Green Audit Report

CIL Ref. No.:	**1/4002076**
Name of organization:	**KASHI INSTITUTE OF TECHNOLOGY**
Address of premises:	**MS-23, VARANASI-PRAYAGRAJ HIGHWAY, MIRZAMURAD, VARANASI**
Name of Inspector:	**Mr. Ashutosh Tiwari**
Date of Inspection:	**4/03/2023**
Type of Inspection:	**Green Audit**

Organization Details	
Total Campus Area	11 Acres
Total Built-up Area	18637 sq.mtr.
Covered Parking	6200 sq.mtr.
Total Air-Conditioned Area	9637 sq.mtr.
Non-Airconditioned Area	9000 sq.mtr.
Cross Floor Area	-
Forest / Planted Area	5000 sq.mtr.
Age of the building	14 Years

DETAILS OF INFRASTRUCTURE

Classrooms	39
Laboratory	61
Library	1
Seminar hall and auditorium	5
Sports room	1

Gymnasium	1
Staff and student parking area	2
Canteen	1
Playground	2
Computer Lab	4

LIST OF BUILDINGS

Name of Building	Number of Floors	Area (m2)
CRC Building	04 + Ground Floor	2281
Block-A	04 + Ground Floor	6746
Block-B	04 + Ground Floor	5916
Block-D	04 + Ground Floor	5601.6
Library & Computer Lab	04 + Ground Floor	2124.84
Canteen	02 + Ground Floor	1109.62
Boy's Hostel	04 + Ground Floor	2426.4
Girl's Hostel	04 + Ground Floor	3013.75
Auditorium	01 + Ground Floor	1000

DEPARTMENTS

1	Department of Mechanical Engineering
2	Department of Civil Engineering
3	Department of Electrical & Electronic Engineering
4	Department of Electronic & Communication Engineering
5	Department of Computer Science Engineering
6	Department of Biotechnology
7	Department of AIML
8	Department of MBA
9	Department of MCA

DETAILS OF STUDENTS AND STAFF

Total Number of Students	727 (2021-2022)
Teaching Staff	102
Technical Staff	12
Non-Technical Staff	85

GREEN AUDIT PARTICIPANTS

Name	Designation
Dr. A.K Yadav	**Professor**
Dr. D.M Srivastava	**Professor**
Dr. Rupesh Kumar Singh	**Assistant Professor**
Dr. Kumar Sonu	**Assistant Professor**

Mr. Vikas Barnwal	**Assistant Professor**
Dr. Ravi Ranjan Singh	**Associate Professor**

LEGAL COMPLIANCES

Description	Registration Details
Consent to operate (CTO) from SPCB	NA
Fire NOC	Yes
Water Boring permission	No
DG Set Permission	Yes

About Organization

Kashi Institute of Technology (KIT) got its existence in 2008 with the vibrant vision of Jain Education Society to give an outstanding ambience of technical education in the entire Uttar Pradesh and especially in Purvanchal, it is approved by All India Council of Technical Education (AICTE) and is affiliated to Dr. A.P.J. Abdul Kalam Technical University (AKTU) Lucknow (formerly U.P.T.U Lucknow).

KIT is maintaining its leading position amongst all private engineering Institutes in Eastern Uttar Pradesh. It is run by a team of visionary and motivated IIT Alumni with the strong dedication to provide best technical education and world class qualitative environment to the students of Uttar Pradesh.

Kashi Institute of Technology (KIT) is one the top most Engineering colleges in Varanasi providing technical education in seven different domains of high need at graduation level like Computer Science and Engineering, Artificial Intelligence, Machine Learning, Bio-Technology, Information Technology, Civil Engineering, Mechanical Engineering, Electrical & Electronics Engineering and Electronics & Communication Engineering. In post graduate program KIT is providing Masters of Business Administration (MBA) with the high integrative approach of Industry and Academia.

Kashi IT is having excellent placement records with students getting placed in top IT companies such as Infosys, TCS, Wipro, Cap Gemini and HCL Technologies and many more. Recently students are placed in ByJus at an annual package of Rs. 10 lakhs making it as one of the best private Institute in Uttar Pradesh.

Vision

To empower young generations for substantial contribution to economical, technological & social progress of the society worldwide.

