BEST PRACTICE -I

IMPROVEMENT OF TEACHING- LEARNING METHOD



NANDA NATH SAIKIACOLLEGE, TITABAR

JORHAT, ASSAM PIN-785630



Classrooms with Smart boards/ Interactive boards



Classrooms with Smart boards/ Interactive boards



Classrooms with Smart boards/ Interactive boards





Classroom with Smart boards/ Interactive boards



Classrooms with LCD Projector





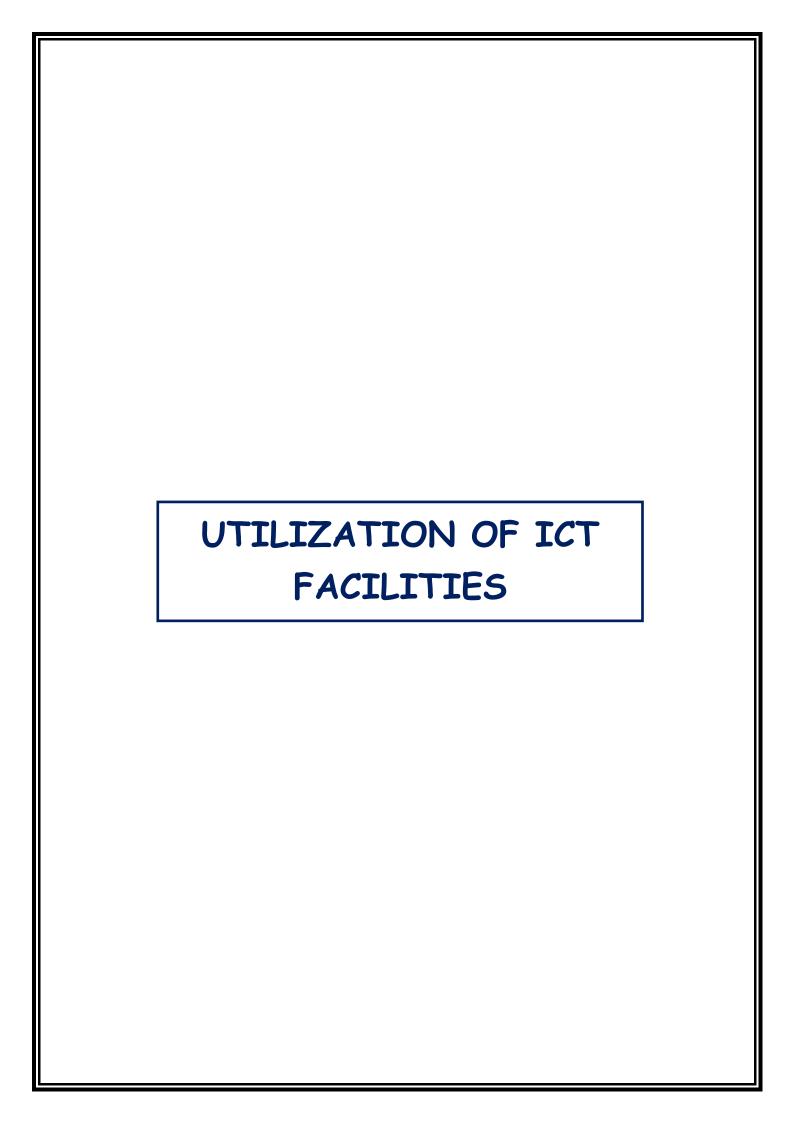
Laboratories cum Classrooms with LCD Projector





