Environment & Green Audit Report

DIT UNIVERSITY DEHRADUN

Village Makkawala, Mussoorie Diversion Road, Dehradun (U.K.)

CONDUCTED BY:

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Table of Contents

Introduction 4

Executive Summary 5

Points of Appreciation 7

General Observations and Recommendations 13

Environment and Green Policy 15

Description of Campus 17

Green and Environment Audit 20

Details of Occupancy 21

Auditing for Energy Management 22

Renewable Energy 25

Waste Management Policy 26

Auditing for Waste Management 35

E-Waste Disposal 36

Canteen Waste - Handling Practice 36

Waste Management Initiatives of University 37

Auditing for Green Campus Management 39

Transportation Practices 42

List of Vehicles with Pollution Clearance Certificate 42

Students Not Using Bus Services 43

Updated List Of Staff Bus 44

List of Students Availing Bus Services 45

Procurement Practices To Be Followed 52

Management of Use of Paper 53

E-Library 54

Plantation Policy 56

Plantation Inventory 57

Plantation Program 57

Air Quality 57

Air Quality Data 58

Significance of Refrigerant for Environment 62

Detail of Refrigerant Used in Installed Air Conditioners 63

Eco Friendly Housekeeping Materials 64

General Purpose Cleaners 65

Annexure-A Photographs DIT University 74
Annexure-B Thermal Imaging Report 87
Annexure-C Excerpts from Energy Conservation Building Code-2017 111
Annexure-D Detail of Lux Level 112
Annexure-E Handling and disposal of CFL's and Fluorescent tubes 113
Annexure-F Limits of Sound level as per NBC-2016 115
Annexure-G Guidelines for Environment Friendly and Green Initiatives 116
Annexure-H List of Plantations 120
Annexure-I Record of Cow-Dung-DIT-University 121
Annexure -J List of Air-Conditioners 122
Annexure-K List of Hazardous Chemicals 124

Introduction

We at A-Z Energy Engineers Pvt. Ltd. Are grateful to the management of DIT University for awarding the work of Environment and Green audit of DIT University. We are especially thankful to top management of DIT –Dehradun. We also express our sincere gratitude to Mr. Alok Saxena and other members of team for their proactive approach and providing us well maintained relevant data required for audit. We are also thankful to the other concerned in charge of various departments for their cooperation during audit study at site and also the members of staff for their active involvement in audit on site study.

The following members of A-Z Energy Engineers Pvt. Ltd. were part of audit study at DIT University.

1. Dr. P.P.Mittal –Principal Auditor
2. Mr. Satvinder Singh-Associate Auditor
3. Mr. Ranjit Singh -Data surveyor cum senior instrument technician
4. Mr. Ashwani-Instrument technician

Executive Summary

An environmental audit is a snapshot in time, in which one assesses campus performance in complying with applicable environmental laws and regulations. Though a helpful benchmark, the audit almost immediately becomes outdated unless there is some mechanism in place to continue the effort of monitoring environmental compliance. This audit report contains observations and recommendations for improvement of environmental consciousness.

A nation's growth starts from its educational institutions, where the ecology is thought as a prime factor of development associated with environment. A clean and healthy environment aids effective learning and provides a conducive learning environment. Educational institutions now a day are becoming more sensitive to environmental factors and more concepts are being introduced to make them eco-friendly.

With pro-active approach of management and staff for improvement of environment and reduction of impact of university activities on climate and also improvement of indoor air quality and optimization of energy use, there is always an inclination of all related stake holders that is teaching, non-teaching staff and other support staff the university is continually functioning for improvement of environment in and around university premises and mitigation of impact of its activities on climate.

To preserve the environment within the campus, various viewpoints are applied by all the concerned stake holders.DIT university-Dehradun to solve their environmental problems through formulation of Environment and green policy, Plantation policy, commitment for empowerment of women and their active participation in improvement of interior and surrounding environment of university premises.

The university administration is working towards promotion of the energy savings demonstrated through energy audit and there is already renewable energy (Solar PV plant 250 kWp and Solar Water heating system 46000 litres per day is already installed on various buildings and Workshop building., recycle of waste, water use reduction, Rain water harvesting, regular plantation activities with native species, judicious management of all kind of waste as per statutory procedures, reduction of paper use , purchase of E-vehicles for use inside the campus is initiated , Provision of grocery ,Stationery shop and saloon in the premises and other sustainable practices.

The university is also instrumental for the well-being of all stake holders and a regular Medical officer visits university campus under arrangement with Max hospital is available in medical centre with four beds, reduction of paper use and also mitigating impact of transportation activities of students, teaching and non-teaching staff by shared transport, fuel consumption monitoring, regular servicing of owned vehicles and encouragement of car-pooling and many other sustainable practices.

There is an issue of ventilation observed in the following areas.

a. Automobile Lab

b. Old and new Chemistry Lab.

Points of Appreciation

1. The staff of DIT University is quite aware and proactive in approach towards environmental aspects.
2. There is data base maintained, which is beneficial for management of Environmental and Green aspects related to activities of University.
3. Total Water use for human consumption and landscape use is recorded and the records are available depicting the concern of relevant persons towards water use management.
4. Data for electrical use is also recorded and maintained and it reflects the sustainable approach of the DIT University.
5. There are two STP plant installed at the campus and the data of treated water in terms of quantity treated and quality post treatment is maintained.
6. The counting of tree in numbers is available.
7. Reuse of water: The treated water from STP is used for Gardening and Flushing purpose depending on the quantity treated.
8. Ramp for PWD Students Maintained.
9. Toilets for PWD Students maintained.
10. There is a commitment towards Women empowerment demonstrated through celebration of International women's day on 8th March every year.
11. There is an environment and Green environment policy in place that covers aspects of air quality, water, environment and sustainability in extensive manner.
12. There is plantation policy and plan for managing and mitigation of impact on climate.
13. E-Library: Records of E-Library are maintained. There are plans for future and PO's are already in place for coming time.
14. The staff and students of university are taking active interest for improvement of environment.
15. Wasted food is composted and a part of it is sent to local piggeries for consumption.
16. Composting pit is existing on site and botanical waste and post use food waste is regularly composted and converted to manure used for landscape and plantation use.
17. Composting plant installation is under way and likely to be installed in near future.
18. The university is regularly conducting department activities for creating awareness and sensitization of students, faculty members and other staff members. The details are shown separately.
19. A saloon, Grocery shop and stationery shop is inside the campus thus making it convenient for the residential and day time staff and students to purchase items for their consumption as per requirement and also for availing for their grooming needs

inside the campus without wasting time an important non- renewable resource and also savings in fuel and making it a sustainable activity.

20. There are many activities that have been shared by concerned stakeholder on social platform like face book for effect dissemination to students and general public.

21. IMPORTANT ENVIRONMENTAL ACTIVITIES : Shown in Pictures

Environment day celebration -5th June-2022

7.) Event: ENVIRONMENT DAY

DATE- 5th June,2021

Mode-Online

OVERVIEW- On 5th June, World Environment Day is celebrated every year to spread awareness and action for protection of the Environment. Due to outbreak of COVID-19 this year awareness was spread through online mode. Two videos were made by the cadets. Video 1 comprised Plog Run and the video 2 comprised Poster making.

In video 1 cadets did plog run cleaning their home, street and city. Along with this they explained about Cleanliness and how environment can be conserved. In video 2 cadets made posters on the same and kept their points.

Also, there was competition of Poster making and Snapshot competition On Ecosystem Restoration.

Cadets participated with full zeal in both the categories.

The seminar was also attended by the cadets on Ecosystem Restoration. The chief guest was Shri Ravi Pandey, Nodal Officer SWM and Septage,Urban,Uttrakhand and Dr Bharat Bhushan Nagar, leading Environment Specialist and member of NREP,USA.

The seminar was very informative and the cadets got to know so many things.

The day completed with the announcement of the result of competition.

11 UN Girls Bn NCC DIT University, Dehradun, UK India

World Day against child labour

8. Event: WORLD DAY AGAINST CHILD LABOUR

World Day against Child Labour is an International awareness day observed on the 12th of June, 2021 solely dedicated to the small innocent children who risks their lives just to feed their family's stomach.

It was put into action by the International Labour Organization (ILO) a part of the United Nations (UN) in the year 2002 to bring attention and join efforts to fight against the high scale child labour all around the world.

Our NCC cadets came together and discussed it's causes, they also talked about the country having the most no.of child labours.

"ACT NOW, END CHILD LABOUR ".

Let's stop Child Labour,

And make our children FLY.

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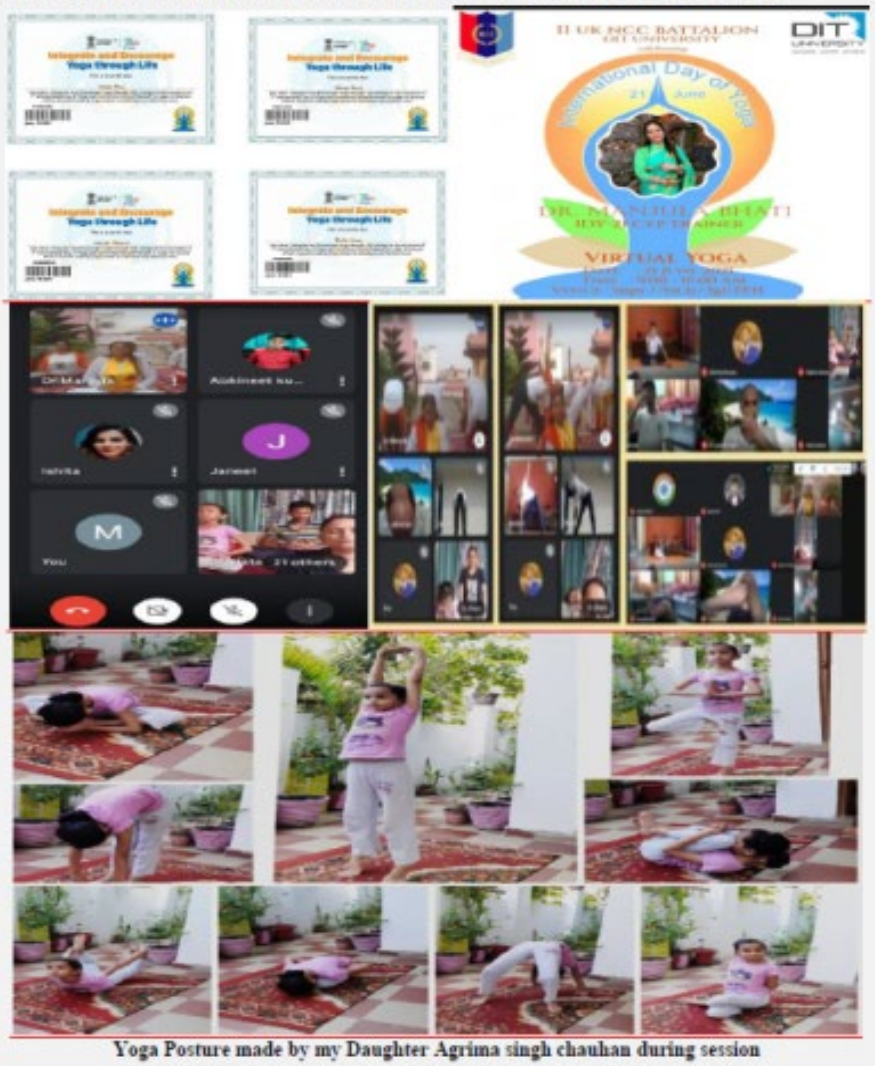
International Yoga Day celebration

2. Event: International Yoda Day **No. of participant- 50**

International Yoga Day, this idea was proposed by our Prime Minister Mr.Narendra Modi. He said " Yoga is a valuable gift of India's ancient tradition. To make Yoga an integral part of people's life , to Integrate and encourage yoga through life 46 Cadets of NCC DIT University took Pledge . The theme was "Be with Yoga Be at Home" By taking pledge cadets underline benefits of yoga and motivate everyone to take up the pursuit of Yoga. Dr. Manjula Bhati and her team deliver a online session on Yoga on 20th June 21.



Yoga Posture made by my Daughter Agrima singh chauhan during session

11 UN Girls Bn NCC DIT University, Dehradun, UK India

Celebration of Women's Day

5. **Event: Women's Day**

Date: 08th March 2021

Time: 9:00 am

Venue: Chanakya lawn, DIT University

DIT university conducted a self-defence training program on International Womens's Day. Students at the university participated in the training program with full enthusiasm.

With 'Choose to Challenge' as these years theme the self-defence training program was organized to make students self-empowered. This training program was conducted on 08th of March 2021 from 9 am onwards.

The students, NCC cadets as well as faculty members participated in the self-defence training program and learned some self-defence techniques. Students were awarded for their good performances . Vishruti Bhatt, Keerti Adhikari and Srishti Rawat secured 1st,2nd and 3rd positions respectively.

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Celebration of International Women's day depicts the active involvement of women for environment issues also.

22. Tobacco free campus signage is installed at right wall after entrance.
23. There is good practice of using low Volatile organic compound. All the paint work is proposed to be done by using water-based paints.
24. Two knobs cisterns are installed for water conservation.

25. In new buildings two stack plumbing system is used for separation of black and grey water for reducing avoidable load on STP and savings of energy making it more sustainable.
26. Signage for avoiding noise pollution installed for managing noise pollution.
27. Smoking free campus signage is installed for creating awareness and prohibition.
28. Green campus signage installed.

General Observations and Recommendations

- The Environment and Green policy be displayed at following prominent locations inside the premises.
    - **a.** Near main gate
    - **b.** At main entrance of Administrative Building
    - **c.** Cafeteria
    - **d.** Academic Blocks
    - **e.** Auditorium
    - **f.** Library
    - **g.** Hostels
- Signage for Tobacco free campus are required to be displayed in Cafeteria and these are also required to be displayed at main entrance and other prominent areas inside the campus..
- Single stack plumbing system is in place in all buildings except two buildings thereby increasing the avoidable load on STP and also increasing the electricity consumption for treatment of mixed water. Whenever major repair work is undertaking for plumbing.
- Two stack plumbing system is recommended for future augmentation/major repairs for separation of Black and grey water for energy savings and not stressing the capacity of installed STP.
- Signage for avoiding Food wastage is displayed at important locations like cafeteria and hostel mess in campus.
- Signage for Water conservation be displayed at important locations including toilets, cafeteria and hostel mess in campus.
- Signage for plastic free campus is placed on main entrance right wall. These may be further supplemented.
- Signage for Segregation of waste is placed at important locations for sensitization of occupants.
- Provision of different dust bins as a set at a common location at few places these is replaced with twin dust bins.
- Height of fume exhaust in chemistry lab is not proper. It should be discharged above building height. Presently fumes are dispersing around building affecting local environment.
- Air Conditioners with refrigerant that has higher Ozone Depletion potential have been installed. Immediate action is initiated for replacement of AC's with zero ODP refrigerants in Phases.

- Cool Roof: As per ECBC for improving the indoor thermal comfort of top floor in building and also reducing energy use of top floor by providing cool roof at terrace level.

  Cool roof: roof with top layer of material that has high solar reflectance and high thermal emittance properties. Cool roof surfaces are characterized by light colors so that heat can be rejected back to the environment.

  Excerpts from ECBC are attached in this report-Annexure-C
- Ventilation: There are issues with ventilation of Chemistry lab, and Automobile/Mechanical Lab.
- Stack Height of DG set exhaust is not as per CPCB requirement.
- Computers not switched off causing losses of energy as well as reducing life of equipment further causing energy loss through embodied energy expanded in manufacture of parts that are replaced pre-maturely.
- No Rain Water Harvesting pits provided
- No twin Dust Bins for Dry and Wet Waste at one location without colour coding for waste identification
- No segregation of waste at source. It is require to be practiced.
- No 'smoke free Campus Signage's not fixed in blocks
- No 'Plastic free Signage's not fixed in blocks
- STP treated water pipe leakage at many places in garden. Leak should be plugged in time.

Environment and Green Policy

DIT UNIVERSITY, DEHRADUN
ENVIRONMENTAL & GREEN POLICY

Policy Statement

DIT University, Dehradun, is dedicated to its estate management in accordance with the responsibilities to pressure out environment. These responsibilities shall be established within the following areas as under:

1. **Environmental Rules and Guidelines:** DIT University commit to safeguard the compliance to extant pollution control and other appropriate environmental guidelines. Tree Plantation Policy is in place to ensure that adequate green cover is maintained in and around the campus.
2. **Waste Disposal and Recycling**: DIT University will pursue to minimalize its generation of waste without compromising its primary functions, or by re-use of materials within or outside the university premises. The materials shall be recycled wherever the reduction or re-use is not feasible. The Waste Management prices shall be strictly of the University adhered to.
3. **Energy**: DIT University is ecologically accountable for its use of energy, and will therefore consider the sources, type, origin and destination of energy input and output throughout the premises. This will require careful nursing of alternate energy sources, removal of unnecessary or redundant used system, and a continuing program of energy preservation. There are already renewable energy solar PV plants installed and in the near future, efforts shall be made to use renewable energy to the degree possible for mitigation of impact of energy used by university on the environment.
4. **New Build and Building Refurbishment**: DIT University, Dehradun, will ensure that any new construction or refurbishment whenever planned shall be executed as per the guidelines prescribed by the National Building Code-2016 and the prescribed EIA guidelines.

DIT UNIVERSITY DEHRADUN

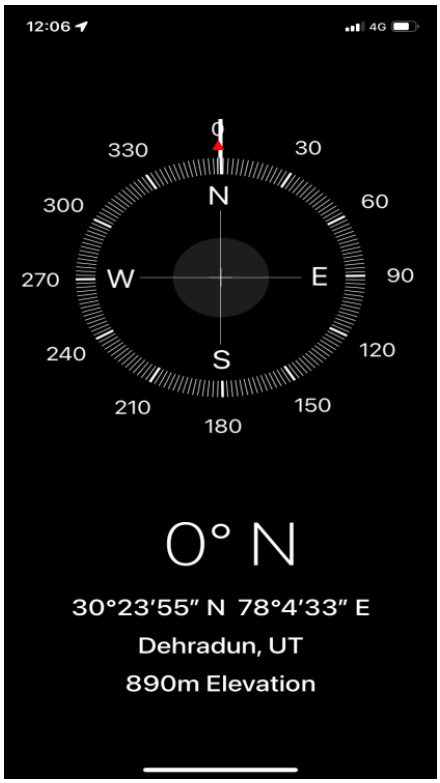
5. **Water Use:** The University intends to promote optimization of water use by avoidance of wastage, treatment, recycling and re-use of waste water for other possible uses.
6. **Cleaning**: DIT University shall use such cleaning products that are suitable and prescribed by the concerned approving bodies and which prescribe to reducing the carbon foot print followed by cost and suitability. The University shall monitor and assess its working practices aligned towards controlling the doses so as to reduce the risk of over concentration and additional residue of unused cleaning mixtures which may find their way into piped waste disposal systems.
7. **Green Travel Plan**: DIT University, Dehradun actively encourages the use of public transport, walking and cycling. The University, wherever possible encourages students and staff to use public transport when on college assignments. This plan is regularly reviewed. The travel of students shall also be encouraged through public or shared transport.
8. **Tobacco Free premises**: The University administration pledges and carries out various initiatives to make the premises tobacco free completely. No smoking nor any type of tobacco products shall be allowed inside the campus.
9. **Food Policy**: DIT University, will ensure that decisions pertaining to the purchase of food, together with the use and disposal of plastic crockery/cutlery, should at all times include assessing the environmental implications as well as such factors as cost and nutritional value. The notification By UGC for use of junk food in the premises shall be strictly followed.
10. **Purchasing:** For the purchase of various items including services, materials, equipment and different types of consumable items, DIT University, Dehradun wherever possible, would undertake services where the probability of environmental harm is the least.
11. The university also commits for Plastic free environment in premises.

The policy shall be swotted annually or as per requirement and shall be communicated to all stake-holders.

DIT UNIVERSITY DIT DEHRADUN

Description of Campus

The DIT University is located at village, Makkawala, Mussorie diversion road, Dehradun. The coordinates of DIT university are latitude 30 degrees 23'
And 55 "North Longitude 78 degree 4' 33" East at an altitude of 280 meters above mean sea level. It is located t 890 meters altitude above sea level.



As per NBC-2016 and ECBC-2017, climate of Dehradun is in composite climatic zone which means that climate of Dehradun has high number of heating degree days and also higher number of cooling degree days, thus requiring more energy in winter for heating and also for cooling in summer.

The university campus has the following facilities

Schools

- School of Computing
- School of Architecture, Planning & Design
- School of Pharmaceutical & Populations Health Informatics
- School of Physical Sciences
- School of Liberal Arts & Management
- Department of Management Studies
- Department of Humanities & Liberal Arts

- School of Engineering & Technology
- Department of Civil Engineering
- Department of Electrical and Electronics & Communication Engineering
- Department of Mechanical Engineering
- Department of Petroleum & Energy Studies

Central Facilities and Labs in University Premises

- Veda - The Central Library
- Computing Facilities
- NPTEL
- Central Workshop

Labs

- Architecture
- Civil Engineering
- Mechanical Engineering
- Petroleum & Energy Studies
- Pharmacy
- Humanities
- Physical Sciences
- Electrical and Electronics & Communication Engineering

BUILDING-WISE INFRASTRUCTURE DETAILS

SUMMARY INFRASTRUCTURE

Block	Type of Room	Big Class Room	Lecture Hall	Class Rooms	Tutorial Room	Seminar Hall	Drawing Studio	Computer Lab	Dept Labs	Prep Room	Library	Common Room	HOD/Dean	PA	Faculty	Dept Office	Board Rooms	Auditorium	Senior Staff	Staff	Pantry	Store / Utilities	Toilets
Vishveshwarya Block	Ground Floor								6				1									1	2
	First Floor	1			2	1			2				1	1	6							1	2
	Second Floor	1			2		1	1	1				1	1	6							2	2
	Third Floor	2	1					1	2				1	1	8							1	2
	Fourth Floor		6								1		1	1	8							2	2
	Fifth Floor	1	6										1										2
	Total	5	13		4	1	1	2	11		1		6	4	28	0						7	12
Vedanta Block	Basement																					4	
	Ground Floor													1			2		8	15	1	3	5
	First Floor										1								1				
	Second Floor		6	2	2			1					1		20	1				3		1	3
	Third Floor		6	2	2			1					1	1	20					3		1	3
	Fourth Floor		6		1			4					1		20					3		1	3
	Fifth Floor							7										1				2	2
	Total	0	18	4	5	0	0	13	0		1	0	3	2	60	1	2	1	9	24	1	12	16
Vastu Block	Ground Floor					1		1	1				1		6	1							3
	First Floor			1			2								17						1		2
	Second Floor			1			2		2						4								2
	Third Floor			2			2		1														2
	Fourth Floor								2		1	1				1							2
	Total	0	0	4	0	1	6	1	6		1	1	1	0	27	2	0	0	0	0	1	0	11
Charak Block	Basement			2					3													2	
	Ground Floor			1					3	1			1	1	1								2
	First Floor			1					3	2					3						1		1
	Second Floor			1					2	2					1							1	2
	Third Floor			1					3	3					3							1	
	Total	0	0	6	0	0	0	0	14	8	0	0	1	1	8	0	0	0	0	0	1	4	5
Vishwakarma Block	Ground Floor			1					9						2							1	2
	First Floor		8	1		1									10								2
	Second Floor	2	9												10							1	2
	Third Floor		3					1	4				2		17							1	4
	Total	2	20	2	0	1	0	1	13		0	0	2	0	39	0	0	0	0	0	0	3	10
Chanakya Block	Lower GF		4						7						4								
	Ground Floor		6			1			13				2	2	13	1						2	
	First Floor		9	1			1		10				1		38								1
	Second Floor		13			1			2		1		1		16								1
	Total	0	32	1	0	2	1	0	32		1	0	4	2	71	1	0	0	0	0	0	2	2
Café Block CoE	Basement								2													2	
	First Floor								3						4								2
	Second Floor		1				1	1	1						7								2
	Third Floor								5						4								2
	Total		1	0	0	0	1	1	11	0	0	0	0	0	15	0	0	0	0	0	0	2	6
GRAND TOTAL		7	84	17	9	5	9	18	87	8	4	1	17	9	248	4	2	1	9	24	3	30	62

Green and Environment Audit

Pre -Audit meeting

A pre-audit meeting provided an opportunity to reinforce the scope and objectives of the audit and discussions were held on the practicalities associated with the audit. This meeting is an important prerequisite for the green audit because it is the first opportunity to meet the University concerned personnel for audit and deal with any concerns.