Mission

To contribute to the development of human resources in the form of professional leaders of the global cadre.
To develop the holistic personality of the learners.
To make this institute a Leading Center of Research.

GEOGRAPHICAL LOCATION WITH CAMPUS MAP IN SCALE

CLIMATIC PARAMETERS

1. Climate: The wet season is oppressive and partly cloudy, the dry season is mostly clear, and it is hot year round. Over the course of the year, the temperature typically varies from 48°F to 104°F and is rarely below 42°F or above 111°F.
Based on the beach/pool score, the best times of year to visit Varansi for hot-weather activities are from late March to mid May and for the entire month of October.

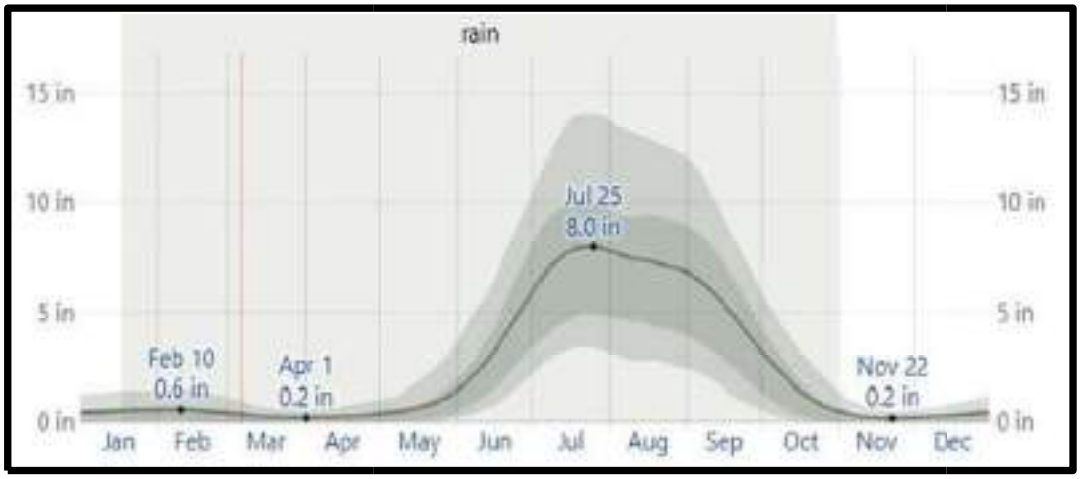
2. Rainfall: To show variation within the months and not just the monthly totals, we show the rainfall accumulated over a sliding 31-day period centered around each day of the year. Varansi experiences extreme seasonal variation in monthly rainfall.
The rainy period of the year lasts for 9.4 months, from January 17 to October 31, with a sliding 31-day rainfall of at least 0.5 inches. The month with the most rain in Varansi is July, with an average rainfall of 7.8 inches.
The rainless period of the year lasts for 2.6 months, from October 31 to January 17. The month with the least rain in Varansi is November, with an average rainfall of 0.2 inches.

3. Temperature: The hot season lasts for 2.7 months, from April 8 to June 28, with an average daily high temperature above 97°F. The hottest month of the year in Varansi is June, with an average high of 101°F and low of 82°F.
The cool season lasts for 2.1 months, from December 8 to February 10, with an average daily high temperature below 77°F. The coldest month of the year in Varansi is January, with an average low of 48°F and high of 71°F.