Laboratories cum Classrooms with LCD Projector





Teaching- learning through ICT tools





Teaching- learning through ICT tools



Teaching-learning through ICT tools



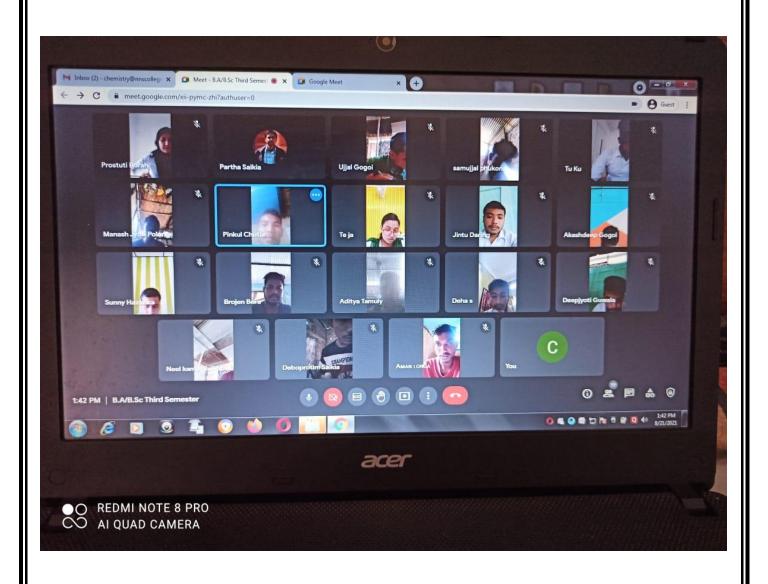


Teaching- learning through ICT tools

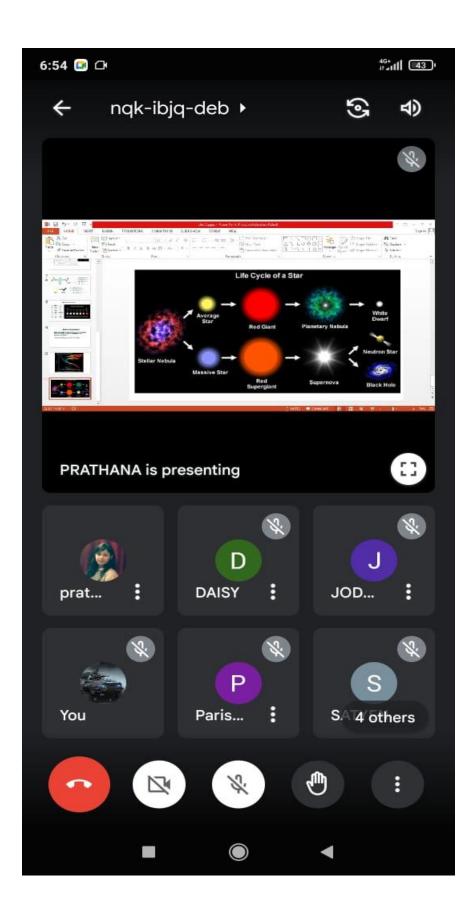


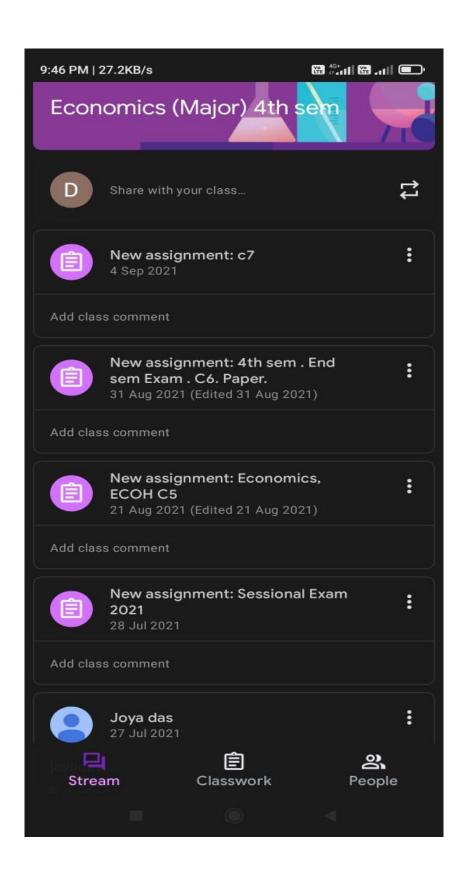


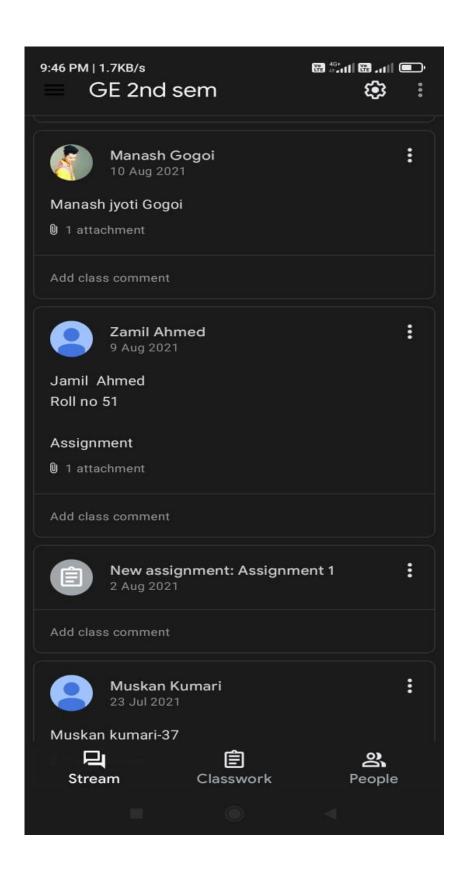
Teaching- learning through online mode

