit Program and the audit result)	C	Yearly frequency and Internal Audit plan/records found available. Last done (11.01.2023 to 12.01.2023)	

9.3 Management Review (Frequency, Input, Output, Documented Information for MRM Results)	C	MRM agenda and minutes found available. Last done 18.01.2023.
10.1 Improvement – General	C	Done and included in MRM
10.2 Nonconformity and corrective action (Documented Information for nature of NC and result of action taken)	C	Procedure established.
10.3 Continual improvement	C	Objective and monitoring data found available.—

END OF REPORT

AQC GLOBAL LLC

ISO 50001:2018

Stage 1 Energy Audit Report

F19EN18

Issue 01

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Name of the Organization	BUDGE BUDGE COLLEGE		
Address	7, Deshbandhu Chittaranjan Road, Budge Budge 24 Parganas (South), Kolkata - 700137		
Site Address (If any)			
No. of Employees	Teaching = 41, Non-teaching = 12, House-keeping = 2, Security = 2, Electrician=1, Total = 58		
No. Of Shift	1		
E mail id	budgebudgecollege@gmail.com		
Contact Person	Dr. Debjani Datta		
Telephone/Fax	033 24701454, 033 24805168		
Scope	"Teaching, Learning and Evaluation processes relating to awarding of BA, B.Sc. & B.Com Honours as well as general considering Environment friendly and Energy efficiency manner in College Green Campus".		
Technical Area	Teaching, Learning and Evaluation, Capacity Building, Skill Enhancement, Institutional Social Responsibility		
Audit Team	Lead Auditor: Amalesh Kr. Mandal Auditor: Technical Expert	Audit duration Man day(s): Technical Expert	
Starting date of Audit	21.06.2023		
End Date of Audit	21.06.2023		
Brief about the organization	<p>Budge Budge College was established on 10th December' 1971. Initially the college was located in a different location with few classrooms. Later it was shifted to its present position. This College was lucky to have the famous writer late Narayan Ganguly as its Founder President of the Governing Body and the founder principal was late Prof. Prithwis Dutta. The college has played its role since all these years for the development of education in the suburbs of Kolkata.</p> <p>The township of Budge Budge itself has its own significance in the field of culture and freedom movement of India. The College is located in the vicinity of Budge Budge Railway Station and occupies an important position in the locality. Hence to serve the students in the larger area has been possible for the College. Day by day this College has created its own aura and significance in spreading education in West Bengal particularly to the middle class & lower middle class families. Students of this College come from all spheres of society. We have large numbers of female students to take care of. Most of our students are well established in their life</p>		

AQC GLOBAL LLC

ISO 50001:2018

Stage 1 Energy Audit Report

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	and playing their role as good citizens.
Audit Objective	To evaluate the client's documented system, location & site-specific conditions and gather other details through discussions with the client's personnel to determine the organization's readiness for the Stage 2 Audit for Certification

CHANGE DETAIL

Audit Duration for Stage 1	
Are quoted man-days adequate?	Yes
Any change in employee detail?	None
Any Change in Scope?	None
Any additional Information:	None

ATTENDENCE SHEET:

NAME OF PERSON	DESIGNATION
<i>Dipak Mandal</i>	Lead Auditor
<i>Debjit Dasgupta</i>	PRINCIPAL
<i>Sandip Singh</i>	Associate Professor, Commerce
<i>Kavita De</i>	Associate Professor, Commerce
<i>Dipak Mandal</i>	Associate Professor, History
<i>Anup Kumar Sahu</i>	Assistant Professor, Physics
<i>Kishore Nathar</i>	Assistant Professor, Economics
<i>Papia Das</i>	Assistant Professor, Zoology
<i>Samaran Lamday</i>	Assistant Professor, Botany
<i>Barnali Debn</i>	SACT, ZOOLOGY
<i>Uttoriya Roy</i>	SACT, Environmental Studies
<i>Biyali Debn</i>	SACT, Botany
<i>Shreya Chakraborty</i>	Assistant Professor, ENGLISH
<i>Sonowal Debe</i>	Electrician-aem-Caretaker OFFICE
<i>Shris Ahmed</i>	Computer Assistant OFFICE

SUMMARY OF AUDIT

AREA OF IMPROVEMET

(Areas of Improvement Which May be Identified as Non Conformities During Stage 2 Audit)

1	Communication/Display of policy
2	Communication/Display of Objectives

AQC GLOBAL LLC

ISO 50001:2018

Stage 1 Energy Audit Report

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Non Conformities Raised

0 Minor/Major Nonconformance identified in the Stage 1 audit, details of Non Conformance in F50.

Please respond by using your own corrective action form and include the root cause analysis with systemic corrective action. Failure to include root cause analysis with systemic corrective action will result in your responses being rejected by Lead Auditor

Team Leader Declaration (Tick or cross Each Column as per applicability)

- Auditing is based on a sampling process of the available information
- Audit is combined, joint or integrated;
- The effectiveness of corrective actions taken regarding previously identified nonconformities has verified
- Outcomes are effective and complying.
- The internal audit and management review process are effective and complying with the requirements.
- The scope of certification is appropriate.
- The capability of the management system to meet applicable requirements and expected
- The audit objectives has been fulfilled and achieved.

