



Guru Nanak College Budhlada

Distt. Mansa-151502

Under the Management of S.G.P.C., Sri Amritsar Sahib

Affiliated to Punjabi University, Patiala

NAAC Accreditation 'A' Grade

Selected Under 'Star College Scheme' by DBT, GOI

GREEN/ ENVIRONMENT/ ENERGY

AUDITREPORT

2020-21



Principal

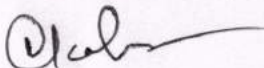
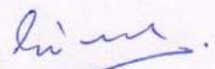
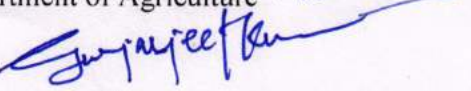

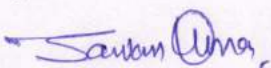
Dr. Kuldip Singh Bal

Green Audit Committee has prepared this report for Guru Nanak College, Budhlada. This report is based on input data submitted by the representatives of the college and is completed with the best judgment capacity of the expert team.

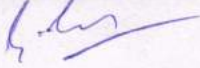
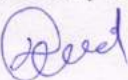
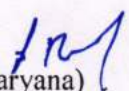
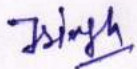
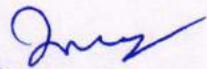
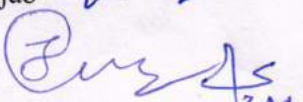
While all reasonable care has been taken in its' preparation, details contained in this report have been compiled in good faith based on information gathered.

It is further informed that the calculations are arrived following best estimates and no representation, warranty or undertaking, express or implied is made and no responsibility is accepted by Audit Team in this report or for any direct or consequential loss arising from any use of the information, statements or forecasts in the report.

Member of Internal Committee for Green / Energy and Environment Audit

1. Dr. Nariender Singh Coordinator IQAC 
2. Dr. Garima Mahajan Prof. Environmental Science Department of Agriculture 
3. Dr. Gurjasjeet Kaur Assist. Prof. Department of English 
4. Dr. Jitender Singh Assist. Prof. Department of Chemistry 
5. Dr. Sarvan Kumar Assist. Prof. Department of Agriculture 

Member of External Committee for Green / Energy and Environment Audit

1. Er. Gagandeep Garg Jr. Engineer. PSPCL Sangrur (Punjab) 
2. Prof. (Dr.) Dhiraj Sud, W/W treatment, Department of Chemistry SLIET Longowal (Punjab) 
3. Dr. Ajay dhul Prof. Department of Geography, National Govt. College, Sirsa (Haryana) 
4. Jagmail Singh Rtd. S.D.Ø. PSPCL Budhlada (Punjab) 
5. Dr. D.K. Jindal Rtd. Prof., Entomology Govt. College, Nabha Punjab 
6. Dr. Jaspal Singh Shawney, Rtd. Prof. Soil Science PAU Ludhiana 

Principal
Guru Nanak College
BUDHLADA



Guru Nanak College Budhlada

Distt. Mansa-151502

Under the Management of S.G.P.C., Sri Amritsar Sahib

Affiliated to Punjabi University, Patiala

NAAC Accreditation 'A' Grade

Selected Under 'Star College Scheme' by DBT, GOI

CONTENTS

Sr.No.	Titles/Topics	PageNo.
1	INTRODUCTION	4
2	OBJECTIVES	4
3	METHODOLOGY	5
4	ABOUTTHECOLLEGE	5
5	VISION&MISSIONSTATEMENT	6
6	GREENAUDITING	6
7	TREEDIVERSITYOFGNC	7
8	FAUNALDIVERSITYINGNC	12
9	WEATHERDATAOFGNC	22
10	WASTEDISPOSALAT GNC	24
11	WATERANALYSISREPORTOFGNC	33
12	TRANSPORTATIONATGNC	37

4s
Principal
Guru Nanak College
BUDHLADA

1. INTRODUCTION:

Green Audit is a process of systematic identification, quantification, recording, reporting and analysis of components of environmental diversity of institute. It aims to analyse environmental practices within and outside of the concerned place, which will have an impact on the eco-friendly atmosphere. Green audit is a valuable means for a college to determine how and where they are using the most energy or water or other resources; the college can then consider how to implement changes and make savings. It can create health consciousness and promote environmental awareness, values and ethics. It provides staff and students better understanding of Green impact on campus. If self-enquiry is a natural and necessary outgrowth of a quality education, it could also be stated that institutional self-enquiry is a natural and necessary outgrowth of a quality educational institution. Thus it is imperative that the college evaluate its own contributions toward a sustainable future. As environmental sustainability is becoming an increasingly important issue for the nation, the role of higher educational institutions in relation to environmental sustainability is more prevalent. The rapid urbanization and economic development at local, regional and global level has led to several environmental and ecological crises. On this background it becomes essential to adopt the system of the Green Campus for the institutes which will lead to sustainable development and at the same time reduce a sizeable amount of atmospheric CO₂ from the environment. The National Assessment and Accreditation Council, New Delhi (NAAC) has made it mandatory that all Higher Educational Institutions should submit an annual Green Audit Report. Moreover, it is part of Corporate Social Responsibility of the Higher Educational Institutions to ensure that they contribute towards the reduction of global warming through carbon footprint reduction measures.

OBJECTIVES:

In recent time, the Green Audit of an institution has been becoming a paramount important for self-assessment of the institution which reflects the role of the institution in mitigating the present environmental problems. The college has been putting efforts to keep our environment clean since its inception. Therefore, the purpose of the present green audit is to identify, quantify, describe and prioritize framework of Environment Sustainability in compliance with the applicable regulations, policies and standards. The main objectives of

carrying out Green Audit are:

- To map the Geographical Location of the college
- To document the floral and faunal diversity of the college
- To record the meteorological parameter of Budhlada where college is situated
- To document the ambient environmental condition of weather, air, water and noise of the college
- To document the waste disposal system
- To estimate the Energy requirements of the college
- To report the expenditure on green initiatives during the last five years

1. METHODOLOGY:

The purpose of the green audit of Guru Nanak College Budhlada is to ensure that the practices followed in the campus are in accordance with the Green Policy of the country. The methodology includes: collection of data, physical inspection of the campus, observation and review of the documentation and data analysis.

2. ABOUT THE COLLEGE:

Guru Nanak College, affiliated to Punjabi University, Patiala (listed in 12(b) & 2(f) sections of UGC Act 1956) is situated in outskirts of Budhlada city - a small town of district Mansa in Punjab. To tribute the 500th birth anniversary of "Sri Guru Nanak Dev Ji", it was started in 1971 by some eminent personalities of the region keeping in mind the noble cause to make affordable education accessible to all the people of this backward, rural and remote area. In the beginning, it was functioning under the local management but later on handed over to SGPC (Shiromani Gurdwara Parbandhak Committee, Sri Amritsar Sahib) an apex and philanthropic body of the Sikhs committed to serve the humanity, on 09 November 1994 due to meager financial resources and some other executive problems. It was followed by some significant reforms in both college functioning and infrastructure. The growth of the college took a phenomenal pace since 2008 with a radical augment in a number of courses, faculty, infrastructure and other teaching learning resources. At present, it has become the foremost organization of the area having 16 PG and 12 UG courses (including 03 skill-development vocational and industry oriented courses), 151 faculty members, 5926 students (2190 girls and 3736 boys) with state-of-the-art infrastructure and technology to provide quality education.

3. MOTTO, VISION&MISSIONVISIONSTATEMENT:

Our Motto: Learning with Perseverance; Rising with Honour

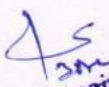
Our Vision: 'Enlightening Human Minds and Social Empowerment through Education'

Our Mission: Transforming the youth into a productive asset of the society through value-based quality education focusing on their all round development so that they are able to contribute in the progress of society to their utmost potential. In order to fulfill the mission of Guru Nanak College, the institution sets the following objectives which reflect the overall goal of the college.

- To achieve excellence in teaching and learning.
- To inculcate social, moral and spiritual values among the students.
- To sensitize the students towards social issues and make them responsible citizens.
- To make the students skilled and productive.
- To groom the students intellectually with scientific temper providing congenial ambience.
- To enable the youth to become tomorrow's leaders of change.
- To provide educational opportunities to the under-privileged sections of the society.
- To ensure all round development of the students through extra-curricular activities.

4. GREENAUDITING:

The college has adopted the 'Green Campus' system for environmental conservation and sustainability. There are main three pillars i.e. zero environmental foot print, positive impact on occupant health and performance and 100% graduates demonstrating environmental literacy. The goal is to reduce CO₂ emission, energy and water use, while creating atmosphere where students can learn and be healthy.