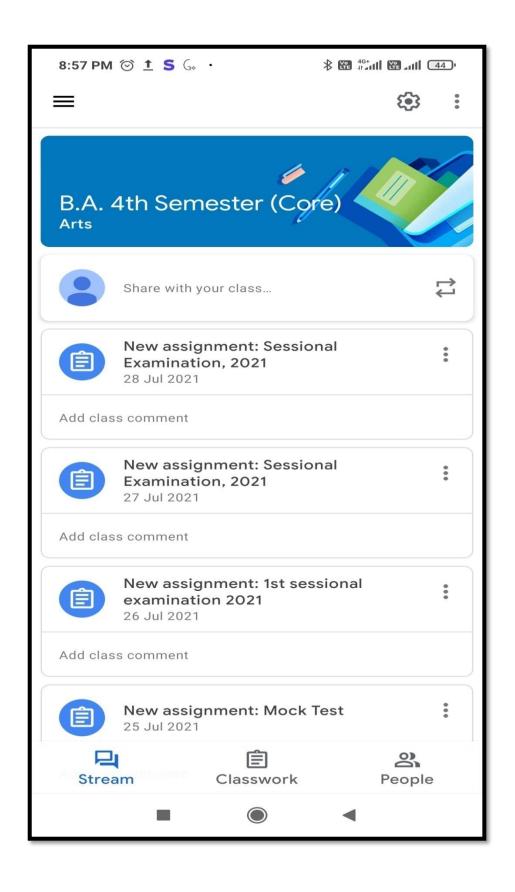


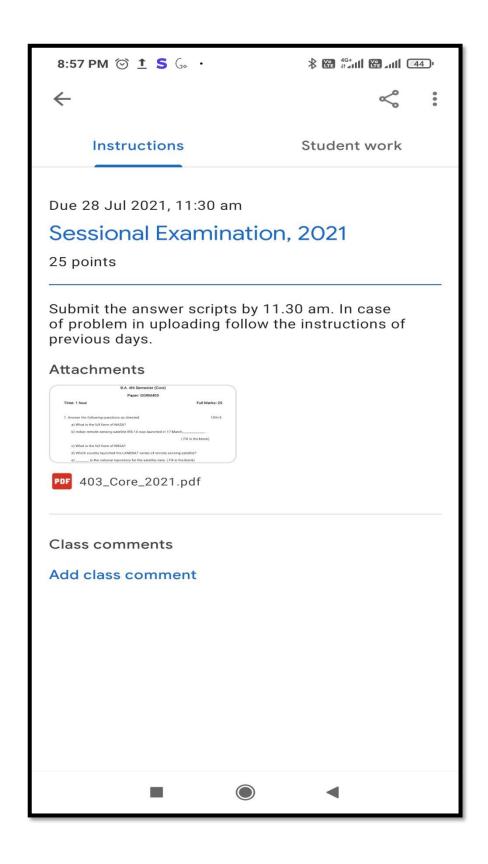
Teaching- learning through online mode



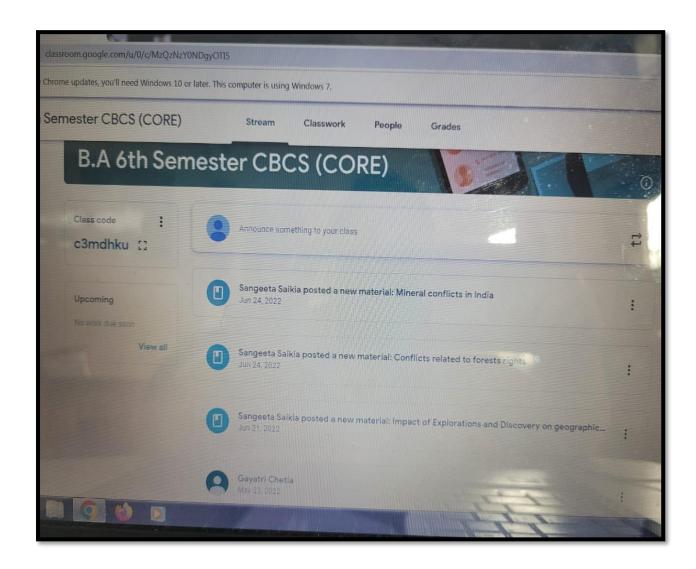




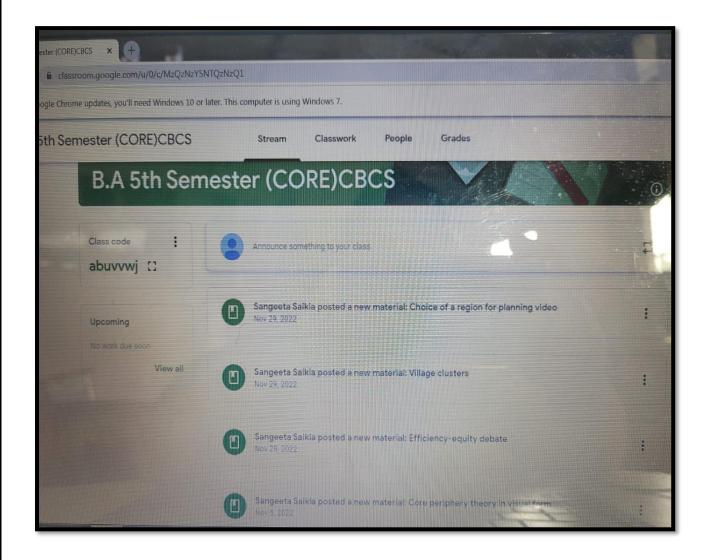




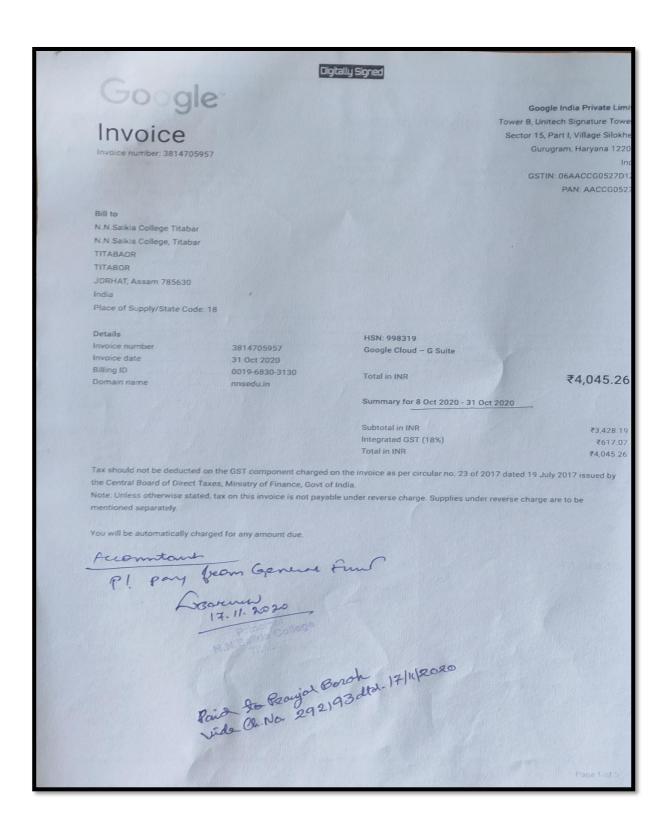
Online sharing of study materials through Google Classroom



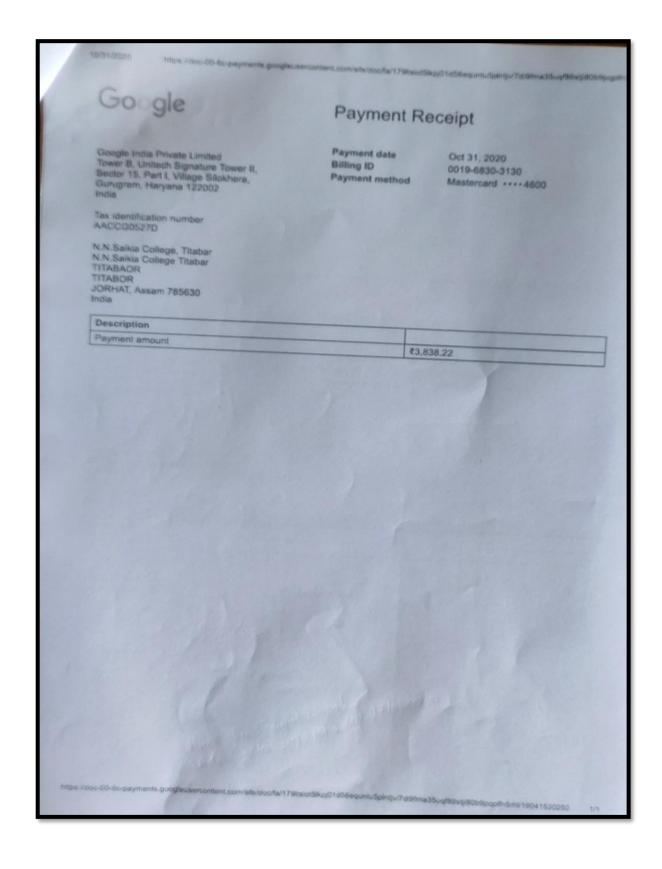
Online sharing of study materials through Google Classroom