RECOMMENDATION

- Recommended Proceeding With Stage 2 (within 60 days from this audit date)
- Recommend not proceeding to stage 2 until audit evidence has been submitted to AQC showing that the concerns raised by the auditor (s) have been rectified. A date for stage 2 will then be agreed.
- Recommend not proceeding without a further stage 1 Audit due to the severity of the concerns raised by the audit team

Sign Off : Date 21.06.2023

AQC Report Submission

Name of Auditor: Amalesh Kr. Mandal
Signature: *Amalesh Kumar Mandal*

Client Acceptance for Report

Name: Dr. Debjani Datta

Sign

Designation: Principal

DR DEBJANI DATTA

M.Sc. (Gold Medalist), Ph.D

Principal

Budge Budge College

7, D.B.C. Road, Kol-700137

West Bengal, India

AUDIT CHECKLIST

REQUIREMENTS	COMMENTS	Status C/NC/O
Is the Information is documented as required as per the ISO 50001:2018?	Manual and other documented information available. (Doc. Ref. No. ENMS/L1, dtd. 02.04.2022)	C
Has the discussion held with personnel of the Client company for readiness for stage-2?	Yes	C
Has the Client site specific conditions are evaluated?	Established, implemented and the Scope has set as per Site specific. (Under clause 4.3 of ENMS/L1 Manual)	C
Has the company identified energy performance indicator, Energy baseline, Energy objectives, energy targets and energy management action plans?	Respective Energy project found taken by Authority. Like "Efficient use of Energy Resources"	C
Has the client having understanding with the ISO 50001:2018 Standard requirement?	Yes. Awareness training has conducted by external consultant.	C
Is the scope is having boundaries and specific to client organization?	Yes scope found suitable as per client specific.	C
Is client having Multisite then level of control is established.	Not applicable	C
Is organization analyze energy used and consumption based on measurement and other data: (Identify current energy sources/evaluate past and present energy use and consumption?)	Measurement done on Bill monitoring, list of energy sources are available, significant energy sources identified.	C
Based on the analysis of energy used and consumption, Is organization identify the areas of significant energy use.(identify the facilities, equipment, systems, processes and personnel working for, or on behalf of, the organization that significantly affect energy use and consumption?)	List of energy sources are available, significant energy sources identified. Energy program found established.	C
Has organisation identified EnPIs (energy performance indicators) appropriate for monitoring and measuring your energy performance?	Energy baseline declared as last year consumption. EnPI set in the form of Energy Projects.	C

Has organisation identified, implemented and have access to the applicable legal requirements and other requirements to which organisation subscribes related to energy use, consumption and efficiency?	Budge Budge College was established on 10th December' 1971. Initially the college was located in a different location with few classrooms. Later it was shifted to its present position. Organization Approved by UGC Under 2(f) & 12(b), Affiliated to Calcutta University.	C
Is the resource are adequate for stage 2 audit?	Yes	C
Is Internal Audit planned and performed and effective?	Last Internal scheduled on 04.03.2023	C
Is MRM planned and performed and Effective?	Last MRM held on 15.03.2023	C

END OF REPORT

Certificate of Registration

This is to Certify that
Energy Management System of

BUDGE BUDGE COLLEGE

7, DESHBANDHU CHITTARANJAN ROAD, BUDGE BUDGE, 24 PARGANAS (SOUTH), KOLKATA – 700137, WEST BENGAL, INDIA.

has been assessed and found to conform to the requirements of
ISO 50001:2018
for the following scope :

"TEACHING, LEARNING AND EVALUATION PROCESSES RELATING TO AWARDING OF BA, B.SC. & B.COM HONOURS AS WELL AS GENERAL CONSIDERING ENVIRONMENT FRIENDLY AND ENERGY EFFICIENCY MANNER IN COLLEGE GREEN CAMPUS,

Certificate No	: 24EEEnMU27
Initial Registration Date	: 16/02/2024
Date of Expiry	: 15/02/2027
1st Surv. Due	: 16/01/2025
Issuance Date	: 16/02/2024
2nd Surv. Due	: 16/01/2026


Director





(Scan to Verify)

Assurance Quality Certification LLC

Head Office: Sharjah Media City, SHAMS, Sharjah, UAE. e-mail: info@aqcworld.com.

Key Location: A-60, Sector - 2, Noida, Uttar Pradesh, 201301, India.

*Validity of the Certificate is subject to successful completion of surveillance audit on or before of due date. (in case surveillance audit is not allowed to be conducted, this certificate shall be suspended/withdrawn).

Certificate Verification: Please Re-check the validity of certificate at <http://www.aqcworld.com/activeclients.aspx> or www.aqcworld.com at Active Clients.

Certificate is the property of Assurance Quality Certification LLC and shall be returned immediately when demanded

Name of the Organization	BUDGE BUDGE COLLEGE	
Address	7, Deshbandhu Chittaranjan Road, Budge Budge 24 Parganas (South), Kolkata - 700137	
Site Address (If any)		
No. of Employees	Teaching = 41, Non-teaching = 12, House-keeping = 2, Security = 2, Electrician=1, Total = 58	
No. of Shift	1	
E mail id	budgebudgecollege@gmail.com	
Contact Person	Dr. Debjani Datta	
Telephone/Fax	033.24701454, 033 24805168	
Scope	"Teaching, Learning and Evaluation processes relating to awarding of BA, B.Sc. & B.Com Honours as well as general considering Environment friendly and Energy efficiency manner in College Green Campus".	
Technical Area	Teaching, Learning and Evaluation, Capacity Building, Skill Enhancement, Institutional Social Responsibility.	
Audit Team	Lead Auditor: Amalesh Kumar Mandal Auditor: Technical Expert	No of Mandays: 1
Starting date of Audit	12.07.2023	
End date of Audit	12.07.2023	
Brief about the organization	<p>Budge Budge College was established on 10th December' 1971. Initially the college was located in a different location with few classrooms. Later it was shifted to its present position. This College was lucky to have the famous writer late Narayan Ganguly as its Founder President of the Governing Body and the founder principal was late Prof. Prithwis Dutta. The college has played its role since all these years for the development of education in the suburbs of Kolkata.</p> <p>The township of Budge Budge itself has its own significance in the field of culture and freedom movement of India. The College is located in the vicinity of Budge Budge Railway Station and occupies an important position in the locality. Hence to serve the students in the larger area has been possible for the College. Day by day this College has created its own aura and significance in spreading education in West Bengal particularly to the middle class & lower middle class families. Students of this College come from all spheres of society. We have large numbers of female students to take care of. Most of our students are well established in their life and playing their role as good citizens.</p>	

Purpose of Audit

To verify the implementation of the Energy Management System as per the ISO 50001:2018 Standards Requirement, verification of records for the conformity of the implementation.