Management's Commitment

The Management of the university has shown the commitment towards the green auditing during the pre-audit meeting. They were ready to encourage all green activities. It was decided to promote all activities that are environment friendly such as awareness programs on the environment, campus farming, planting more trees on the campus etc., after the green auditing.

Scope and Goals of Green and Environment Auditing

A clean and healthy environment aids effective learning and provides a conducive learning environment. There are various efforts around the world to address environmental education issues. Green Audit is the most efficient and ecological way to manage environmental problems. It is a kind of professional care which is the responsibility of each individual who are the part of Economical, financial, social, environmental factor. It is necessary to conduct green audit in university campus because students become aware of the green audit, its advantages to save the planet and they become responsible citizen of our country.

Details of Occupancy

DIT UNIVERSITY-OCCUPANCY DATA

Sr. No	Description	Qty-Nos	No of Days of Occupancy
1	No of Day Time Students	3501	243
2	Student in Hostel	1356	351
3	Faculty and Staff	218	231
4	Non-Teaching Staff (Damion)	245	297
5	Support Staff/ Security	54	310
6	Outsourced (Vendor) Staff	182	310
7	Approx. No. of daily visitors	25	310

DIT UNIVERSITY DEHRADUN

Auditing for Energy Management

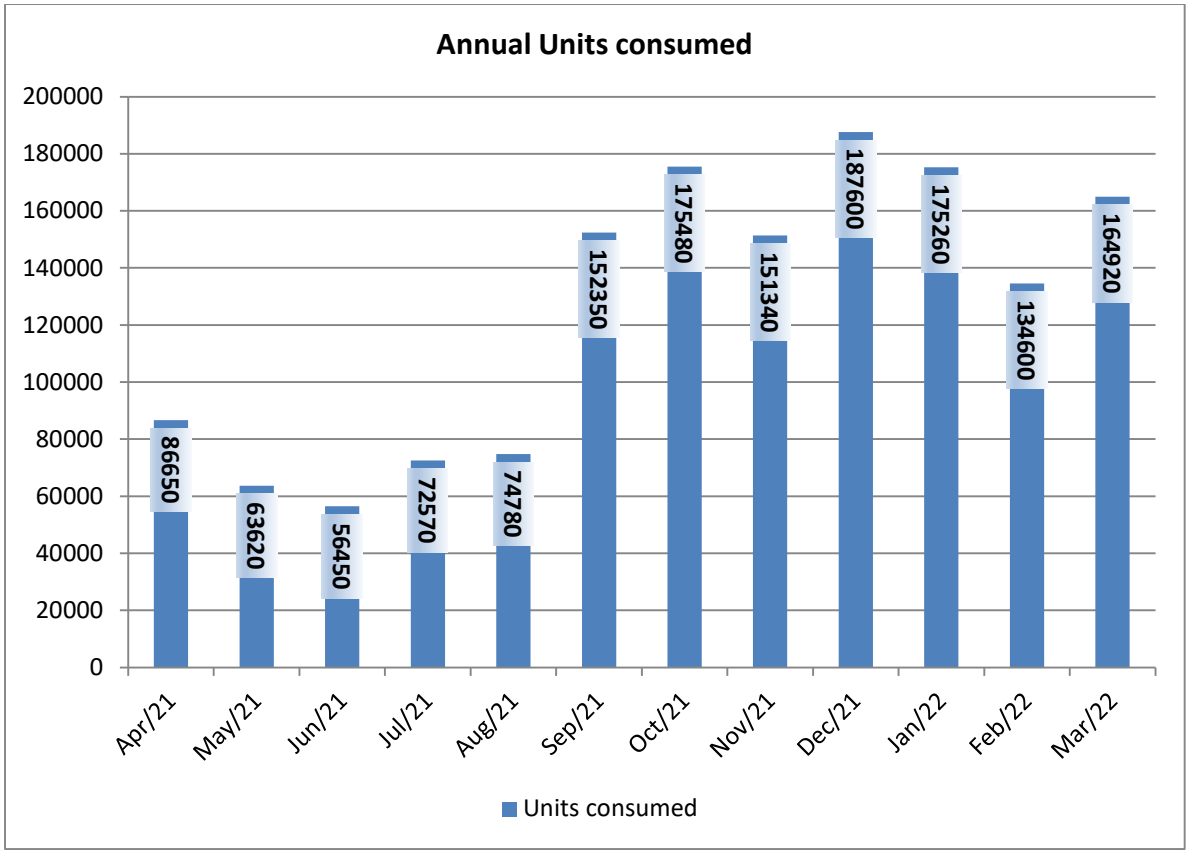
Energy cannot be seen, but we know it is there because we can see its effects in the forms of heat, light and power. This indicator addresses energy consumption, energy sources, energy monitoring, lighting, appliances, and vehicles. Energy use is clearly an important aspect of campus sustainability and thus requires no explanation for its inclusion in the assessment. An old incandescent bulb uses approximately 60W to 100W while an energy efficient light emitting diode (LED) uses only less than 10 W. Energy auditing deals with the conservation and methods to reduce its consumption related to environmental degradation. It is therefore essential that any environmentally responsible institution examine its energy use practices. **LED use also has a peculiar advantage for environment that LED's are not using any** Mercury **as in the case of CFL's or Fluorescent tubes.**

All fluorescent tube lights of and CFL be immediately got replaced with LED fittings for energy use and also elimination of mercury use for lighting system.

Energy Use

Annual Electrical Energy consumption of DIT –Dehradun university

S.No	Month	Units consumed
1	Apr-21	86650
2	May-21	63620
3	Jun-21	56450
4	Jul-21	72570
5	Aug-21	74780
6	Sep-21	152350
7	Oct-21	175480
8	Nov-21	151340
9	Dec-21	187600
10	Jan-22	175260
11	Feb-22	134600
12	Mar-22	164920
Total Annual Energy units Consumption		**1495620**



Annual High Speed Diesel Consumption

Month	HSD consumption-Litres
Apr-21	805
May-21	245
Jun-21	887
Jul-21	794
Aug-21	643
Sep-21	1060
Oct-21	754
Nov-21	1000
Dec-21	0
Jan-22	2220
Feb-22	300
Mar-22	572
Total Annual HSD consumption	**9280**

Energy Consumption

S.No.	Description	Qty.	Unit
1	Annual Electricity consumption	14,95,620	kWh
2	Annual HSD Consumption	9280	Lts.
3	SP.Gr. of HSD	0.875	
4	Wt. of HSD consumed	8120	Kgs.
5	Calorific value of HSD	10800	kCal/kG
6	Converted kWh of HSD consumption	101972	kWh
7	**Total kWh (Annual) Electricity+ HSD**	**15,97,592**	**kWh**

The energy consumption being a main parameter for sustainability an environment regular monitoring of energy use and is normalisation related to change in activities is required to be monitored at all times.

Renewable Energy

There are solar photovoltaic plants installed at roof top totalling to 250 kWp.

Solar Water Heating System -Capacity in the Hostels

Sr. No	Building	Tank Capacity				Total Capacity (Ltrs)	Remark
		1,000 Ltrs		2,000 Ltrs			
		Tanks Qty	Total Capacity (Ltrs)	Tanks Qty	Total Capacity (Ltrs)		
1	Raman Hostel	7	7,000			7,000	Solar System
2	Bose Hostel	8	8,000			8,000	Solar System
3	Bhabha Hostel	13	13,000			13,000	Solar System
4	Sarabhai Hostel	10	10,000			10,000	Solar System
5	Sarojni Hostel	4	4,000	2	4,000	8,000	Solar System
	Total Solar Water heating capacity					**46,000**	

Waste Management Policy

Waste Management Policy

DIT University, Dehradun

Contents

1. Introduction
2. Statement of Purpose
3. Objectives
4. Organization and Management
5. Action Plan
6. Glossary

Prepared by	Reviewed by	Approved by
Deputy Registrar	Registrar	Vice Chancellor

DIT UNIVERSITY DEHRADUN

1.0 INTRODUCTION

DIT University, Dehradun situated on the foothills of Mussoorie is committed to transmuting the lives and serving the society through quest for excellence in various domains. The teaching learning process and pedagogy research & innovation and demonstration of knowledge, cultural enhancement and outreach services are few of the areas where DITU has excelled over the years and committed to serve the society and the nation.

With a rich heritage spanning over 24 years, DIT University, Dehradun (erstwhile Dehradun Institute of Technology, Dehradun- Estd. 1998), flagship institute of the Unison Group, was established in the year 2013 by DIT University Act (Uttarakhand Act No. 10 of 2012) vide Notification No 60/XXXVI (3)/2013/63(1)/ 2012 dated February 15, 2013 and further recognized by University Grants Commission, New Delhi under section 2(f) of the UGC Act, 1956. The University came into existence with an objective to promote inter and trans-disciplinary research in the various fields like Engineering & Technology, Architecture & Design, and Physical Sciences etc.

Currently, DIT University offers Undergraduate, Postgraduate & Doctoral level programs in the domain of Computing, Architecture, Planning & Design, Engineering, Humanities & Liberal Arts, Management, Pharmacy & population Health Informatics and Applied Sciences catering to the aspiration of around 5000 students and more than 250 faculty members.

Considering the current state of environment and the climate change, it is important that sustainable and holistic waste management, for reducing the carol footprint is practiced and essential steps are taken by the University, on priority, to provide a safe and healthy environment to all the employees, students and visitors of the organization.

It is the principal duty of the University to safeguard the environment and ensure that a proper waste segregation mechanism is followed to dispose of the entire campus waste in a responsible manner at the source level. The University should also try to covert the waste it into environment friendly value added product. Additionally, the medical and other

hazardous waste should be disposed of or managed by the registered waste contractors which are approved by the Government.

The purpose of the policy is to enable the operation of the action plan carried out for management of hazardous waste including their minimization, ecologically sound management and vigorous promotion of transfer and use of cleaner technologies. The waste management policy is in alignment with the UGC-SATAT.

2.0 STATEMENT OF PURPOSE

The University shall adopt the ideologies of the 'finest realistic environmental option' in disbursement of its waste management services. The University will put on a 'waste hierarchical approach', to condense, recycle, reprocess and recover the waste products in predilection to the disposal of waste to landfill.

The University will decrease the volume of waste sent to landfill followed by exploiting the reuse and reprocessing, wherever possible.

The University necessitates the entire staff (teaching & non-teaching), students, visitors and guests and any other individual using the premises to follow the Policy and associated "University Environmental Guidance" to guarantee compliance with all the necessary waste regulations. Any type of solid waste generated in the campus shall be controlled in accordance with the compliance criteria and the process as laid down in Municipal Corporation in their Management and Handling Rules, 1999. The rules mentioned and published under the notification of the Government of India in the Ministry of Environment and Forests number S.O. 783(E), dated, September 27, 1999 in the Gazette of India, Part II, Section 3, Sub-section (ii) shall be followed.

There is a legal and lawful requirement to comply with the various regulations under national and international environmental protection legislation for all those parties who produce, keep or dispose hazardous/radioactive waste/chemical waste of any type.

3.0 Objectives:

The objectives of the Policy are laid down as under:

- To guarantee enhanced performance of waste management system in accordance with all requirements.
- To reduce the waste generation at source and to enable any type of reuse and recycling of the generated waste in a cost effective manner.
- Identifying and coordinating every single activity of the campus waste management as per the defined roles and responsibilities.
- To endorse and disseminate environmental awareness in order to achieve minimization of waste and encourage recycling.
- To capitalize and explore the chances of recycling of the waste on the University campus and transform waste into value added products.
- To ensure safe handling and storing of waste on University campus.
- To Design and deliver suitable training programmes for teachers, residents, staff, students and otherstakeholders on waste management issues.
- To encourage all-inclusive approach of waste management in the campus.

4.0 ORGANIZATION AND MANAGEMENT

The responsibilities and organizational arrangements for this Waste Management Policy would lie with a variety of personnel within the University. The Advisory board constituted in the University would comprises of:

- Director STEAM & Quality- Chairperson-Ex Officio
- Registrar– Ex Officio
- Director, SoAPD– Ex Officio
- Director, SOPPHI– Ex Officio
- Dean, Student Welfare – Ex Officio
- Chief Proctor – Ex Officio
- HoD, Civil Engineering - Ex Officio
- Head Administration– Ex Officio

4.1 FUNCTIONS OF ADVISORY BOARD: -

- Advise on creation of the facility of central waste management and recycling contract services
- Ensuring all stakeholders including contractors to strictly comply and adhere to University's Waste Management Policy.
- Ensuring proper appointment of Government certified/ approved contractor for related works.

4.2 UNIVERSITY RESPONSIBILITY: -

- Development of Environmental Performance Indicators for waste management.
- Annual Reporting on the progress made against the 'EnvironmentalPerformance Indicators'.
- Reviewing the performance of waste management systems for all wastes, to safeguard safety and legal compliance.
- Monitoring and auditing the working of contractors associated with the University.
- Provision of suitable training for all personnel who are directly or indirectly associated with the implementation of waste management policy.
- Coordinating the congregation of and delivering all relevant information to suitable enforcement agencies, whenever the information related to waste management is demanded.
- Examination of any type of incidents related to spillage or non- proper disposal of hazardous and general waste.

4.3 ENVIRONMENT SUSTAINABILITY AND MANAGEMENT CELL

- The Head of Civil Engineering department shall be responsible for constituting the Environment Sustainability and Management Cell (ESMC).
- A person designated as responsible person will head the ESMC and the tenure of such person shall be a minimum of two years. Any change in the constitution of the ESMC shall be brought to the notice of Advisory Board.
- ESMC will implement the recommendation of advisory board and work on the followings.
    - Non-hazardous Wastes: Confirming that no hazardous waste is disposed of through the general or waste recycling streams
    - Hazardous Wastes: Recommending an 'accountable person' within their department to synchronize the waste disposal for any hazardous or laboratory wastes.

4.4 RESPONSIBILITIES OF SUPPORT STAFF: -

- Supervision of delivery of general waste and their recycling services on daily basis.

- Monitoring the performance of the university contractor against the signed agreements.
- Liaising with the "Environment Sustainability Management Cell" to establish customary procedures for handling waste on the University campus.
- Operative monitoring of waste management systems across the campus.
- Accumulating waste transfer data and statistic as notes regarding centrally accomplished waste andrecycling collection.

4.5 RESPONSIBILITY OF STAFF/SUPERVISOR (CONTRACTUAL):-

- Disposing of waste responsibly through the appropriate waste disposal system (segregation of waste), in accordance with University policy and procedures.
- Reporting any problems with waste collection schemes to ESMC of the University
- Organize / conduct of Awareness progremme on cleaning and disposal of bio-medical waste shall be organized for the support staff/ housekeeping.

4.6 RESPONSIBILITY OF STUDENTS: -

- Responsible disposal of waste through the suitable waste disposal system, in accordance with University policy and procedures.
- Reporting any glitches related to department/laboratory waste or waste collection process to the 'Head of Department'.

5.0 ACTION PLAN FOR POLICY IMPLEMENTATION: -

- The advisory board will meet at least twice in a calendar year to review the internal audit report as submitted by ESMC
- Paper waste minimization through e-governance
- It will be obligatory for Administration head to report any type of changes/additions in the hazardous waste generation and the steps taken to reduce generation of waste per unit of production. As per the guidelines prescribed by the Hazardous Waste regulations, University can store the hazardous waste for a period not exceeding 90 days and shall preserve a record of sale, transfer, storage, recycling and reutilizing of such wastes unless the concerned State Pollution Control Board has protracted

the specified period.

5.1 WASTE AVOIDANCE AND WASTE MINIMIZATION AT SOURCE

In the hierarchy of waste management, waste evasion and waste minimization has to be endeavored at first, for which distribution of information on scientific options should be an enduring exercise. Promoting the operation of recovery of various capitals such as solvents, other reagents and by-products as well as re-generation of consumed catalysts in a time frame manner.

5.2 REUSE, RECOVERY AND RECYCLING OF NON-HAZARDOUS WASTE.

University will explore possibilities/ opportunities of reprocessing, recovery and recycling of non-hazardous waste in an ecologically sustainable manner. Paper waste will be recycled to make paper board and packing material.

5.3 SAFE DISPOSAL OF HAZARDOUS WASTE

- For the waste which cannot be recycled/ reused, non-toxic and environmentally sound disposal will be espoused depending upon waste category. Design and operation norms of disposal facilities should be firmly obeyed to as per the guidelines outlined by CPCB.

5.4 SETTING UP OF COMMON TREATMENT, STORAGE AND DISPOSAL FACILITIES

- Collective treatment plant for the departmental and house hold waste will be established and the degradable and non-biodegradable waste will be separated and preserved according to their physical nature.
- Color coded waste bins to be installed for waste segregation on the campus.
- On site composting facility for food vegetable waste should be created and the manure can be used in house gardening.

Note:

a) Activities concerning establishment and utilization of nuclear facilities and use of radioactive sources are to be carried out in India in accordance with the relevant provisions of the Atomic Energy Act, 1962.

b) Bio-medical waste management and disposal will be governed by Bio-Medical Waste (Management and Handling) Rules, 1998, MoEF, Gov.of India.

6.0 GLOSSARY

6.1 HAZARDOUS WASTE

Waste that causes considerable or possible intimidations to public health or the environment e.g. Acids, Pesticides, Fluorescent Tubes, Alkaline Solutions, Photographic Chemicals, Batteries Waste Oils Paint, Solvents, Computer Monitors, radioactive substances

6.2 RECYCLING

The diversion of waste away from landfill or burning and the reprocessing of those wastes either into the same product or a different one. This primarily includes non-hazardous wastes such as organic waste, wood, paper, and glass, cardboard, plastic and scrap metal.

6.3 RESPONSIBLE PERSON

The person who oversees the wastes to be removed from the premises at which it was produced or is being held.

6.4 WASTE

According to United Nations Statistics Division (UNSD), waste are "materials that are not prime products (that is, products produced for the market) for which the generator has no further use in terms of his/her own purposes of production, transformation or consumption, and of which he/she wants to dispose. Wastes may be generated during the extraction of raw materials, the processing of raw materials into intermediate and final products, the consumption of final products, and other human activities. Residuals recycled or reused at theplace of generation are excluded."

6.5 INCIDENT

Events that are distinguished from accidents in terms of being less severe.

6.6 SEGREGATION

An activity where waste or materials are separated or are kept separate according

to radiological, chemical and/or physical properties to facilitate waste handling and/or processing.

6.7 TREATMENT AND DISPOSAL OF "BIOMEDICAL WASTE"

Bio-medical waste shall be treated and disposed of in accordance with Schedule I, and in compliance with the standards prescribed in Schedule V, Bio-Medical Waste (Management and Handling) Rules, 1998, MoEF, Gov. of India. Every occupier, where required, shall set up in accordance with the time-schedule in Schedule VI, requisite bio-medical waste treatment facilities like incinerator, autoclave, microwave system for the treatment of waste, or, ensure requisite treatment of waste at a common waste treatment facility or any other waste treatment facility.

6.8 BIOMEDICAL WASTE

waste, which is generated during the diagnosis, treatment or immunization of human beings or animals or in research activities pertaining thereto or in the production or testing of biologicals, and including categories mentioned in Schedule I, (Management and Handling) Rules, 1998, MoEF, Gov. of India.

6.9 CYTOTOXIC WASTE may be contaminated with a cytotoxic, pharmaceuticals, laboratory chemicals used in preparation, transportation and administration.

6.10 CHEMICAL WASTE is generated from the use of chemicals in laboratories for teaching and research

6.11 RADIOACTIVE WASTE is contaminated with radioactive substances which arises from medical orresearch uses.

6.12 GENERAL WASTE includes paper, plastics, glass, liquids and organics.

6.13 HAZARDOUS WASTE, bulk of which is generated by the industries, can cause environmental pollution and adverse health effects if not handled and managed properly. Its effective management, with emphasis on minimization of generation and recycling/ reuse, taking into account economic aspects, is therefore essential.

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Auditing for Waste Management

Pollution from waste is aesthetically unpleasing and results in large amounts of litter in our communities which can cause health problems. Plastic bags and discarded ropes and strings can be very dangerous to birds and other animals.

This indicator addresses waste production and disposal, plastic waste, paper waste, food waste, and recycling Solid waste can be divided into two categories:

General waste and hazardous waste. General wastes include what is usually thrown away in schools such as garbage, paper, tins and glass bottles. Hazardous waste is waste that is likely to be a threat to health or the environment like cleaning chemicals and petrol. Unscientific landfills may contain harmful contaminants that leach into soil and water supplies, and produce greenhouse gases contributing to global climate change.

Furthermore, solid waste often includes wasted material resources that could otherwise be channelled into better service through recycling, repair, and reuse. Thus, the minimization of solid waste is essential to a sustainable campus. The auditor diagnoses the prevailing waste disposal policies and suggests the best way to combat the problems. It is therefore essential that any environmentally responsible institution examine its waste processing practices.

Solid waste: Paper is collected and disposed of through sale to recyclers. 620 Kilograms of waste paper has been sold for re cycling that was collected in a period of two years

E-Waste: The old computers are sold back to vendor which is again put to beneficial use by repairing and it is good sustainable practice. Material not reusable is re cycled as per extant guidelines.

Key Boards and mouse which become un-serviceable are also disposed of. It is required to be ensured that vendor dealing with E-waste is authorised to collect E-waste.

Hazardous Waste: Lead Acid Cell Batteries are returned to Vendors for re-cycling of lead and other constituents.

Fluorescent tubes are handed over to Junk dealer who in turn should send them to Local re-cycling units. Storage of Fluorescent tubes in university should be as per recommended practice.

WASTE- Types of waste generated in campus

- E-waste-Yes-Handled as per extant guidelines and rules. E-waste is handed over to authorised re-cycler

E-Waste Disposal

The record of use and handling of E-waste is maintained, while disposing/Auction or sale of E-waste credential of purchaser is documented and vendor is authorised for collection and ensuring re cycling of E-waste as per extant guidelines.

- **Hazardous waste (toxic)-yes**

  For safe handling and management of hazardous waste in an environmentally sound manner, Govt. of India has notified the Hazardous Waste (Management & Handling) Rules, 1989, under the Environment (Protection) Act, 1986. However, these Rules were suppressed with re notification of the Hazardous Wastes (Management, Handling and Trans boundary Movement) Rules, 2008. Under the said Rules, hazardous waste has been defined as those wastes which by reason of any of its physical, chemical, reactive, toxic, flammable, explosive or corrosive characteristics causes danger or is likely to cause danger to health or environment, whether alone or when in contact with other wastes or substances, and shall include wastes as specified in Schedules of the Rules.

- Solid waste-yes-Extra waste removed and disposed in municipal waste collection points
- Dry leaves-Yes-Used in university for making manure/compost
- Canteen waste-yes-Used for Compost in university
- Liquid waste-yes-Preserved and used in university
- Glass-Yes-sent for recycling
- Unused equipment-yes-Returned to vendors through sale
- Plastic waste-Yes-Segregated and removed

Canteen Waste - Handling Practice

Food Waste prevention signage should be provided at all points of consumption and preparation of wood

1. Cafeteria
2. Mess

Waste Management Initiatives of University

7.1.5: Waste Management stepsincluding:

Response:

1.	Total Wastage Per year (Kg)	72000 Kg
2.	Plastic (Kg)	4000 Kg
3.	Papers (Kg)	2000 Kg
4.	Total Volume Recycled (Kg)	72000 Kg
5.	Percentage of waste Recycled	75 Percent

7.1.5.1: Solid Waste Management

To minimize the amount of material entering the waste stream, DIT follows a strict Waste Management & Recycling Process. There are more than 250 recycling bins on campus through which solid waste such as paper, plastic, and metal cans, newspapers, cardboard drop-off and organic waste are systematically collected and disposed of. More than 75 percent of duly processed waste (Reduce- Reuse- Recycle) is diverted to landfills, however the goal is to reach 90 percent before 2020.Food waste generated is disposed through waste collecting agencywhich is further used for consumption of animals at piggeries with whom an agreement has been signed. DITU recognizes the importance of its role in working with its supply chain and others to help avoid or to minimize the generation of waste and in working with the waste collection authorities. We are committed to good practice in reducing and managing waste effectively and innovatively and integrating the policy within our departments at all levels. The average yearly values of the waste handled for the last 5 years.