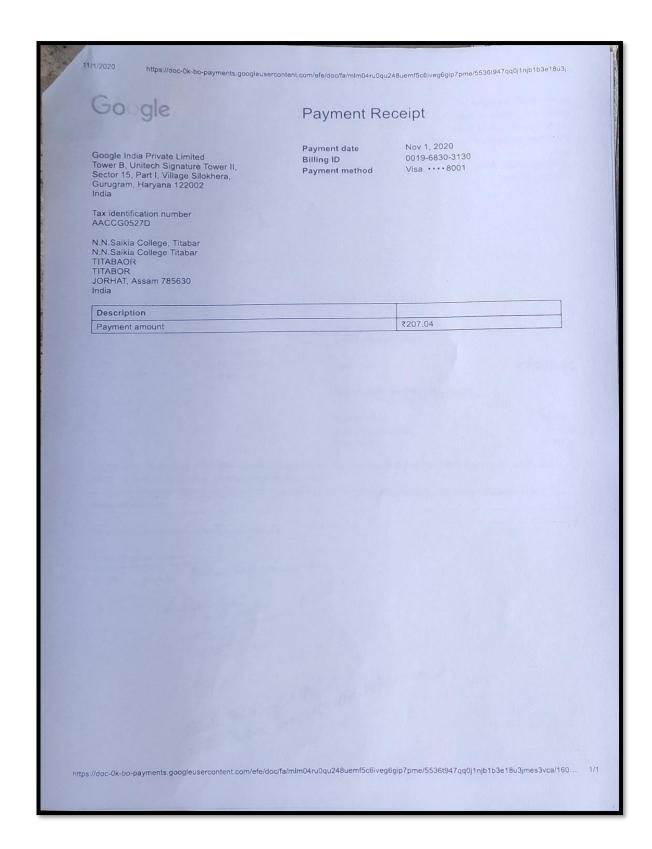
Google Cloud- G Suit purchasing invoice



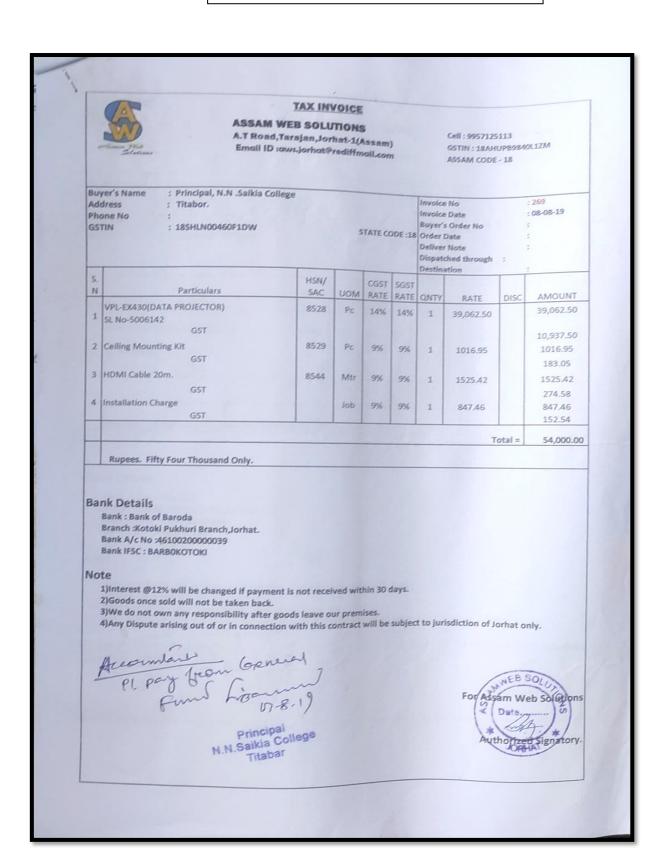
Google Cloud- G Suit purchasing invoice



Google Cloud- G Suit purchasing invoice



Sample invoice of LCD Projector Purchase



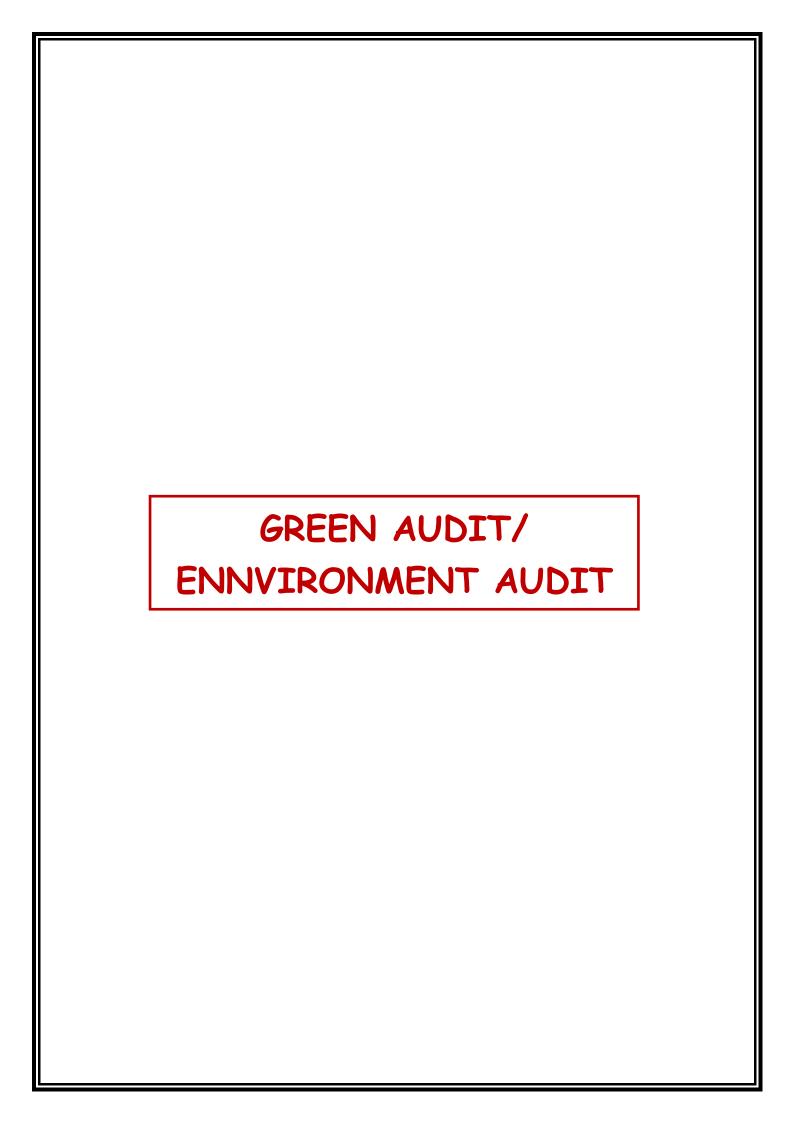
BEST PRACTICE -II

MAINTENANCE OF GREEN ECO-FRIENDLY CAMPUS



NANDA NATH SAIKIACOLLEGE, TITABAR

JORHAT, ASSAM PIN-785630







वर्षा वन अनुसंधान संस्थान

भारतीय वानिकी अनुसंधान एवं शिक्षा परिषद्

(पर्यावरण वन एवं जलवायु परिवर्तन मंत्रालय भारत सरकार के अधीन एक स्वायत्त परिषद् पोस्ट बॉक्स नं.136, जोरहाट-785001, असम

RAIN FOREST RESEARCH INSTITUTE

Indian Council of Forestry Research & Education

(An Autonomous body of Ministry of Environment, Forest & Climate Change, Govt. of India)
Post Box No. 136, Jorhat- 785001, Assam

No. RFRI/FECC/ENV-AUD/2021

दिनांक/Date: 04/01/2023

'Green and Environment Audit Report 2021-22' of Nanda Nath Saikia College, Titabar, Jorhat, Assam

The 'Green and Environment Audit Report 2021-22' prepared by the Green and Environment Audit Team, Nanda Nath Saikia College, Titabar, Jorhat was submitted to RFRI, Jorhat for evaluation. Accordingly, suggestions and comments were given on the report based on existing literatures and experiences on the subject which was duly incorporated in the revised and final 'Green and Environment Audit Report 2021-22'. In the next phase, a team of three members consists of Dr. Dhruba Jyoti Das, Scientist-F, Dr. Girish Gogoi, STO and Shri Abhijit Medhi, TA, RFRI, Jorhat visited the college as a 3rd party monitoring team on 3rd January 2023. The RFRI monitoring team inspected and monitored the various infrastructures, plantations and other management works mentioned in the 'Green and Environment audit report 2021-22'.