CHANGE DETAIL:**Audit Duration for Stage 2**

Are quoted man-days adequate?	Yes
Any change in employee detail?	None
Any Change in Scope?	None
Any additional Information:	None

ATTENDENCE SHEET:

NAME OF PERSON	DESIGNATION
Debjyoti Saha	PRINCIPAL
Sandip Sinha	Associate Professor, Commerce
Gautam Das	Associate Professor, Commerce
Dipankar Mandal	Associate Professor, History
Amp Kumar Sahoo	Assistant Professor, Physics
Kishore Narayan	Assistant Professor, Economics
Papia Das	Assistant Professor, Zoology
Samiran Panday	Assistant Professor, Botany
Barnali Behera	SACT, ZOOLOGY
Uttariya Roy	SACT, Environmental Studies
Bigali Das	SACT, Botany
Shreya Chakraborty	Assistant Professor, ENGLISH
Somenath Rose	Electrical-Cum-Controller OFFICE
Abis Ahmed	Computer Assistant, OFFICE

SUMMARY OF AUDIT

AREA OF IMPROVEMENTS

1	No such significant area identified as critical w.r.t energy consumption

Non Conformities Raised

0 Minor/Major Non-conformance identified in the Stage 2 audit, details of Non Conformance in F50

Please respond by using your own corrective action form and include the root cause analysis with systemic corrective action. Failure to include root cause analysis with systemic corrective action will result in your responses being rejected by Lead Auditor

Team Leader Declaration (Tick or cross Each Column as per applicability)

<input checked="" type="checkbox"/>	Auditing is based on a sampling process of the available information
<input checked="" type="checkbox"/>	Audit is combined, joint or integrated;
<input checked="" type="checkbox"/>	The effectiveness of corrective actions taken regarding previously identified nonconformities has verified
<input checked="" type="checkbox"/>	outcomes are effective and complying.
<input checked="" type="checkbox"/>	The internal audit and management review process are effective and complying with the requirements.
<input checked="" type="checkbox"/>	The scope of certification is appropriate.
<input checked="" type="checkbox"/>	The capability of the management system to meet applicable requirements and expected
<input checked="" type="checkbox"/>	The audit objectives has been fulfilled and achieved.

Recommendation:

✓	The quality system complies with the requirements of the reference standard: Congratulations, on the basis of the above summary, Lead Auditor is pleased to put forward a recommendation for Issuance of Certificate. The organization can use the AQC Mark
×	The quality system complies with the requirements of the reference standard with exception of minor NC: Congratulations, Team Leader is pleased to put forward a recommendation for Issuance of the certificate of Organization upon off-site verification of closure of all minor NC within 60 days from the date of Stage 2 audit. Responses to the non-conformances should be submitted to AQC and must include supporting evidence of closure to allow for off-site verification. In responding to the non-conformances, the organization should consider the root cause of the non-conformance and the potential for related issues in other parts of system. If all non-conformances are not closed within 60 days, a full reassessment may be required.
×	Evidence of major non conformities: Organization is not recommended for Issuance of Certificate and at this time. Follow-up audit will be scheduled to allow for on-site verification and closure of all issues within 60 days from the date of Stage 2. Once all non-conformances are closed, the recommendation for Issuance of certification may recommended. If all non-conformances are not closed within 60 days, a full reassessment may be required.
×	Not Recommended: Organization is not recommended for Issuance of certificate at this time. Full Stage 2 audit is required as the organisation has not implemented the system and process at pace.
	<i>Proposed Audit Date for 1st Surveillance Audit 11.07.2024 (mm/dd/yy)</i>

Sign Off : (Date) 12.07.2023

AQC Report Submission

Name of Team Leader: Amalesh Kr. Mandal

Signature: *Amalesh Kumar Mandal*

Client Acceptance for Report

Name: Dr. Debjani Datta

Sign: *Debjani Datta*

Designation: Principal

DR. DEBJANI DATTA

M.Sc. (Gold Medalist), Ph.D

Principal

Budge Budge College

7, D.B.C. Road, Kol-700137

West Bengal, India

AUDIT CHECKLISTVERIFICATION OF DOCUMENTED INFORMATION & RECORDS AS PER STD REQUIREMENT
(C- Conformity, NC-Non Conformity, O-Observation)

Clause Number	C/NC/O	Document Verification detail with statement of Conformity
4 Context of the organization		
4.1 Understanding the organization and its context (External and Internal Issues)	C	Identified and included in Manual. (Under clause 4.1 of Doc. Ref. No. ENMS/L1, dtd. 02.04.2022)
4.2 Understanding the needs and expectations of interested parties (Need & Expectation of Interested parties)	C	Identified and included in Manual. (Under clause 4.2 of Doc. Ref. No. ENMS/L1, dtd. 02.04.2022)
4.3 Determining the scope of the energy management system	C	Scope established and included in Manual. (Under clause 4.3 of ENMS/L1 Manual)
4.4 Energy management system	C	Process Flow found established and as per UGC norms.
5 Leadership		
5.1 Leadership and commitment (Ensure Top Management Commitment)	C	Interviewed with Top Management, found committed to communication of respective Energy Policies, Projects and implementation of Energy specific Projects.
5.2 Energy policy (Documented, communicated, availability and Review)	C	Energy Policy established and displayed in notice board. Advise them to display for others stakeholders as well as in Website.
5.3 Organization roles, responsibilities and authorities (Assigned and communicated by Top Management)	C	Defined in Manual and found as per Government protocol.
6 Planning		
6.1 Actions to address risks and opportunities	C	Risk Register found maintain (Doc. Ref. No. EnMS/POT/E-RISK/01), initially found 3 nos Energy risk identified.
6.2 Objectives, energy targets and planning to achieve them (Consistent with Energy Policy, SEU, documented, measurable, communicated and updated)	C	Energy Objectives found established and planned to achieve action (MAP), Projects taken Like "Efficient use of Energy Resources" and monitoring methodology found set to achieve the goal.
6.3 Energy review (Current type of energy use, past and current consumption, documented and updated)	C	Energy review has done based on Meter reading study and kept as documented information. Current list of Energy sources found available including Significant energy sources.
6.4 Energy performance indicators (Documented and updated)	C	Documented in the form of Energy projects.