7.1.5.2:Liquid Waste Management

Water

The Average water usage in the campus is 450 KLD. The University has three Sewage Treatment Plants (STP) of 300 KLD, 200 KLD and 265 KLD capacity which look after the treatment of sewage generated in the campus. The average gray water treated in the 3 STPs is 400 KLD.Theentiretreatedwaterisusedforwateringthegardens, green areas and lawnsmaintained inthe campus and flushing of toilets in designated areas.The STP has an Ultra Water Treatment Plant of 1000 L per hour, this ultra-filtered water is recycled for the use in the flush tanks of designated buildings of the campus.The sludge settled in the STPs is removed twice a month and is composted and used as manure for the gardens. The DPR of the same is attached for reference.

Special care is taken to ensure that water usage is managed to efficient levels by adhering to water timingschedules and ensuring that overrun of water is avoided by regular checks and maintenance drills. Flow meters are in place to monitor water consumption pattern and take timely corrective actions. The specification and design of the water scheme enables the

management staff to monitor and control the system to supply as per requirement basis. Together with existing improved design of water system in the University, the water usage discipline on the part of consumers viz students and staff carries a lot of weightage in conservation of this all important resource and minimizing the waste.

7.1.5.3: E-Waste Management

As per guidelines from Uttarakhand Pollution Control Board (UKPCB), the e-waste is being recycled through authorized e waste management unitsin accordance with e-waste management rules 2016 in a judicious manner at the University. The outdated e-waste is regularly collected from source points and sent to e-waste storageroom (size: 20ft x 10 ft)in the campus every 6 months. The stored e-waste is then disposed to government authorized recycling companies. The e-waste items that generally form the e waste category are computers, monitors, laptops, printers & cartridges, television sets, refrigerators, air conditioners, fluorescent and mercury tube lights & lamps etc.

The authorized company which presently collects e-waste from DIT campus is M/s Resource E Waste Solution Pvt. Ltd., Delhi. Consequent to ongoing construction of new Administration block and renovation in the existing Chanakya Academic block, quotations have already been called from e waste vendors for disposal of surplus e waste created due to discarding of older versions of computers and peripherals.

	File Description	Document
1.	Details of E-waste under process	Excel
2.	Waste Disposal Agreement	pdf
3.	Details of e Waste Disposed	pdf

Auditing for Green Campus Management

Unfortunately, biodiversity is facing serious threats from habitat loss, pollution, over consumption and invasive species. Species are disappearing at an alarming rate and each loss affects nature's delicate balance and ourquality of life. Without this variability in the living world, ecological systems and functions would break down, with detrimental consequences for all forms of life, including human beings. Newly planted and existing trees decrease the amount of carbon dioxide in the atmosphere. Trees play an important ecological role within the urban environment, as well as support improved public health and provide aesthetic benefits to cities. In one year, a single mature tree will absorb up to 48 pounds of carbon dioxide from the atmosphere, and release it as oxygen. The amount of oxygen that a single tree produces is enough to provide one day's supply of oxygen for people. So, while you are busy studying and working on earning those good grades, all the trees on campus are also working hard to make the air cleaner for us. Trees on our campus impact our mental health as well; studies have shown that trees greatly reduce stress, which a huge deal is considering many students are under some amount of stress.

Health Audit

1. There is an arrangement with local Max hospital and regular medical officer in medical centre in university visit on daily basis.
2. There is no specific environment related disease noticed in students or faculty members arising out of their presence in University campus.

Noise Pollution

1. Sounds of Normal Conversations:

Sound Intensity: 40-60 dB

Health Hazard: Sound less than 80 dB is safe for the ear.

2. Sounds emanating from Tape recorders or an Orchestra:

Sound Intensity: 70 dB

Health Hazard: It is safe for ear.

3. Sounds of Heavy Traffic:

Sound Intensity: 90 dB

Health Hazard: Constant exposure to sound greater than 80 dB causes temporary hearing loss and if they are not treated immediately, causes permanent impairment.

4. Sounds of Pneumatic drills and other machines:

Sound Intensity: 100 dB

Health Hazard: Constant exposure causes temporary hearing loss and if they are not treated immediately, causes permanent impairment.

5. Sounds of Aircraft engine:

Sound Intensity: 100-200 dB

Health Hazard: Higher noise level of 160 dB cause total deafness, rupturing eardrums, damaging inner ear. It also causes high blood pressure, ulcer in stomach, palpitation, nervous problems, irritation, anger, and affects pregnant women's embryo.

6. Sounds of Rockets during Take-off:

Sound Intensity: 200 dB

Health Hazard: It is dangerously causing total deafness by rupturing the eardrums and damaging the inner ear. It also causes high blood pressure, ulcer in stomach, palpitation, nervous problems, irritation, anger, and affects pregnant women's embryo.

Decible Measurement

Sno	Location	Decibel	Remarks
1	Chanakya Board Room	51	Satisfactory
2	Vivekanand Block-Cafeteria	68	Satisfactory
3	Outside Chanakya Block	53	Satisfactory
4	Near DG Set	60	Satisfactory
5	STP Area	72	Satisfactory
6	Civil and Petroleum Block- 402 LH	47.5	Satisfactory
7	Civil and Petroleum Block- 005	51.2	Satisfactory
8	Civil and Petroleum Block- corridor	52.3	Satisfactory
9	Civil and Petroleum Block- WL 201	61.4	Satisfactory
10	Civil and Petroleum Block- 509 LH-18	60.3	Satisfactory
11	Workshop - corridor	69.9	Satisfactory
12	Workshop - Lab	56.7	Satisfactory
13	Main Entry Gate	69.4	Satisfactory
14	Vastu Block - corridor	49.2	Satisfactory
15	Architecture Studio	63.2	Satisfactory
16	Pharmacy Chemistry Lab - II	70.2	Satisfactory
17	Pharmacy - corridor	68.3	Satisfactory
18	Vedanta Basement Parking	54.4	Satisfactory
19	Vedanta Reception	57.8	Satisfactory
20	Vedanta Lecture Hall - 405	47.6	Satisfactory
21	Sarojani Girls Hostel Mess	68.4	Satisfactory
22	Sarojani Girls Hostel - Room	41.5	Satisfactory
23	Kasturba Girls Hostel	63.7	Satisfactory
24	Girls Hostel - common Room	51.4	Satisfactory
25	Chanakya Academic block Drawing Hall	49.4	Satisfactory
26	Chanakya Academic block-Connection Lab	61.6	Satisfactory
27	Chanakya Academic block-Land, Air, Water Lab	68.7	Satisfactory
28	Boys Hostel - Raman Block	56.2	Satisfactory
29	Boys Hostel - Bose Block	51.4	Satisfactory
30	Boys Hostel - Bhabha Block	58	Satisfactory
31	Boys Hostel - Sarabhai Block	53.8	Satisfactory
32	Boys Hostel - Mess	72.6	Satisfactory
33	Boys Hostel - Common Room	60.4	Satisfactory
34	Medical Room	61.3	Satisfactory

Sound/Decibel level measured is satisfactory and there is no adverse impact of the same on occupants.

NBC-2016 standards of exposure to sound level is annexed as per Annexure-F

Transportation Practices

Observation and Recommendation

1. It is appreciable that University is planning for purchase of battery vehicle for internal transportation.
2. Daily commuting Teaching and Non-Teaching faculty is also sensitized for using pooled transportation for working towards sustainability and reducing resource use and encouragement of resource conservation.
3. Fuel consumption is monitored for University owned vehicles. Regular servicing is got done for University owned vehicles. (Document attached for reference).
4. For outsourced vehicles to the extent possible empty trips of buses should be made with parking arrangement from the starting point.
5. Transport vehicles purchased in future should be purchased with consideration of life cycle cost. (Keeping in consideration fuel efficiency of vehicle purchased.).
6. It is recommended that charging station in common parking be provided for encouragement of e-vehicles by students and staff members.

List of Vehicles with Pollution Clearance Certificate

Sr No.	Vehicle No.	Date of registration	Date of Permit	Date of Road Tax	Date of Fitness	Date of Insaurance	Date of Pollution
1	UK-07PA-2246	15-05-2014	19-05-2024	30-04-2020	12-05-2021	11-05-2020	05-01-2021
2	UK-07PA-2248	15-05-2014	19-05-2024	30-04-2020	12-05-2021	11-05-2020	05-01-2021
3	UK-07PA-2249	15-05-2014	16-05-2024	30-04-2020	12-05-2021	11-05-2020	05-01-2021
4	UK-07PA-1841	04-07-2013	05-07-2023	31-05-2020	28-06-2021	09-06-2020	05-01-2021
5	UK-07PA-1842	04-07-2013	05-07-2023	31-05-2020	28-06-2021	27-08-2021	05-06-2021
6	UK-07PA-1843	04-07-2013	05-07-2023	31-05-2020	28-06-2021	09-06-2020	05-01-2021
7	UK-07PA-1844	04-07-2013	05-07-2023	31-05-2020	28-06-2021	27-08-2021	05-01-2021
8	UK-07PA-1222	08-09-2011	08-09-2022	30-06-2020	06-09-2021	29-08-2020	05-01-2021
9	UK-07PA-1223	08-09-2011	08-09-2021	30-06-2020	06-09-2021	09-09-2020	05-01-2021

10	UK-07PA-1606	23-08-2012	17-08-2022	30-06-2020	17-08-2021	13-08-2020	05-01-2021
11	UK-07PA-2220	09-04-2014	15-04-2024	30-06-2020	04-04-2021	03-04-2020	05-01-2021
12	UK-07BD-5699	09-05-2014			08-05-2029	06-05-2021	05-07-2021
13	UK-07N-6870	17-07-2006			16-07-2021	14-07-2021	05-01-2021
14	UK-07AM-7816	07-12-2011			06-12-2026	27-09-2021	08-10-2021
15	UK-07PA-2034	05-08-2010			06-10-2021	31-07-2021	05-07-2021
16	UK-07PA-0737	04-08-2010			06-10-2021	31-07-2021	04-10-2021
17	UK-07AB-0133	17-12-2009			16-12-2024	23-12-2020	

The record for getting pollution tested has been maintained thus depicting concern of university in maintaining environment and also complying with statutory requirements.

Students Not Using Bus Services

SR. NO.	NAME OF STUDENTS	SAP ID	REMARKS
1	GAUTAM SINGH	1000015448	Call Not Answered
2	AAMIR	1000017456	No Incoming
3	EESHAN UNIYAL	1000016758	Not Availing transport
4	GAURAV KUMAR	1000017134	Withdrawal
5	MS. MALLIKA	1000015275	Not Availing transport
6	NAVEEN	1000013735	Not Availing transport
7	PRIYANSHU	1000014278	Unable to connect
8	MS. RIA BISHT	1000012989	Call Not Answered
9	MS ASTHA	1000014508	No Incoming
10	SHREYA	1000016785	Unable to connect
11	Riya Grewal	1000011988	Not Availing transport
12	EKANSH DEVRANI	1000016632	Not Availing transport
13	KASHISH BARTWAL	1000014357	No. Incorrect
14	PRIYANSHU CHAUHAN	1000012512	Not Availing transport
15	PRIYA NEGI	1000016190	Not Availing transport
16	SHRUTI KUMARI	1000016882	Call Not Answered

17	NIOPENDRA	1000012469	Not Availing transport
18	MS. PRIYA BAHUGUNA	1000012299	No Incoming
19	MS. GAURI BISHT	1000013609	Call Not Answered
20	MS. VANSHITA MITTAL	1000010616	Unable to connect
21	EKANSH SINGH	1000013464	Not Availing transport
22	KESHAV RANAWAT	1000011042	No Incoming Facility on No.
23	MS. SHIVANI	1000015422	Unable to connect
24	MS. HIMANI	1000017369	***Availing but fees not submitted yet, spoken with Adm Sir***
25	ISHIKA TANDON	1000016525	Not Availing transport
26	POEM BALUNI	1000017037	Call Not Answered
27	MUKUL AGGARWAL	1000010767	Not Availing transport
28	ISHIKA TANDON	1000016525	Not Availing transport
29	POEM BALUNI	1000017037	Unable to connect
30	MUKUL AGGARWAL	1000010767	Not Availing transport

Updated List Of Staff Bus

S. No.	Name	SAP ID
1	S. Bhanu Prakash	10000498
2	Dr. Ankit Agarwal	10000660
3	Dr. Shachi Negi	10000472
4	Dr. J P Panda	10000858
5	Dr. Sarabanti Maji	10000190
6	Hemraj Saini	10000922
7	MANISHA DEBBARMA	10000945
8	Nalin Somani	10000356
9	Dr. Deepshikha Bhargav	10000933
10	Parusharamulu Buduma	10000917
11	Dr. Shriya Goyal	10000902
12	Rachel Joseph	10000937
13	Sana Anwar	10000249
14	Sushmita	10000938
15	Asha Negi	10000853
16	Ms. Mansi	10000720
17	Chandrakanta Rawat	10000843

18	Raj Kumar Jangra	30000229
19	Ms. Shalini Kuchhal	10000954
20	Dr. Amandeep Sharma	10000951
21	Dr. Manas Ranjan Dash	10000914
22	Ms. Swati	10000965
23	Mrs. Sharadha Singh	1000015384

List of Students Availing Bus Services

SR. NO.	NAME OF STUDENTS	SAP ID	COURSE NAME	PASSES VALID UPTO
1	AAROHI NEGI	1000017022	B.SC STAT 3RD YEAR	*Passes Issued, valid up to 31st-May-2022*
2	AARTI BHATT	1000012139	BSC CHEMISTRY	*Passes Issued, valid up to 31st-May-2022*
3	ADITI CHETRI	1000011964	B.TECH	*Passes Issued, valid up to 31st-May-2022*
4	ADITI RATURI	1000015557	B .Tech Mech. Engineering	*Passes Issued, valid upto 31st-May-2022*
5	ADITYA CHAUHAN	1000016383	B.TECH CSE	*Passes Issued, valid upto 31st-May-2022*
6	ADITYA GAHARWAR	1000016683	B.TECH-CSE	*Passes Issued, valid upto 31st-May-2022*
7	AKANKSHA DHANIK	1000016256	B.TECH	*Passes Issued, valid upto 31st-May-2022*
8	AKSHIT DANGWAL	1000017174	B.Tech. CSE	*Passes Issued, valid upto 31st-May-2022*
9	AKSHITA ARYA	1000016337	B.Tech. CSE	*Passes Issued, valid upto 31st-May-2022*
10	AMAN	1000012574	B.TECH	*Passes Issued, valid upto 31st-May-2022*
11	AMAN KUMAR	1000016333	B.TECH	*Passes Issued, valid upto 31st-May-2022*
12	AMBIKA KUMARI	1000016355	B.TECH	*Passes Issued, valid upto 31st-May-2022*
13	AMIT NAUTIYAL	1000014355	B.TECH-CSE	*Passes Issued, valid upto 31st-May-2022*
14	ANCHAL RANA	1000016624	BSC. CHEMISTRY 1ST YEAR	*Passes Issued, valid upto 31st-May-2022*
15	ANIRUDH TOMAR	1000016249	B.TECH-C.E, 1ST YEAR	*Passes Issued, valid upto 31st-May-2022*

16	ANJALI KARKI	1000016420	B.TECH-CSE	*Passes Issued, valid upto 31st-May-2022*
17	ANJALI SAKLANI	1000014210	B.TECH ECE	*Passes Issued, valid upto 31st-May-2022*
18	ANMOL BAHUGUNA	1000016284	B.TECH	*Passes Issued, valid upto 31st-May-2022*
19	ANMOL THAPA	1000014360	B-PHARMA 2ND YEAR	*Passes Issued, valid upto 31st-May-2022*
20	ANSHIKA DUMAGA	1000013128	B.TECH	*Passes Issued, valid upto 31st-May-2022*
21	ANSHIKA SINGH	1000016049	B.Tech. CSE	*Passes Issued, valid upto 31st-May-2022*
22	ANSHUL NEGI	1000015938	B.TECH	*Passes Issued, valid upto 31st-May-2022*
23	ANUKRITI BHAKTA	1000016234	B.SC CHEMISTRY 1ST YEAR	*Passes Issued, valid upto 31st-May-2022*
24	ANUSHKA CHAUHAN	1000015908	B.PHARMA	*Passes Issued, valid upto 31st-May-2022*
25	ARUSHI NEGI	1000017335	BCA 1ST YEAR	*Passes Issued, valid upto 31st-May-2022*
26	ASHISH RANA	1000014738	BCA 2ND YEAR	*Passes Issued, valid upto 31st-May-2022*
27	ASHUTOSH	1000015182	BTECH CSE 3RD YEAR	*Passes Issued, valid upto 31st-May-2022*
28	ASHWANI RAWAT	1000012376	B.TECH CSE	*Passes Issued, valid upto 31st-May-2022*
29	ASHWANI PANWAR	1000014429	BSC PHYSISCS	*Passes Issued, valid upto 31st-May-2022*
30	AYUSH NEGI	1000017425	B.TECH 2ND YEAR	*Passes Issued, valid upto 31st-May-2022*
31	AYUSH NEGI	1000015924	B.TECH	*Passes Issued, valid upto 31st-May-2022*
32	AYUSHI CHAUHAN	1000015178	B.ARC. 2ND YEAR	*She will issue her bus pass today upto 31st- May 2022*
33	AYUSHI THAPA	1000016512	B.A PSYCHOLOGY	*Passes Issued, valid upto 31st-May-2022*
34	AYUSHMAN SEMWAL	1000013396	B.TECH	*Passes Issued, valid upto 31st-May-2022*
35	BALJEET KAUR	1000012137	BSC MATHS	*Passes Issued, valid upto 31st-May-2022*
36	CHERRY SINGH	1000014568	B.TECH	*Passes Issued, valid upto 31st-May-2022*
37	DEV SHARMA	1000014727	B.TECH	*Passes Issued, valid upto 31st-May-2022*

38	DEVANSH SRIVASTAVA	1000014909	B.TECH (CSE) 2ND YEAR	*Passes Issued, valid upto 31st-May-2022*
39	DEVANSHI SINGH	1000014252	B.A (Hons) in English	*Passes Issued, valid upto 31st-May-2022*
40	DISHA CHAUHAN	1000016490	B.Tech. CSE	*Passes Issued, valid upto 31st-May-2022*
41	DISHA JANGWAN	1000017315	B.ARC. 1ST YEAR	*Passes Issued, valid upto 31st-May-2022*
42	DIVYANSH RAWAT	1000015070	B.TECH (CSE) 2ND YEAR	*Passes Issued, valid upto 31st-May-2022*
43	DIVYANSH SEHGAL	1000017433	B.TECH	*Passes Issued, valid upto 31st-May-2022*
44	DIWAKAR SINGH	1000014951	M. Sc (C.R) 2nd Year	*Passes Issued, valid upto 31st-May-2022*
45	GAURANGI NAITHANI	1000015474	B.TECH	*Passes Issued, valid upto 31st-May-2022*
46	GAURAV JOSHI	1000016656	B.TECH	*Passes Issued, valid upto 31st-May-2022*
47	GUNJAN PHARASI	1000016596	B.Sc. (Hons) in Chemistry	*Passes Issued, valid upto 31st-May-2022*
48	HAMZA AHMED KHAN	1000016729	B.Tech. Civil Engineering	*Passes Issued, valid upto 31st-May-2022*
49	HARDIK PUROHIT	1000015941	B.PHARMA	*Passes Issued, valid upto 31st-May-2022*
50	HARDIK RANA	1000017265	B.TECH	*Passes Issued, valid upto 31st-May-2022*
51	HARSHIT SAINI	1000014557	B.TECH	*Passes Issued, valid upto 31st-May-2022*
52	HIMANDEEP BISHT	1000015833	B.TECH	*Passes Issued, valid upto 31st-May-2022*
53	HIMANSHU CHAURASIA	1000015328	B.Sc. (Hons)in Physics	*Passes Issued, valid upto 31st-May-2022*
54	KANISHKA RATURI	1000014586	B.TECH	*Passes Issued, valid upto 31st-May-2022*
55	KARAN BHATT	1000015865	B.TECH	*Passes Issued, valid upto 31st-May-2022*
56	KARTIK BHATIA	1000015791	B.Tech. CSE	*Passes Issued, valid upto 31st-May-2022*
57	KARTIK RASRAJ	1000016354	B.TECH	*Passes Issued, valid upto 31st-May-2022*
58	KAVITA .	1000016020	BCA	*Passes Issued, valid upto 31st-May-2022*
59	KAVITA RAWAT	1000014750	B.PHARMA	*Passes Issued, valid upto 31st-May-2022*

60	KEERTY JOSHI	1000016634	B.TECH	*Passes Issued, valid upto 31st-May-2022*
61	KHUSHI CHHETRI	1000015990	B.SC PHYSICS	*Passes Issued, valid upto 31st-May-2022*
62	KIRAN KANWAR	1000015342	B.TECH	*Passes Issued, valid upto 31st-May-2022*
63	KIRAN MOURA	1000016209	B.TECH	*Passes Issued, valid upto 31st-May-2022*
64	KRITIKA SINGH	1000016286	B.TECH	*Passes Issued, valid upto 31st-May-2022*
65	KUSHAGRA SANWAL	1000013883	B.Sc (Hons)in Maths	*Passes Issued, valid upto 31st-May-2022*
66	LAKSH TANEJA	1000016258	B.Tech. CSE	*Passes Issued, valid upto 31st-May-2022*
67	LAKSHAY SHARMA	1000016366	B.TECH	*Passes Issued, valid upto 31st-May-2022*
68	LUBHNA UNIYAL	1000014019	B.SC MATHS	*Passes Issued, valid upto 31st-May-2022*
69	MAHIMA VERMA	1000016825	B. DESIGN	*Passes Issued, valid upto 31st-May-2022*
70	MAHINOOR	1000017387	Diploma in Pharmacy	*Passes Issued, valid upto 31st-May-2022*
71	MANAS POKHRIYAL	1000016435	B.TECH	*Passes Issued, valid upto 31st-May-2022*
72	MANISH DANGI	1000016908	B.TECH	*Passes Issued, valid upto 31st-May-2022*
73	MAYANK WALIA	1000014924	MAYANK WALIA	*Passes Issued, valid upto 31st-May-2022*
74	MD. ZISHAN FIROZ	1000016991	B.TEC CSE 2ND YEAR (4 SEM)	*Passes Issued, valid upto 31st-May-2022*
75	MEGHA PANDEY	1000014672	B-DESIGN , UX, 2ND YEAR	*Passes Issued, valid upto 31st-May-2022*
76	MOHAMMAD ANWAR	1000016182	B.TECH (CSE) 1ST YEAR	*Passes Issued, valid upto 31st-May-2022*
77	MOHIT BALONI	1000014873	B.TECH	*Passes Issued, valid upto 31st-May-2022*
78	MOHIT KHATI	1000014532	B.TECH	*Passes Issued, valid upto 31st-May-2022*
79	MS. PALAK	1000012117	B.SC CHEMISTRY	*Passes Issued, valid upto 31st-May-2022*
80	NAMAN POKHRIYAL	1000014591	B.TECH	*Passes Issued, valid upto 31st-May-2022*
81	NAVENDU BAHUKHANDI	1000015801	B.TECH-CSE	*Passes Issued, valid upto 31st-May-2022*