Principal
Guru Nanak College
BUDHLADA

5. TREEDIVERSITYOF GNC,BUDHLADA

Guru Nanak College is within the geo-position between latitude 27.20° N and longitude 77.49°E in Budhlada (Mansa), Punjab, India. It encompasses an area of approximate 11 acre. The area is immensely diverse with a variety of tree species performing a variety of functions. Most of these tree species are planted in different periods of time through various plantation programmes organized by the authority and have become an integral part of the college. The trees of the college have increased the quality of life, not only the college fraternity but also the people around of the college in terms of contributing to our environment by providing oxygen, improving air quality, climate amelioration, conservation of water, preserving soil, and supporting wildlife, controlling climate by moderating the effects of the sun, rain and wind. Leaves absorb and filter the sun's radiant energy, keeping things cool in summer. Many species of birds are dependent on these trees mainly for food and shelter. Nectar of flowers and plants is a favourite of birds and many insects. Leaf-covered branches keep many animals, such as birds and squirrels, out of reach of predators. Different species display a seemingly endless variety of shapes, forms, texture and vibrant colours. The strength, long lifespan and regal stature of trees give them a monument-like quality. They also remind us the glorious history of our institution in particular. We often make an emotional connection with these trees and sometime become personally attached to the ones that we see every day. A thick belt of large shady trees in the periphery of the college have found to be bringing down noise and cutting down dust and storms. Thus, the college has been playing a significant role in maintaining the environment of the entire Budhlada town in its surrounding areas. The following are the tree species with whom we are being attached-

Sr.No	Name of Plant	Botanical Name	Family	No. of plants
1	Ficus	<i>Ficus sp.</i>	Moraceae	190
2	Alstonia	<i>Alstonia scholaris</i>	Apocyanaceae	5
3	Amaltas	<i>Acacia fistula</i>	Fabaceae	6
4	Amla	<i>Phyllanthus emblica</i>	Phyllanthaceae	12
5	Arjun	<i>Terminalia arjuna</i>	Combretaceae	11
6	Ashoka Tree	<i>Saraca asoca</i>	Caesalpiniodae	40

7	Bohad/ Banyan	<i>Ficus benghalensis</i>	Moraceae	03
8	Hibiscus	<i>Hibiscus sp.</i>	Malvaceae	31
9	Ber	<i>Ziziphusmauritiana</i>	Rhamnaceae	9
10	Araucaria	<i>Araucaria sp.</i>	Araucariaceae	02
11	Bottlebrush	<i>Callistemonviminalis</i>	Myrtaceae	04
12	BottlePalm	<i>Hypophorbelagenicaulis</i>	Arecaceae	43
13	Areca palm	<i>Dypsislutescens</i>	Arecaceae	06
14	Date palm (Phoenix plam)	<i>Phoenix sp.</i>	Arecaceae	45
15	Cheeku	<i>Manilkarazabota</i>	Asparagaceae	1
16	Lantena (West Indian Lantana)	<i>Lantenacamra</i>	Verbenaceae	14
17	Cycas	<i>Cycasrevoluta</i>	Cycadaceae	9
18	Dek	<i>Meliaazedarch</i>	Meliaceae	11
19	China palm	<i>Livistona Chinensis</i>	Arecaceae	01
20	Golden shower tree	<i>Cassia fistula</i>	Fabaceae	01
21	Chandni	<i>Tabernaemontanadivaricat a</i>	Apocynaceae	04
22	Double Chandni	<i>Tabernaemontanadivaricat a</i>	Apocynaceae	03
23	Guava	<i>Psidiumguajava</i>	Myrtaceae	32
24	Rose (Gulab)	<i>Rosa indica</i>	Rosaceae	18
25	Kadam (Burflower Tree)	<i>Neolamarckiacadamba</i>	Rubiaceae	03
26	Gulmohar	<i>Delonixregia</i>	Fabaceae	9
27	Harshingar	<i>Nyctanthesarbortristis</i>	Oleaceae	01
28	Cheel tree (Narrow leaved paperbark)	<i>Melaleuca alternifolia</i>	Myrtaceae	01
29	Jamun	<i>Syzygiumcumini</i>	Myrtaceae	02
30	Jatropha	<i>Jatrophacurcus</i>	Euphorbiaceae	02
31	Kachniar	<i>Bauchiniavariegata</i>	Caesalpinaceae	02

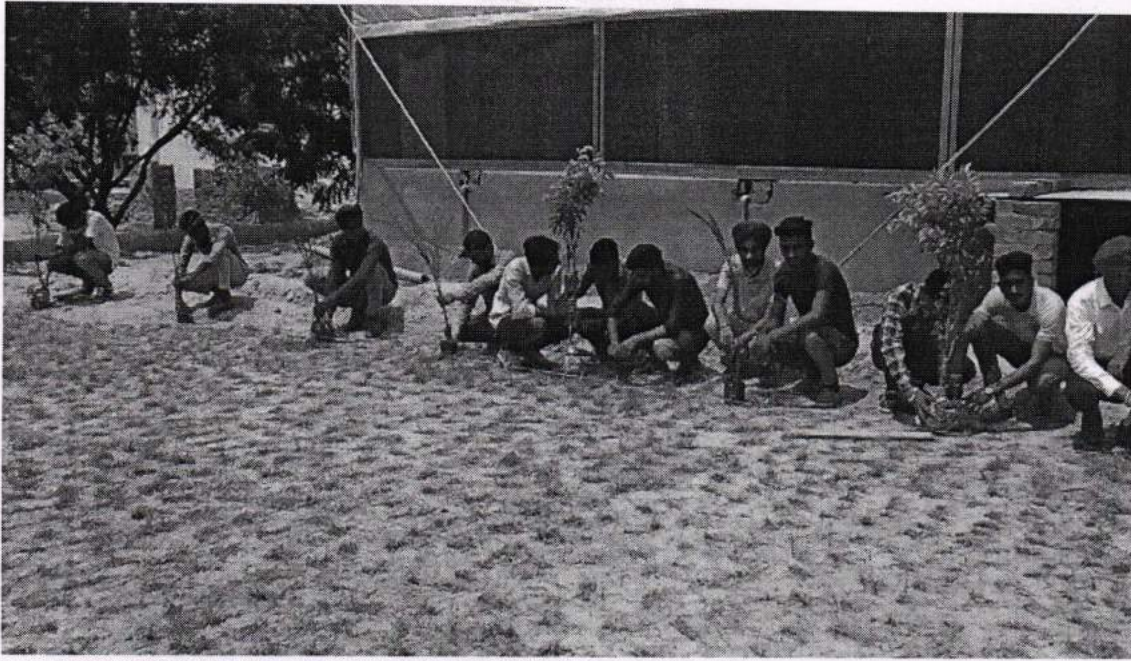
31	Kachniar	<i>Bauchiniavariegata</i>	Caesalpinaceae	01
32	Nolina (Ponytail palm)	<i>Beaucarnearecurvata</i>	Asparagaceae	04
33	Washingtonia tree (Mexican Fan plam)	Washingtoniarobusta	Arecaceae	51
34	Lasuda	<i>Cordiomyxa</i>	Boraginaceae	01
35	Mango	<i>Mangiferaindica</i>	Anacardiaceae	03
36	Neem	<i>Azadirachtaindica</i>	Meliaceae	30
37	Peepal	<i>Ficusreligiosa</i>	Moraceae	02
38	Rabishpalms	<i>Rhapisexcelsa</i>	Arecaceae	09
39	RubberPlant	<i>Ficuselastica</i>	Moraceae	01
40	Safeda	<i>Eucalyptusobliqua</i>	Myrtaceae	11
41	Sarien	<i>Albegialebeck</i>	Fabaceae	01
42	Sukhchain	<i>Millettiapinnata</i>	Fabaceae	43
43	Tahli	<i>Delbergiasisso</i>	Fabaceae	16
44	Tecona	<i>Tecona sp.</i>	Bignoniaceae	09
45	Cupressus	Cupressus sp.	Cupressaceae	01
46	Ixora (West Indian Jasmine)	<i>Ixora sp.</i>	Rubiaceae	03
47	Furcraea	<i>Furcraea sp.</i>	Asparagaceae	02
48	White Marigold	<i>Caltha sp.</i>	Ranunculaceae	100
49	Baheda	<i>Terminalia bellirica</i>	Combretaceae	14
50	Coral tree	<i>Erythrina variegata</i>	Fabaceae	02
51	Graps	<i>Vitis vinifera</i>	Vitaceae	20
52	Pear	Pyrus	Rosaceae	10
53	Pomegranate	Punica granatum	Lythraceae	10
54	Peach	Prunus persica	Rosaceae	05
55	Lemon	Citrus limon	Rutaceae	05
56	Phalsa	Grewia asiatica	Malvaceae	10
57	Bougainvillea	Bougainvillea sp.	Nyctaginaceae	10



Overview of Administrative block



Overview of College Campus



Department of Agriculture Van Mahoutsav Celebration in Campus

Various events such as Plantation drives, Awareness rallies, Seminars, Competitions and Guest Lectures are organized by the college from time to time to spread awareness on environmental issues among students and society.



Cycas



Roses

45
Principā,
Guru Nanak College
BUDHLADA

6. FAUNAL DIVERSITY IN GNC CAMPUS BUDHLADA

Guru Nanak College is located in Mansa District of Punjab. Mansa Was Declared As District on 13th April 1992 From The East While District of Bathinda. It Lies Between 29.58' To 36.33" In North & 75.23' To 34.87" East At The Elevation of 716 Feet From Sea Level .Mansa Is A Small District Both In Terms of Population and Area. It Is Situated on The Rail Line Between Bathinda- Jind- Delhi Sections and also on Barnala-Sardulgarh-Sirsa Road. This District Is Surrounded By Bathinda District In North West, By Sangrur District In East And By Sirsa District of Harayana State in the South. Mansa District is divided into three Sub Divisions Namely Mansa, Budhlada and Sardulgarh There are five Blocks and 243 Villages having 244 Gramm Panchyats.