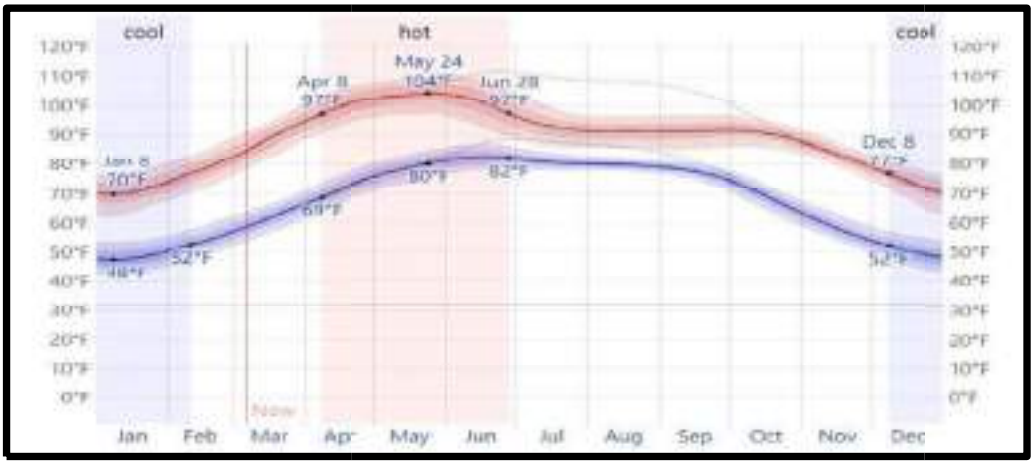
Average Monthly Climate of Varansi

Climate data for Kanpur Airport (1981-2010, extremes 1901-2006)													
Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Record high °C (°F)	31.1 (88.0)	35.6 (96.1)	42.8 (109.0)	45.6 (114.1)	47.2 (117.0)	47.5 (117.1)	45.0 (113.0)	40.6 (105.1)	40.0 (104.0)	40.6 (105.1)	36.1 (97.0)	31.1 (88.0)	47.5 (117.1)
Average high °C (°F)	22.3 (72.1)	25.4 (77.7)	32.0 (89.6)	38.9 (100.4)	39.1 (102.0)	39.0 (102.2)	33.9 (93.0)	33.2 (91.8)	33.1 (91.6)	32.5 (90.5)	28.8 (83.8)	24.4 (75.9)	31.5 (88.6)
Average low °C (°F)	8.2 (46.8)	10.6 (51.1)	15.6 (60.1)	21.1 (70.0)	25.1 (77.2)	27.2 (81.0)	25.4 (78.0)	25.1 (77.2)	24.8 (76.6)	19.0 (66.2)	12.8 (55.0)	8.7 (47.7)	18.5 (65.3)
Record low °C (°F)	1.6 (34.9)	0.6 (33.1)	7.2 (45.0)	11.1 (52.0)	16.4 (61.5)	20.6 (69.1)	21.7 (71.1)	21.7 (71.1)	11.8 (53.2)	4.6 (40.3)	0.5 (32.9)	−0.9 (30.4)	−0.9 (30.4)
Average rainfall mm (inches)	9.2 (0.36)	9.2 (0.36)	2.9 (0.11)	2.7 (0.11)	8.2 (0.32)	61.8 (2.43)	185.2 (7.29)	191.7 (7.55)	138.1 (5.44)	33.9 (1.33)	3.4 (0.13)	2.1 (0.08)	648.5 (25.52)
Average rainy days	0.8	0.8	0.4	0.3	0.8	2.9	9.6	9.0	6.1	1.4	0.3	0.2	32.6
Average relative humidity (%) (at 17:30 IST)	59	46	34	27	31	45	74	77	72	62	62	62	54
Source: India Meteorological Department[citation]													

Average Monthly Rainfall of Varansi



Average Monthly Temperature of Varanasi



BIO-DIVERSITY

List of Tree/Shrubs/Herbs species found in the campus

1.	**Common name**	***Botanical name***	**Quantity planted**
2.	Money plant	*Epipremnum aureum*	30
3.	Karotan	*Codiaeum variegatum*	10
4.	Laal Karotan	*Codiaeum variegatum*	10
5.	China Palm	*Livistona chinensis*	15
6.	Lalin	*Calotropis procera*	10
7.	Bulb	*Dioscorea bulbifera*	20
8.	Lily	*Lilium*	40
9.	Laal saag	*Amaranthus dubius*	30
10.	Candula	*Calendula officinalis*	15
11.	Begum Baheliya	*Bougainvillea glabra*	30
12.	Laaltena	*Cytisus scoparius*	30
13.	Kasmas	*Schleichera oleosa*	4
14.	Keshantiya	*Prosopis cineraria*	10