82	NEEHARIKA JUGRAN	1000014209	B.Tech. CSE	*Passes Issued, valid upto 31st-May-2022*
83	NEERAJ NEGI	1000014021	B-DESIGN, UX	*Passes Issued, valid upto 31st-May-2022*
84	NIMISH SHANDILYA	1000016934	B.TECH-CSE	*Passes Issued, valid upto 31st-May-2022*
85	NIYATI NEGI	1000016176	B.TECH	*Passes Issued, valid upto 31st-May-2022*
86	PARITOSH NAUTIYAL	1000016601	B.TECH REA	*Passes Issued, valid upto 31st-May-2022*
87	PARTH JUYAL	1000015086	B-DESIGN, UX	*Passes Issued, valid upto 31st-May-2022*
88	PAWAN YADAV	1000016612	B.TECH	*Passes Issued, valid upto 31st-May-2022*
89	PIYUSH NEGI	1000017342	B.TECH	*Passes Issued, valid upto 31st-May-2022*
90	PIYUSH PANIYAL	1000014033	B.TECH	*Passes Issued, valid upto 31st-May-2022*
91	POOJA BHANDARI	1000014724	B.TECH CSE	*Passes Issued, valid upto 31st-May-2022*
92	POOJA MALHOTRA	1000015926	B.TECH-CSE	*Passes Issued, valid upto 31st-May-2022*
93	PRATHAM SINGH	1000017149	B.Tech. CSE	*Passes Issued, valid upto 31st-May-2022*
94	PRITESH KHOLIA	1000016805	B. Pharma	*Passes Issued, valid upto 31st-May-2022*
95	PRIYANSHI RAJ	1000017454	B.TECH	*Passes Issued, valid upto 31st-May-2022*
96	RAGHAV SINGHAL	1000016658	B.Sc. (Hons)in Physics	*Passes Issued, valid upto 31st-May-2022*
97	RISHABH BISHT	1000017205	BTECH CSE	*Passes Issued, valid upto 31st-May-2022*
98	RITIK	1000015495	BSC MATHS 2ND YEAR	*Passes Issued, valid upto 31st-May-2022*
99	RIYA BHATT	1000012138	B.SC MATHS	*Passes Issued, valid upto 31st-May-2022*
100	ROHAN RAWAT	1000015997	B.PHARMA 1ST YEAR	*Passes Issued, valid upto 31st-May-2022*
101	ROHIT PANWAR	1000017402	BSC CHEMISTRY	*Passes Issued, valid upto 31st-May-2022*
102	SAAKSHI JOSHI	1000015389	B.TECH (CSE) 3RD YEAR	*Passes Issued, valid upto 31st-May-2022*
103	SAKSHI RAWAT	1000012435	B.TECH, IT	*Passes Issued, valid upto 31st-May-2022*

104	SALONI NAITHANI	1000014280	B.TECH (CSE) 2ND YEAR	*Passes Issued, valid upto 31st-May-2022*
105	SAMIKSHA PAL	1000017414	M.A CLINICAL	*Passes Issued, valid upto 31st-May-2022*
106	SANJEEVNI RANA	1000017388	B.SC PHYSICS 1ST YEAR	*Passes Issued, valid upto 31st-May-2022*
107	SAURABH RAWAT	1000015830	B.TECH. 1ST YEAR	*Passes Issued, valid upto 31st-May-2022*
108	SAURABHB DEOLI	1000014718	BCA	*Passes Issued, valid upto 31st-May-2022*
109	SHEFALI THAPA	1000012220	B.TECH	*Passes Issued, valid upto 31st-May-2022*
110	SHOAIB ALI	1000015767	B.SC MATHS 1ST YEAR	*Passes Issued, valid upto 31st-May-2022*
111	Shreya Malik	1000017506	B.Sc (Hons)in Maths	*Passes Issued, valid upto 31st-May-2022*
112	SHREYA PATWAL	1000017293	B.SC MATHS	*Passes Issued, valid upto 31st-May-2022*
113	SHRISTI PUNDORA	1000012065	B.DESIGN, UX	*Passes Issued, valid upto 31st-May-2022*
114	SHRUTI CHANDAN	1000016552	B.TECH-CSE	*Passes Issued, valid upto 31st-May-2022*
115	SHRUTI CHAUHAN	1000016183	B.Tech. CSE	*Passes Issued, valid upto 31st-May-2022*
116	SIDDHANT SINGH	1000014477	B.Sc (Hons)in Maths	*Passes Issued, valid upto 31st-May-2022*
117	SONAL VERMA	1000016035	B.TECH	*Passes Issued, valid upto 31st-May-2022*
118	SRIJAN GHOSH	1000012219	B.TECH CSE	*Passes Issued, valid upto 31st-May-2022*
119	SRISHTHI PANWAR	1000017242	BA. PSYCOLGY 1ST YEAR	*Passes Issued, valid upto 31st-May-2022*
120	SUDIPTA DUTTA	1000017158	B.TECH	*Passes Issued, valid upto 31st-May-2022*
121	TANUJA BISHT	1000012281	B.TECH (CSE) 3RD YEAR	*Passes Issued, valid upto 31st-May-2022*
122	TANVI VADIYAN	1000017186	B.Sc. (Hons) in Chemistry	*Passes Issued, valid upto 31st-May-2022*
123	TEJAS WALDIA	1000016912	B.TECH-RAE 1ST YEAR	*Passes Issued, valid upto 31st-May-2022*
124	UNAIZA .	1000016833	B.TECH	*Passes Issued, valid upto 31st-May-2022*
125	VAIBHAV BARTWAL	1000012400	B.TECH	*Passes Issued, valid upto 31st-May-2022*

126	VAISHNAVI RANA	1000012992	B.SC 3 RD YEAR	*Passes Issued, valid upto 31st-May-2022*
127	VIKAS RAI	1000015309	B.TECH (IT) 3RD YEAR	*Passes Issued, valid upto 31st-May-2022*
128	VIKAS RANA	1000016116	B. PHARMA 2ND YEAR	*Passes Issued, valid upto 31st-May-2022*
129	YOGESH GIRI	1000015603	B.TECH 2ND YEAR	*Passes Issued, valid upto 31st-May-2022*
130	YASH SATYAWALI	1000016438	B.Tech. CSE	*Passes Issued, valid upto 31st-May-2022*
131	DEVANSH KUMAR	1000014640	B.TECH	*Passes Issued, valid upto 31st-May-2022*
132	ARUSHI	1000014099	B.SC PHYSICS HONS	*She will issue her bus pass today upto 31st- May 2022*
133	KATYAYANI	1000013257	B.TECH	*Passes Issued, valid upto 31st-May-2022*

Procurement Practices To Be Followed

Procurement team is required to be made aware regarding procurement of goods and services that are sustainable. The sensitization is required for all purchases in a way that optimized utilisation of natural resources are possible.

1. Paper with Recycle content-Presently this is not in vogue. There is a commitment to explore and sensitize procurement personnel on this issue
2. AC's using refrigerant with Zero ODP Refrigerant- A number of AC's are with R-22 refrigerant a plan is proposed to replace these in phases as per availability of budget.
3. Environment friendly Housekeeping Chemicals
4. Paints, Adhesives, sealants with recommended percentage of volatile organic compound.

   There is already a practice to purchase of low VOC paints. The decision is under consideration to eliminate use of oil base paint with water based environment friendly paint.

Management of Use of Paper

For reduction of use of paper, paperless work has been adopted in all offices and laboratories. The following initiatives are already in vogue in functioning of university:

1. Paperless work has been adopted by teachers and staff members
2. Teachers share data among students and staff
3. WhatsApp groups are created for communication.
4. Applications like LMS, Shiksha Setu, google forms, Cisco Webex are used to share data and gathering of information (assessments, tests, assignments, notes, projects, ppt etc.
5. Online e-content has been prepared by university students.
6. Staff members attended training to use and develop e-content.

Paper Use And Printing Goals

1. There are efforts already directed through use of E-Books for reducing the use of paper.
2. There are instructions to staff and student to resort to printing only if it is absolutely UN avoidable.
3. Papers should be purchased that have recycled content.
4. Paper use and printing goals are already circulated by University management is followed by students and staff of University.

E-Library

E-books v/s Traditional books data and year wise history to moving from traditional to E-system.

The record of Library activities is given here under:

Green Library Initiatives in Central library,(Veda)

The library is well equipped with modern technology and proper use light, air and wood. The library use wood material in stack areas and reference hall, periodical section reading hall. The windows are big and wide and proper lights come to the reading area and fresh air came.

The main motto of the green library is to facilitate students for group discussion. The Library gives an separate study space for the student with sitting, dirking and Wi Fi facilities, etc

We are motivating to the students to utilize the available e-recourse instead of hard copy of books.

At present we are subscribing six e- databases (Green Library tools) for the students and faculty members containing with approx 1000 journals and 5000 plus Educational video.

1 EBSCO

2 ASME

3. ASCE

4. IEEE

5. DELNET

7. NPTL

Beside of these we have good collection of e books also .we have more than 10000 e books on all subject students are using these e-books and e data base anywhere in the campus and outside the campus through Knibmus software.

As per the usage statistic on an average 1000 students are login for the e recourses on per day basis.

Future Planning for Green Library:-

Planning to encourage other librarians towards green library by discussion, seminar, and conference

Library staff will Promote green library tools, techniques (e-recourse) to encourage to students and staff members.

There is constant endeavour to promote use of E-Books which is a Very positive effort.

Despite fewer in numbers the e-books have advantage of being used by multiple students/ faculty simultaneously and thus creating better impact on sustainability in contrary to hard copy that can be read by only one person at a time.

The following recommendations are made

1. Use of E-books is promoted for students and faculty members especially in present Covid situation.
2. No. of E-books made available should be increased continuously.
3. Training on sustainability should be provided.
4. Adaption is promoted considering it to be a new normal.
5. Targets for increasing E-books should be fixed on continual basis.

Training and Awareness

The university is regularly conducting awareness program for students and faculty members.

Governance

There is a requirement of making Environment aspects for discussion in periodic meetings of top management. Through enactment of Green and Environment policy, Waste Management policy and Plantation policy and its effective implementation by setting of targets and monitoring there can be improvement across all segments. The policies and targets are required to be circulated to all stake holders; all these steps can lead an institution towards sustainability. The results are regularly required to be verified at Periodical intervals. These can be managed through internal or external audits.

Plantation Policy

DIT University-Dehradun

Plantation Policy, DIT University, Dehradun

We at DIT University are dedicated for recurrent development of Environment. As plantation of trees contribute to a great extent in cultivating the atmosphere, University has ratified the policy of plantation for the assistance of all stake holders and the Society.

Planting a tree has long been a suggestion to better the earth environment, whether it is clamour and cautioning of global warming, water crisis etc. The trees offer several benefits associated with the economic, social and environmental fields.

Through these trees plantation, the life cycle shall improve and the essential needs of mankind will be easily managed. Besides absorption of Carbon Dioxide, trees also support life by providing habitat to different species such as squirrels, bees and birds. Trees cleanse the climate by engrossing carbon dioxide from the environment and releasing oxygen. The trees cool the environment and also effects of global warming are mitigated.

University with premeditated vision of top management and an active contribution of students, Faculty members, and other staff shall sombrely promise to always work, participate and contribute for betterment of environment through constant tree plantation programs.

There shall be consistent organization of awareness programs with face-to-face interaction with all the stake holders where in the objective of benefits of plantation can be better explained. The students of DIT university very well comprehend the prominence of trees in our life and have taken a pledge to contribute their bit in making the University, Cities, nation and world a better place to live. They all have to pledge to plant more and more trees on timely basis followed by proper caring of plants providing the basic requirements as and when required.

DIT University has a policy to celebrate Tree Plantation week in the University premises on annual basis and obligates the setting up a target to add 1 % to the existing plantation population annually.

DIT University once again vows to plant trees as per policy followed by assure survival of trees by satisfactory maintenance and watering practices. Species selected for plantation shall be rather native such that these can be grown with very minimal water requirement. We shall also decide to optimally have turf (Grass area) as per simplest requirement for reduction of water foot print for horticulture use in university premises.

DIT UNIVERSITY DIT DEHRADUN

Plantation Inventory

The total number of trees are counted and maintained. There is a requirement to maintain a categorised inventory with common name and botanical name and plates with this data are required to be put on trees for easy monitoring and identification, as per Annexure-H

There is a track on survival of species planted afresh as per plantation policy and plan and the survival rate has been found to be satisfactory as informed.

Cow dung used is also documented as per Annex-I

Plantation Program

The DIT University has regular plantation program.

Native species are planned to be planted and it is very good as these have minimum water requirement.

Air Quality

CPCB GUIDELINES

Exhaust of DG Sets is required to be raised as per CPCB requirement.

There is no record of air quality testing done earlier.
As per WHO guidelines the following should be the limits for Air Quality

Particulate matter

Guidelines	
$PM_{2.5}$:	10 µg/m³ annual mean 25 µg/m³ 24-hour mean
PM_{10}:	20 µg/m³ annual mean 50 µg/m³ 24-hour mean

Normal outdoor level: 350 - 450 ppm. acceptable levels: **< 600 ppm**. complaints of stuffiness and odors: 600 - 1000 ppm. ASHRAE and OSHA standards: 1000 ppm. general drowsiness: 1000 - 2500 ppm. Acceptable indoor level is 500ppm differential from outdoor levels

Air Quality Data

Sr.no	Location	PM-2.5	PM-10	Particles	Remarks
1	Chanakya Board Room	29.7	42.9	5614	**Moderate**
2	Chanakya Board Room- after 30 Minutes	35	52.2	3679	**Moderate**
3	Vivekanand Block-Cafeteria	29.2	44.7	3632	**Moderate**
4	Outside Chanakya Block	29.8	46.2	3592	**Moderate**
5	Near DG Set	26.8	39.9	3725	**Moderate**
6	STP Area	24.3	36.6	2886	**Moderate**
7	Civil and Petroleum Block- 402 LH	22.8	34.1	3029	**Moderate**
8	Civil and Petroleum Block- 005	21.6	30.9	3736	**Moderate**
9	Civil and Petroleum Block- corridor	32.4	49.5	3712	**Moderate**
10	Civil and Petroleum Block- WL 201	32.2	48.5	4083	**Moderate**
11	Civil and Petroleum Block- 509 LH-18	28.4	40.8	3580	**Moderate**
12	Workshop - corridor	21.8	35.2	4236	**Moderate**
13	Workshop - Lab	31.9	49.7	3050	**Moderate**
14	Main Entry Gate	20.2	31.4	2835	**Moderate**
15	Vastu Block - corridor	47.7	72.4	4859	**Unhealthy**
16	Architecture Studio	33.2	49.2	6281	**Moderate**
17	Pharmacy Chemistry Lab - II	43.2	65.5	5063	**Unhealthy**
18	Pharmacy - corridor	26.4	41.3	3883	**Moderate**
19	Vedanta Basement Parking	32.3	48.5	5098	**Moderate**
20	Vedanta Reception	50.2	72.8	7286	**Unhealthy**
21	Vedanta Lecture Hall-405 windows closed	31.9	46.8	4090	**Moderate**
22	Vedanta Lecture Hall-405 after windows opened	37.6	53.4	5055	**Moderate**
23	Sarojani Girls Hostel Mess	35.5	52.9	5223	**Moderate**
24	Sarojani Girls Hostel - Room	33	47.4	4678	**Moderate**
25	Kasturba Girls Hostel	32.2	47.3	4118	**Moderate**
26	Girls Hostel - common Room	27.3	43.8	3990	**Moderate**
27	Chanakya Academic block Drawing Hall	33.1	49.4	4065	**Moderate**
28	Chanakya Academic blockConnection Lab	27.8	41.2	3826	**Moderate**
29	Chanakya Academic block-Land, Air, Water Lab	23.3	34.9	2947	**Moderate**
30	Boys Hostel - Raman Block	34.6	51.4	4897	**Moderate**
31	Boys Hostel - Bose Block	38.6	61	5491	**Moderate**
32	Boys Hostel - Bhabha Block	38	55.4	4753	**Moderate**
33	Boys Hostel - Sarabhai Block	55.4	86	7287	**Unhealthy**
34	Boys Hostel - Mess	38.8	60.3	886	**Moderate**
35	Boys Hostel - Common Room	42.8	65	801	**Unhealthy**
36	Medical Room	31.3	46.5	3465	**Moderate**

AIR Quality DATA - DIT University –Dehradun-NCHO-Formaldehyde

Sno	Location	NCHO	Remarks
1	Chanakya Board Room	0.049	Healthy
2	Chanakya Board Room-After 30 Minutes	0.034	Healthy
3	Vivekanand Block-Cafeteria	0.011	Healthy
4	Outside Chanakya Block	0.001	Healthy
5	Near DG Set	0.001	Healthy
6	STP Area	0.034	Healthy
7	Civil and Petroleum Block- 402 LH	0.001	Healthy
8	Civil and Petroleum Block- 005	0.067	Healthy
9	Civil and Petroleum Block- corridor	0.002	Healthy
10	Civil and Petroleum Block- WL 201	0.001	Healthy
11	Civil and Petroleum Block- 509 LH-18	0.001	Healthy
12	Workshop - corridor	0.001	Healthy
13	Workshop - Lab	0.002	Healthy
14	Main Entry Gate	0.001	Healthy
15	Vastu Block - corridor	0.002	Healthy
16	Architecture Studio	0.001	Healthy
17	Pharmacy Chemistry Lab - II	0.014	Healthy
18	Pharmacy - corridor	0.002	Healthy
19	Vedanta Basement Parking	0.104	Healthy
20	Vedanta Reception	0.066	Healthy
21	Vedanta Lecture Hall - 405 windows closed	0.016	Healthy
22	Vedanta Lecture Hall - 405 after windows opened	0.014	Healthy
23	Sarojani Girls Hostel Mess	0.001	Healthy
24	Sarojani Girls Hostel - Room	0.001	Healthy
25	Kasturba Girls Hostel	0.001	Healthy
26	Girls Hostel - common Room	0.001	Healthy
27	Chanakya Academic block Drawing Hall	0.002	Healthy
28	Chanakya Academic block-Connection Lab	0.002	Healthy
29	Chanakya Academic block-Land, Air, Water Lab	0.407	Healthy
30	Boys Hostel - Raman Block	0.001	Healthy
31	Boys Hostel - Bose Block	0.001	Healthy
32	Boys Hostel - Bhabha Block	0.001	Healthy
33	Boys Hostel - Sarabhai Block	0.001	Healthy
34	Boys Hostel - Mess	0.002	Healthy
35	Boys Hostel - Common Room	0.001	Healthy
36	Medical Room	0.002	Healthy

AIR Quality DATA - DIT University –Dehradun-Carbon Dioxide

Sno	Location	CO2	Remarks	Recommendation
1	Chanakya Board Room	877	Satisfactory as per external values	None
2	Chanakya Board Room- after 30 Minutes	1177	Satisfactory as per external values	None
3	Vivekanand Block-Cafeteria	1131	Satisfactory as per external values	None
4	Outside Chanakya Block	846	Satisfactory as per external values	None
5	Near DG Set	794	Satisfactory as per external values	None
6	STP Area	795	Satisfactory as per external values	None
7	Civil and Petroleum Block-402LH	817	Satisfactory as per external values	None
8	Civil and Petroleum Block- 005	831	Satisfactory as per external values	None
9	Civil and Petroleum Block-corridor	889	Satisfactory as per external values	None
10	Civil and Petroleum Block- WL 201	880	Satisfactory as per external values	None
11	Civil and Petroleum Block- 509 LH-18	835	Satisfactory as per external values	None
12	Workshop - corridor	860	Satisfactory as per external values	None
13	Workshop - Lab	963	Satisfactory as per external values	None
14	Main Entry Gate	820	Satisfactory as per external values	None
15	Vastu Block - corridor	898	Satisfactory as per external values	None
16	Architecture Studio	878	Satisfactory as per external values	None
17	Pharmacy Chemistry Lab - II	865	Satisfactory as per external values	None
18	Pharmacy - corridor	870	Satisfactory as per external values	None
19	Vedanta Basement Parking	871	Satisfactory as per external values	None
20	Vedanta Reception	877	Satisfactory as per external values	None
21	Vedanta Lecture Hall - 405 windows closed	1022	Satisfactory as per external values	None
22	Vedanta Lecture Hall - 405 after windows opened	1013	Satisfactory as per external values	None
23	Sarojani Girls Hostel Mess	834	Satisfactory as per external values	None

24	Sarojani Girls Hostel - Room	849	Satisfactory as per external values	None
25	Kasturba Girls Hostel	847	Satisfactory as per external values	None
26	Girls Hostel - common Room	838	Satisfactory as per external values	None
27	Chanakya Academic block Drawing Hall	825	Satisfactory as per external values	None
28	Chanakya Academic block-Connection Lab	823	Satisfactory as per external values	None
29	Chanakya Academic block-Land, Air, Water Lab	876	Satisfactory as per external values	None
30	Boys Hostel - Raman Block	851	Satisfactory as per external values	None
31	Boys Hostel - Bose Block	862	Satisfactory as per external values	None
32	Boys Hostel - Bhabha Block	901	Satisfactory as per external values	None
33	Boys Hostel - Sarabhai Block	931	Satisfactory as per external values	None
34	Boys Hostel - Mess	886	Satisfactory as per external values	None
35	Boys Hostel - Common Room	801	Satisfactory as per external values	None
36	Medical Room	931	Satisfactory as per external values	None

The values of PM-2.5 and PM-10 are very high and values are dangerous for human beings. Values of CO_2 and Formaldehyde are satisfactory. There is not much that can be done by university for management of particulate matter. Only any loose soil or construction material inside premises should be sprinkled with water to mitigate to some extent.

Significance of Refrigerant for Environment

Table depicting properties of Refrigerants

Refrigerant	Global Warming Poetential	Ozone Depletion Potential
R 22	1810	Medium
R 410A	2088	Nil
R 32	675	Nil
R 134A	1430	Nil
R 290	3	Nil
R 600A	3	Nil

Refrigerant	Type	ODP	GWP	Atmospheric lifetime (years)
R12	CFC	0.9	8500	102
R22	HCFC	0.06	1700	13.3
R134a	HFC	0	1300	14
R407C	HFC blend	0	1610	36
R410A	HFC blend	0	1900	36
Ammonia (R717)	Natural compound	0	0	< 1
Propane (R290)	HC	0	3	< 1
R1234yf	HFC unsat.	0	6	Very low
R1234ze	HFC unsat.	0	6	Very low

Detail of Refrigerant Used in Installed Air Conditioners

Data of Refrigerants not maintained. Inventory of Air conditioners as per Annex-J

All window type Air conditioners installed are with R-22 refrigerant. ON replacement all AC's should be purchased with zero ODP refrigerants. It is recommended that in future all procurement for AC's, Water cooler etc. be made with consideration for Environment friendly refrigerants.

Action for replacement of AC's with zero ODP refrigerants be initiates in phases.

Recommendations

1. It is recommended that in future care should be taken to purchase Air conditioners with refrigerants for which GWP is low and ODP is nil.
2. Life cycle cost should be considered for making decision about purchase of Air Conditioners.
3. All AC's that were procured more than 8 years ago should be replaced with best in class energy efficient Air Conditioners after taking into consideration Life Cycle Cost. This will eliminate existing AC's impact on environment through low impact refrigerant and also with low consumption of Electricity thus reducing.

Eco Friendly Housekeeping Materials

Staff at DIT University is conversant with eco friendly housekeeping chemicals. At present eco-friendly housekeeping material are partly used not used. It is recommended that Green Seal -37 compliant an International standard or Green Pro-CII certified housekeeping material should be used for reduction of impact of activities of university o environment.

Green Seal -37 compliant an International standard or Green Pro - CII certification

It is recommended that Eco Friendly material and Sustainable material as per NBC-2016 guidelines is procured and used.