Budha and Ladha were two real brothers who were khatri by caste. The village has got its name from the name of these two brothers. Some of the population of the village was of Majhbi and Ramdasia. It was a part of Kaithal State. The king of the Kaithal State did not help the British during the insurgency of 1857. So the British annexed the kingdom. Later on, it was merged with Karnal District. It was the largest market of East Punjab. It was a very big recruitment centre of military personnels which was second to only to Rohtak in India. Prestigious Ashoka Chakra award was conferred on Hawaldar Joginder Singh Datewas who was recruited from Budhlada. The highest temperature recorded is 38⁰ -40⁰C just prior to the onset of the monsoon (around May- early June). Summer rain is normal, and is principally caused from late June to August by the moisture-laden South-West Monsoon, on striking the Himalayan foothills of the north. The climatic condition of the Mansa district as a whole and GNC in particular is very suitable for a wide variety of flora and fauna to support its rich biodiversity. The faunal diversity of GNC campus has been studied and documented as below:

Table: Common and Scientific names of birds and animals

S.No.	Common Name	Scientific Name
1.	Grasshopper	<i>Caelifera</i>
2.	Water Beetle	<i>Hydrophilinae</i>
3.	Dung Beetle	<i>Scarabaeus</i>
4.	Dragonfly	<i>Anax</i>
5.	Red pierrot	<i>Talicara</i>

6.	JewelBug	<i>Chrysocoris</i>
7.	SkipperButterfly	<i>Pelopidas</i>
8.	CommonmormonButterfly	<i>Papilio</i>
9.	RedCottonBug	<i>Dysdercus</i>
10.	BlisterBeetle	<i>Mylabris</i>
11.	Housefly	<i>Muscadomestica</i>
12.	CabbageButterfly	<i>Peiris</i>
13.	MoleCricket	<i>Gryllotalpa</i>
14.	CommonShieldBug	<i>Palomena</i>
15.	Indianpalmsquirrel	<i>Funambulus</i>
16.	PunjabToad/Indianmarbledtoad	<i>Duttaphrynus</i>
17.	GardenLizard	<i>Calotes</i>
18.	Rat	<i>Rattusrattus</i>
19.	Earthworm	<i>Pheretima</i>
20.	Slug	<i>Limax</i>
21.	HouseCricket	<i>Acheta</i>
22.	GardenSnail	<i>Cornu</i>
23.	PrayingMantid	<i>Mantis</i>
24.	StableFly	<i>Stomoxys</i>
25.	BlowFly	<i>Calliphora</i>
26.	White-throatedKingfisher	<i>Halcyon</i>
27.	Honeybee	<i>Apis spp.</i>
28.	BluetigerButterfly	<i>Tirumala</i>
29.	Carpenter Ants	<i>Camponotus</i>
30.	Cockroaches	<i>Periplaneta</i>
31.	Plaintigerbutterfly	<i>Danaus</i>
32.	LemonButterfly	<i>Papilio</i>
33.	Hornbill	<i>Buceros</i>
34.	CommonKingfisher	<i>Alcedo</i>
35.	CrowPheasant	<i>Centropus</i>
36.	TheCommonPierrot	<i>Castaliusrosimon</i>

37.	ThePeaBlue	<i>Lampidesboeticus</i>
38.	TheCommonSilverline	<i>Spindasisvulcanus</i>
39.	YellowWasp	<i>Polistes</i>
40.	Ladybirdbeetle	<i>Coccinella</i>
41.	Rockdove, rockpigeon, orcommonpigeon	<i>Columba livia</i>
42.	CommonmynaorIndianmyna	<i>Acridotheres</i>
43.	Ringneckedparakeet	<i>Psittacula</i>
44.	JungleBabbler	<i>Turdoides</i>
45.	Greatercoucalorcrow pheasant	<i>Centropus</i>
46.	<u>White-throatedKingfisher</u>	<i>Halcyon</i>
47.	Rufoustreepie	<i>Dendrocitta</i>
48.	Owl	<i>Tyto</i>
49.	CommonCrow	<i>Corvus</i>
50	HouseSparrow	<i>Passer</i>


 Principal
 Guru Nanak College
 BUDHLADA

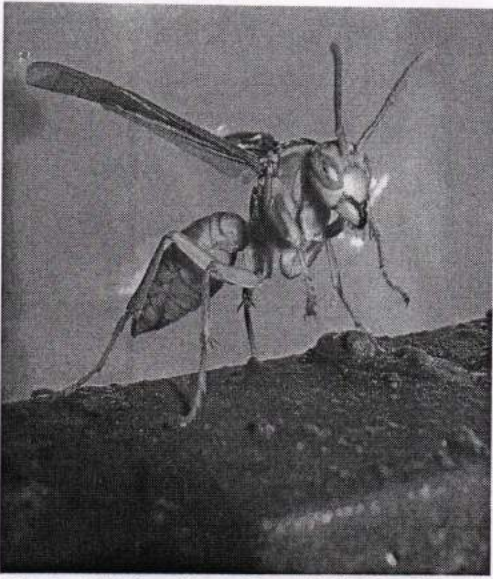


Photo-1. Yellow Wasp (Ropalidia Marginata)



Photo-2 . Butter Fly (Danaus Genutia)



Photo.3 Beetle insect on hibiscus flower



Photo.4 Snake



Photo. 5 Common Wood shrike



Photo. 6 Pied Myna (Gracupica Contra)



(Tephrodornis Pondicerianus)

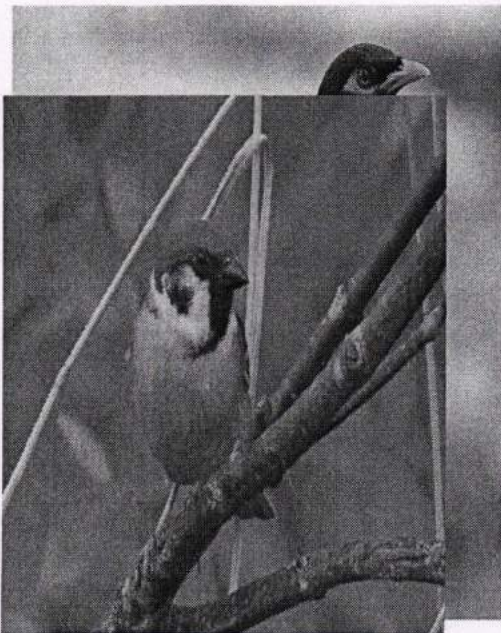


Photo.8 Skylark(AludaGulgula)

Photo. 7 Red-VentedBulbul(Pycnonotus Cafer)

Photo. 9 CommonMyna (AcridotheresTristis)

Phot0-10HouseCrow(Corvus Splendens)



Principal
Guru Nanak College
BUDHLADA

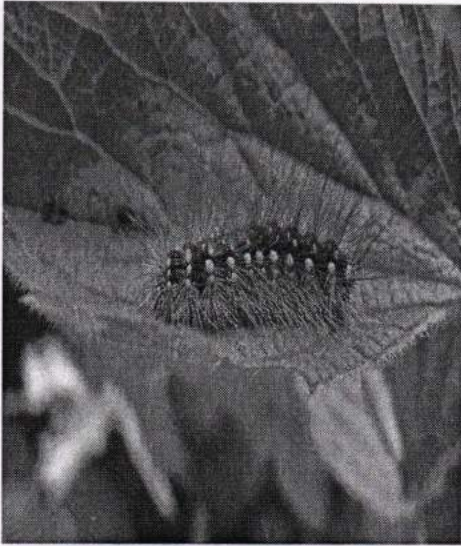


Photo-
11. House Sparrow (*Passer domesticus*)



Photo-12
Cuckoo (*Cuculidae*)

Photo. 13 Garden Tiger Moth (*Arctia Caja*)
(*Syntomeida Epilais*)



Photo. 15 Little Owl (*Athene Brama*)

Photo. 14 Oleander Moth

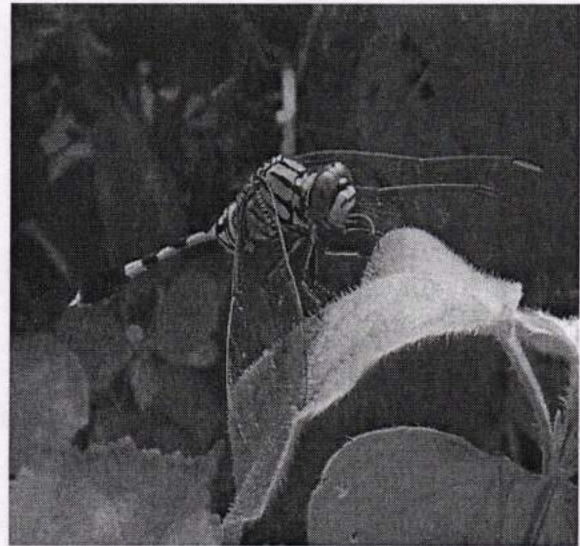


Photo. 16 Slender Skimmer (*Orthetrum Sabina*)