6.5 Energy baseline (Documented and review periodically and retention)	C	Energy baseline declared as last year Power consumption, accordingly projects taken to review and reduce the Power.
6.6 Planning for collection of energy data (Accuracy and repeatable, documented and retention)	C	Electrical Energy bill statements kept available for further review.
7 Support		
7.1 Resources (Determination of resource required)	C	Found available
7.2 Competence (determine, documented and retain the competence)	C	Training planning and related training records found available. Awareness training conducted by External consultant.
7.3 Awareness (Objective, Policy, Non Conformance of EnMS)	C	Done through training and display
7.4 Communication (What, When, With Whom, How & Who)	C	Done in the form of minutes and display.
7.5 Documented information (Creation, Updating, Control, Retention, External Origin, Storage & Preservation)	C	Control of documented information procedure established.
8 Operation		
8.1 Operational planning and control (Documented, Plan, Implement, Control the process related to SEU and communication)	C	Operational procedures established supported with work instructions and related records.
8.2 Design (Documented, Specification, design consideration)	C	Design part not included
8.3 Procurement (Establish & Implement criteria for evaluating energy performance)	C	Effectively implemented, tendering system applicable in procurement.
9 Performance evaluation		
9.1.1 General (Monitoring, measurement, analysis and evaluation of energy performance and the EnMS)	C	Criteria set against each Project mapping, to monitor the performance and effectiveness of the Energy performance. Current Status: 1. Project mapping Vs. monitoring
9.1.2 Evaluation of compliance with legal requirements and other requirements	C	Budge Budge College was established on 10th December' 1971. Initially the college was located in a different location with few classrooms. Later it was shifted to its present position. Organization Approved by UGC Under 2(f) & 12(b), Affiliated to Calcutta University.
9.2 Internal audit (Frequency and Effectiveness)	C	Yearly frequency and Internal Audit plan/records found available, Last Internal scheduled from 11.01.2023 to 12.01.2023.

9.3 Management review (Frequency and input/output)	C	MRM agenda and minutes found available. Last MRM held on 18.01.2023.
10 Improvement		
10.1 Nonconformity and corrective action	C	Procedure established and monitored through project planning.
10.2 Continual improvement	C	Objective and monitoring data found available.

END OF REPORT



Budge Budge College

Estd. 1971

NAAC Accredited B+ & UGC 12B, 2(f)

Affiliated to the University of Calcutta

Ref. No.....

Date 12.04.2024

**7.1.3: Quality audits on environment and energy regularly undertaken by the Institution. The institutional environment and energy initiatives are confirmed through:
Beyond the campus environmental promotion activities**

Sl. No.	Activity
1	NCC Activities: World Anti-tobacco Day, 31.05.2023
2	Association for Awareness on "Environment at Cross Roads: Education and Entertainment" by NSS, Unit I, Budge Budge College in collaboration with Byanjanbarna Foundation (NGO) National Service Scheme 21.03.2023
3	Celebration of Birthday of Netaji Subhash Chandra Bose by NSS, Unit I, Budge Budge College National Service Scheme 23.01.2023
4	Swachh Bharat NSS, Unit I, Budge Budge College, National Service Scheme, 09.01.2023
5	AIDS awareness program, NSS Unit I, Budge Budge College 11.11.2022
6	Rally for Dengue Awareness, NSS Unit I, Budge Budge College in collaboration with NSS, University of Calcutta 12.11.2022
7	Online Awareness Programme on Yoga and yoga performance from home, 21.06.2022
8	NCC: World No-Tobacco Day Awareness Rally, 31.05.2022
9	One-day State level webinar on "Learning to live with Covid-19" organised by NSS Unit 1 in Collaboration with IQAC, Budge Budge College, 25.09.2020
10	NCC Activities, Swatchta Pakwada Abhiyan, December 2019
11	Organised an orientation programme for NSS volunteers and a seminar on 'water conservation' on 19.09.2019
12	NSS: Tree plantation programme was organised on 22.07.2019 and trees were planted at Budge Budge Police Station
13	NSS: Organised a seminar on "Sexual harassment of women at workplace" on 28.03.2019
14	NSS: Handed over cloths from kapra bank and some exercise books, pencils and erasers to local poor people and children surrounding the college area on 22.01.2019
15	NSS: Handed over cloths from kapra bank and some food to local poor people surrounding college area on 10.01.2019
16	Students of Budge Budge college participated in poster and essay competition organised by West Bengal Government Higher Education Department in collaboration with Narendrapur Ramkrishna Mission on 17.09.2018
17	Budge Budge College in collaboration with Electoral Literacy Club organised workshop on Electoral Literacy with the aim "No voters to be left behind" on 04.09.2018
18	NCC Activities: Peace and Harmony Run & G-20 Online Workshop

Jabardatta
DR. DEBJANI DATTA
M.Sc. (Gold Medalist), Ph.D.
Principal
Budge Budge College
7, D.B.C. Road, Kol-700137
West Bengal, INDIA; Tel: (033)24701454/ (033)24805168

Budge Budge College

7.1.3: Beyond the campus environmental promotion activities

Photographs and any other supporting document of relevance should have proper captions and dates.