CII
Confederation of Indian Industry

GreenPro

GreenPro Certification Standard for

Cleaning Chemicals

Version 1.0

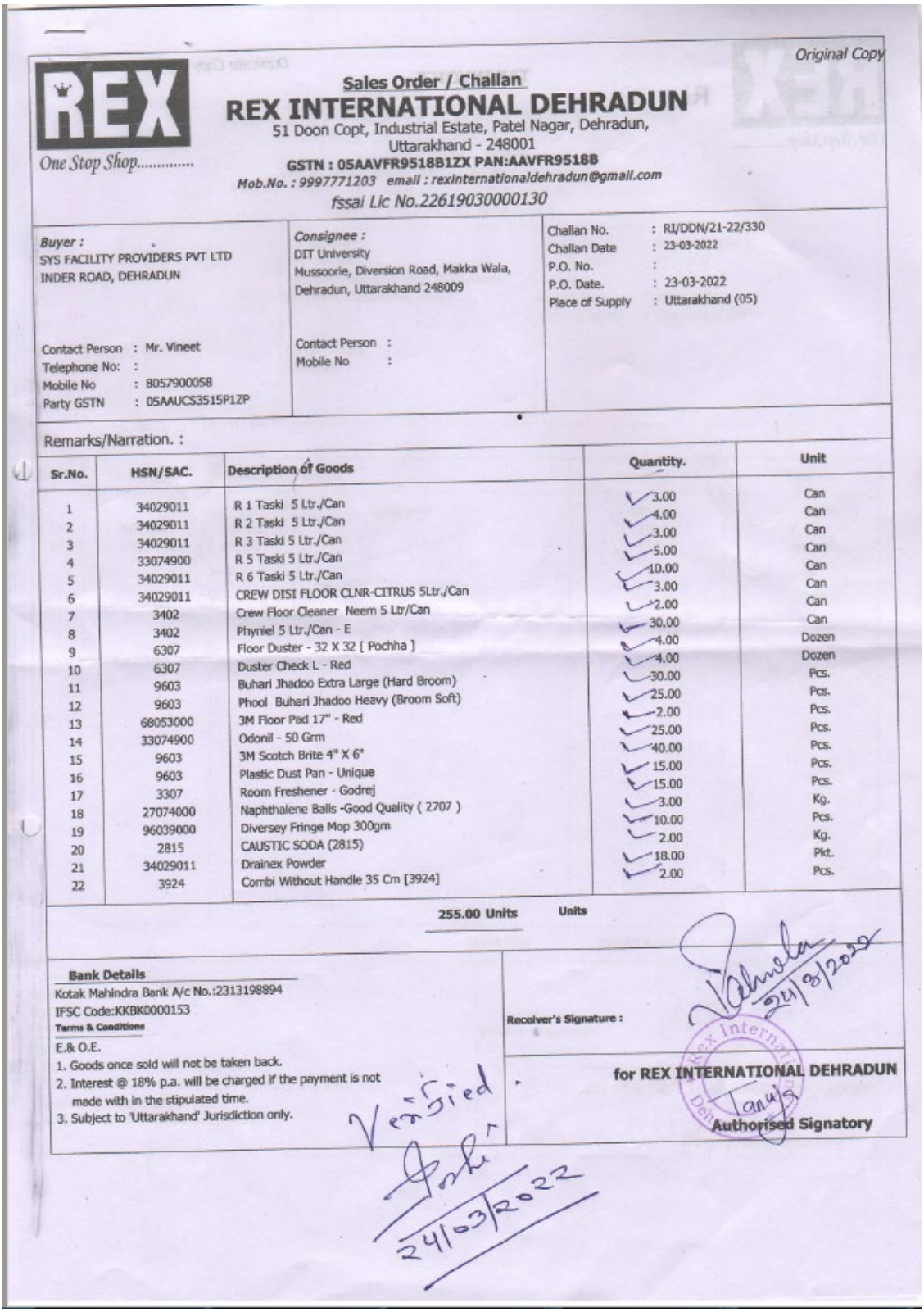
General Purpose Cleaners

Eco friendly housekeeping materials are recommended to be used for all cleaning application should be Green Pro or any similar Indian standard should be procured in future and records of such procurement b documented for future references.

The cleaning material may be required for following applications and also may be some other in addition to these.

1. Glass Cleaners
2. Bathroom Cleaners
3. Disinfectants and Sanitizers
4. Cleaner/Degreasers
5. Carpet and Upholstery Cleaners
6. Floor Cleaners
7. Liquid Hand Soap
8. Furniture Polish

List of Housekeeping Chemicals



Original Copy

REX
One Stop Shop.....

Sales Order / Challan

REX INTERNATIONAL DEHRADUN

51 Doon Copt, Industrial Estate, Patel Nagar, Dehradun,
Uttarakhand - 248001

GSTN : 05AAVFR9518B1ZX PAN:AAVFR9518B

Mob.No. : 9997771203 email : rexinternationaldehradun@gmail.com

fssai Lic No.22619030000130

Buyer : SYS FACILITY PROVIDERS PVT LTD INDER ROAD, DEHRADUN Contact Person : Mr. Vineet Telephone No: : Mobile No : 8057900058 Party GSTN : 05AAUCS3515P1ZP	***Consignee :*** DIT University Mussoorie, Diversion Road, Makka Wala, Dehradun, Uttarakhand 248009 Contact Person : Mobile No :	Challan No. : RI/DDN/21-22/330 Challan Date : 23-03-2022 P.O. No. : P.O. Date. : 23-03-2022 Place of Supply : Uttarakhand (05)

Remarks/Narration. :

Sr.No.	HSN/SAC.	Description of Goods	Quantity.	Unit
1	34029011	R 1 Taski 5 Ltr./Can	3.00	Can
2	34029011	R 2 Taski 5 Ltr./Can	4.00	Can
3	34029011	R 3 Taski 5 Ltr./Can	3.00	Can
4	33074900	R 5 Taski 5 Ltr./Can	5.00	Can
5	34029011	R 6 Taski 5 Ltr./Can	10.00	Can
6	34029011	CREW DISI FLOOR CLNR-CITRUS 5Ltr./Can	3.00	Can
7	3402	Crew Floor Cleaner Neem 5 Ltr/Can	2.00	Can
8	3402	Phyniel 5 Ltr./Can - E	30.00	Can
9	6307	Floor Duster - 32 X 32 [Pochha]	4.00	Dozen
10	6307	Duster Check L - Red	4.00	Dozen
11	9603	Buhari Jhadoo Extra Large (Hard Broom)	30.00	Pcs.
12	9603	Phool Buhari Jhadoo Heavy (Broom Soft)	25.00	Pcs.
13	68053000	3M Floor Pad 17" - Red	2.00	Pcs.
14	33074900	Odonil - 50 Grm	25.00	Pcs.
15	9603	3M Scotch Brite 4" X 6"	40.00	Pcs.
16	9603	Plastic Dust Pan - Unique	15.00	Pcs.
17	3307	Room Freshener - Godrej	15.00	Pcs.
18	27074000	Naphthalene Balls -Good Quality (2707)	3.00	Kg.
19	96039000	Diversey Fringe Mop 300gm	10.00	Pcs.
20	2815	CAUSTIC SODA (2815)	2.00	Kg.
21	34029011	Drainex Powder	18.00	Pkt.
22	3924	Combi Without Handle 35 Cm [3924]	2.00	Pcs.
		255.00 Units	**Units**	

Bank Details
Kotak Mahindra Bank A/c No.:2313198894
IFSC Code:KKBK0000153

Terms & Conditions
E.& O.E.
1. Goods once sold will not be taken back.
2. Interest @ 18% p.a. will be charged if the payment is not made with in the stipulated time.
3. Subject to 'Uttarakhand' Jurisdiction only.

Receiver's Signature :

24/3/2022

for REX INTERNATIONAL DEHRADUN

Authorised Signatory

Verified
24/03/2022

Ventilation Assessment

The areas constructed have been provided with adequate windows and ventilators have been provided @ more than 6% of floor area as per requirement of ventilation as per IGBC operation and maintenance green building rating system.

The ventilation in most of the areas has been found to be satisfactory as per requirement of Green building standard. Where lacking ventilation be supplemented through making fixed glasses open able.

Workshop

In workshop, main hall and other areas

There is an issue of ventilation observed in the following areas. Open able windows and Ventilators with louvered arrangement be installed for natural ventilation and exhaust fans be provided

a. Chemistry Lab

b. Mechanical Department Lab

Chemistry Lab

Ventilation of chemistry lab is discharged at ground level this is required to be thrown above building height by provision of ducting and discharging the fumes above last floor of building.

Recommended Rate of Air-Circulation

Table 11 Recommended Rate of Air Circulation for Different Areas
(Clause 11.3)

Sl No. (1)	Application (2)	Air Change per Hour (3)
1)	Assembly rooms	4-8
2)	Bakeries	20-30
3)	Banks/building societies	4-8
4)	Bathrooms	6-10
5)	Bedrooms	2-4
6)	Billiard rooms	6-8
7)	Boiler rooms	*see* **11.2.2**
8)	Cafes and coffee bars	10-12
9)	Canteens	8-12
10)	Cellars	3-10
11)	Changing rooms	6-10
12)	Churches	1-3
13)	Cinemas and theatres	10-15
14)	Club rooms	12, *Min*
15)	Compressor rooms	10-12
16)	Conference rooms	8-12
17)	Corridors	5-10
18)	Dairies	8-12
19)	Dance halls	12, *Min*
20)	Dye works	20-30
21)	Electroplating shops	10-12
22)	Engine rooms/DG rooms/GG rooms	*see* **11.2.2**
23)	Entrance halls	3-5
24)	Factories and work shops	8-10
25)	Foundries	15-30
26)	Garages	6-8
27)	Glass houses	25-60
28)	Gymnasium	6, *Min*
29)	Hair dressing saloon	10-15
30)	Hospitals-sterilising	15-25
31)	Hospital-wards	6-8
32)	Hospital domestic	15-20
33)	Laboratories	6-15
34)	Launderettes	10-15
35)	Laundries	10-30
36)	Lavatories	6 -15
37)	Lecture theatres	5-8
38)	Libraries	3-5
39)	Lift cars	20, *Min*
40)	Living rooms	3-6
41)	Mushroom houses	6-10
42)	Offices	6-10
43)	Paint shops(not cellulose)	10-20
44)	Photo and X-ray dark room	10-15
45)	Public house bars	12, *Min*
46)	Recording control rooms	15-25
47)	Recording studios	10-12
48)	Restaurants	8-12
49)	Schoolrooms	5-7
50)	Shops and supermarkets	8-15
51)	Shower baths	15-20
52)	Stores and warehouses	3-6
53)	STP rooms	30, *Min*
54)	Squash courts	4, *Min*
55)	Swimming baths	10-15
56)	Toilets	6-10
57)	Underground vehicle parking	6, *Min*
58)	Utility rooms	15-30
59)	Welding shops	15-30

Fire Safety

No halon-based fire extinguishers have been used, it is very good initiative. As a future guideline it is recommended that of fire suppression system is to be used for any fire extinguishing system, only clean agents with minimum environmental impact should be installed.

For sustainability there is requirement of reducing the fire risk. There is requirement of fire fighting to be followed as per NBC-2016. It is recommended that audit for fire safety-General safety and Electrical safety should be got conducted and required provisions should be made for safety and averting loss of life and property.

Custodial Chemical Use

Chemical for one-year requirement are stored in Labs and these are stored in a separate store. The store requires to be ventilated and hazard analysis should be got done through Material Specification Data Sheet and record should be maintained. Proper ventilation with hoods should be designed. The list of custodial chemicals is maintained and kept updated always and is attached as per Annexure-K

Sustainable Development Goals

Sustainable development should always be practiced in all activities of university. The university administration, students and staff are already aware and efforts are always put to meet requirement as per applicability.

The principal, teaching and Non-teaching staff is aware of these goals and there is a practice of considering these goals while taking decisions in university.

Summarization of Green and Environment Audit Findings

An Environment and Green Audit was conducted, the major relevant aspects that were covered in the Environment and Green audit and present level of performance of University are summarized here:

1. **Awareness of Staff: The** concerned staff is very much aware and there are excellent records maintained and kept updated for environmental aspects. This attitude has made the implementation of environmental aspects for activities of university easier and effective.
2. **Establishment of saloon , shop for grocery and stationery inside of university campus:**
   a. The shop inside the campus for grocery and stationery also saves energy for commuting.
   b. Saloon shop is also inside campus thus catering to the grooming needs of students without requiring traveling leading to savings of fossil fuel.
3. **Policies, planning and Commitment:** The University has already in place an Environment and Green policy that covers all concerning aspects, plantation policy and Waste management policy. Effective Policy preparation and its implementation with appropriate planning is the major contributor for bringing in change and for continual improvement.
4. **University land, structural foot print and maintaining inventory of ventilation, Plumbing and sanitation and recharging of Ground water:** The concerned university staff is maintaining the details of all constructed areas of university building for effective management of ventilation, sanitation and reduction of water use for betterment of Environment and making the university green. Majority of areas are air conditioned .There are enough open able windows for requirement of natural ventilation in university premises.
5. **Plantation and Turf area:** The University is conducting regular plantation program and planting native species that has low consumption of water for their subsistence. The turf area has also been optimized to avert use of excess water that may be required for maintenance of grass. NCC, NSS and other departments have participated in plantation program in recent years despite prevalence of Covid-19. Total turf area is 1.98 Hectares or 19800 sq.mts.
6. **Health of students and staff:** The University is having a regular visiting Medical officer from local Max hospital in an established medical center with four beds for

treatment of students and other staff members and there is no disease prevalence in students or university staff by virtue of their attendance in university premises.

7. **Transportation:** The university administration is encouraging the mitigation of impact on environment due to use of transport by students and members of staff. Substantial proportion of population is residing in campus. There are university buses operating for students.
8. **Procurement Procedures**:
   a. The procurement activities of an institution are very significant for making it sustainable and also in mitigation of energy foot print by purchase of energy efficient equipment.
   b. As Energy consumption has direct bearing on climate change and environment, the awareness of those responsible for purchase of energy consuming equipment should be aware regarding energy efficiency of equipment for considering the same while making purchase.
   c. The purchase committee of DIT University-Dehradun ,members are imparted awareness knowledge on the adverse impact of less energy efficient equipment and thereby increase of carbon foot print due to use of in efficient equipment. They have the understanding that in case of energy efficient equipment **first cost** has not to be the only consideration while making purchase decisions, instead life cycle cost should be considered for making purchase decision of energy consuming equipment.
   d. The purchase committee members are also aware that for any equipment the impact of substances like refrigerants, the fixture that are containing mercury or other harmful substance is to be avoided absolutely and equipment with zero ODP and with low hazard elements are only to be purchased.
   e. The committee has also been sensitized for purchase of paints, sealants and adhesives with permissible quantity of volatile organic compounds.
   f. The committee has also been made aware for considering recycled content of paper for any future purchases.
   g. The committee members are aware of Eco friendly housekeeping materials and for future purchases the same shall be considered.

9. **Use of paper and E-library**

   The university has already instructions in place for all members of staff for avoiding the printing where ever possible and also applies other techniques for reduction of paper use.

   Use of E-library for on line study is encouraged and is also monitored regularly and

ratio of E- books to hard copies is increasing year on year with normalized calculations.

10. **Sustainable development goals**

The university staff and students are aware of sustainability goals and practicing the same in their actions as per applicability.

11. **On-site composting and use of manure:**

Leaves and other botanical waste are treated in composting plant and manure thus formed is used in place of chemical fertilizer and no fertilizer is purchased for plantation.

12. **Fire Fighting equipment:**

None of firefighting equipment installed is with high environment impact chemicals like halon etc.

13. **Handling of waste from chemistry lab and exhaust fumes handling**

There is a practice of proper disposal of chemical effluents and waste generated by handing over to concerned agency. The discharge from chemical lab is stored in plastic containers and is disposed of through centralized ETP vendors.

Exhaust of chemistry lab is required to be raised to avert dispersion of fumes at lower level. The same is required to be provided at a height of 3.00 meters above building height for safe dispersion of chemicals.

14. **Air Quality**

The presence of particulate matter is slightly higher than acceptable limits. There is nothing that can be done for improvement of same. Spraying with RO reject water for area covered with soil can be practiced for managing inside air quality to the extent possible.

15. **Waste management**

There is an effective waste management plan and procedures in place that are followed by university for handling of solid, plastic, paper and E- waste.

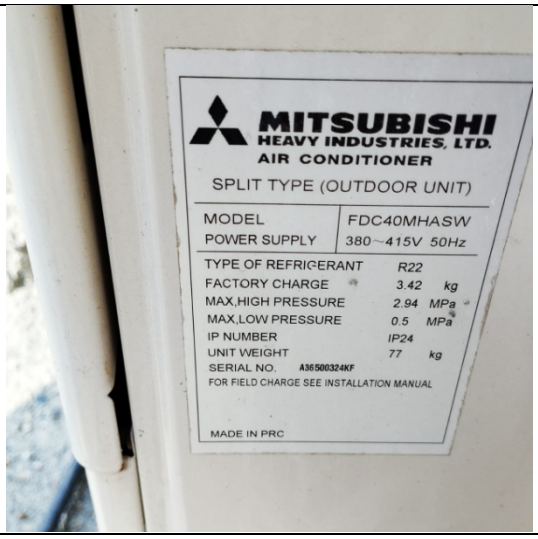
16. **Sound Level**

Level of sound in areas of university is within acceptable limits as per length of exposure as per NBC-2016 standards.

Annexure-A Photographs DIT University

Photographs Related to Environment Issue

S. No.	Description	Issue
1		**Incoming water pipes –location for installation of Mjeters on incoming water supply**
2		**Leakage in water pipe**
3		**Good Practice-Smoke free campus signage**

4		**Single Dust bin kept-There should be twin dust bin installed at one location**
5		**Air conditioners with non environment friendly gas-R-22**
6		**Good practice-Construction lab enclosed for practical –Good practice**

7		**Leakage in external yard hydrant –water leakage survey should be planned with set periodicity**
8		**Waste stacked in bags for removal-Good practice**
9		**Composting pit at site –Good practice**

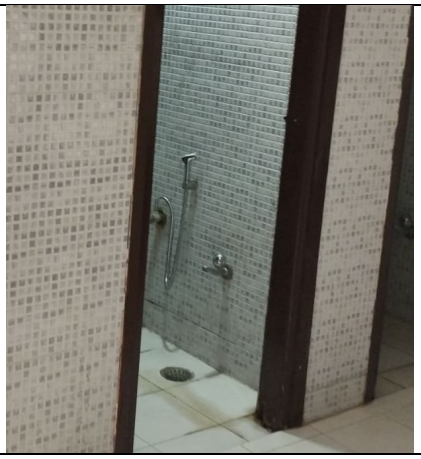
10		**STP installed-good practice**
11		**DG set exhaust not as per CPCB requirement**
12		**Planters placed –Good practice** **Dust bins should be twin type at all locations**

13		**Testing meter for Air quality PM-2.5 –PM-10-CO2 level and formaldehyde.**
14		**Good practice-Push and use type taps installed for saving water wastage.**
15		**Good practice-Push and use type taps installed for saving water wastage.**

16		**Water treatment plant-Exhaust of engine not appropriate.**
17		**Water treatment plant**
18		**Gaps around Pipes-Contamination of water can happen**

19		**Good Practice-Green initiative signage**
20		**Good practice-No smoking signage**
21		**Signage for management of noise pollution –an environmental hazard-Good Practice**

22		**Audit team working in Field taking measurements**
23		**Audit team working in Field taking measurements**
24		**Audit team working in Field taking measurements**

25		**Health Faucet installed**
26		**Normal Supply type tap**
27		**Fume chamber installed Chemistry-Discharged at Ground level only.**

28		**Good practice-A storage container kept in chemistry lab for storage of hazardous waste and is then handed over to authorised vendors**
29		**Good practice-Low VOC-Low volatile organic compound content paint is used for painting in university campus.**
30		**Damaged solar panel in storm-Loss of generation and sustainability-Panels not installed for wind velocity guidelines of MNRE**

31		**Damaged solar panel in storm-Loss of generation and sustainability-Panels not installed for wind velocity guidelines of MNRE**
32		**Exhaust discharged at horizontal level impacting local environment and occupants**
33		**Fume Hood is provided.**

34		**Insulation of Solar Water heating system damaged**
35		**Insulation of Solar Water heating system damaged**
36		**Green and Blue dust bins dumped-Single dust bin used.**

37		**Food practice push type flushing system is provided for Urinals in University toilets.**

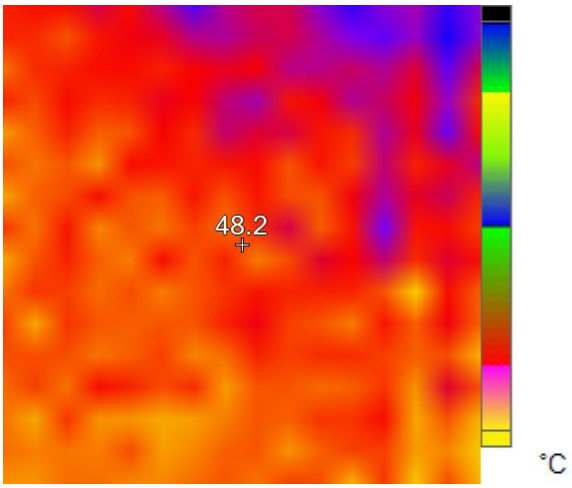
Annexure-B Thermal Imaging Report

THERMAL IMAGING REPORT

Envelope thermal imaging report

Inspection Summary

File name	vt_00001.is2	Inspection Date and Time	5/19/2022 3:07:48 PM
		Location	South Side Window
File name	vt_00002.is2	Inspection Date and Time	5/19/2022 3:08:04 PM
		Location	South Side Window
File name	vt_00003.is2	Inspection Date and Time	5/19/2022 3:08:22 PM
		Location	South Side Window
File name	vt_00004.is2	Inspection Date and Time	5/19/2022 3:24:09 PM
		Location	Workshop Roof Top
File name	vt_00005.is2	Inspection Date and Time	5/19/2022 3:24:29 PM
		Location	Workshop Roof Top
File name	vt_00006.is2	Inspection Date and Time	5/19/2022 3:24:46 PM
		Location	Workshop Roof Top
File name	vt_00007.is2	Inspection Date and Time	5/19/2022 3:25:07 PM
		Location	Workshop Roof Top
File name	vt_00008.is2	Inspection Date and Time	5/19/2022 3:25:30 PM
		Location	Workshop Roof Top
File name	vt_00009.is2	Inspection Date and Time	5/19/2022 3:39:09 PM
		Location	South Side Window
File name	vt_00010.is2	Inspection Date and Time	5/19/2022 3:39:22 PM
		Location	South Side Window
File name	vt_00011.is2	Inspection Date and Time	5/19/2022 3:39:36 PM
		Location	South Side Window
File name	vt_00012.is2	Inspection Date and Time	5/19/2022 3:44:05 PM
		Location	West Side Window
File name	vt_00013.is2	Inspection Date and Time	5/19/2022 3:44:13 PM
		Location	West Side Window
File name	vt_00014.is2	Inspection Date and Time	5/19/2022 3:45:36 PM
		Location	North Side Window
File name	vt_00015.is2	Inspection Date and Time	5/19/2022 3:45:46 PM
		Location	North Side Window
File name	vt_00016.is2	Inspection Date and Time	5/19/2022 3:48:31 PM
		Location	Ground
File name	vt_00017.is2	Inspection Date and Time	5/19/2022 3:48:48 PM
		Location	Ground
File name	vt_00018.is2	Inspection Date and Time	5/19/2022 3:53:12 PM
		Location	Civil Building Roof Top
File name	vt_00019.is2	Inspection Date and Time	5/19/2022 3:53:31 PM
		Location	Civil Building Roof Top
File name	vt_00020.is2	Inspection Date and Time	5/19/2022 3:54:05 PM
		Location	Civil Building Roof Top
File name	vt_00021.is2	Inspection Date and Time	5/19/2022 3:54:19 PM
		Location	Civil Building Roof Top
File name	vt_00022.is2	Inspection Date and Time	5/19/2022 3:54:34 PM
		Location	Civil Building Roof Top



vt_00001.is2
5/19/2022 3:07:48 PM

Visible Light Image

Location South Side Window

Graph

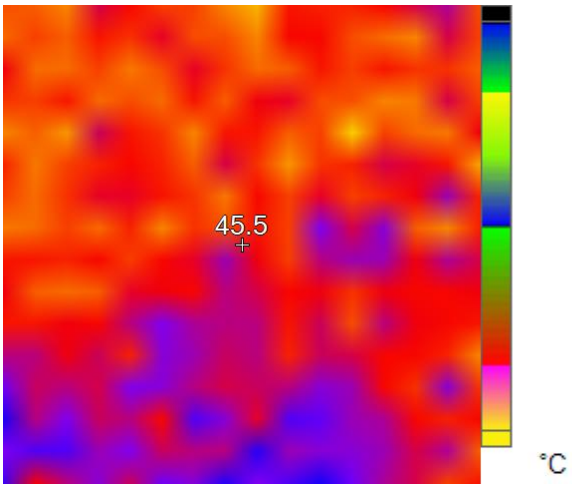
Very high temperature noticed –Much higher than ambient