15.	Petuniya	*Petunia xatkinsiana*	20
16.	Guldawari	*Chrysanthemum morifolium*	40
17.	Guldawari Hybrid	*Chrysanthemum morifolium*	10
18.	Genda	*Tagetes*	50
19.	Inka Genda	*Tagetes erecta*	40
20.	Kochia	*Kochia scoparia*	2
21.	Zed	*Crassula ovata*	10
22.	Spongi	*Luffa aegyptiaca*	5
23.	Paan Patta	*Piper betel.*	30
24.	SurajMukhi	*Helianthus annuus*	10
25.	Dog flower	*Antirrhinum majus*	7
26.	Tulsi	*Ocimum sanctum Linn*	10
27.	pattar churn	*Bryophyllum pinnatum*	15
28.	Flask	*Melia azedarach*	10
29.	Raat rani	*Cestrum nocturnum*	5
30.	Mann patta	*Morinda coreia*	4
31.	Pandan	*Pandanus amaryllifolius*	40
32.	Chipkali Bel	*Ficus Repens*	1000
33.	MadhuMalti	*Combretum indicum*	5
34.	Juhi	*Jasminum auriculatum*	4
35.	Ashok pandula	*Palyalthia longifolia var. pendula*	72
36.	Ashok pandubbi	*Saraca asoca*	8
37.	Ficus	*Ficus benjamina*	20
38.	Chandni	*Tabernaemontana divaricata*	60
39.	Lantana	*Lantana camara*	250
40.	Bottle palm	*Hyophorbe lagenicaulis*	60
41.	Erika palm	*Dypsis lutescens*	30
42.	Manokamini	*Murraya paniculata*	800
43.	Duranta	*Duranta erecta*	1000
44.	Tapori	*Kajorina tapori*	4
45.	Morpankhi	*Platycladus orientalis*	15
46.	China Morpankhi	*Thuja orientalis*	8
47.	Sonam champa	*Magnolia champaca*	30
48.	Bougainvillea	*Bougainvillea spectabilis*	30
49.	Narangi	*Citrus reticulata*	100
50.	Gulchin	*Plumeria rubra L*	15
51.	Chameli	*Jasminum officinale*	1
52.	Gulmoh r	*Delonix regia*	4
53.	Sagwan	*Tectona grandis*	50
54.	Papita	*Carica papaya*	6

55.	Desi gulab	*Rosa moschata*	25
56.	English gulab	*Rosa rubiginosa*	5
57.	Chitwan	*Alstonia scholaris*	5
58.	Amaltas	*Cassia fistula*	4
59.	Kaner	*Cascabela thevetia*	2
60.	Neelkamal	*Nymphaea nouchali*	30
61.	Gandhraj	*Gardenia jasminoides*	3
62.	Gudhal	*Hibiscus rosa-sinensis*	10
63.	Parijat	*Nyctanthes arbor-tristis*	5
64.	Song of India	*Dracaena reflexa*	20
65.	Lily	*Lilium*	100
66.	Coleus	*Coleus scutellarioides*	50
67.	Chipkali bel	*Ficus repens*	100
68.	Madhumalti	*Combretum indicum*	5
69.	Bela	*Jasminum sambac*	25
70.	Bel	*Aegle marmelos*	1
71.	Rudraksh	*Elaeocarpus ganitrus*	1
72.	Jal me ka kamal	*Nelumbo nucifera*	10
73.	Indonesia	*Jasminum sambac*	8
74.	Juhi	*Jasminum auriculatum*	4
75.	China palm	*Livistona chinensis*	25
76.	Kathal	*Artocarpus heterophyllus*	1
77.	Snake	*Dracaena trifasciata*	100
78.	Musanda	*Mussaenda erythrophylla*	1
79.	Litchi	*Litchi chinensis*	1
80.	Amla	*Phyllanthus emblica*	1
81.	Aam	*Mangifera indica*	6
82.	Aloevera	*Aloe barbadensis miller*	4
83.	Kela	*Musa paradisiaca L.*	7
84.	Kadi patta	*Murraya koenigii*	4
85.	Jungle neem	*Azadirachta indica*	2
86.	Raatrani	*Cestrum nocturnum*	4
87.	Jamun	Syzygium cumini L.	5

Reference images:



