The Team had a detailed discussion with Dr. Litool Baruah, Principal and Dr. M.L. Dutta, Vice principal & HoD Department of Botany and other faculty members of the college. They discussed about the various works related to environment, importance of conservation and awareness among students, teachers and common people. The RFRI team was accompanied by a team of faculty members including Dr. M.L. Dutta, Vice principal; Shri J. P. Ojah, Coordinator IQAC; Dr. P.N. Bhattacharyya, Coordinator, Green & Environment Audit team; Shri U.N. Gogoi, Assistant Professor, Department of Mathematics; Shri H. Thengal, Asssistant Professor, Department of Political Science and other faculties. The RFRI team visited the various water purification units, human health and safety and waste management systems operative in the college. The RFRI team also visited the various infrastructures, plantations, traditional rain water harvesting units (pond), botanical garden, vermi-composting units, water filtering system, drainage system, solar panels, different dustbins, signboards and other facilities installed in the campus related to environment.

Various plants (trees, shrubs and herbs) were planted in the campus from time to time for keeping the air in the campus pollution free and of good quality. Some of the

important species found in the campus include Artocarpus heterophyllus, Mangifera indica, Mesua ferrea Azadirachta indica, Nyctanthes arbor-tristis, Terminalia arjuna, Psidium guajava, Polyalthia longifolia, Cassia fistula, Terminalia chebula, Araucaria columnaris, Thuja occidentalis, Eucalyptus globules, Dillenia indica, Emblica oficinalis, Syzygium cumini, Aquilaria malaccensis, Lagerostroemia indica, Hibiscus rosa-sinensis, Morus alba, Tinospora cordifolia, Tamarindus indica, Bauhinia variegate, Caesalpinia pulcherrima, Baccaurea sapida, Magnolia champaca, Tectona grandis, Flemingia strobilifera, Moringa pterygosperma, Swietenia mahagoni, Terminalia bellirica, Delonix regia, Gmelina arborea etc.

Various display boards installed for general awareness among the students located at important places were also checked. Dry and Wet dustbins in different locations of the college were also seen. In order to save and conserve energy LED bulbs have been found used in most of the classrooms, principal's office, administrative office, auditorium, library, indoor stadium, gymnasium, computer lab., canteen, girls hostel and departmental rooms in the college. The ground water of Titabor area is reported to be very rich in Arsenic, hence an Arsenic treatment unit is installed in the college campus which is visited by the team. The treatment unit was found functioning well. The other initiatives as mentioned in the Green Audit report were visited and inspected as well.

Some of the photographs of the visit and inspection are given below:



A view of the main gate of the college



Synoptic view of the college campus



Group photo of the team with the Principal and other faculty members



Botanical garden of the college



Plantation of ornamental trees



Vermi-compost units



Vermi-compost units-inside



Preparation of grasses for vermicompost



Arsenic treatment plant



Traditional rain water harvesting: Pond in the college campus for rain water harvest & ground water recharge



Water filter system in the college



Interaction with college faculities



Solar Panels on the roof-top



Inside the Library of the college



Library of the college



Singboard for save water



Signboard aganist use of plastic





Dustbins in the campus for dry and wet waste management

The overall works as mentioned in the Green and Environment Audit Report were found satisfactory. The college has got certificate of appreciation for cleanliness & greenness from Titabor municipal board and tobacco free declaration certificate from District Tobacco Council Cell, Jorhat. The following recommendations are given to the Green and Environment Audit Team and college authority to be followed for further improvement in this regard.

Recommendations:

- More plantations of ecologically and economically important tree species with aesthetic value can be done in the vacant spaces. RFRI, Jorhat can provide necessary guidance in this regard, if required.
- (2) Proper maintenance of the botanical garden with plantation of more rare, endangered and threatened plant species of Northeast India is required. Again, RFRI, Jorhat can provide necessary guidance and other help in this regard, if required.
- (3) The college has a pond for rain water harvesting and ground water recharge. Introduction of aquatic plant species may be done in the pond.
- (4) Roof-top rain water harvesting may be done for additional rain water harvest with the help of external financial assistance.
- (5) More awareness programmes on environment may be organised for students and general public from time to time.

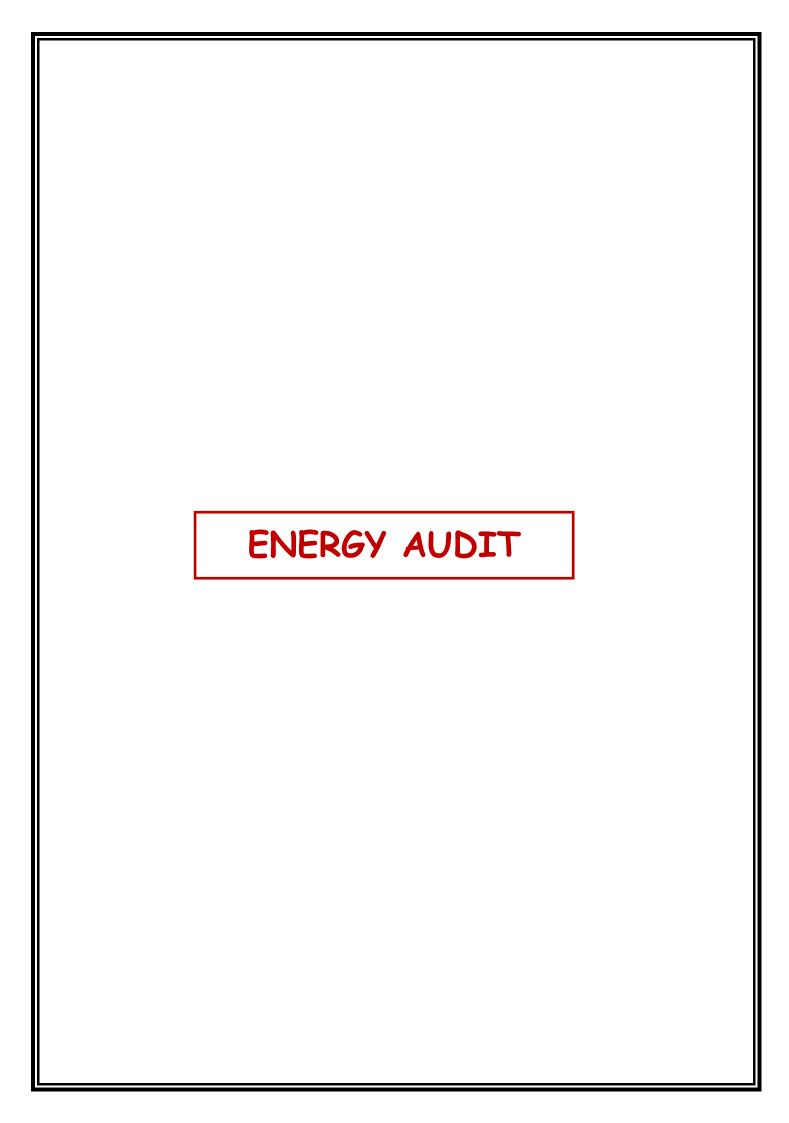
Abhijit Medhi, TA RFRI, Jorhat (Team member)