Image Info

Background temperature	20.0°C
Emissivity	0.95
Image Time	5/19/2022 3:07:48 PM
Calibration Range	-10.0°C to 250.0°C

Main Image Markers

Name	Temperature	Emissivity	Background
Centerpoint	48.2°C	0.95	20.0°C



vt_00002.is2
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Visible Light Image

Location South Side Window

Graph

Very high temperature noticed –Much higher than ambient

Image Info

Background temperature	20.0°C
Emissivity	0.95
Image Time	5/19/2022 3:08:04 PM
Calibration Range	-10.0°C to 250.0°C

Main Image Markers

Name	Temperature	Emissivity	Background
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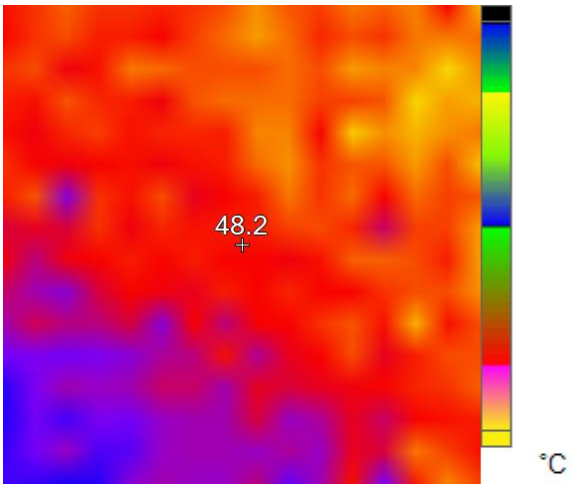


vt_00003.is2
5/19/2022 3:08:22 PM

Visible Light Image

Location South Side Window

Graph

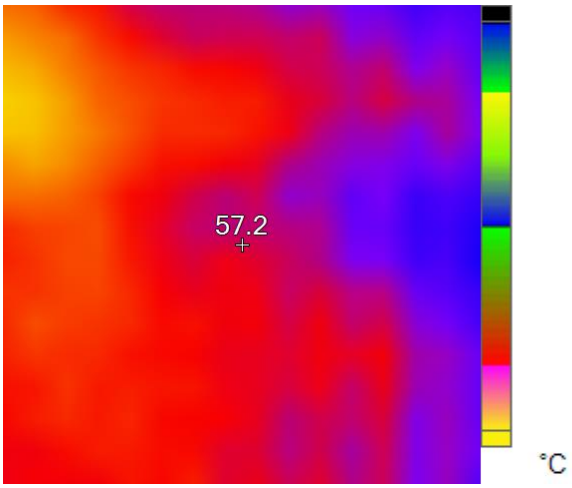
Very high temperature noticed –Much higher than ambient

Image Info

Background temperature	20.0°C
Emissivity	0.95
Image Time	5/19/2022 3:08:22 PM
Calibration Range	-10.0°C to 250.0°C

Main Image Markers

Name	Temperature	Emissivity	Background
Centerpoint	48.2°C	0.95	20.0°C



vt_00004.is2
5/19/2022 3:24:09 PM

Visible Light Image

Location Workshop Roof Top

Graph

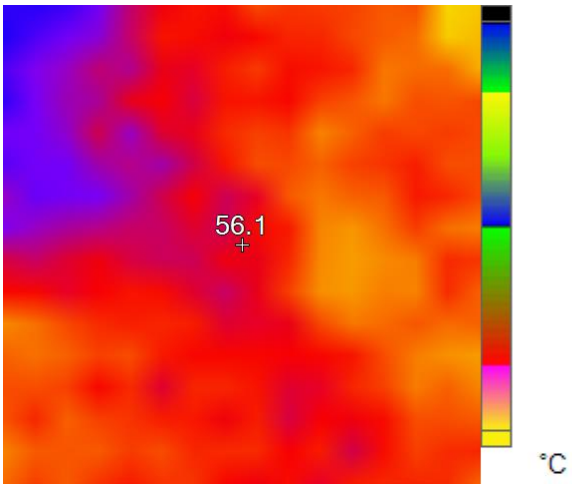
Very high temperature of Roof noticed

Image Info

Background temperature	20.0°C
Emissivity	0.95
Image Time	5/19/2022 3:24:09 PM
Calibration Range	-10.0°C to 250.0°C

Main Image Markers

Name	Temperature	Emissivity	Background
Centerpoint	57.2°C	0.95	20.0°C



vt_00005.is2
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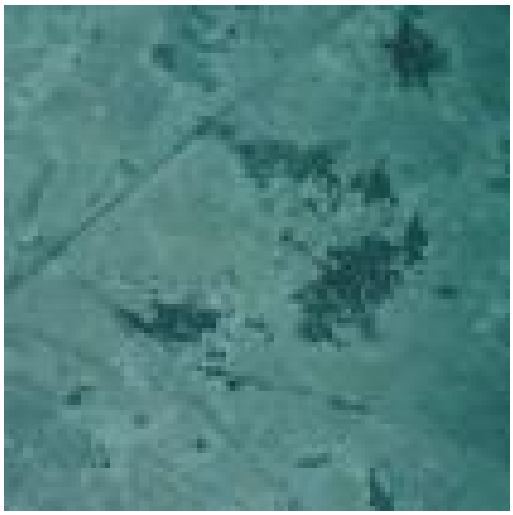


Visible Light Image

Location Workshop Roof Top

Graph

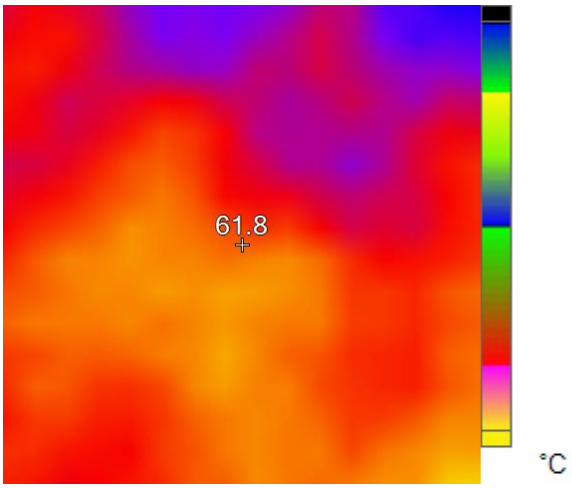
Very high temperature of Roof noticed

Image Info

Background temperature	20.0°C
Emissivity	0.95
Image Time	5/19/2022 3:24:29 PM
Calibration Range	-10.0°C to 250.0°C

Main Image Markers

Name	Temperature	Emissivity	Background
Centerpoint	56.1°C	0.95	20.0°C



vt_00006.is2
5/19/2022 3:24:46 PM

Visible Light Image

Location Workshop Roof Top

Graph

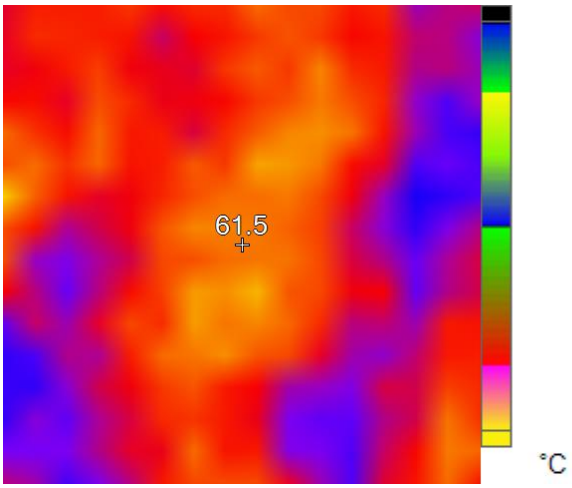
Very high temperature of Roof noticed

Image Info

Background temperature	20.0°C
Emissivity	0.95
Image Time	5/19/2022 3:24:46 PM
Calibration Range	-10.0°C to 250.0°C

Main Image Markers

Name	Temperature	Emissivity	Background
Centerpoint	61.8°C	0.95	20.0°C



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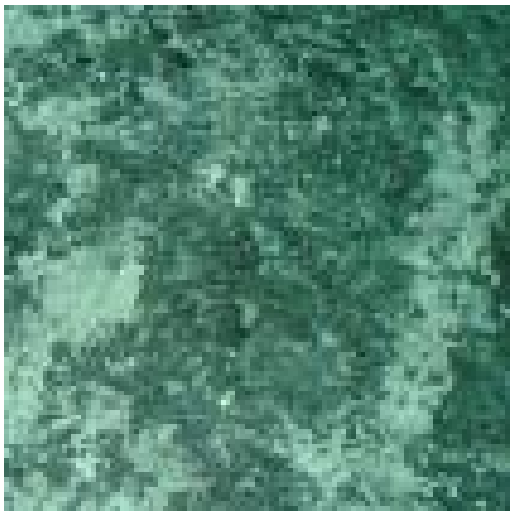
5/19/2022 3:25:07 PM



Visible Light Image

Location Workshop Roof Top

Graph

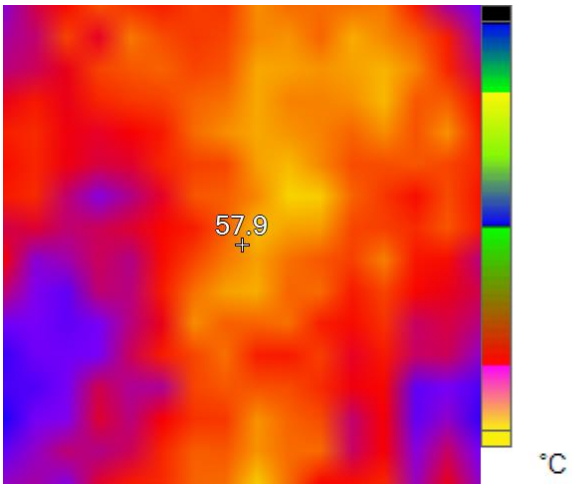
Very high temperature of Roof noticed

Image Info

Background temperature	20.0°C
Emissivity	0.95
Image Time	5/19/2022 3:25:07 PM
Calibration Range	-10.0°C to 250.0°C

Main Image Markers

Name	Temperature	Emissivity	Background
Centerpoint	61.5°C	0.95	20.0°C



vt_00008.is2
5/19/2022 3:25:30 PM

Visible Light Image

Location Workshop Roof Top

Graph

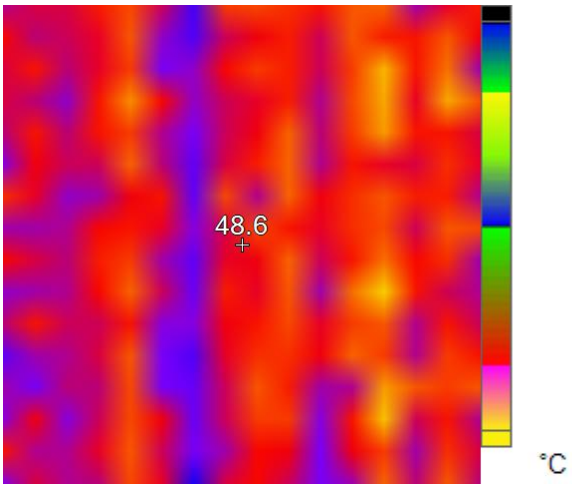
Very high temperature of Roof noticed

Image Info

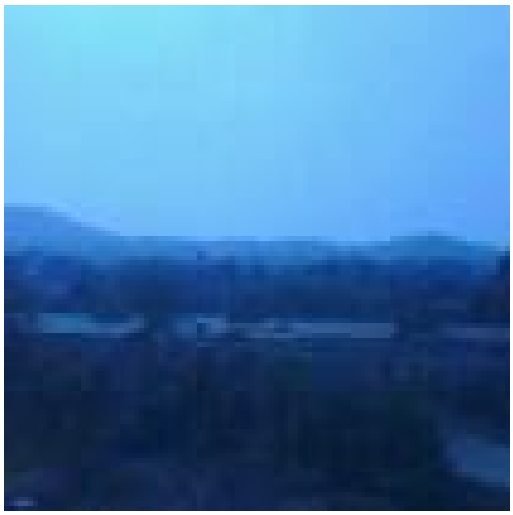
Background temperature	20.0°C
Emissivity	0.95
Image Time	5/19/2022 3:25:30 PM
Calibration Range	-10.0°C to 250.0°C

Main Image Markers

Name	Temperature	Emissivity	Background
Centerpoint	57.9°C	0.95	20.0°C



vt_00009.is2
5/19/2022 3:39:09 PM



Visible Light Image

Location South Side Window

Graph

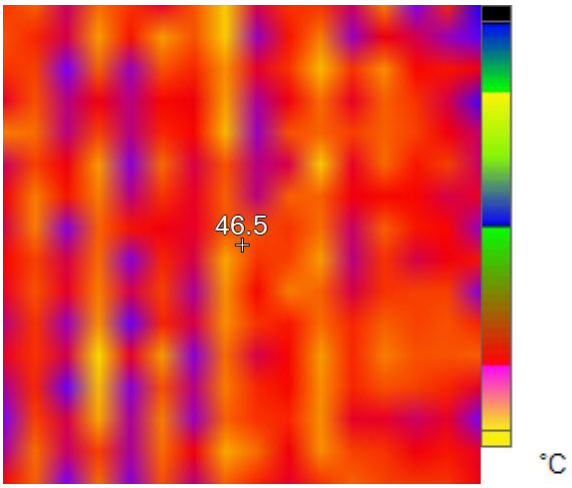
Very high temperature noticed –Much higher than ambient

Image Info

Background temperature	20.0°C
Emissivity	0.95
Image Time	5/19/2022 3:39:09 PM
Calibration Range	-10.0°C to 250.0°C

Main Image Markers

Name	Temperature	Emissivity	Background
Centerpoint	48.6°C	0.95	20.0°C



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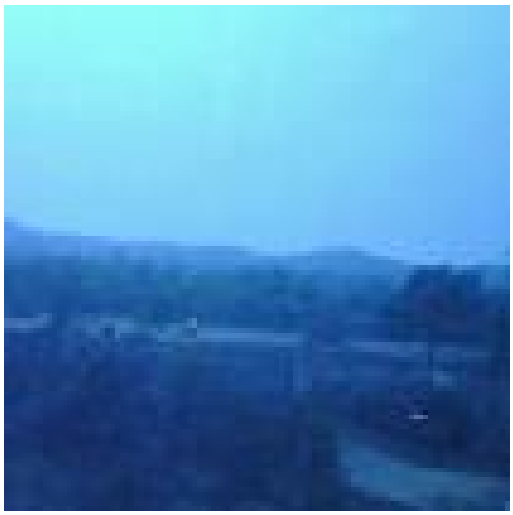
5/19/2022 3:39:22 PM



Visible Light Image

Location South Side Window

Graph

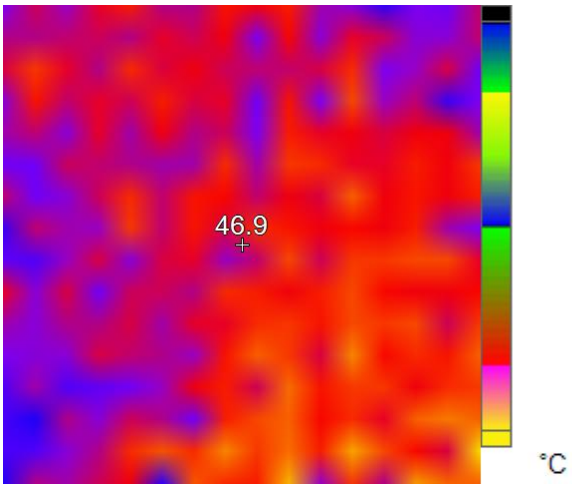
Very high temperature noticed –Much higher than ambient

Image Info

Background temperature	20.0°C
Emissivity	0.95
Image Time	5/19/2022 3:39:22 PM
Calibration Range	-10.0°C to 250.0°C

Main Image Markers

Name	Temperature	Emissivity	Background
Centerpoint	46.5°C	0.95	20.0°C



vt_00011.is2
5/19/2022 3:39:36 PM

Visible Light Image

Location South Side Window

Graph

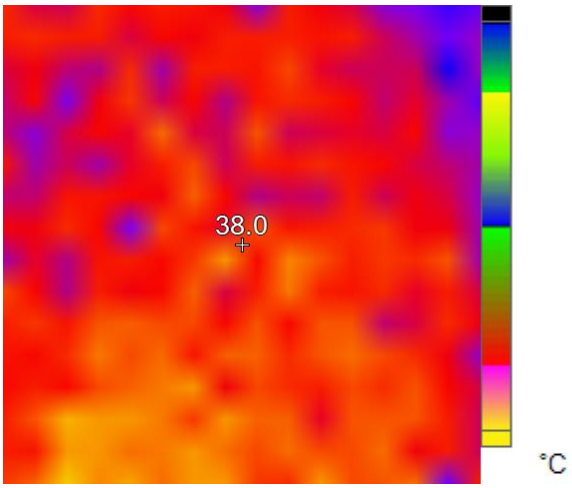
Very high temperature noticed –Much higher than ambient

Image Info

Background temperature	20.0°C
Emissivity	0.95
Image Time	5/19/2022 3:39:36 PM
Calibration Range	-10.0°C to 250.0°C

Main Image Markers

Name	Temperature	Emissivity	Background
Centerpoint	46.9°C	0.95	20.0°C



vt_00012.is2
5/19/2022 3:44:05 PM

Visible Light Image

Location West Side Window

Graph

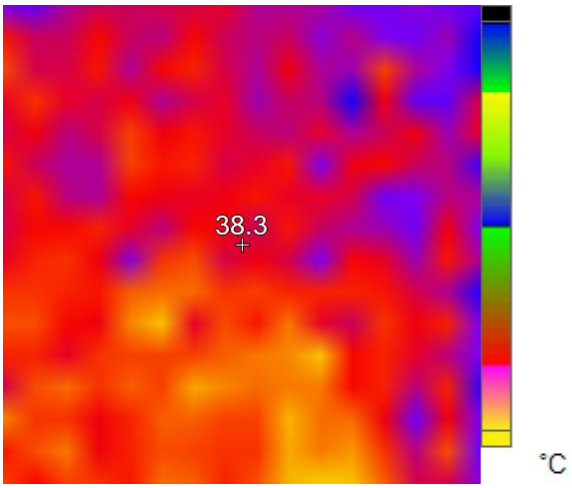
Very high temperature noticed –Much higher than ambient

Image Info

Background temperature	20.0°C
Emissivity	0.95
Image Time	5/19/2022 3:44:05 PM
Calibration Range	-10.0°C to 250.0°C

Main Image Markers

Name	Temperature	Emissivity	Background
Centerpoint	38.0°C	0.95	20.0°C



vt_00013.is2
5/19/2022 3:44:13 PM

Visible Light Image

Location West Side Window

Graph

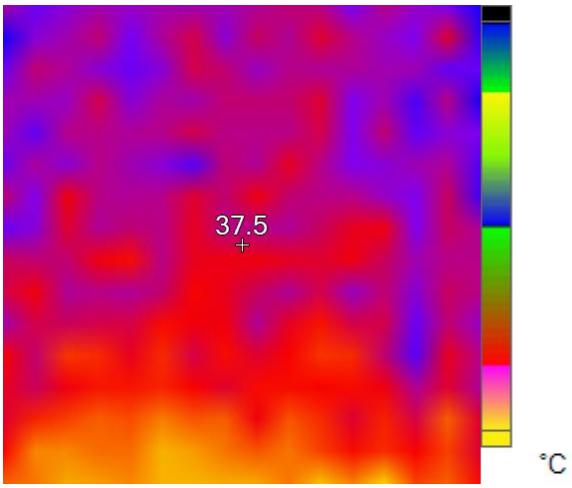
Very high temperature noticed –Much higher than ambient

Image Info

Background temperature	20.0°C
Emissivity	0.95
Image Time	5/19/2022 3:44:13 PM
Calibration Range	-10.0°C to 250.0°C

Main Image Markers

Name	Temperature	Emissivity	Background
Centerpoint	38.3°C	0.95	20.0°C



vt_00014.is2
5/19/2022 3:45:36 PM

Visible Light Image

Location North Side Window

Graph

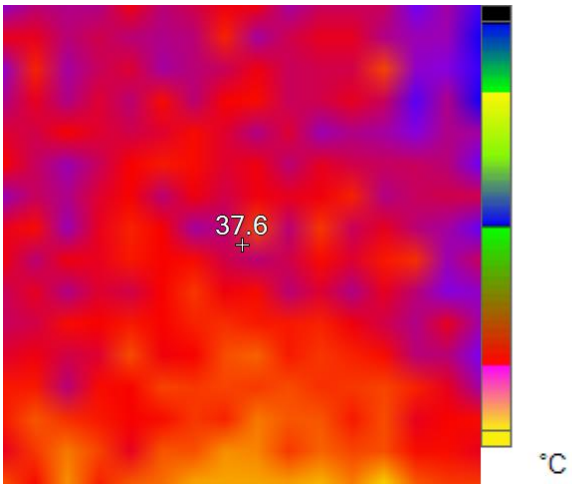
Very high temperature noticed –Much higher than ambient

Image Info

Background temperature	20.0°C
Emissivity	0.95
Image Time	5/19/2022 3:45:36 PM
Calibration Range	-10.0°C to 250.0°C

Main Image Markers

Name	Temperature	Emissivity	Background
Centerpoint	37.5°C	0.95	20.0°C



vt_00015.is2
5/19/2022 3:45:46 PM

Visible Light Image

Location North Side Window

Graph

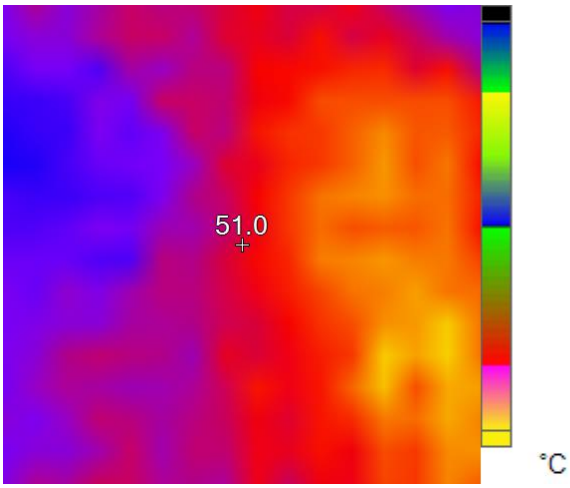
Very high temperature noticed –Much higher than ambient

Image Info

Background temperature	20.0°C
Emissivity	0.95
Image Time	5/19/2022 3:45:46 PM
Calibration Range	-10.0°C to 250.0°C