Images of Green Cover of the University Campus

List of birds and animals

S. No.	Zoological Name	Common Name
1.	Canis lupus familiaris	**Dog**
2.	Felis catus	**Cat**
3.	Oryctolagus cuniculus	**Rabbit**
4.	Columba livia	**Pigeon**
5.	Passeridae	**Sparrow**
6.	Corvus	**Crow**
7.	Pavo cristatus	**Peacock**
8.	Strigiformes	**Owl**

List of Butterflies found in and around the campus

S. No.	Zoological Name	Common Name
1.	Blue Pensy Junonia Orithya	Blue Pensy
2.	Tirumala Limniace	Blue Tiger
3.	Azanus-ubaldus	Bright Babul Blue
4.	Hasora-chromus	Common Banded Awl

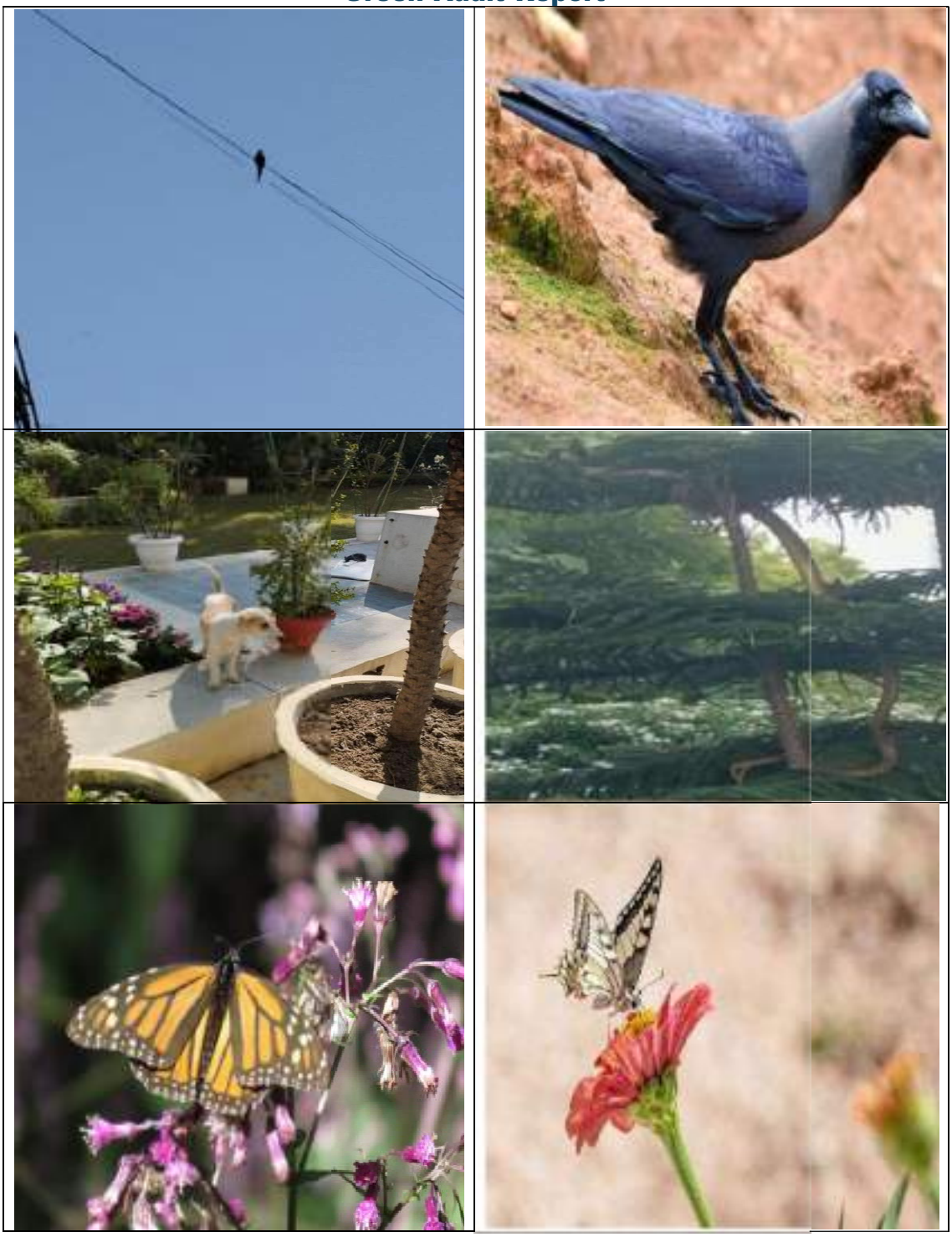
List of Reptiles found in and around the campus