Dr. Girish Gogoi, STO RFRI, Jorhat (Team member) Or. Daruba J. Das, Scientist F Head, FECC, RFRI, Jorhat

CTeam(Leader)
Scientist and Head
Forest Ecology and Climate Change Division
Rain Forest Research Institute (ICFRE)
Jorhat, Assam

Dr. Rajib Kr. Borah Director, RFRI, Jorhat

> निदेशक / Director वर्षा बन अनुसंधान संस्थान Rain Forest Research Institute जोरूट (असम)/Jorhat (Assam)



Assam Power Distribution Company Limited CIN: U40109AS2003SGC007242

Registered Office: Bijulee Bhawan, Paltan Bazar, Guwahati-781001, Assam Office of the Chief Executive Officer: Jorhat Electrical Circle

NA-ALI, JORHAT-785001

Email ID: dgmjec_apdcl@rediffmail.com

Phone No.: 0376-2320184

NO: CEO/JEC/APDCL/G-1/2022/1063

Date: 21.12.2022

To,

The Principal N.N.Saikia College Titabor, Jorhat

Sub: Energy Audit

Ref: Your letter no: NNSC/EA/IQAC/2022/3994 Dated: 26.10.22

Sir.

In reference to the subject cited above, I have the honour to inform you that, the energy audit report prepared and submitted by your organisation has been scrutinised, analysed and found satisfactory. Based on the audit, few observation and recommendation has been made from this end enclosed herewith as annexure A.

Thanking You

Very truly yours.

Jyotiska Barua al Manager(P)
Assistant General Manager (P)

Bidyut Bhawan, APDCUL, What

Assam Power Distribution Company Limited CIN: U40109AS2003SGC007242

Registered Office: Bijulee Bhawan, Paltan Bazar, Guwahati-781001, Assam
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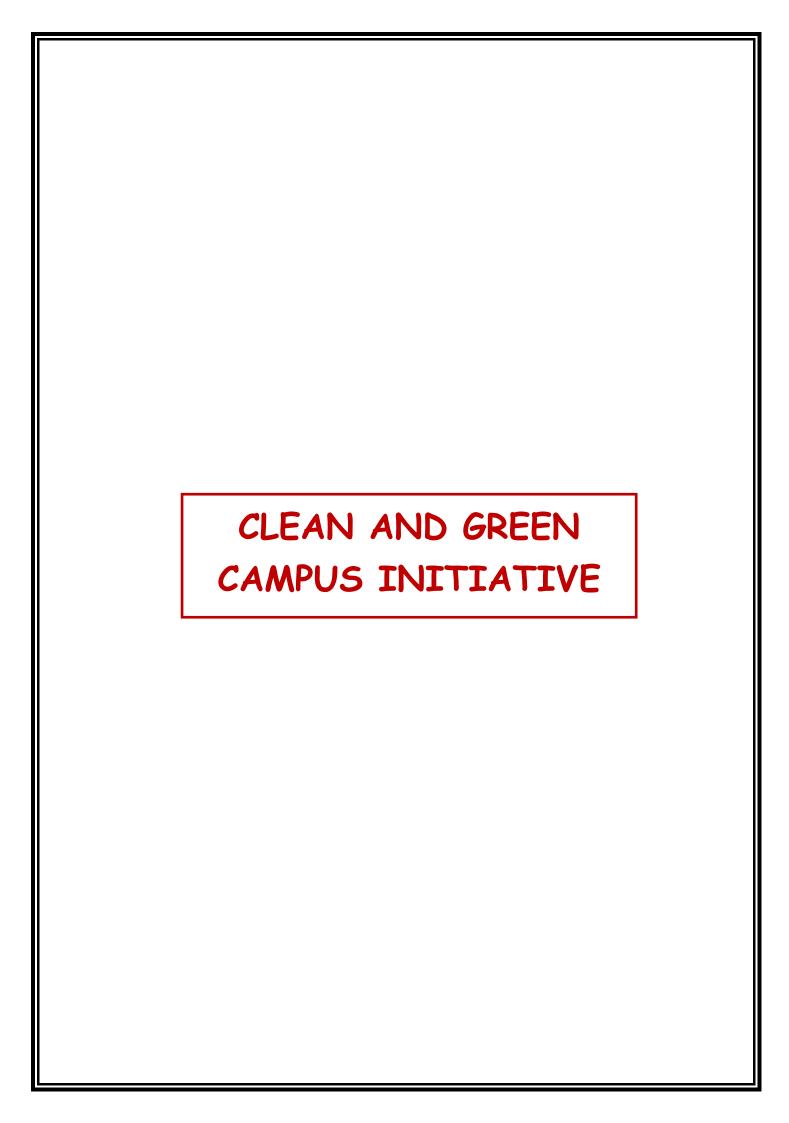
Phone No.: 0376-2320184

Annexure-A

Observation and recommendation

- The cooling load including fans and Air Conditioners contribute a major portion
 of total connected load and seems to significantly contribute to overall electricity
 consumption. Regular maintenance, cleaning of the devices helps to reduce energy
 losses from those devices. It is also recommended to replace any inefficient, old
 devices (fan, AC) by energy efficient devices which will contribute to achieve
 overall energy efficiency.
- 2) Department wise load segregation revealed that, Chemistry and Botany department has highest installed load due to different energy intensive devices like electric furnace, oven etc. Periodic inspection, cleaning are required for efficient operation of those devices which will contribute to reduce losses from those devices.
- Illumination of most of the building rooms has been achieved through daylighting and having lux level within the range of recommended level of illumination for respective room's activity.
- 4) There is no separate energy sub meter installed. Sub meters can be installed to measure and compare category wise as well as department wise electricity consumption, which will helps in exploring energy conservation measures and achieving energy efficiency.
- 5) The college building has many vacant roof areas .which can be utilise to install solar panel for harnessing power through renewable energy. This will helps the organisation to reduce overall electricity consumption from Grid and carbon emission to the atmosphere.

Asstt. General Manager(P)
O/o The CEO, JEC
APDCL, Jorhat



Quality compost Unit at College campus for sustainability



Solid waste management through municipal bodies



Use of Dustbins for solid waste management in different locations



MoA for e-waste management between N.N.Saikia College and Digital Infosolution, Jorhat



অসম असम ASSAM

34AA 387760

Memorandum of Agreement Agreement for disposal of E-waste

This agreement for disposal of E-waste is made at Titabar, this 5th June, 2018 between N.N.Saikia College, Titabar and Digital Infosolution, Jorhat, a firm registered under the office of the Register of firms and societies, Govt. of Assam having its registered office at B.G. Road, Jorhat (hereinafter referred to as "Vendor").

Each being a "Party" to this agreement and together comprising the "parties" to the agreement.