**NATIONAL SERVICE SCHEME (NSS), UNIT I & NATIONAL CADET CORPS (NCC)
BUDGE BUDGE COLLEGE**

2022-2023

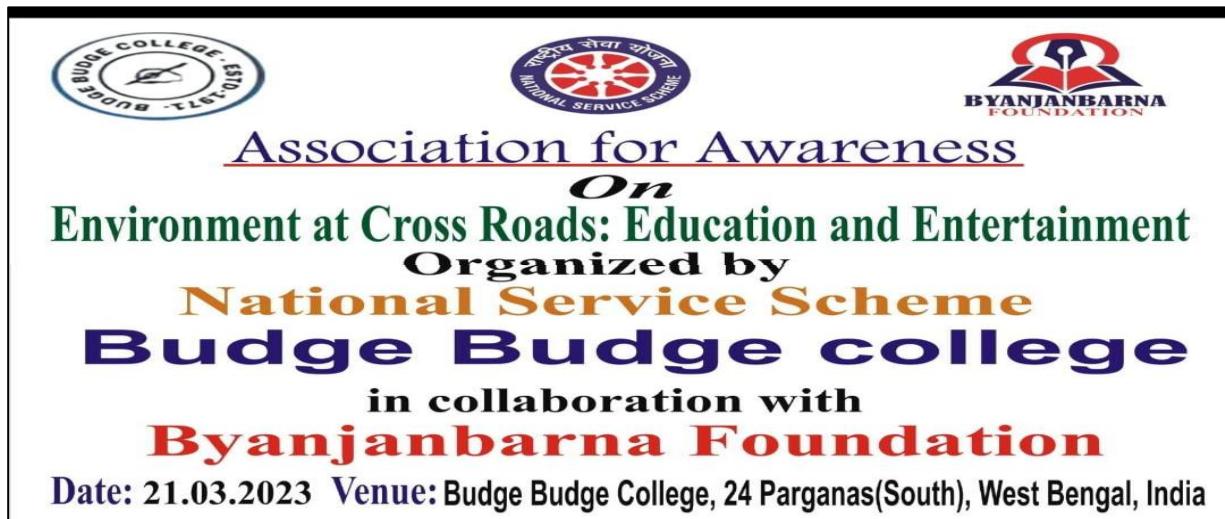
NCC Activities: World Anti-tobacco Day, 31.05.2023



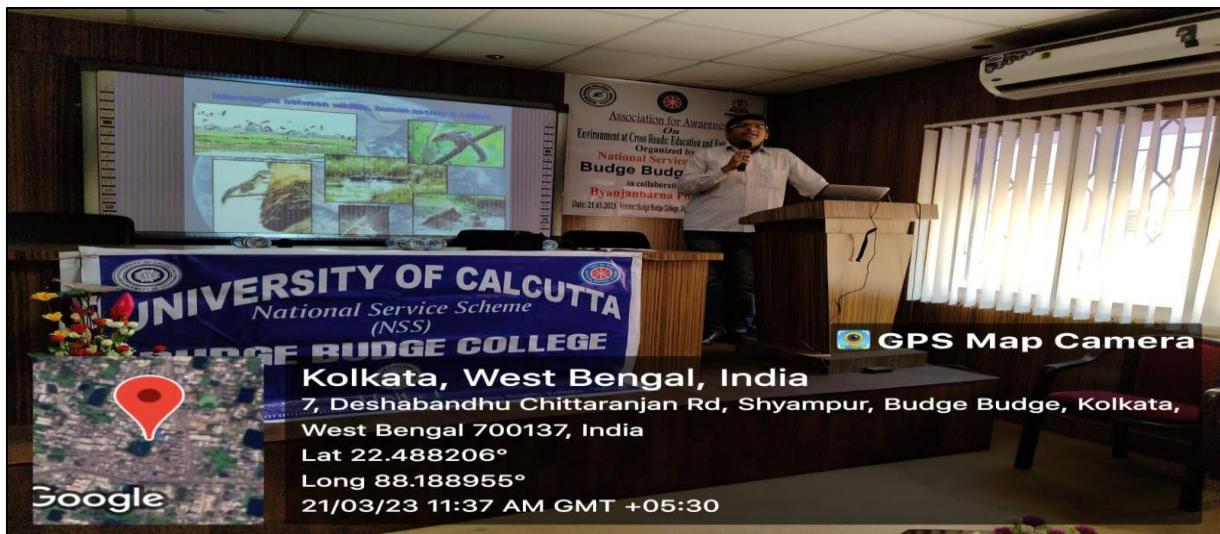
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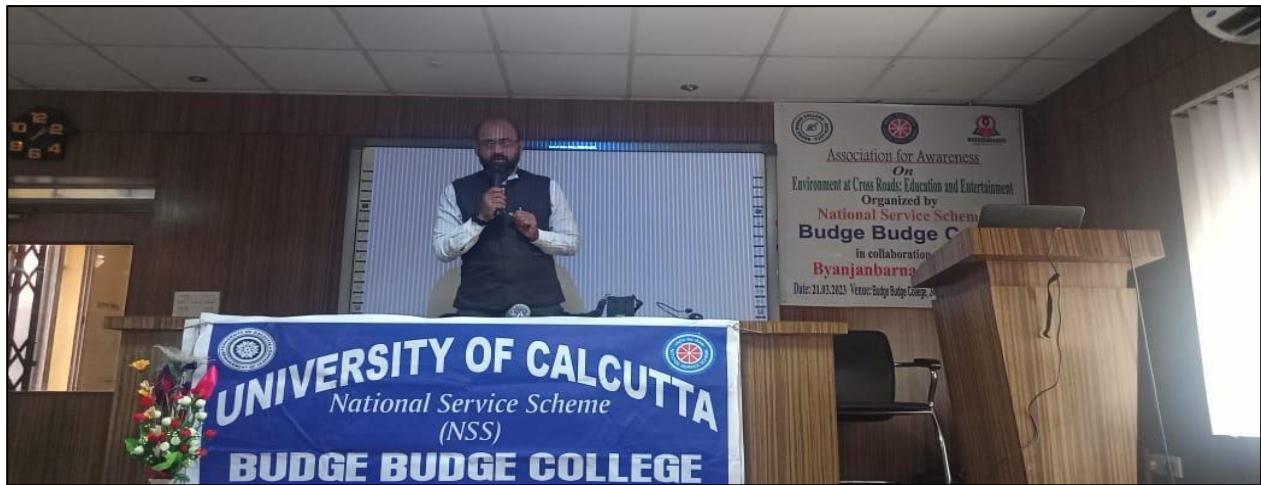
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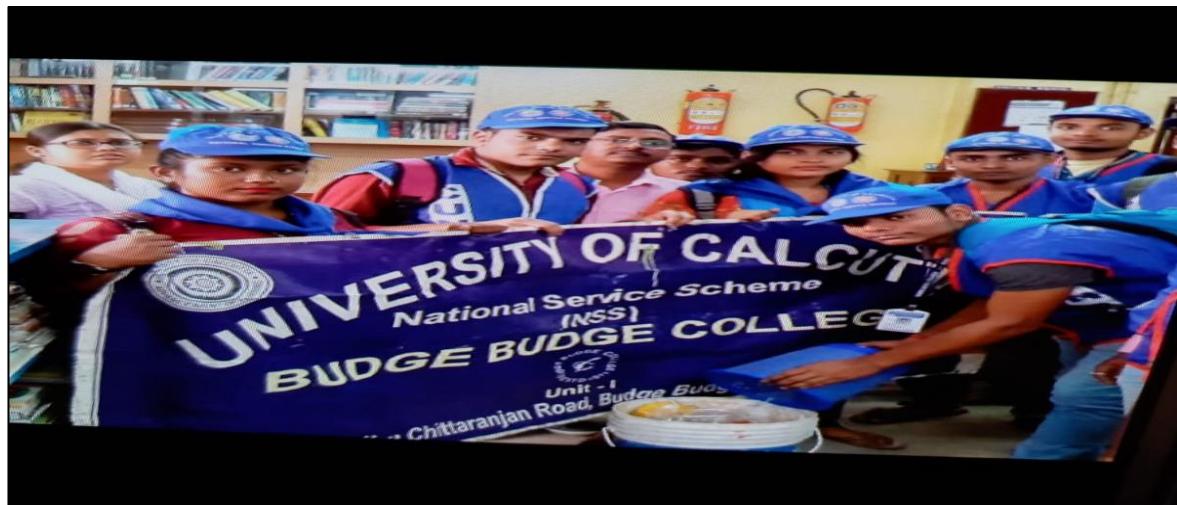
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Swachh Bharat NSS, Unit I, Budge Budge College, National Service Scheme 09.01.2023