AS
3M
Principal
Guru Nanak College
BUDHLADA

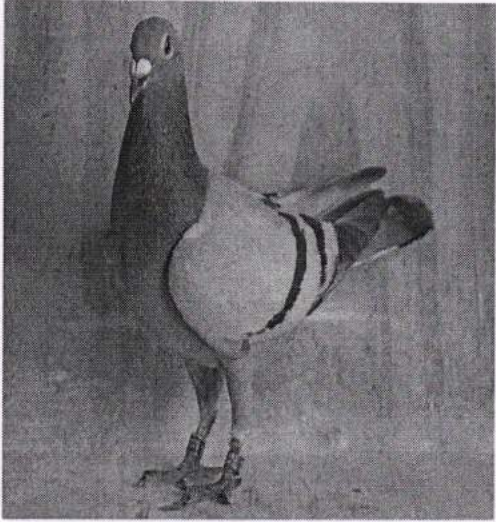


Photo 17 Common Pigeon (*Columba livia*)
neckedparakeet)

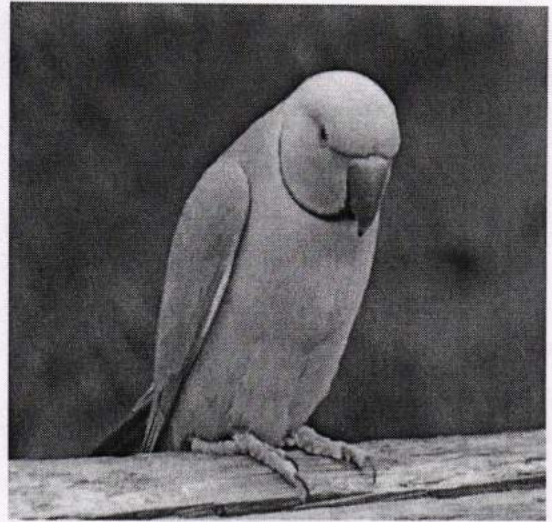


Photo. 18. *Psittacula* (Ring

45
300
Principal
Guru Nanak College
BUDHLADA

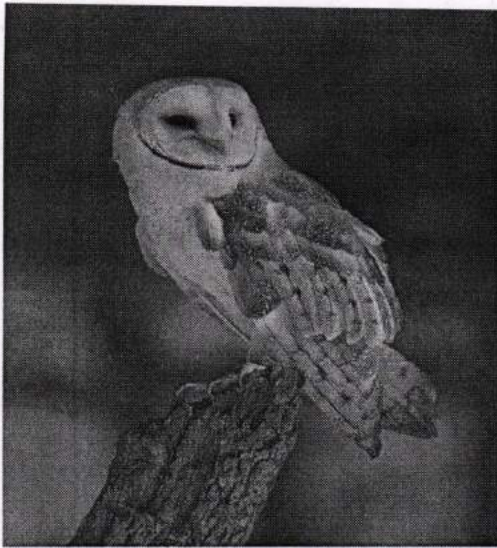


Photo-19 Tyto (Owl)



Photo-20 Centropus(CrowPheasant)



Photo-21 Cinnerys(Purplesunbird)



Photo-22 Eudynamys(AsianKoel)



Photo-23 Passer(HouseSparrow)



Photo-24 Turdoides(JungleBabbler)

AS
2011
Principal
Guru Nanak College
D.D.



5 *Coccinella*(Ladybirdbeetle)

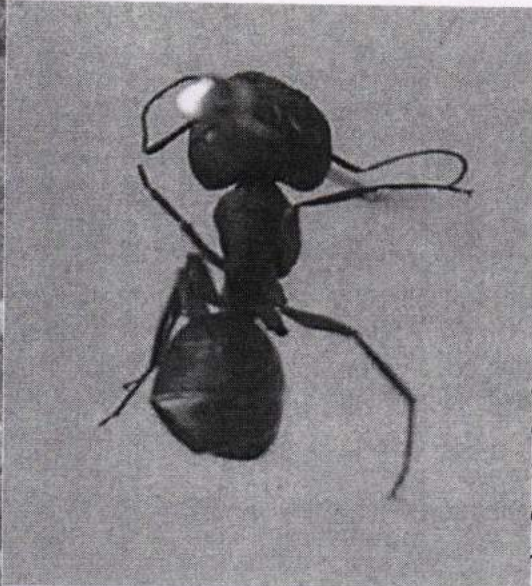


Photo-26 *Camponotus*(CarpenterAnts)

P
h
o
t
o
-
2

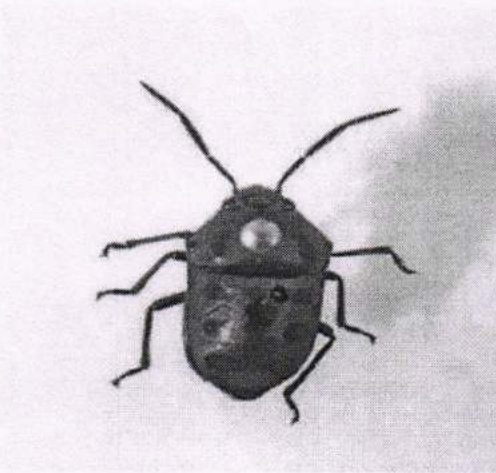


Photo-27 *Chrysocoris*(JewelBug)

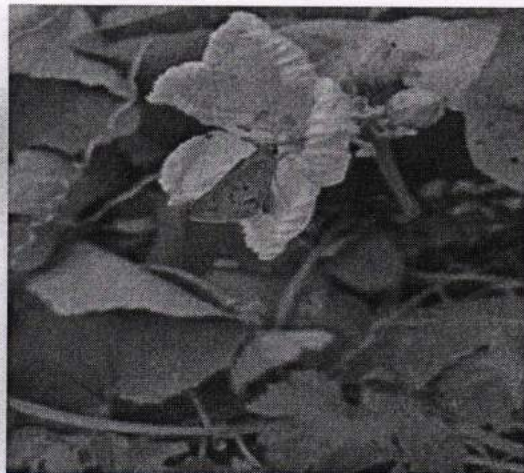


Photo-28 *Pelopidas*(SkipperButterfly)

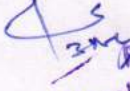
P



AS
Principal
Guru Nanak College
BUDHLADA

Photo-29 *Cinnyris*(Purplesunbird)

Photo-30 *Eudynamys*(AsianKoel)