WHEREAS

- 1. An institute/college is engaged in providing various education to students and generate waste such as desktops, laptops, printers, keyboards, mouse, UPS, cartridge etc while carrying out different academic and administrative activities (hereinafter referred to as E-waste) and intends to dispose the said E-waste generated as per guidelines of the pollution control board of Assam, Ministry of environment and forest, Govt. of Assam.
- 2. Upon the representation of the Vendor, the institute/college has agreed to appoint the vendor and the vendor has agreed to take charge of the said E-waste and collect. remove and dispose the same in the manner prescribed by the concerned authorities on the following terms and conditions agreed between the parties.
- NOW, THEREFORE, In consideration of the foregoing, the parties hereby, agree as follows: The Institute /college agree to provide E-waste and the Vendor agrees to take charge of the E-waste.
 - The institute/college shall, at its sole discretion, send written intimation to the vendor either at specified interval of time or whenever specifies quantity of E-

MoA for e-waste management between N.N.Saikia College and Digital Infosolution, Jorhat

waste is generated to collect the E-waste. The said E-waste shall be collected from the institute/college premises by the Vendor within 30 working days from intimation by the institute/college. It will be the responsibility of the Vendor to collect the same from the premises and have the same transported from premises from the institute/college to the Vendor's facility at its own cost.

TERM AND TERMINATION:

- 1. This Agreement shall commence from the Effective Date and shall continue to be in force for a period of five (5) years thereafter ("Term"), unless renewed further or earlier terminated. The Agreement may be renewed or extended by mutual agreement (in writing) between the Parties at any time during the Term.
- Notwithstanding anything herein contained, either Party may forthwith terminate this Agreement immediately under any one or more of the following conditions:
 - a. In the event of a remediable breach of this Agreement by the other Party that remains uncured for a period of seven (7) days after written notice of breach to the defaulting Party by the aggrieved Party;
 - b. It can be extended if the review committee recommends it
 - c. This MOA will be automatically invalid after five years unless renewed.

IN WITNESS WHEREOF, the Parties hereto have executed the Agreement by their duly authorized representatives, on the dates set forth below:

AGENCY A		AGENCY B		
Principal, Nanda Nath Saikia College, Titabar, Jorhat, Assam		Proprietor, Digital Infosolution, Jorhat Assam		
Signature & Seal	Principal N.N.Saikia College Titabar	Signature & Seal	AW 7 CHANT 02	
Telephone No.	9435490124	Telephone No.	9435738830	
Email. Id	nuscollege ogmeil.	Email. Id	digiinfojrt@gma	11.00m
Witness: (Parthe Pr Soulli'l ((Preoriful cuelin		Witness: D Khogiswur wer. D Achole Dos D Wihan Kr. Gogai		

MoA for solid waste management between N.N.Saikia College and Titabar Municipal Board, Govt of Assam



অসম असम ASSAM

34AA 387763

Memorandum of Agreement Agreement for disposal of Solid waste

This agreement for disposal of solid waste is made at Titabar, on 21st April, 2022 between N.N.Saikia College, Titabar and Titabar Municipal Board, Govt. of Assam, for serving the purpose of collection and disposal of solid waste of all sort from N.N.Saikia College campus and Girls' hostel on daily basis and would be disposed properly without creating any harm to the natural environment and as per the norms of state government.

The nature of waste that would be collected from the college premises are as follows:

- 1. Paper waste
- 2. Biodegradable waste
 - 3. Glass waste
 - 4. Garbage

These waste materials will be collected from the college campus daily or as requested by the college authority which shall be communicated by the Principal.

This agreement for the collection of solid waste materials and disposal of the same are valid for a period of five years from the date of agreement.