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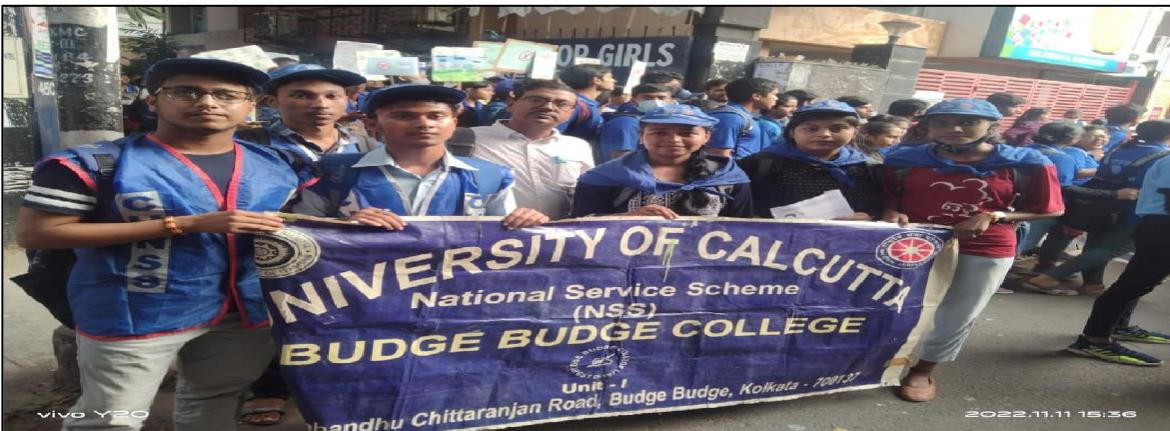
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Rally for Dengue Awareness NSS Unit I, Budge Budge College in collaboration with NSS, University of Calcutta 12.11.2022