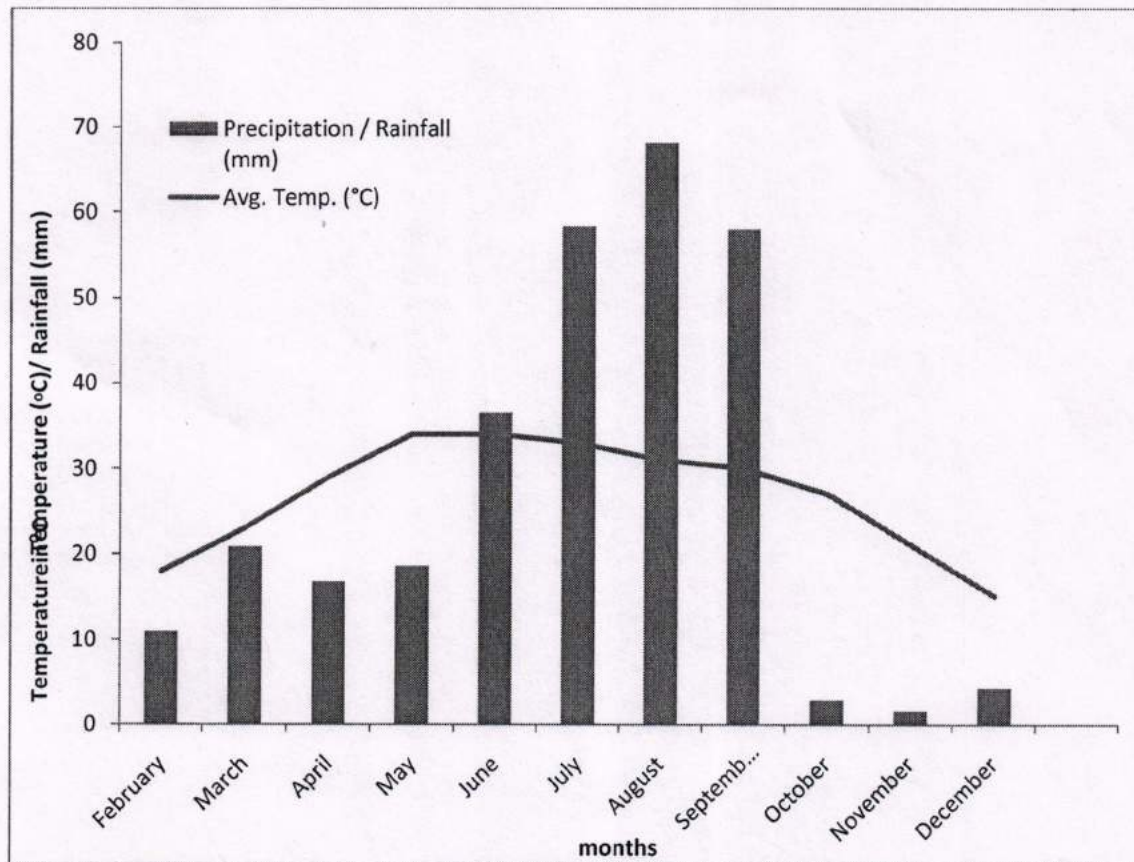

Principal
Guru Nanak College
BUDHLADA

7. WEATHER DATA MONTH WISE OF BUDHALADA AND GNC CAMPUS: 2021

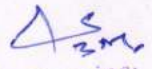
Temperature\Month	January	February	March	April	May	June	July	August	September	October	November	December
Avg.Temp.(°C)	14	18	23	29	34	34	33	31	30	27	21	15
Min.Temp(°C)	7	10	15	20	25	27	27	26	24	19	13	8
Max.Temp(°C)	20	26	32	38	43	41	38	36	36	35	29	23
Relative Humidity (%)	72	67	59	39	37	49	67	72	70	58	62	70
Average Pressure (mb)	1018	1015	1011	1007	1001	998	997	1000	1004	1010	1014	1017
Precipitation /Rainfall(mm)	7.6	11	20.9	16.8	18.6	36.5	58.3	68.1	58	2.9	1.6	4.3

(Source Google)

CLIMATE GRAPH MONTHWISE RAINFALL AND AVERAGE TEMPRATURE

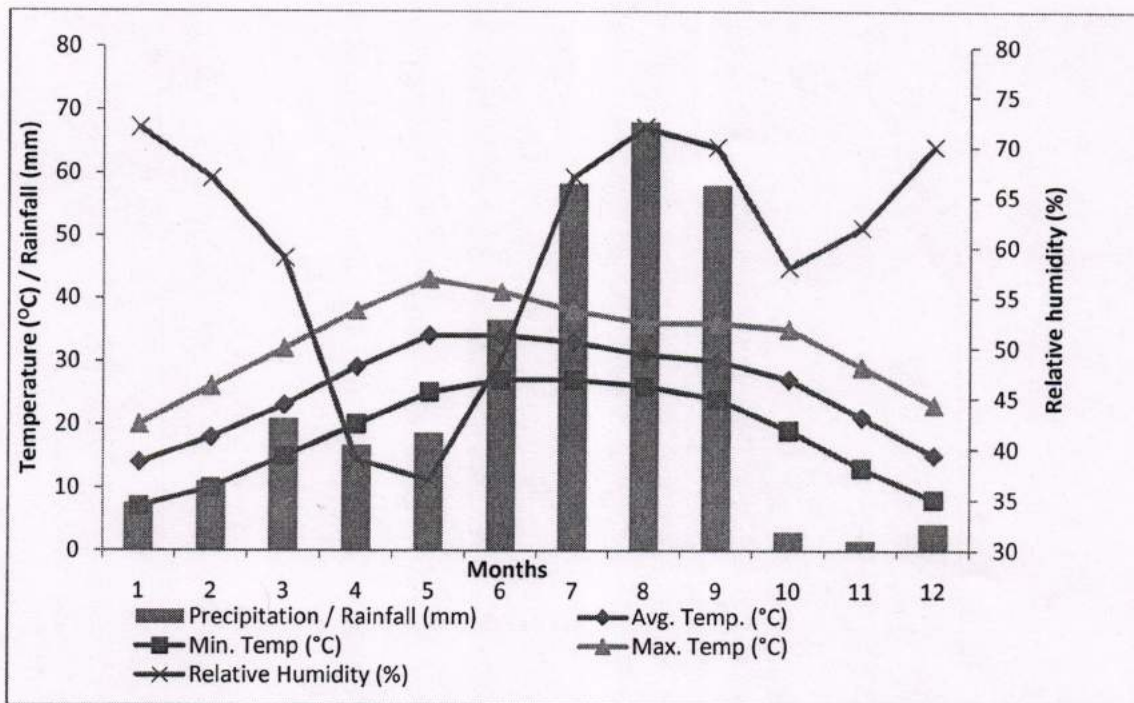


The climate of budhlada mainly comprises of three seasons i.e., summer, rainy and winter. The summer season spans from mid-April to the end of June. The rainy season spans from the month of July to September. The winter season starts from the end of November to the end of February with lowest temperatures in December and January.


 Principal
 Guru Nanak College
 BUDHALADA

The climatic conditions bear a strong resemblance with the other cities in the northern part of India. The summers are usually very hot and the winters are very cold. The summers are prevalent during the months of April to September with June, July, August, and mid of September being the hottest months. The winter is prevalent from the month of November till the month of March. There is onset of monsoon in September and from the mid of September to November one experiences the transitional weather. It is worth mentioning that an extreme type of climatic conditions is found in Budhladamansa as the location of the region is continental and far away from sea coast. Therefore, the average annual range of temperature is up to 19°C due to extremely high temperatures in summers and extremely low temperatures in winter season

WEATHER DATA MONTH WISE OF BUDHALADA AND GNC CAMPUS



45
3/22
Principal
Guru Nanak College
BUDHLADA

8. WASTE DISPOSAL OF GURU NANAK COLLEGE, BUDHLADA

Waste disposal are the activities and actions required to manage waste from its inception to its final disposal. This includes the collection, transport, treatment and disposal of waste, together with monitoring and regulation of the waste management process.

The waste from all around the college is separated daily as wet and dry waste in different bags which are disposed separately. Dry waste includes paper, cardboard, glass tin cans etc. on the other hand; wet waste refers to organic waste such as vegetable peels, left-over food etc. Separation of waste is essential as the amount of waste being generated today causes immense problem. The material was composted and evaluated as a fertilizing material. Disposal of these waste results in the production of good quality organic manure that can be used as soil amendments and source of plant nutrients.

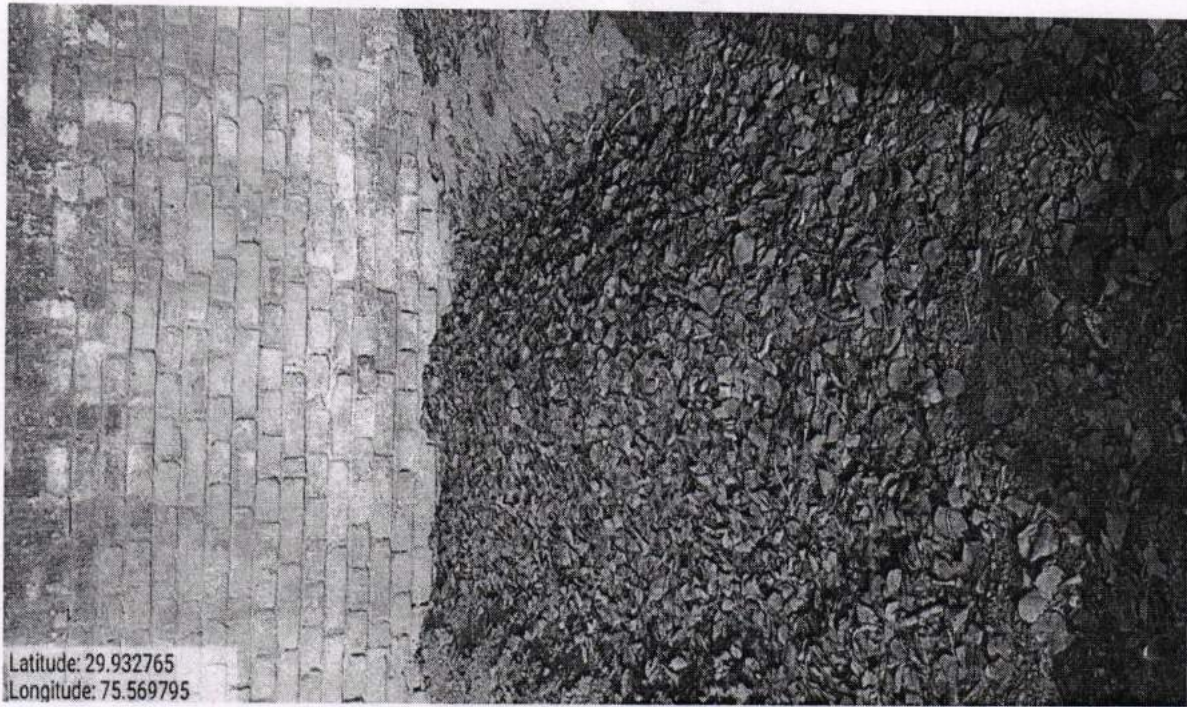
With smart initiatives like "Think Green Campus Model", waste management is helping colleges and universities to achieve a higher level of environmental performance. By reusing or recycling we are contributing to the conservation of natural resources, saving energy, helping to protect the environment, reducing landfill. We will also reduce our impact on the environment by minimizing the carbon emissions associated with both disposing of old products and obtaining new ones. GNC adopts environment friendly practices and takes necessary actions such as energy conservation, waste recycling, carbon neutral etc. The biological reusable waste are processed as organic manure for the plants available in the college campus and the other solid waste generated in the college campus is taken to the community bin of Budhlada municipality for recycling and disposal.