> 21.04.22 Principal

Nanda Nath Saikia College, Titabar, Jorhat, Assam

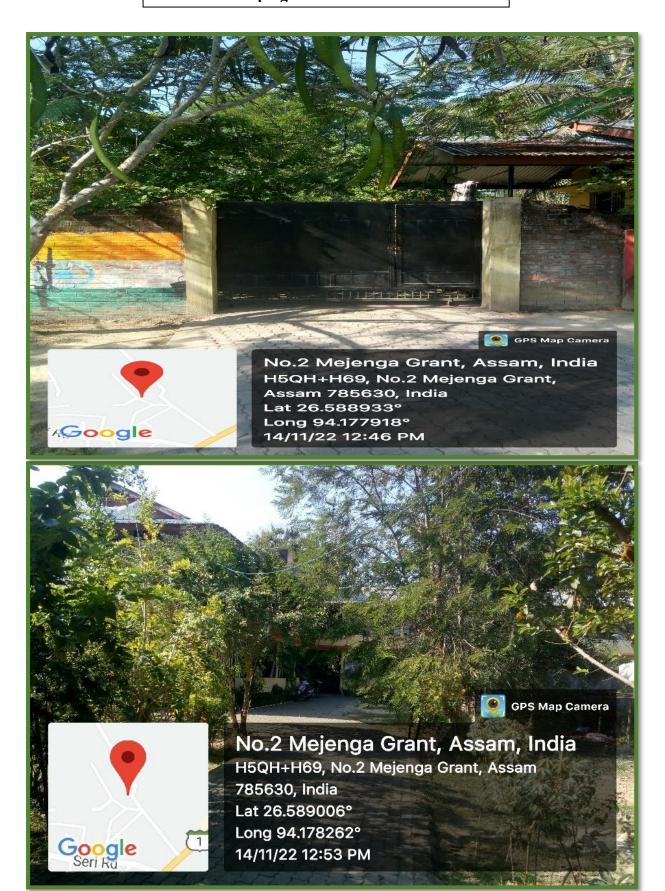
Principal N.N.Saikia College Titabar

Titabar Municipal Board, Titabar Jorhat, Assam

Chairperson Titabar Mt:nicipal Board Restricted entry of automobiles

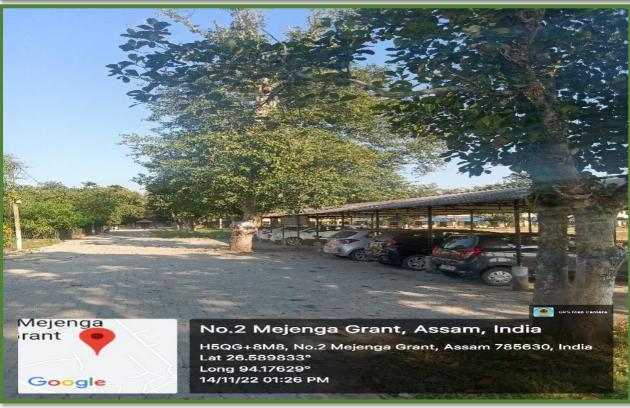


Landscaping in front of Girls' Hostel



Landscaping in the campus





Landscaping in the campus



Landscaping in the campus





Display boards to create awareness







FOR OUR CHILDREN

NANDA NATH SAIKIA COLLEGE, TITABAR



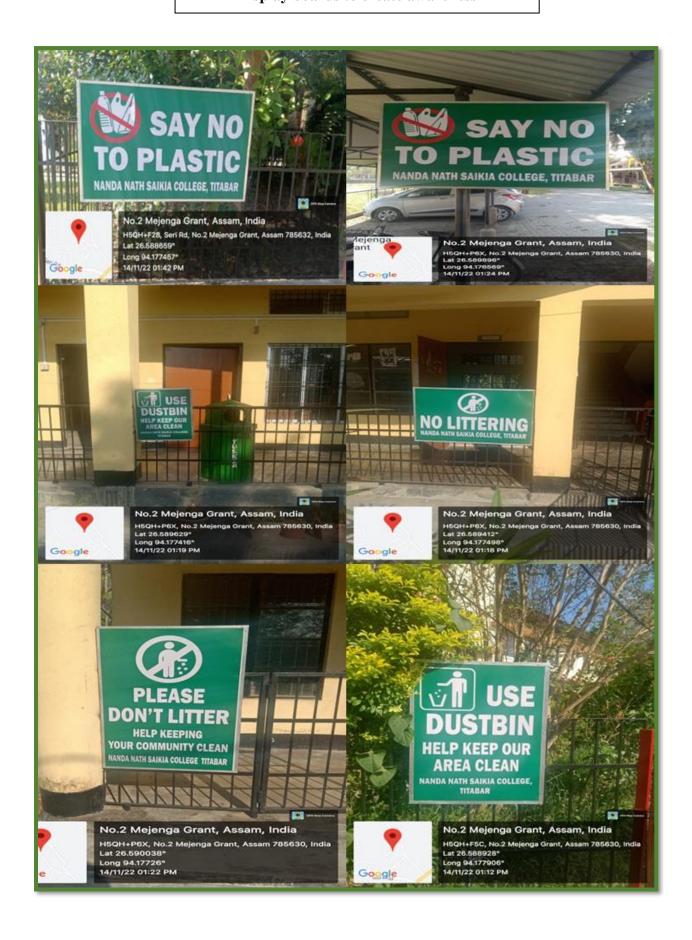




Display boards to create awareness



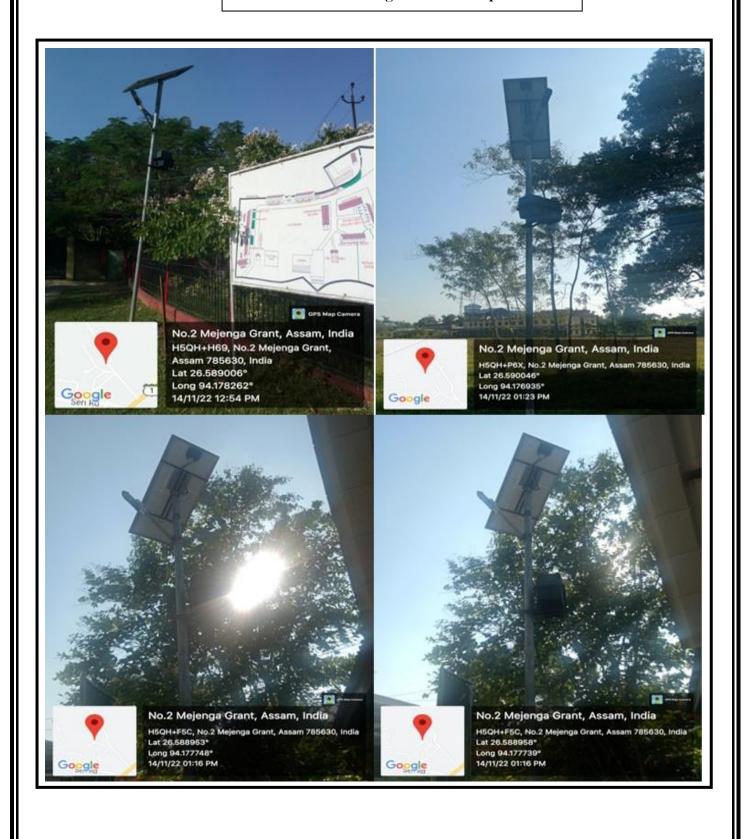
Display boards to create awareness



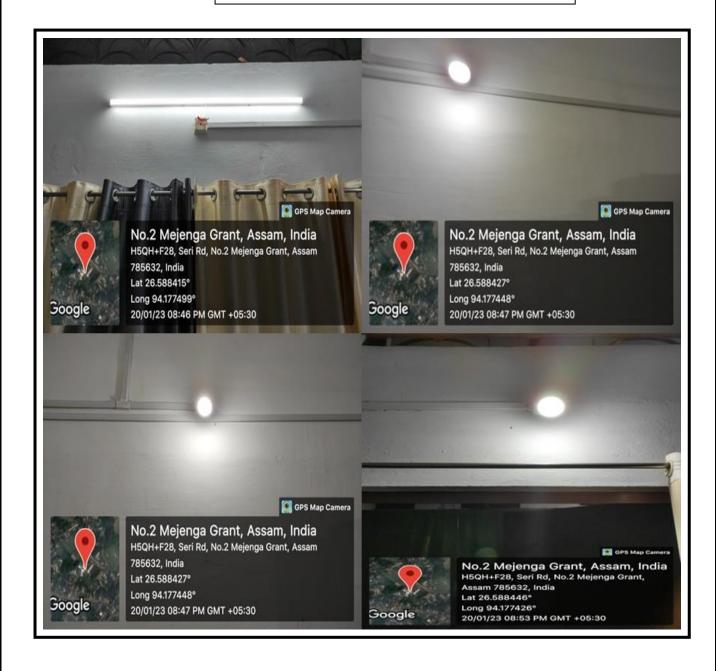
Rain water harvesting



Solar Street lights in the campus



Power saving LED lights in the campus



In Campus awareness and Swachh Mission by College members for maintaining clean campus



In Campus awareness and Swachh Mission by College members for maintaining clean campus



Awareness programme on waste recycling among students through Competition



Plantation Drive in the College Premise





Pedestrian friendly pathways in front of college



Clean and Green Campus Certificate from Titabar Municipal Board, Govt. of Assam



No.TMB/NOC/34-A/Pt/2018/ 1714と、

Dated .:- 29/11/2021

CLEAN AND GREEN CAMPUS CERTIFICATE

This is to certify that the NANDA NATH SAIKIA COLLEGE, is situated at Titabar Ward No.3, Dist. Jorhat, Assam, in the Jurisdiction of Titabar Municipal Board.

The campus of N.N.Saikia College is Clean and Green.

Chairperson
Titabar Municipal Board
Chairperson
Titabar Municipal Board

Beyond the campus environmental promotion activities: Cleanliness drive to create awareness about waste management among people of nearby villages



Beyond the campus environmental promotion activities: Cleanliness drive to create awareness about waste management among people of adopted village



Beyond the campus environmental promotion activities: Cleanliness drive to create awareness about waste management in public places