Main Image Markers

Name	Temperature	Emissivity	Background
Centerpoint	37.6°C	0.95	20.0°C



vt_00016.is2
5/19/2022 3:48:31 PM

Visible Light Image

Location Ground

Graph

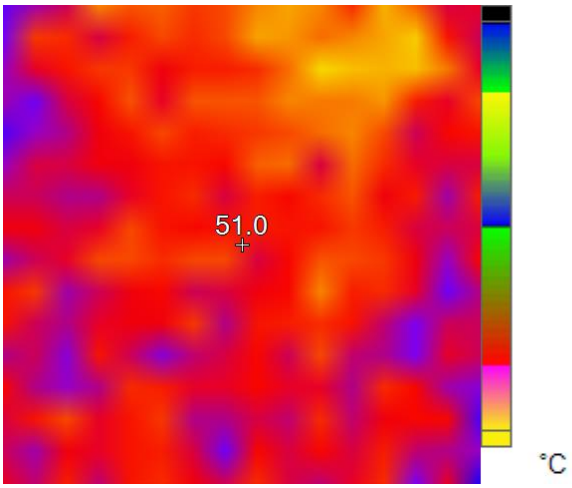
Very high temperature noticed

Image Info

Background temperature	20.0°C
Emissivity	0.95
Image Time	5/19/2022 3:48:31 PM
Calibration Range	-10.0°C to 250.0°C

Main Image Markers

Name	Temperature	Emissivity	Background
Centerpoint	51.0°C	0.95	20.0°C



vt_00017.is2
5/19/2022 3:48:48 PM

Visible Light Image

Location Ground

Graph

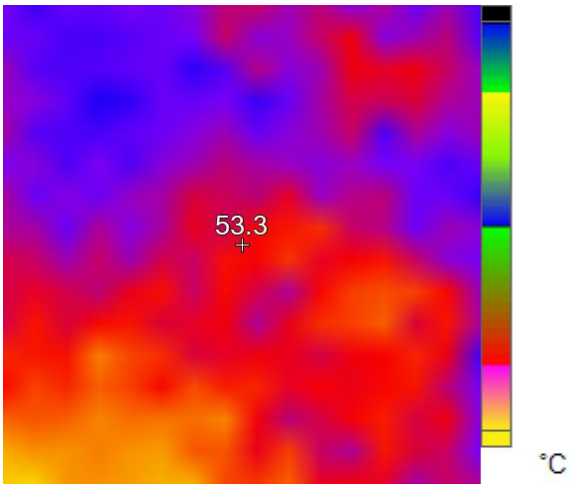
Very high temperature noticed –Much higher than ambient

Image Info

Background temperature	20.0°C
Emissivity	0.95
Image Time	5/19/2022 3:48:48 PM
Calibration Range	-10.0°C to 250.0°C

Main Image Markers

Name	Temperature	Emissivity	Background
Centerpoint	51.0°C	0.95	20.0°C



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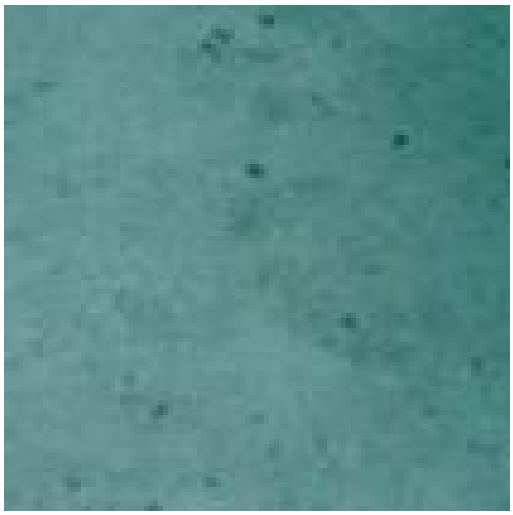


Visible Light Image

Location Civil Building Roof Top

Graph

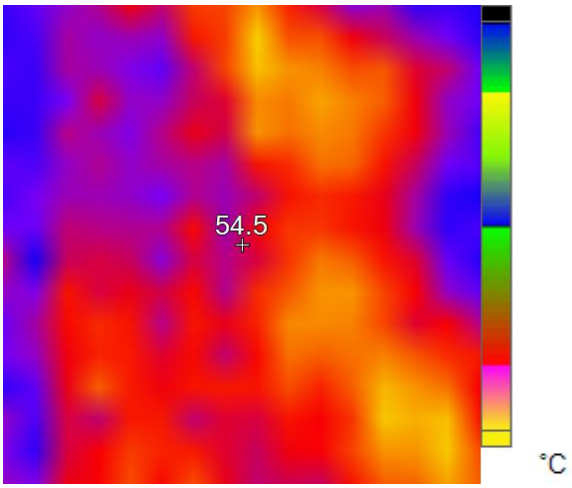
Very high temperature noticed –Much higher than ambient

Image Info

Background temperature	20.0°C
Emissivity	0.95
Image Time	5/19/2022 3:53:12 PM
Calibration Range	-10.0°C to 250.0°C

Main Image Markers

Name	Temperature	Emissivity	Background
Centerpoint	53.3°C	0.95	20.0°C



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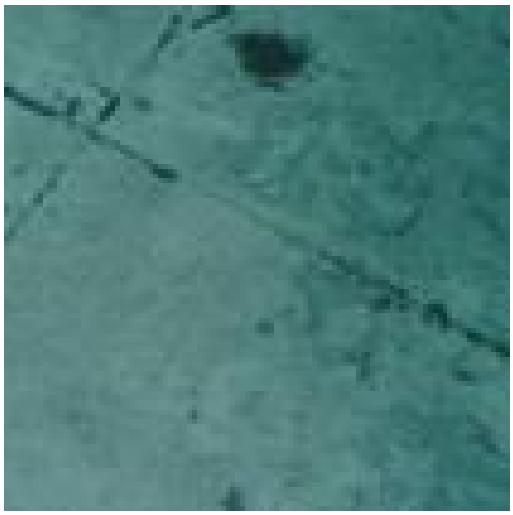


Visible Light Image

Location Civil Building Roof Top

Graph

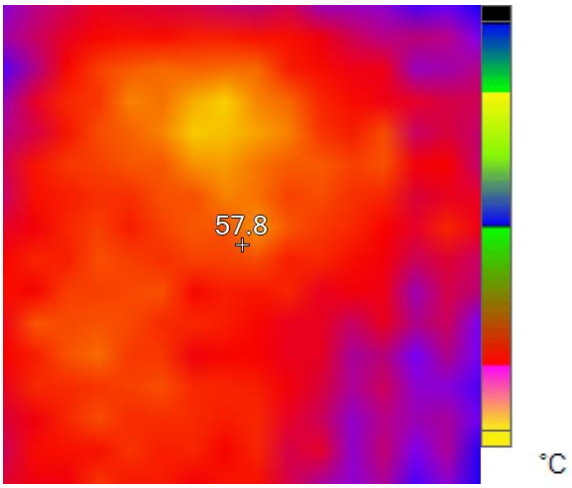
Very high temperature noticed –Much higher than ambient

Image Info

Background temperature	20.0°C
Emissivity	0.95
Image Time	5/19/2022 3:53:31 PM
Calibration Range	-10.0°C to 250.0°C

Main Image Markers

Name	Temperature	Emissivity	Background
Centerpoint	54.5°C	0.95	20.0°C



vt_00020.is2
5/19/2022 3:54:05 PM

Visible Light Image

Location Civil Building Roof Top

Graph

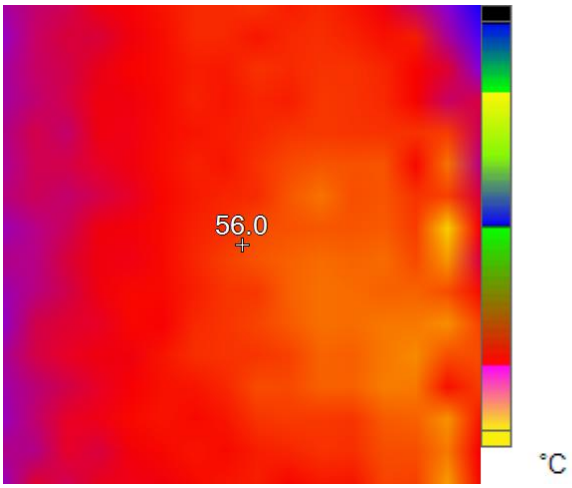
Very high temperature noticed –Much higher than ambient

Image Info

Background temperature	20.0°C
Emissivity	0.95
Image Time	5/19/2022 3:54:05 PM
Calibration Range	-10.0°C to 250.0°C

Main Image Markers

Name	Temperature	Emissivity	Background
Centerpoint	57.8°C	0.95	20.0°C



vt_00021.is2
5/19/2022 3:54:19 PM

Visible Light Image

Location Civil Building Roof Top

Graph

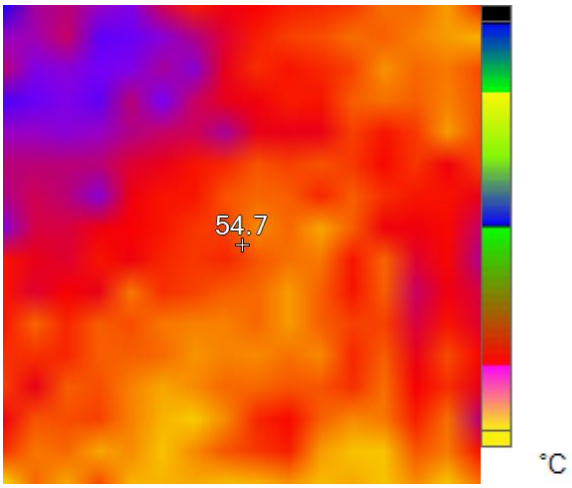
Very high temperature noticed –Much higher than ambient

Image Info

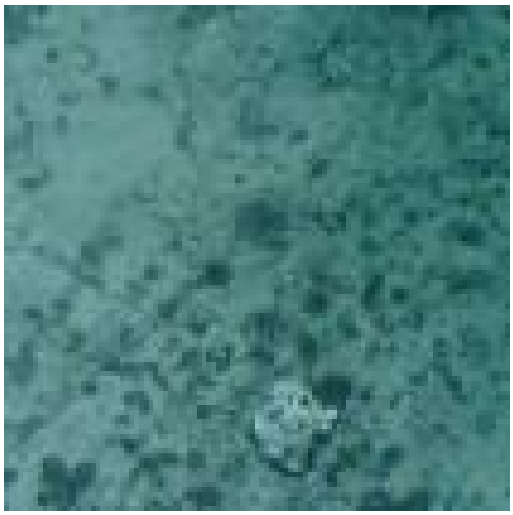
Background temperature	20.0°C
Emissivity	0.95
Image Time	5/19/2022 3:54:19 PM
Calibration Range	-10.0°C to 250.0°C

Main Image Markers

Name	Temperature	Emissivity	Background
Centerpoint	56.0°C	0.95	20.0°C



vt_00022.is2
5/19/2022 3:54:34 PM



Visible Light Image

Location Civil Building Roof Top

Graph

Very high temperature noticed –Much higher than ambient

Image Info

Background temperature	20.0°C
Emissivity	0.95
Image Time	5/19/2022 3:54:34 PM
Calibration Range	-10.0°C to 250.0°C

Main Image Markers

Name	Temperature	Emissivity	Background
Centerpoint	54.7°C	0.95	20.0°C

Inference and recommendations:

1. Windows :
   a. Higher temperature of window surface of south side windows has been noticed.
   b. Temperature of north side and west side windows is found to be lower.
2. Roof: High temperature about 15 to 18 degree centigrade above ambient is recorded. Roof get exposed to sun light although the day.
3. Ground temperature: Ground temperature is also found to be considerably high than ambient.

Recommendation:

1. Windows: Whenever there is a requirement of changing glasses of window, these should be replaced with spectrally selective glass as per requirement of ECBC-2017. All south side windows be provided venetian blinds-Vertical or Horizontal and be used in Summer conditions for managing the heat ingress and savings in energy used in air conditioning making the use of energy sustainable.
2. Roof: Roof be covered with tiles or requisite SRI paint preferably with tiles as per recommendations of Energy conservation building code-2016.
3. Ground temperature : No recommendation

Annexure-C Excerpts from Energy Conservation Building Code-2017

Table 4-6 Roof Assembly U-factor (W/m².K) Requirements for SuperECBC Building

	Composite	*Hot and dry*	*Warm and humid*	*Temperate*	*Cold*
All buildings types	0.20	0.20	0.20	0.20	0.20

4.3.1.1 Vegetated and Cool Roof

All roofs that are not covered by solar photovoltaics, or solar hot water, or any other renewable energy system, or utilities and services that render it unsuitable for the purpose, shall be either cool roofs or vegetated roofs.

(a) For qualifying as a cool roof, roofs with slopes less than 20° shall have an initial solar reflectance of no less than 0.70 and an initial emittance no less than 0.75. Solar reflectance shall be determined in accordance with ASTM E903-96 and emittance shall be determined in accordance with ASTM E408-71 (RA 1996).

(b) For qualifying as a vegetated roof, roof areas shall be covered by living vegetation of >50 mm high.

Annexure-D Detail of Lux Level

Detail of Lux Level at DIT University-DIT university

S No.	Location	Minimum Lux	Maximum Lux
1	Chanakya Board Room	425	446
2	Vivekanand Block-Cafeteria	161	345
3	Civil and Petroleum Block- 402 LH	103	382
4	Civil and Petroleum Block- 005	271	309
5	Civil and Petroleum Block- corridor	98	111
6	Civil and Petroleum Block- WL 201	208	300
7	Civil and Petroleum Block- 509 LH-18	228	372
8	Workshop - corridor	132	184
9	Workshop - Lab	192	228
10	Vastu Block - corridor	131	275
11	Architecture Studio	457	546
12	Pharmacy Chemistry Lab - II	210	266
13	Pharmacy - corridor	174	210
14	Vedanta Basement Parking	32	140
15	Vedanta Reception	51	99
16	Vedanta Lecture Hall - 405	290	316
17	Sajojani Girls Hostel Mess	182	226
18	Sajojani Girls Hostel - Room	164	187
19	Kasturba Girls Hostel	301	313
20	Girls Hostel - common Room	184	345
21	Chanakya Academic block Drawing Hall	310	481
22	Chanakya Academic block-Connection Lab	340	536
23	Chanakya Academic block-Land, Air, Water Lab	357	520
24	Boys Hostel - Raman Block	164	211
25	Boys Hostel - Bose Block	157	236
26	Boys Hostel - Bhabha Block	248	260
27	Boys Hostel - Sarabhai Block	140	161
28	Boys Hostel - Mess	180	225
29	Boys Hostel - Common Room	238	320
30	Medical Room	184	260

Annexure-E Handling and disposal of CFL's and Fluorescent tubes

Disposal of Fluorescent tubes -Guidelines

Consumer Level:

As per the present observed practice at consumer level in the society at large, often, the used lamps are collected by the kabari from the households and collectively handed over to the glass recyclers for the recovery of glass material.

This is all operative in a highly unorganized sector. It has, also, been observed that, the used lamps are thrown in the garbage bins and finally into the municipal garbage dumpsites, contaminating air, water and soil. Most of the used lamps are broken either at transit solid waste bins (provided by local civic authority) or broken during the transport to the final disposal site.

A portion of the mercury, in vapor form, is released into the air; whereas rest of the mercury is released onto the soil with further possibility of getting into the surface and/or ground water bodies through the leachate from soil.

Establishment Level - Handling of Used/Broken Fluorescent Lamps (FLs):

The consumers may handle and dispose the used lamps as described below: Domestic Consumers:

(i) The consumer must ensure that (s)he does not throw used lamps in the general trash bin but hands them over (in a properly packed form) to a kabari (an individual) or a collection agency identified by an authorized Lamp Recycling Unit for proper recycle / disposal of used FLs.

(ii) The used intact FLs may be stored either in the same boxes in which new lamps are brought or other boxes of similar size. They should be stored upright. The due precaution may be taken while packing more than one used lamp, so as not cause the possibility of breakage during the storage and transportation.

(iii) Even, the broken FLs, after due clean up may be handed over for safe recycling and disposal.

Here are some guidelines for cleaning up a broken CFL:

(i) Open a window and leave the room (restrict access) for at least 15 minutes. If you have fans, place the fans in the windows and blow the air out of the room. Note: If

the room has no windows, open all doors to the room and windows outside the room and use fans to move the air out of the room and to the open windows.

(ii) Remove all materials you can without using a vacuum cleaner

(iii) Wear disposable rubber gloves, if available (do not use your bare hands) • Carefully scoop up the fragments and powder with stiff paper or cardboard

(iv) Wipe the area clean with a damp paper towel or disposable wet wipe

(v) Sticky tape (such as duct tape) can be used to pick up small pieces and powder

(vi) Place all cleanup materials in a plastic bag and seal it, and then place in a second sealed plastic bag, dispose it properly and wash your hands after disposing of the bags.

(vii) The first time you vacuum the area where the bulb was broken, remove the vacuum bag once done cleaning the area (or empty and wipe the canister) and put the bag and/or vacuum debris, as well as the cleaning materials, in two sealed plastic bags in the outdoor trash or protected outdoor location for normal disposal.

User Awareness:

All the consumers, individual domestic consumers and bulk consumers (offices, institutions, large residential complexes, etc.) should get fully aware about the potential health impact of mercury-bearing lamps, through audio-visual media and the product leaflets. The precautions, to be taken while cleaning up the broken FLs should, also, are known to the consumers. As a part of such awareness programs, the consumers, even at individual level, are expected to participate actively with constructive suggestions and provide the feedback, for the overall success of mercury management in fluorescent lamp

Collection: The collection of used lamps may be done mainly by two ways: (i) Collection of used lamp (FLs) from bulk consumers may either be arranged by the management of above set-up (institutions, etc.) for direct disposal to LRU or by the LRU which may arrange to pick up used lamps from such collection sites through an identified collection agency. (ii) Collection of used lamps (FLs) from individual domestic consumer may be arranged by the LRU, either through kabaris (individuals appointed for the purpose by LRU) or an identified collection agency for door to door pickup. Transportation: (i) The Handler (Kabari or representative of LRU) of used FLs in transit should take care of selection of proper vehicle and carriage so as to minimize breakage of used FLs.

(ii) There should not be any intermediate transfer of materials in the transit stage. The collected used FLs should be straight transported to the LRF for further processing (iii) The Handler should be trained to take care of mercury spills, if any, that takes place during the journey to LRU.

Annexure-F Limits of Sound level as per NBC-2016

Sl No.	Sound Level (Slow Response) dBA	Time Permitted, *T* h : min
(1)	(2)	(3)
i)	85	16:00
ii)	86	13:56
iii)	87	12:08
iv)	88	10:34
v)	89	9:11
vi)	90	8:00
vii)	91	6:58
viii)	92	6:04
ix)	93	5:17
x)	94	4:36
xi)	95	4:00
xii)	96	3:29
xiii)	97	3:02
xiv)	98	2:50
xv)	99	2:15
xvi)	100	2:00
xvii)	101	1:44
xviii)	102	1:31
xix)	103	1:19
xx)	104	1:09
xxi)	105	1:00
xxii)	106	0:52
xxiii)	107	0:46
xxiv)	108	0:40
xxv)	109	0:34
xxvi)	110	0:30
xxvii)	111	0:26
xxviii)	112	0:23
xxix)	113	0:20
xxx)	114	0:17
xxxi)	115	0:15

Annexure-G Guidelines for Environment Friendly and Green Initiatives

VOC limits of materials

Type of Material	VOC Limit (g/L less water)
Paints	
Non- Flat (Glossy) paint	150
Flat (Mat) paint	50
Anti- corrosive/ anti-rust paints	250
Varnish	350
Adhesives	
Glazing adhesives	100
Tiles adhesives	65
Wood adhesive	30
Wood flooring adhesive	100

Minimum Ventilation Rates in Various Functional Zones*

Occupancy Category	People Outdoor Air Rate	Area Outdoor Air Rate
	Cfm/person	Cfm/ sq.ft
Correctional Facilities		
Dayroom, Guard station	5	0.06
Booking/ waiting	7.5	0.06
Education Facilities		
Daycare (through age 4), daycare sickroom, Art Classroom, science laboratories, college laboratories, wood, metal shop	10	0.18
Classrooms (ages 5-8), (age 9+), computer lab, media centre	10	0.12
Lecture Room/ hall (fixed seating)	7.5	0.06
Music/ theater/ dance,	10	0.06
Multi use assembly	7.5	0.06
Food & Beverages Services		
Restaurant dining rooms/ cafeteria/ fast food dining/ Bars/ Cocktail Lounges	7.5	0.18
General		
Break Rooms, Coffee stations, conference/ meeting	5	0.06
Corridors	-	0.06
Storage Rooms	-	0.12
Hotels, Motels, Resorts, Dormitories		
Bedroom/ living room, barracks sleeping areas	5	0.06
laundry rooms	5	0.12
Lobbies/ prefunction	7.5	0.06
Multipurpose assembly	5	0.06

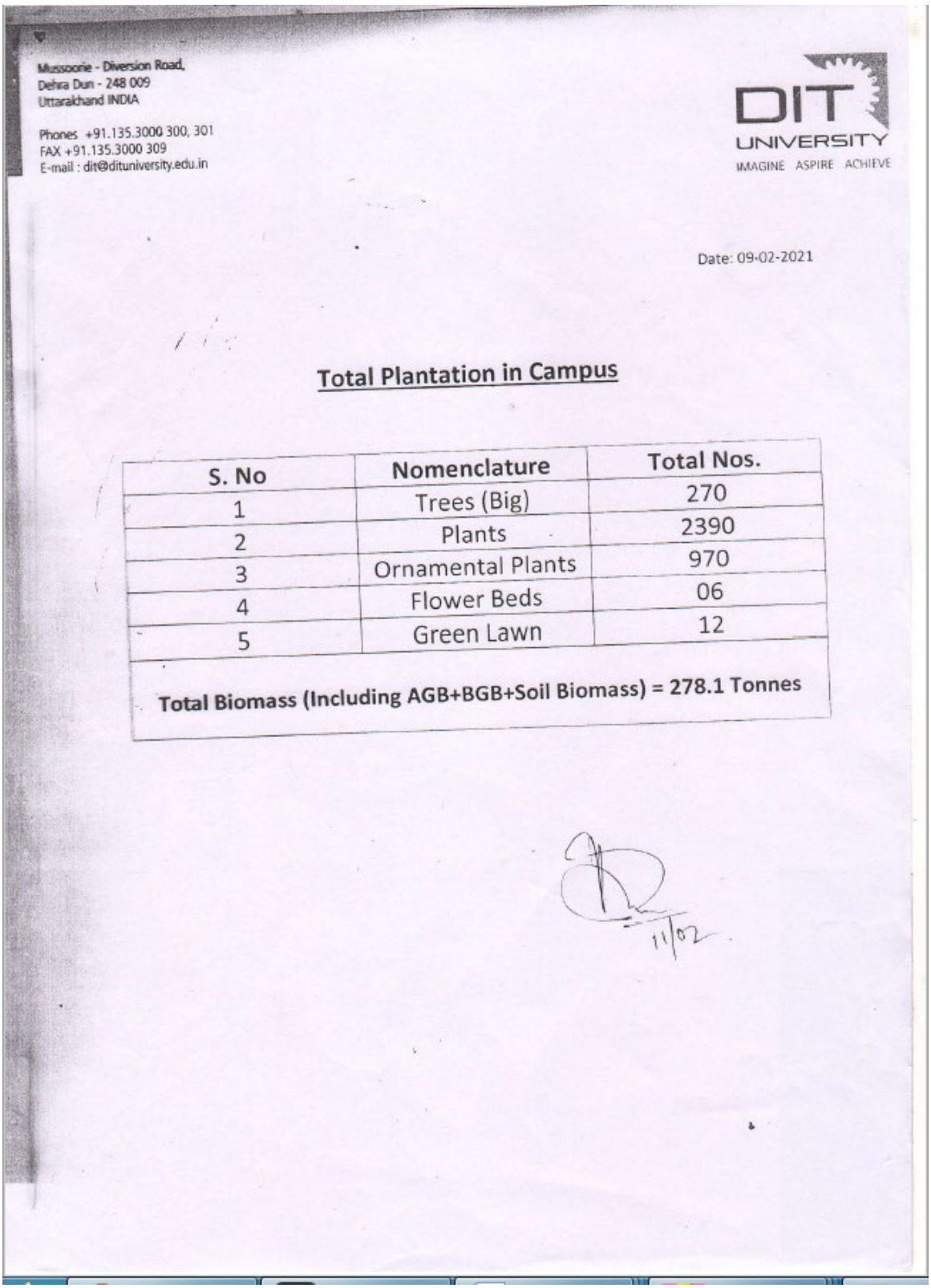
Occupancy Category	People Outdoor Air Rate	Area Outdoor Air Rate
	Cfm/person	Cfm/ sq.ft
Office Building		
Office Spaces, Reception Areas, Telephone, data entry, Main entry Lobbies	5	0.06
Electrical Equipment rooms	-	0.06
Elevator machine rooms	-	0.12
Pharmacy (prep area)	5	0.18
Photo Studios	5	0.12
Shipping/ receiving	-	0.12
Telephone closets	-	0.00
Transportation waiting	7.5	0.06
Warehouses	-	0.06
Public Assembly Spaces		
Auditorium seating area, Place of religious worship, Courtrooms, Legislative Chambers, Lobbies	5	0.06
Libraries	5	0.12
Museums (children's)	7.5	0.06
Museum/ galleries	7.5	0.06
Retail		
Sales	7.5	0.12
Mall common Areas	7.5	0.06
Barber Shop	7.5	0.06
Beauty & nail salons	20	0.12
Pet Shops (animal areas)	7.5	0.18
Super Market, Coin operated Laundries	7.5	0.06