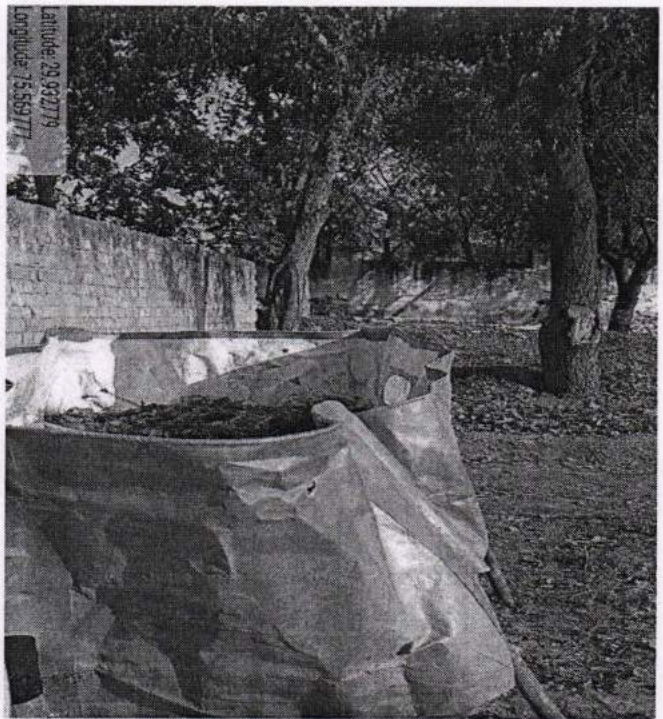
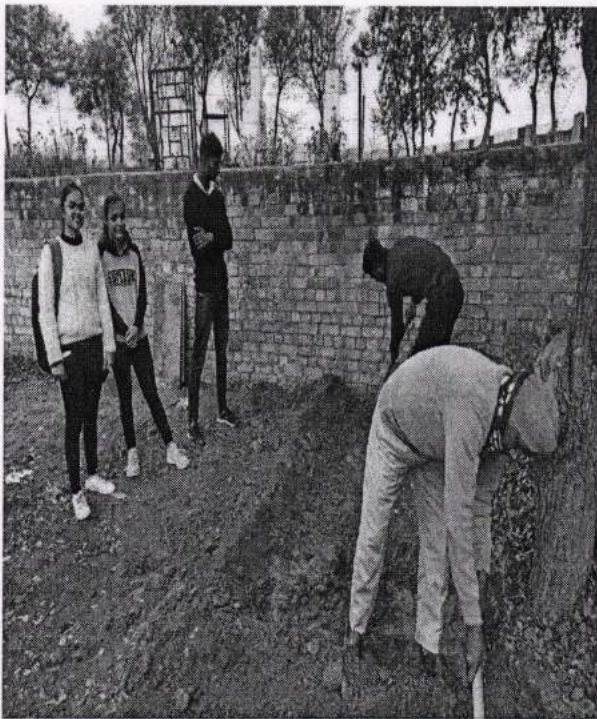
24



[Signature]
Principal
Guru Nanak College
BUDHLADA



GreenWastecollectionpitforpreparationofmanure



Organiccompostpreparedincollegecampus



Pit preparation for green disposal by students of agriculture department

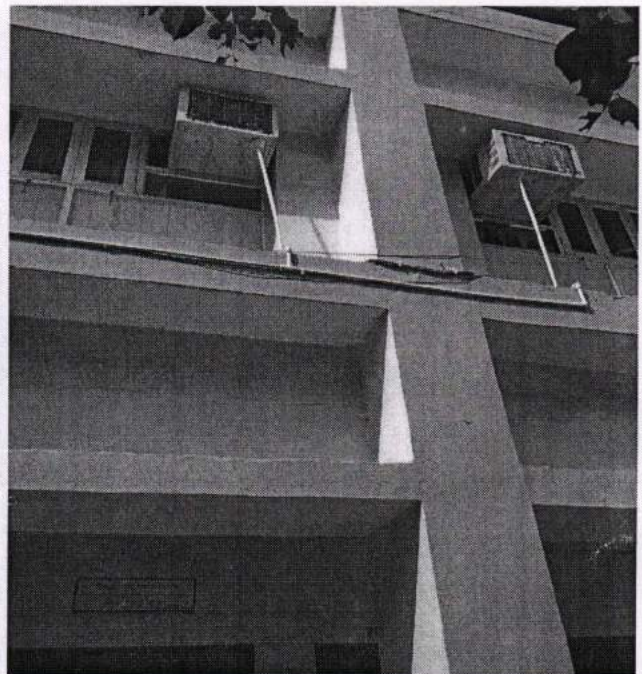
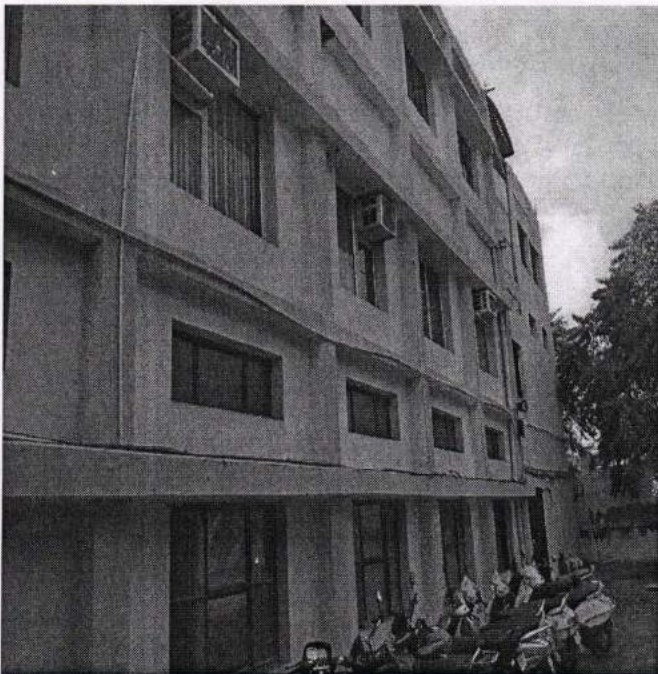




Department of Agriculture Vermi compost unit at campus

Liquid waste management:

The waste chemicals mixed water from laboratory passes through concealed pipe line into soak pit & recycled water is used for the watering trees or non-potable usage. Liquids are diluted by getting mixed with the washroom and toilet liquid wastes in to the common drainage.



AC Water discharge collection

AS
3m
Principals
Guru Nanak College
BUDHLADA



Oue College has MOU with Medwaste solution Pvt Ltd during the pandemic COVID-19 for the maintain then cleanness of campus

AS
Principal
Guru Nanak College
BUDHLADA

ਪੰਜਾਬ ਪ੍ਰਦੂਸ਼ਣ ਕੰਟਰੋਲ ਬੋਰਡ
PUNJAB POLLUTION CONTROL BOARD

No. 546

Dated. 28.9.2020

Office Order

Subject: Regarding rates to be charged for collection, transportation, treatment and disposal of COVID-19 waste generated from HCEs/ Isolation Wards/Quarantine Centers/Camps/Home Quarantine / Home-Care facilities/ Collection Centers/ Testing Laboratories.

The Central Pollution Control Board had issued guidelines for the Common Bio-medical Waste Treatment and Disposal Facilities in the year 2003, wherein, in Para-I, it has been mentioned as under:

"Cost to be charged from the healthcare units plays an important role in sustaining the project. The cost shall be so worked out that neither it becomes a monopoly of the CBWTF operator nor the interest of the CBWTF operator is overlooked. Accordingly, it is recommended that cost to be charged from the healthcare units shall be worked out in consultation with the State Pollution Control Board, Pollution Control Committee and the Local Medical Association."


And whereas, in compliance to the said guidelines the Punjab Pollution Control Board vide the letter no EPA/2014/3742-45 dated 15.10.2014 has fixed the rates to be charged by the operator of the Common Bio-medical Waste Treatment Facilities (CBWTFs) from the Health Care Facilities (HCFs) for collection, transportation, treatment and disposal of Bio-medical Waste.

And whereas, the Central Pollution Control Board has issued revised guidelines for the Common Bio-medical Waste Treatment and Disposal Facilities on 21.12.2016, wherein, in Para-14 titled 'cost to be charged by the CBWTF operator for the HCFs', it has been mentioned as under:

"Cost to be charged from the healthcare facilities plays an important role in financial viability and sustainable operation of a CBWTF project, for providing the best treatment services to the Healthcare Units and for ensuring compliance to the Bio-medical Waste Management Rules. The cost shall be so worked out that neither it becomes a monopoly of the CBWTF operator nor the interest of the CBWTF operator is overlooked. It is recommended that cost to be charged from the healthcare units, depending on the size, no of beds and the distance from the location of the CBWTF and same shall be worked out in consultation with the concerned SPCB/PCC and the local Medical Association, keeping in view the following options."