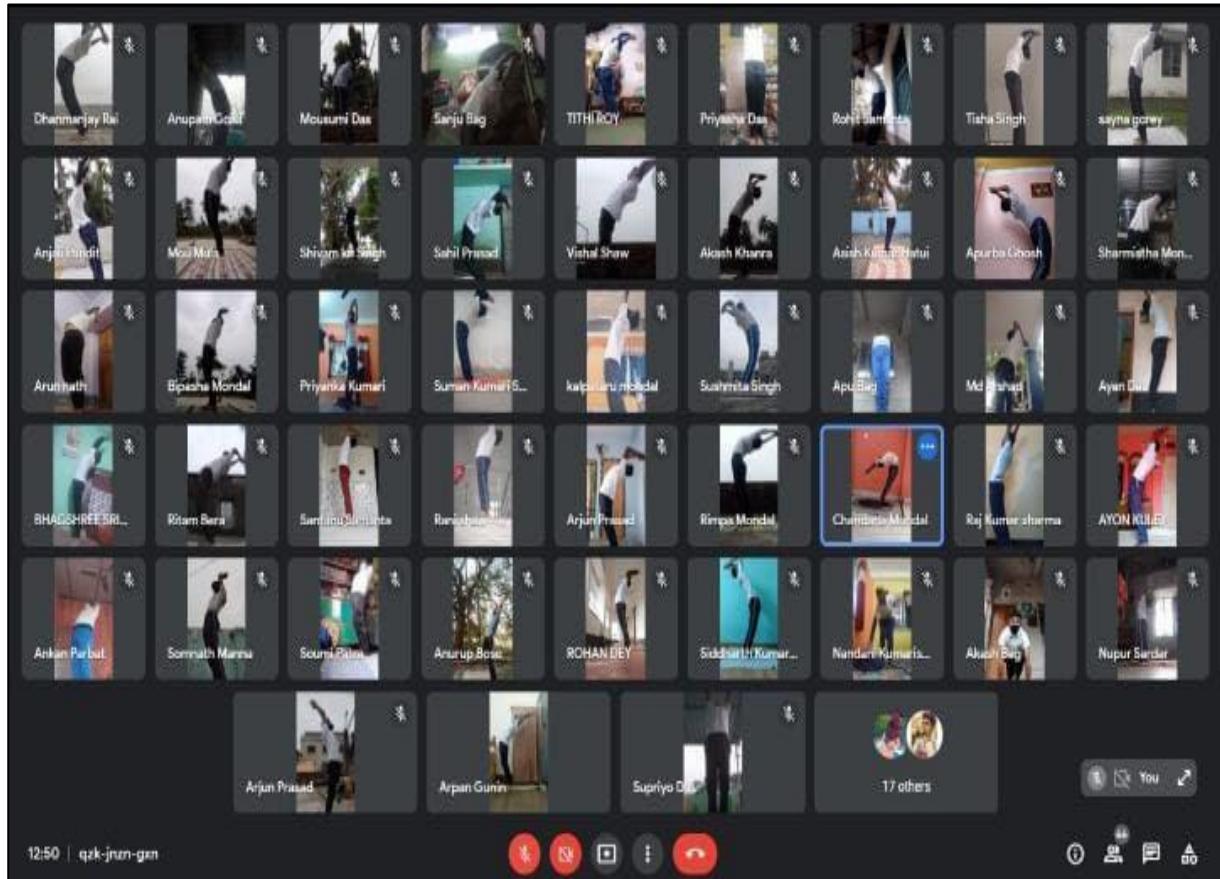


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2021-22

Online Awareness Program on Yoga and yoga performance from home, 21.06.2022

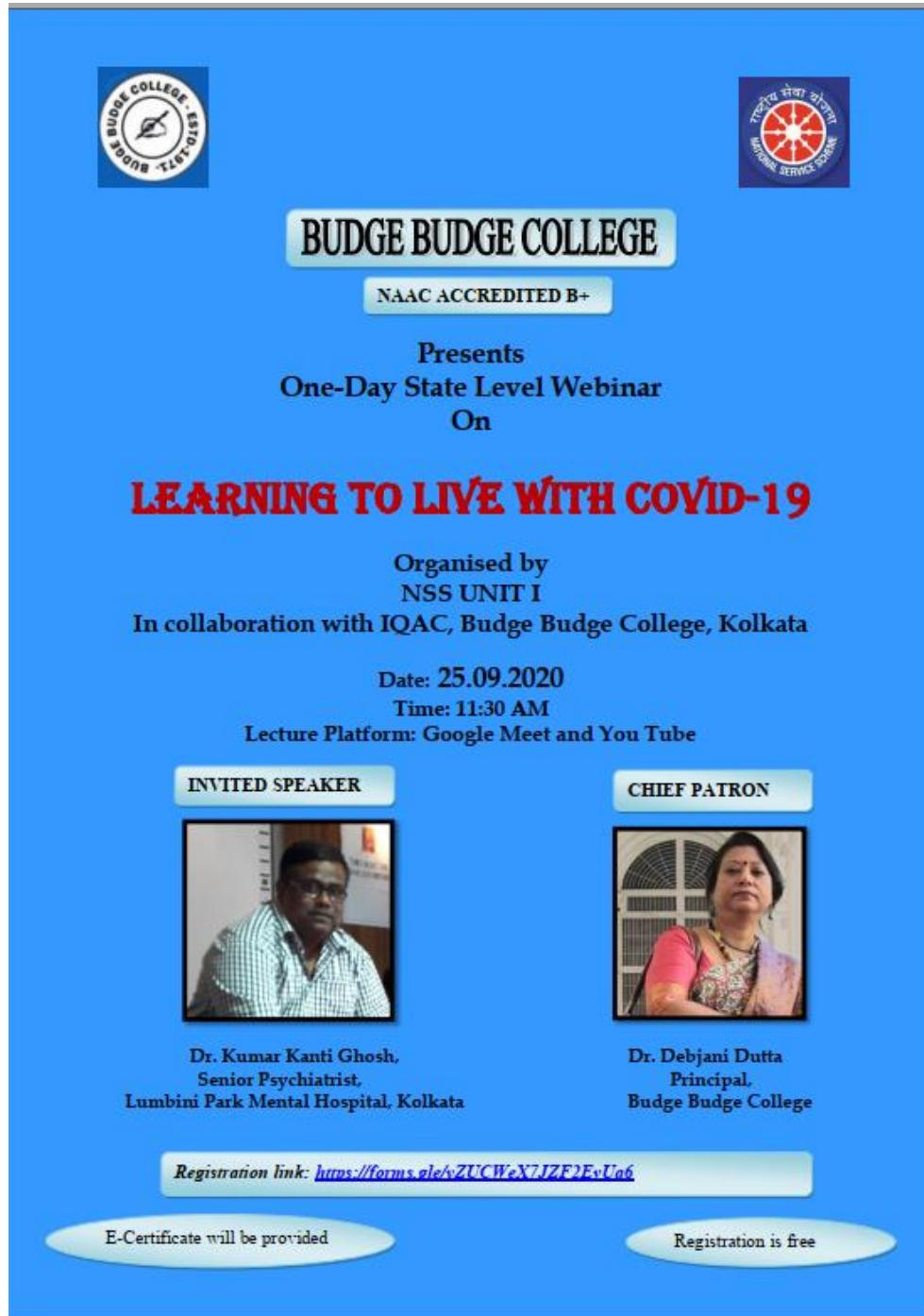


NCC: World No-Tobacco Day Awareness Rally, 31.05.2022



2020-21

One-day State level webinar on "Learning to live with Covid-19" organised by NSS Unit 1 in Collaboration with IQAC, Budge Budge College, 25.09.2020: Flyer Page 1



The flyer is for a one-day state-level webinar organized by NSS Unit 1 in collaboration with IQAC, Budge Budge College. The event is titled "Learning to live with COVID-19". It features two invited speakers: Dr. Kumar Kanti Ghosh and Dr. Debjani Dutta. The registration link is provided, along with information about e-certificates and free registration.