Occupancy Category	People Outdoor Air Rate	Area Outdoor Air Rate
	Cfm/person	Cfm/ sq.ft
Sports & Entertainment		
Sports arena (Play Area), Gym, stadium (play area)	-	0.30
Spectator area	7.5	0.06
Swimming (pool & deck)	-	0.48
Disco/dance floor/ health club/ aerobics room/ weight rooms	20	0.06
Bowling alley (seating)	10	0.12
Gambling casinos/ game arcades	7.5	0.18
Stages, studios	10	0.06

* *Total outdoor air flow in functional zone* =

$$\left\{ \begin{array}{c} \textit{Outdoor air flow rate required per person as per the above table} \\ \times \\ \textit{Zone population} \end{array} \right\} + \left\{ \begin{array}{c} \textit{Outdoor air flow rate required per unit area as per the above table} \\ \times \\ \textit{Net occupiable zone area} \end{array} \right\}$$

Annexure-H List of Plantations



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DIT UNIVERSITY
IMAGINE ASPIRE ACHIEVE

Date: 09-02-2021

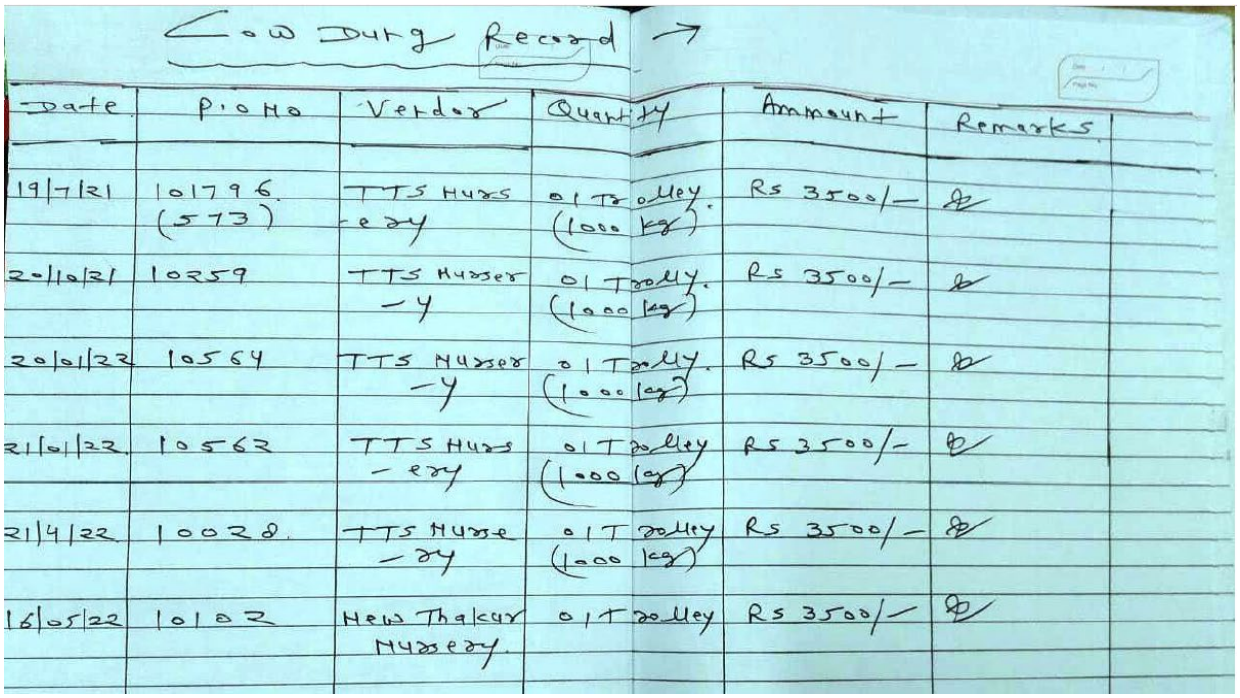
Total Plantation in Campus

S. No	Nomenclature	Total Nos.
1	Trees (Big)	270
2	Plants	2390
3	Ornamental Plants	970
4	Flower Beds	06
5	Green Lawn	12

Total Biomass (Including AGB+BGB+Soil Biomass) = 278.1 Tonnes

11/02

Annexure-I Record of Cow-Dung-DIT-University



Cow Dung Record →

Date	P.O No	Vendor	Quantity	Ammount	Remarks
19/7/21	101796 (573)	TTS Hydro -ery	01 Trolley (1000 kg)	Rs 3500/-	
20/10/21	10259	TTS Hydro -y	01 Trolly (1000 kg)	Rs 3500/-	
20/01/22	10564	TTS Hydro -y	01 Trolly (1000 kg)	Rs 3500/-	
21/01/22	10562	TTS Hydro -ery	01 Trolley (1000 kg)	Rs 3500/-	
21/4/22	100288	TTS Hydro -ery	01 Trolley (1000 kg)	Rs 3500/-	
16/05/22	10102	New Thakur Hydro ery.	01 Trolley	Rs 3500/-	

Annexure -J List of Air-Conditioners

Non-VRV-with R-22 (Non-Eco friendly gas)

AREAS OF THE UNIVERSITY							
S NO.	Area Where AC installed	Manufacture	Location	Capacity	Make	Working Conditions	Total QTY
1	PHARMACY BLOCK	LG	Director Office Pharmacy	1.5 TON	HIGHWALL [Split AC]	WORKING	1
		LG	Central Instumentation Lab 2nd Floor	1.5 TON	HIGHWALL [Split AC]	WORKING	1
		Samsung	Micro Biology Lab preparation room 3rd Floor	1.5 TON	HIGHWALL [Split AC]	WORKING	1
		Total Line	Molucular Pharmacology Lab 3rd Floor	1.5 TON	HIGHWALL [Split AC]	WORKING	1
2	ARCHITECTURE BLOCK	DIAKIN	Director Office Ground Floor	2 TON	HIGHWALL [Split AC]	WORKING	1
		Mitsubishi	Computer Lab Ground Floor	2 TON	Cassette AC	WORKING	3
		Mitsubishi	Faculty Room 1st Floor	2 TON	HIGHWALL [Split AC]	WORKING	2
		DIAKIN	Faculty Room 4th Floor	1 TON	HIGHWALL [Split AC]	WORKING	3
		DIAKIN	UPS Room	1 TON	HIGHWALL [Split AC]	WORKING	1
		DIAKIN	CAD LAB 4th Floor	2 TON	Cassette AC	WORKING	3
3	VEDANTA BLOCK	DIAKIN	Director Steam Office	1.5 TON	HIGHWALL [Split AC]	WORKING	1
		DIAKIN	Ground Floor Meeting Room	1.5 TON	HIGHWALL [Split AC]	WORKING	1
		DIAKIN	Ground Floor Placement Cell	1.5 TON	HIGHWALL [Split AC]	WORKING	2
		DIAKIN	Dean Computer	1.5 TON	HIGHWALL [Split AC]	WORKING	1
		DIAKIN	Vedanta 5th Floor Auditorium	4 TON	Cassette AC	WORKING	8
		DIAKIN	5th Floor Server Room	1.5 TON	HIGHWALL [Split AC]	WORKING	2
		DIAKIN	5th Floor Server Batter/UPS Room	1.5 TON	HIGHWALL [Split AC]	WORKING	2
		DIAKIN	5th Floor ICT mManager Office	1.5 TON	HIGHWALL [Split AC]	WORKING	1
4	GIRLS GYM	CARRIAR	Girls Gym	4 TON	DUCTABLE	WORKING	3
5	CHANAKYA ACADEMIC BLOCK	DIAKIN	COE Office	1.5 TON	HIGHWALL [Split AC]	WORKING	1
		CARRIAR	Chanakya Block Ground Floor Seminar Hall	3 TON	HIGHWALL [Split AC]	WORKING	3
		CARRIAR	MTAB Lab Mechanical Block	1.5 TON	HIGHWALL [Split AC]	WORKING	1
6	MBA BLOCK / OLD SEMINAR HALL	LG	Seminar Hall	2 TON	HIGHWALL [Split AC]	WORKING	1
		LG	Seminar Hall	2 TON	HIGHWALL [Split AC]	WORKING	1
		LG	Seminar Hall	2 TON	HIGHWALL [Split AC]	WORKING	1
7	ELECTRICAL ROOM	LG	DG Panel Electrical Room	1.5 TON	WINDOW	WORKING	1

AREAS OF THE UNIVERSITY							
S NO.	Area Where AC installed	Manufacture	Location	Capacity	Make	Working Conditions	Total QTY
8	WORKSHOP BLOCK	CARRIAR	1st Floor Seminar Hall	3 TON	CASSETTE	WORKING	3
		BLUESTAR	1st Floor Maths Faculty	1.5 TON	HIGHWALL [Split AC]	WORKING	1
		BLUESTAR	2nd Floor Faculty Cabin	1.5 TON	HIGHWALL [Split AC]	WORKING	1
		DIAKIN	3rd Floor Chemistry Lab	1.5 TON	HIGHWALL [Split AC]	WORKING	1
		LG	3rd Floor Maths HOD Office	1.5 TON	HIGHWALL [Split AC]	WORKING	1
		DIAKIN	3rd Floor Faculty Cabin	1.5 TON	HIGHWALL [Split AC]	WORKING	2
		DIAKIN	3rd Floor HOD Chemistry	1.5 TON	HIGHWALL [Split AC]	WORKING	1
		DIAKIN	3rd Floor Humanities HOD	1 TON	HIGHWALL [Split AC]	WORKING	1
		DIAKIN	MULTI MEDIA LAB	3 TON	CASSETTE	WORKING	2
9	VISVESVARAYA BLOCK	MITSUBISHI	5th Floor Faculty Cabin	1.5 TON	HIGHWALL [Split AC]	WORKING	1
		MITSUBISHI	3rd Floor	1.5 TON	HIGHWALL [Split AC]	WORKING	1
		MITSUBISHI	3rd Floor Computer Lab	1.5 TON	CASSETTE	WORKING	2
		MITSUBISHI	2nd Floor Geology & Survey Lab	1.5 TON	HIGHWALL [Split AC]	WORKING	2
		MITSUBISHI	Server Room	1.5 TON	HIGHWALL [Split AC]	WORKING	1
		MITSUBISHI	2nd Floor Computer Lab	1.5 TON	CASSETTE	WORKING	2
		MITSUBISHI	1st Floor Reservoir Lab 104	3 TON	HIGHWALL [Split AC]	WORKING	2
		MITSUBISHI	1st Floor Seminar Hall 101	4 TON	CASSETTE	WORKING	4
		MITSUBISHI	Ground Floor Faculty Cabin	1.5 TON	HIGHWALL [Split AC]	WORKING	1
10	GYMNASIUM BOYS HOSTEL	CARRIAR	BOYS GYM	2 TON	HIGHWALL [Split AC]	WORKING	1
		CARRIAR	BOYS GYM	2 TON	HIGHWALL [Split AC]	WORKING	1
		CARRIAR	BOYS GYM	2 TON	HIGHWALL [Split AC]	WORKING	1
		CARRIAR	BOYS GYM	2 TON	HIGHWALL [Split AC]	WORKING	1
11	BOYS MESS	CARRIAR	Annapurna Mess	2 TON	HIGHWALL [Split AC]	WORKING	1
		CARRIAR	Annapurna Mess	2 TON	HIGHWALL [Split AC]	WORKING	1
		CARRIAR	Annapurna Mess	2 TON	HIGHWALL [Split AC]	WORKING	1
						TOTAL	83

Sr No	Particulars of VRV	Vendor Name
1	VRV - 12HP	DAIKIN AIRCONDITIONING INDIA PVT.LTD
2	VRV - 12HP	DAIKIN AIRCONDITIONING INDIA PVT.LTD
3	VRV - 24HP	DAIKIN AIRCONDITIONING INDIA PVT.LTD
4	VRV - 32HP	DAIKIN AIRCONDITIONING INDIA PVT.LTD
5	VRV - 36HP	DAIKIN AIRCONDITIONING INDIA PVT.LTD
6	VRV -48HP	DAIKIN AIRCONDITIONING INDIA PVT.LTD
7	Controller CRC	DAIKIN AIRCONDITIONING INDIA PVT.LTD
8	VRV - 12HP	DAIKIN AIRCONDITIONING INDIA PVT.LTD
9	VRV - 6HP	IAPL Group
10	VRV - 6HP	IAPL Group
11	VRV - 6HP	IAPL Group
12	VRV - 6HP	IAPL Group
13	VRV - 16HP	DAIKIN AIRCONDITIONING INDIA PVT.LTD
14	VRV - 16HP	DAIKIN AIRCONDITIONING INDIA PVT.LTD
15	VRV - 16HP	DAIKIN AIRCONDITIONING INDIA PVT.LTD
16	VRV - 16HP	DAIKIN AIRCONDITIONING INDIA PVT.LTD
17	VRV - 18HP	DAIKIN AIRCONDITIONING INDIA PVT.LTD
18	VRV - 18HP	DAIKIN AIRCONDITIONING INDIA PVT.LTD
19	VRV - 18HP	DAIKIN AIRCONDITIONING INDIA PVT.LTD
20	VRV - 12HP	DAIKIN AIRCONDITIONING INDIA PVT.LTD
21	VRV - 12HP	DAIKIN AIRCONDITIONING INDIA PVT.LTD
22	VRV - 12HP	DAIKIN AIRCONDITIONING INDIA PVT.LTD
23	VRV - 12HP	DAIKIN AIRCONDITIONING INDIA PVT.LTD
24	VRV - 14HP	DAIKIN AIRCONDITIONING INDIA PVT.LTD

Annexure-K List of Hazardous Chemicals

S.no	Chemical Name	Amount
1	1- naphthol	420gm
2	1,10- Phenanthroniline monohydrate	50gm
3	2- naphthol	1.8kg
4	2,4 Dimitrophenyl hydrozine	565gm
5	2-Methyl Propan 2-ol	500ml
6	Acetaldehyde	4.9L
7	Acetic Acid	6L
8	Acetone	40L
9	Acetonitrile for HPLC & Spectroscopy	2.5L
10	Acetophenone	500ml
11	Acetyl Acetone	500ml
12	Alumina Active Basic	500gm
13	Aluminum Sulphate	950gm
14	Ammonia solution	5.2L
15	Ammonium acetate	3kg
16	Ammonium ceric Nitrate	415gm
17	Ammonium chloride	6.5kg
18	Ammonium Dihydrogen Orthophosphate	900g
19	Ammonium ferrous sulphate	4.25kg
20	Ammonium hydroxide soution	500ml
21	Ammonium Iron(II) sulphate	1kg
22	Ammonium Molybdate	500gm
23	Ammonium sulphate	500gm
24	Ammonium Sulphide Yellow	500g
25	Amylum (Starch Soluble)	500gm
26	Analytical Rasayan	25g
27	Aniline	900mL
28	Antimony Trioxide	500gm
29	Ascorbic acid-L	100gm
30	Barium chloride	1.4kg
31	Barium Hydroxide	400g
32	Barium Nitrate	450g
33	Benedict's Reagent	300mL

34	Benzaldehyde	2.6L
35	Benzene	8L
36	Benzoic Acid	1.3 kg
37	Bleaching powder	4.8kg
38	Borax (Disodium tetraborate)	300g
39	Boric Acid	1kg
40	Butanol(2 Methyl 2 Propanol)	500gm
41	Cadmium Nitrate	500gm
42	Cafffine Anhydrous	100g
43	Calcium carbonate	1.4kg
44	Calcium chloride Dihydrate	2.3kg
45	Carbon tetrachloride	2.9L
46	Cellulose microcrystalline	500gm
47	Cellulose Powder for Charomatography	1kg
48	Charcoal	10 kg
49	Chclohexane	500ml
50	Chlorine Water	1L
51	Chloroform	4.5L
52	Chromic acetate	250gm
53	Citric acid	900gm
54	Cobaltous (II) Nitrate	500g
55	Cobaltous chloride	1.1kg
56	Copper chloride	NIL
57	Copper(2) Nitrate	500gm
58	Copper(2) sulphate Pentahydrate	900g
59	Cupric Chloride	500g
60	Cupric sulphate	9.6kg
61	Cyclohaxenone	2L
62	D(-)fructose	400gm
63	Dextrose	4.8kg
64	Di ammonium hydrogen phosphate	450gm
65	Di phenyl amine	550gm
66	Dichloromethane	5L
67	Dicyclopentadiene	1L
68	Diethyl ether	12L
69	Dimethyl Amino Benzaldehyde	200gm

70	Dimethyl glyoxime	280gm
71	Dimethyl Sulphoxide	500ml
72	Disodium tetraborate decahydrate	1.4kg
73	DPX Mountant	200ml
74	E.B.T	550gm
75	E.D.T.A	7.4kg
76	Epichlorohydrine	100ml
77	Ethanol	14L
78	Ethyl Acetate	6.6L
79	Ethyl Propiolate	25gm
80	Ethylamine	1.7L
81	Ethylene diamine	500ml
82	Fehline's solution no-1	300mL
83	Fehline's solution no-2	300mL
84	Ferric chloride	500gm
85	Ferroin Solution GR	200ml
86	Ferrous sulphate heptahydrate	1.5kg
87	Fluorescein sodium salt	25gm
88	Formaldehyde	3L
89	Formic Acid	500ml
90	Glass Wool	500gm
91	Glucose	3.8kg
92	Glutaraldehyde	500ml
93	Glycine	500g
94	Glyoxal	500ml
95	Graphite Fine Powder	500g
96	HCL	12L
97	Hexane	8L
98	Hydrazine Monohydrate	1kg
99	Hydrogen peroxide	500ml
100	Hydroquinone	500gm
101	Hydroxyl Ammonium	300g
102	Hypophosphorous acid	500ml
103	Iodine	230gm
104	Iron(2) sulphate heptahydrate	2kg

105	Iron(3) chloride anhydrous	NIL
106	Isopropyl Alcohol	3L
107	L- Lysine	100gm
108	Lactic Acid	1L
109	L-Ascorbic Acid	100gm
110	Lead (II) Nitrate	500gm
111	Lead Acetate	500g
112	Lead Chloride	500g
113	Lead Sulphate	500g
114	Lead(II) Acetate trihydrate	500g
115	Liquid Parrafin Light	2L
116	Lithium chloride anhydrous	100gm
117	Lithium hydroxide Monohydrate	200g
118	Litmus Paper(Blue/Red)	2pkt
119	Magnese sulphate monohydrate	2.3kg
120	Magnesium carbonate light	500gm
121	Magnesium chloride Hexahydrate	350gm
122	Magnesium Sulphate	500gm
123	Manganese(2) sulphate monohydrate	2.5kg
124	Mangenous sulphate	3kg
125	Mercuric Chloride	250g
126	Mercuric Sulphate	250gm
127	Mercurous Chloride	100gm
128	Mercury(II) Sulphate	500g
129	Methanol	9L
130	Methyl orange	400gm
131	Methylene blue	20gm
132	Molish Reagent	250ml
133	N- Hydroxy succinimide	50gm
134	N,N Dicyclohexyl carbodimide	100g
135	N,N- Dimethyl acetamide	500ml
136	N,N- Dimethyl Formamide	1.2L
137	Naphthalene Powder	900gm
138	Nickel Sulphate	450g
139	Nitric acid	27L
140	Orthophosphoric acid	1.4L

141	Oxalic acid	2.5kg
142	Paraffin wax	1.7kg
143	Petroleum Ether 60-80	500ml
144	Petroleum spirit	2L
145	Phenol	500g
146	Phenol crystal hi-LR	600g
147	Phenol Reagent	250ml
148	Phenolphtnolein	225gm
149	Phosphorus Red	350g
150	Picric acid	500gm
151	Poly ethylene Glycol(600)	500ml
152	Poly Vinylidene Fluoride	100gm
153	Polyethylene glycol(400)	500ml
154	Polymethyl Meta Crylate	230g
155	Polyvinyl Alcohol	1.95kg
156	Potassium bromate	800gm
157	Potassium bromide	900gm
158	Potassium chloride	1.9kg
159	Potassium chromate	6kg
160	Potassium dichromate	9kg
161	Potassium dihydrogen orthophosphate	500gm
162	Potassium ferricynide	1.5kg
163	Potassium hydrogen phthalate	1kg
164	Potassium hydrogen Sulphate	1Kg
165	Potassium hydroxide	6kg
166	Potassium iodide	2kg
167	Potassium Nitrate	500g
168	Potassium oxalate	1.5kg
169	Potassium permagnate	700gm
170	Potassium sulphate	1.37kg
171	Potassium thiocynate	12.6kg
172	Propionic Acid	900ml
173	Pyradine	500ml
174	Pyrrole	500ml
175	Resorcinol	250gm
176	Salicylic acid	1.9kg

177	Silica gel	6kg
178	Silica Gel (Self Indicating)	4kg
179	Silica gel GF-254	400g
180	Silica gel(230-400)	1.3kg
181	Silica gel(60-120)	1kg
182	Silica gel(6-20)	400gm
183	Silica gel(TLC)	1.5kg
184	Silver nitrate	150gm
185	Silver Oxide	50gm
186	Silver Sulphate	50gm
187	Sodium acetate	1.8kg
188	Sodium Azide	1.5kg
189	Sodium bicarbonate	6.3kg
190	Sodium bisulphite	1.5kg
191	Sodium borohydride	200gm
192	Sodium bromide	500gm
193	Sodium carbonate	3.8kg
194	Sodium chloride	4.5kg
195	Sodium citrate	Nil
196	Sodium dihydrogen orthophosphate dihydrate	500gm
197	Sodium Fluoride	500g
198	Sodium hydroxide	4.7kg
199	Sodium Hypochloride Solution	2L
200	Sodium Hypochlorite	5.3L
201	Sodium Metabisulphite	500g
202	Sodium metal	350gm
203	Sodium nitrate	950gm
204	Sodium nitrite	800g
205	Sodium Nitroprusside	600g
206	Sodium sulphate anhydrous	3.15 kg
207	Sodium sulphite	1kg
208	Sodium thiosulphate	3.1kg
209	Starch	2.3kg
210	Streptozotocin	250mg
211	Sucrose	3.2kg

212	Sulfurous Acid	500ml
213	Sulphuric acid	11.5L
214	Testing Solution	2L
215	Tetrahydrofuran(AR)	550ml
216	Thionyl Chloride	400g
217	Thiourea	1Kg
218	Tollen's regent	500ml
219	Toluene	3.5L
220	Tri Ethyl Amine	500ml
221	Tri sodium citrate dihydrate	500gm
222	Universal Indicator	300ml
223	Urea extra pure	2.28kg
224	Wax	31Box
225	Zinc chloride	1.3kg
226	Zinc dust	500gm
227	Zinc powder	800gm
228	Zirconium Oxychloride	200g