PTO

ਵਾਤਾਵਰਣ ਭਵਨ, ਨਾਭਾ ਰੋਡ, ਪਟਿਆਲਾ - 147001
Vatavaran Bhawan, Nabha Road, Patiala - 147001
Phone : Chairman. : 0175-2215793, Member Secretary : 0175-2215802 (O), 2215636 (FAX)
Website : www.ppcb.gov.in | E-Mail : chairmanppcb@yahoo.in | msppcb@gmail.com |


Principal
Guru Nanak College
BUDHLADA



पंजाब PUNJAB

START - 27/05/2021

AN 832723

END - 26/05/2022

AGREEMENT FOR COLLECTION AND TREATMENT OF COVID-19 Bio-Medical waste

In order to deal with COVID-19 pandemic, State and Central Governments have initiated various steps, which include setting up of quarantine centres, camps, isolation wards, sample collection centres and laboratories. Specific guidelines for management of waste including Bio-medical waste generated during diagnostic and treatment of COVID-19 suspected / confirmed patients are required to be followed by all the stakeholders including isolation wards, quarantine centres, sample collection centres, laboratories, ULBs and common biomedical waste treatment and disposal facilities. In addition to existing practices under BMW Management Rules, 2016.

As per these guidelines This Outsourcing Agreement made on dated 24/05/2021

Between
Medwaste Solutions Pvt. Ltd.

Common Bio Medical Waste Treatment Facility (CBWTF)-First Party

And

Guru Nanak College, Budhlada, under the Management of S.G.P.C. (Amritsar)
 Contact - 01652-253146, 81465-53146.
 Second Party EMAIL - gncbudhlada@yahoo.co.in

Whereas both parties already have an existing agreement for collection and treatment of normal bio-medical waste and whereas (now) isolation wards created in the existing premises and covid care centres (CCC) in the external premises or might be created in future as per need to treat COVID-19 patients / suspects. Now this outsourcing agreement is been made of the following terms and conditions valid for one year from the day of commencement of agreement:

1. That the First Party shall inform regarding COVID-19 Biomedical waste to the State Pollution Control Board (SPCB) from time to time with copy to Second Party.
2. The First Party shall carry out and shall be responsible for procedures and operations as attributed to it in the Guidelines issued time to time To follow the definition of Bio Medical Waste



COMMON WASTE DEPOSITION CENTRES

First Party shall create a one waste deposition centre for COVID-19 waste in the isolation facility. All BMW Collected by the Second Party in the liners/ bags provided by First Party shall be stored in preferably separate deposition centre designated for "COVID WASTE" from which waste will be lifted by the First Party.

AS
 3M
 Principal
 Guru Nanak College
 BUDHLADA

- a) *In case of non-bedded healthcare units, fixed charges depending on the average quantity of waste generation per day, in case of the nursing homes clinics sample collection centres Dental Centres, dispensary, pathological laboratory, blood banks and other non-bedded hospitals irrespective of their system of medicine including ayush hospitals.*
- b) *In case of bedded hospitals, fixed charges per bed per day basis and based on the no. of beds for which consents under the Water Act, 1974 Air Act, 1981 and authorization granted under the Bio-Medical Waste Management Rules by the prescribed authority.**

And whereas, due to pandemic of COVID-19 and being contagious in nature, in order to provide medical facilities to the COVID-19 patients, the State Government has notified HCEs Isolation Wards/Quarantine Centers/Camps/Home Quarantine / Home-Care facilities/ Collection Centers/ Testing Laboratories for separately treating COVID-19 patients to control the spreading of the same.

And whereas, the CPCB has issued guidelines for handling, treatment and disposal of waste generated during treatment/ diagnosis/ quarantine of COVID-19 patients and as per these guidelines, the waste generated from HCEs/ Isolation Wards/Quarantine Centers/Camps/Home Quarantine / Home-Care facilities/ Collection Centers/ Testing Laboratories is to be collected, segregated, transported, treated and disposed of separately than the Bio-medical Waste to be generated from the other patients.

And whereas, as per the guidelines of CPCB, the COVID-19 waste is to be collected on daily basis and for this purpose the operators of the CBWTFs have deployed dedicated vehicles and staff for collection, transportation, treatment and disposal of COVID-19 waste and are providing PPE kits to the staff.

And whereas, there are verbal representations from different quarters to formulate the rates for collection, transportation, treatment and disposal of COVID-19 waste.

And whereas, a meeting through video conferencing was held with the operators of the CBWTFs on 04.09.2020 by the Chief Environmental Engineer (HQ), Punjab Pollution Control Board, wherein, the rates being charged by the operators of 5 CBWTFs located at Mohali, Pathankot, Amritsar, Ludhiana and Sri Muktsar Sahib from the HCEs Isolation Wards/Quarantine Centers/Camps/Home Quarantine / Home-Care facilities/ Collection Centers/ Testing Laboratories were discussed.

And whereas, another meeting through video conferencing was held on 15.09.2020 with the operators of the 5 CBWTFs of the State by the Chairman of the Board, wherein, the operators of CBWTFs were requested to work out the rates to be charged depending upon no. of beds in the range of upto 10 beds, 11-30 beds, 31-50 beds and more than 51 beds, keeping in view the collection, transportation, treatment and disposal charges being actually incurred, which will be further deliberated for finalization.

ected by spraying 1% Sodium hypochlorite multiple times a
ore should be kept dry and be accessible to First Party's collection
a mid-sized truck. The rooms should be kept under lock and key

DUTIES OF SECOND PARTY (COVID-19 Isolation wards/ COVID CARE CENTERS):

- i. To keep separate color coded bins/ bags/ containers in wards and maintain proper segregation of waste as per BMWM Rules, 2016 as amended and CPCB guidelines for implementation of BMW Management Rules or covid related BMW.
- ii. As precaution double layered bags (using 2 bags) should be used for collection of waste from COVID-19 isolation wards so as to ensure adequate strength and no-leaks;
- iii. Collect and store biomedical waste separately prior to handling over the same CBWTF. Use a dedicated collection bin labelled as "COVID-19" to store COVID-19 waste and keep separately in temporary storage rooms prior to handling over to First Party.
- iv. In addition to mandatory labelling, bags / containers used for collecting biomedical waste from COVID-19 wards, should be labelled as "COVID-19 Waste" along with the date and time of disposal. This marking would enable CBWTFs to identify the waste easily for priority treatment and disposal immediately upon the receipt.
- v. The Second Party will keep a separate record of COVID waste in a register on daily basis or whenever the First Party lift the waste with record of no. of bags lifted and their weight.

6. DUTIES OF FIRST PARTY

- a) Report to PPCB about receiving of waste from COVID-19 isolation wards / COVID-19 Testing Centres/ CCC;
- b) The First Party shall ensure regular sanitization and safety for workers involved in handling and collection of biomedical waste.
- c) Vehicle should be sanitized with 1% sodium hypochlorite or any appropriate chemical disinfectant after every trip.
- d) In case it is required to treat and dispose more quantity of bio medical waste generated from COVID-19 treatment, CBWTF may operate their facilities for extra hours, by giving information to SPCBs. Operator of CBWTF shall maintain separate record for collection, treatment and disposal of COVID-19 waste.



As
Principal
Guru Nanak College
BUDHLADA

ing has been necessitated because of expected and unprecedented instances created by the COVID-19. The First Party shall continue to collect and treat the waste to the best of its capability and as allowed by its available capacity. The first party can delay but can't refuse lifting of waste (by abiding to act criteria) if its capacity is exhausted or due to any other reason outside its control for any other major reasons with information to the Second Party and PPCB.

- (b) This agreement shall be valid for 1 year from commencement which can be terminated, unilaterally at any time by the second party with notice of 48 hours without citing any reason.
- (c) The agreement shall extend with mutual consent for further period as required.

8. COST & PAYMENTS.

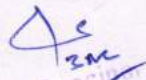
For isolation facilities which are not part of the existing hospital the cost is to be paid by the second party to the First Party for collection & Treatment of COVID-19 BMW shall be;

- a) The payment will be as per the bed Occupancy rate (BOR) of the facility, i.e. if the facility is 100 beds at the rate at which the payment is being made for the hospitals already in agreement in the district.
- b) Same rates and terms shall apply to the Covid Care Centres.
- c) In order to prevent any loss to the First Party, a minimum fixed amount of Rs 1000/- per visit is fixed for the facilities having 10 or less than 10 beds/ or cases of less than 10 admitted / where payment on BOR formula comes out to be less than Rs 1000/ day.
- d) The cost of liners/ Bags of appropriate size of BMW rules 2016 shall be paid by second party at the existing rates and terms. This cost will include the cost of "COVID WASTE" stickers on bags.

Agreed and Signed as below



Second Party


Princip
Guru Nanak College
BUDHLADA

9. WATER ANALYSIS REPORT OF GURU NANAK COLLEGE

Water quality testing is important because it identifies contaminants and prevents water-borne diseases. Drinking or using contaminated water can result in severe illness or death. That is why it is important to ensure that drinking water is safe, clean and free from bacteria and disease.