BUDGE BUDGE COLLEGE
NAAC ACCREDITED B+

Presents
One-Day State Level Webinar
On

LEARNING TO LIVE WITH COVID-19

Organised by
NSS UNIT I
In collaboration with IQAC, Budge Budge College, Kolkata

Date: 25.09.2020
Time: 11:30 AM
Lecture Platform: Google Meet and You Tube

INVITED SPEAKER



Dr. Kumar Kanti Ghosh,
Senior Psychiatrist,
Lumbini Park Mental Hospital, Kolkata

CHIEF PATRON



Dr. Debjani Dutta
Principal,
Budge Budge College

Registration link: <https://forms.gle/vZUCWeX7JZF2EvUa6>

E-Certificate will be provided

Registration is free

**One-day State level webinar on "Learning to live with Covid-19" organised by NSS Unit 1 in
Collaboration with IQAC, Budge Budge College, 25.09.2020: Flyer Page 2**

Programme Schedule

Inaugural Session

Welcome Address by **Time**
Dr. Debjani Datta, Principal, Budge Budge College **11:30 AM**

Technical Session

Speaker: Dr. Kumar Kanti Ghosh 11:45 AM
Date: 12/12/2013 12:30 PM

35-3-31

Concluding Remarks and Vote of Thanks by

Dr. Deoashis Upadhyay,

Programme Hosted by

- OTHER INSTRUCTIONS:**

 - Please register by clicking on this link: <https://forms.gle/vZUCWeX7JZF2EvUa6>
 - Registration will close at 22.09.2020, 10 PM
 - The webinar link will be sent to registered participants on their e-mail ids before the event.
 - Feedback form link will be sent to registered participants via registered e-mail after the event
 - E-Certificates will be given only to registered participants upon submission of their Feedback form
 - The webinar will be live streamed on Google Meet and YouTube.

CHIEF PATRON

Dr. Debjani Datta, Principal, Budge Budge College

CONVENOR

Dr. Dipak Mandal, Assistant Professor, HoD, Department of History

IQAC COORDINATOR

Dr. Debasish Upadhyay, Assistant Professor, HoD, Dept. of Botany

MEMBERS OF ORGANISING COMMITTEE

*Dr. Parisa Das, Assistant Professor, Department of Zoology
Dr. Shreya Agrawal, Assistant Professor, Department of Food And Nutrition*

2019-20

NCC Activities, Swatchta Pakwada Abhiyan, December 2019



NCC Activities, Swatchta Pakwada Abhiyan, December 2019



NCC Activities, Swatchta Pakwada Abhiyan, December 2019



An orientation program for NSS volunteers and a seminar on ‘water conservation”, 19.09.2019



**NSS: Tree plantation program was organised on 22.07.2019 and trees
were planted at Budge Budge Police Station**



2018-2019

**NSS: Organised a seminar on “Sexual harassment of women at workplace,
28.03.2019**

**Seminar on Sexual Harassment of
Women at Workplace**

Honorary Speaker: **Dr. Kumar Kanti Ghosh**
Senior Psychiatrist
Lumbini Park Mental Hospital, Kolkata

Chairperson: **Dr. Debjani Datta**
Principal, Budge Budge College

Organized by: **NSS Unit I, Budge Budge College**

Venue: **Budge Budge College Auditorium**

Date: **28/03/2019 Time 11.30**

NSS: Handed over cloths from kapra bank and some exercise books, pencils and erasers to local poor people and children surrounding the college area,



22.01.2019

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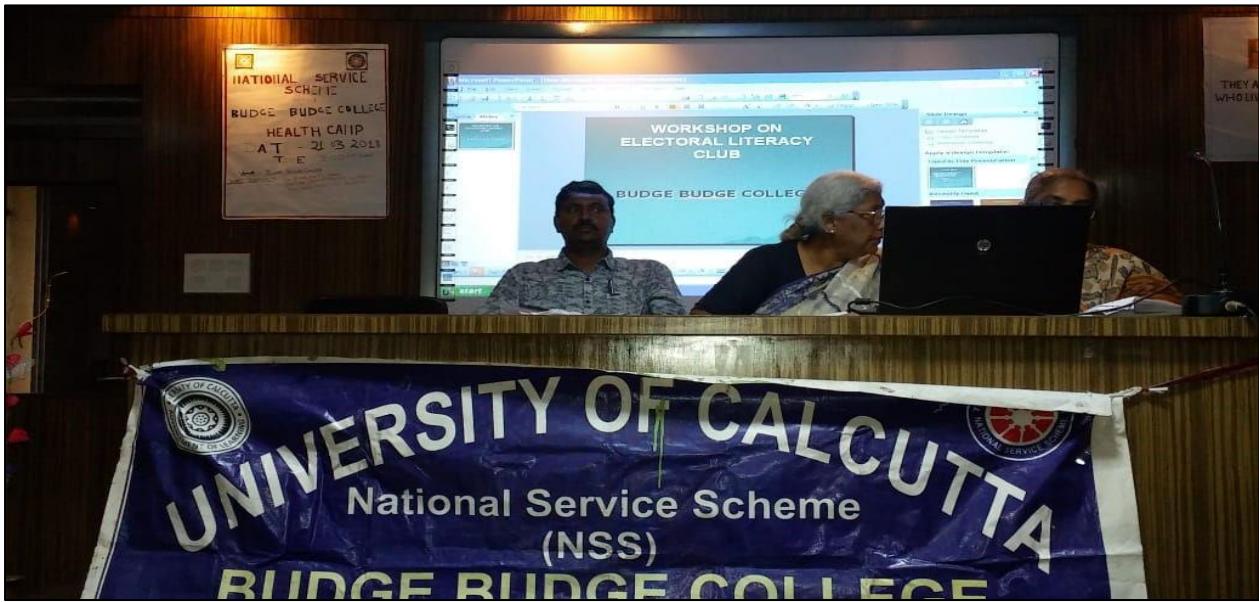
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organised workshop on Electoral Literacy with the aim “No voters to be
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