The parameters for water quality are determined by the intended use. Work in the area of water quality tends to be focused on water that is treated for human consumption, or in the environment.

Drinking water indicators:

The following is a list of indicators often measured by situational category:

- Alkalinity
- Color of water
- pH value
- Taste and odor (Geosmin, 2-Methylisoborneol (MIB), etc.)
- Dissolved metals and salts (Sodium, Chloride, Potassium, Calcium, Manganese, Magnesium)
- Microorganisms such as fecal coliform bacteria (*Escherichia coli*), *Cryptosporidium*, and *Giardia lamblia*; see Bacteriological water analysis
- Dissolved metals and metalloids (lead, mercury, arsenic, etc.)
- Dissolved organics: colored dissolved organic matter (CDOM), dissolved organic carbon (DOC)
- Heavy metals

4/5
2017
Principal
Guru Nanak College
BUDHLADA



Report No.-DWTL/MNS/0027/19

DISTRICT WATER TESTING LABORATORY (TECH. MISSION)

WATER SUPPLY AND SANITATION DEPTT. PUNJAB
Water Works Jawaharke, Division No. 1, Mansa

ANALYSIS REPORT FOR PHYSICAL AND CHEMICAL TEST
EXAMINATION OF WATER SAMPLE

email:- dwltmansa@gmail.com

PARTICULARS OF SAMPLE

1. Name	GURU NANAK COLLEGE (Ref. No. Misc/2019-2020/23898) -BUDHLADA		
2. Block :-	MANSA	6. If Whether water chlorination or Not :-
3. District :-	MANSA	7. Date of collection :-	13-09-19
4. Source of sample	T/W	8. Name and designation of person collecting sample :-	S. Kuldeep Singh Bala Principal
Spring level (mt)/ft :-		9. Date of receipt :-	13-09-19
Depth level (mt) :-	10. Date of commencing examination :-	16-09-19

TEST RESULT

		Desirable Limit	Permissible Limit
Colour(Unit on Pt-Co scale)	Colour less	5.0	25
Taste and Odour(Qualitative)	Ordinary		
Total Alkacity(CaCO ₃)mg/l	176	200	600
Calcium(Ca)mg/l	64	75	200
Chlorides(Cl)mg/l	88	250	1000
Fluorides(F)mg/l	2.05	1.00	1.50
Total Hardness(CaCO ₃)mg/l	254	200	600
Iron(Fe)mg/l	0.08	0.3	1.00
Magnesium(Mg)mg/l	34	30	75
PH	7.72	6.5-8.5	8.5
Nitrates(NO ₂)mg/l	18	15	45
Sulphates(SO ₄)mg/l	36	200	400
Total Dissolved Solids(mg/l)	1160	500	2000
Turbidity(JTU)	1.36	2.5	10
Residual Chlorine mg/l	-	0.2	0.5
Beeteiological Test			
Coliform Organism MPN/100 m	Not Deceted		

REMARKS :-

1. This report is not for legal purpose.
2. Whole sample consumed in testing
3. Sample not drawn by us unless otherwise stated.

(Signature)
Distt. Water Testing Laboratory
W/S & Sanitation Department
Mansa

Save Water. Every drop counts

45
Principal
Guru Nanak College
BUDHLADA

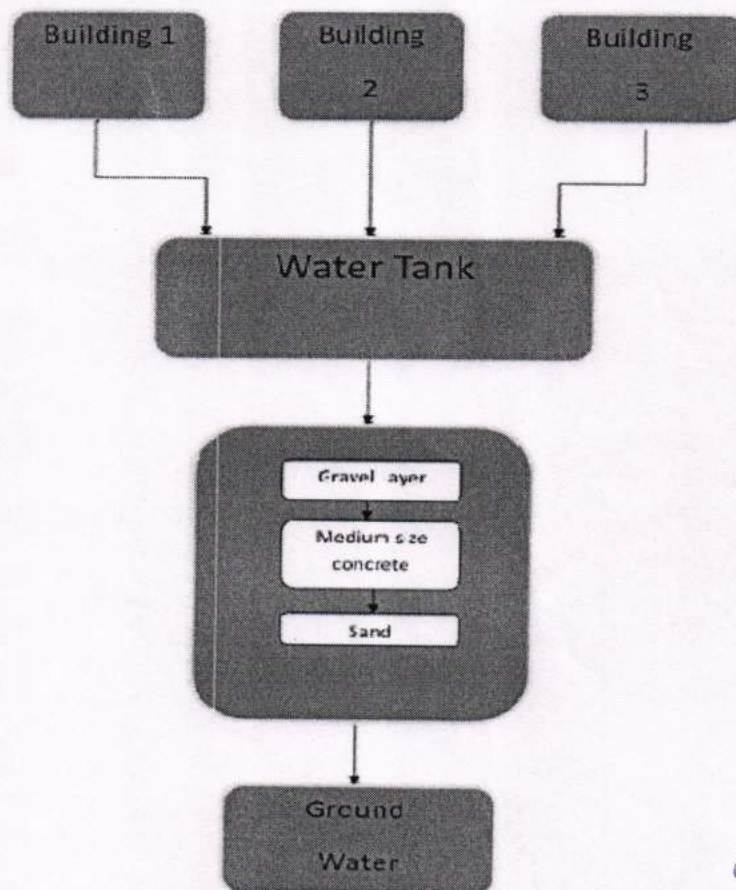
Water Conservation at GNC Campus

The college has planned to conserve water at different level by harvesting, reuse and groundwater recharge. As per geographical area this place is received very less amount of av. annual rainfall 300-400 mm. So need and supply of water for the green belt and other uses is main challenges. College area are divided into four major group all area interconnected with proper channel to collect the rainwater for the supplementary uses in green belt and to filter it and direct discharge into groundwater for the recharge of groundwater

College has very precise facilities to avoid any kind of wastes of water in different way that mentioned below.

- Rain water collection
- Rainwater harvesting and uses for irrigation of green belt
- Excess amount of harvested water use to filter and recharge of ground water
- College has proper storage tank to supply water as per need only
- Proper GI pipe and polymer pipe for proper circulation water and drip and sprinkler irrigation system to irrigate green belt.
- Department level water conservation awareness practices

Ground Water Harvesting Flow Diagram



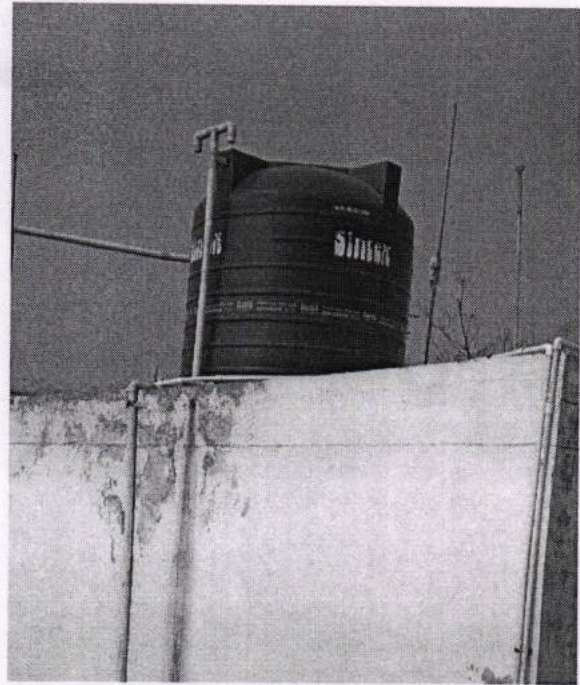
JS
2022
Principal
Guru Nanak College
BUDHLADA



Floor Water discharge in lawn



Water harvesting system



Water storage tank



Drip Irrigation system



Strip Farming Model prepared by students at GNC Agriculture department

Principal
Guru Nanak College
BUDHLADA

10. TRANSPORTATION AT GNC:

Being a largest campus in the region and located centrally, GNC faculty, staff and students commute on their own. The college is dedicated to provide its students and staff all the comfort and convenience to help them to achieve their targets. The students are encouraged to use cycles, two wheelers rather than four wheelers which lead to fuel saving and also the contribution of pollutants to atmosphere is less.

College Bus and Routes

1. **PB-31F 6855 (Driver name: Amandeep Singh Contact No. 9815922640)** Reondkalan, Gandhukalan, Boha, Rampur Mander, kalipur etc.
2. **PB-31 L9157 (Driver Name: Jagdeep Singh Contact No. 8146556247)** phulera, Rattakheda, Daska, Ranghrial, Ralli etc.
3. **PB-31 H 9158 (Driver Name: Binder Singh Contact No. 9876269078)** Sidhani, Chandpura, Kulrian, Mander, Juglan etc.
4. **PB-31 H 9159 (Driver Name: Hariender Singh Contact No. 9915259009)** Kishangarh, Baretta, Jalwehra, sangreri, govindpura etc.
5. **PB-31 H 9160 (Driver Name: Jisvir Singh Contact No. 9464419004)** Mansa, Jwahrke, Chakerian, Phapre bhai k, Hasanpur, Gurne etc.