S. No.	Zoological Name	Common Name
1.	Chamaeleonidae	Chameleons
2.	Serpentes	Snake

3.	Lacertilia	Lizard
4.	Rana tigrina	Frog

Reference images:



LEGEAL REQUIREMENTS

Description	Registration Details
Consent to operate (CTO) from SPCB	No
Fire NOC	Yes. Reference doc/pic no. A1
Water Boring permission	No
DG Set Permission	Yes. Reference doc/pic no. A2

	
A1: Fire NOC	A2: DG Set Permission

GENERAL

General Requirements: Environmental Policies / Environmental Objectives, etc	
Is there an environmental policy? Is it publicly communicated?	No, there is no defined environmental policy implemented by the institute.
Is there a defined waste management policy in the organization?	Yes, there is defined waste management policy in the institute. Reference doc/pic no.: A3
Are there any quantifiable environmental objectives decided by the organization?	There is no defined quantifiable environmental objectives decided by the organization.
Is the organization aware of all environmental Laws pertaining to different aspects of the organization's activities? Mention laws & compliance status.	There is no evident document/record that ensures that the organisation is aware of all environmental laws pertaining to different aspects of the organization's activities.
Does the organization have any Recognition/certification for the environment friendliness? Provide details.	No related record found.

Has the organization established any committee to decide, implement & monitor environmental initiatives?	Yes. Institute has established a Green committee to decide, implement & monitor environmental initiatives. Reference doc/pic no.: A4
Has the institution ever received any notice/warning from the pollution control board or any other concerned environmental authorities? If yes, then what corrective & preventive measures have been taken?	No, institution never received any notice/warning from the pollution control board or any other concerned environmental authorities.
Related images / documents	
	
A3: Waste Management Policy	A4: Green Committee

Observations:
1. There should be a defined/written environmental policy & quantifiable environmental objectives decided by the institute. 2. It is recommended that the institute be aware of all environmental laws pertaining to different aspects of the organization's activities.

POLLUTION

Air Pollution Management (objective, practices / methods to minimize air pollution)

Identify the major sources of air pollution within the organization & the actions taken to either eliminate or minimize the pollution.	The air conditioning system is a major source of air pollution in the college. Air conditioning units consume a lot of energy, creating pollution in the form of greenhouse gas emissions. These greenhouse gases lead to global warming. To save energy, 3-star air conditioners are all installed in the classrooms and are ensured to be turned off when there are no classes. Reference doc/pic no.: B1 Following are some other remedial measures adopted by the campus to minimise air pollution: • Plush Gardens • Plantation in & around campus • Water sprinklers to suppress the dust Reference doc/pic no.:- B5 & B6
HVAC maintenance and calibration records, testing and balancing reports. When was the duct system tested for leakage last?	The institute maintains the maintenance and testing records of its air conditioning units. Reference doc/pic no.:- B2
DG set stack emission test as per CPCB norms.	The institute has a DG set as a power backup that is used whenever there is a power cut-off due to load shading or maintenance of electricity on the college campus. DG Set Capacity is **125 KVA**. DG Set Air Pollution Level, TVOC, and Noise Pollution Checks were conducted by CDG Inspection Ltd. at the time of the audit. Following are the outcomes of the check conducted: **DG Set Air Pollution Level:** 21 **PM2.5 –** 54ug/m^3 **DG Set Noise Pollution Level:** 77.8 dBA Reference doc/pic no.:- B3, B4
Related documents / images	

	
B1: 3-Star Air Conditioners	B2: AC Maintenance report
	
B3: Air Quality Level	B4: DG Set Noise Level

	
B5: Plantation around campus	B6: Water sprinklers

Observations:
1. It is recommended that the institute conduct DG set stack emission tests in accordance with CPCB standards.

In-Door Air Quality (Checks, methods, tests & practices to ensure indoor air quality)	
Does the organization test indoor air quality? Details of last indoor air quality test done.	There were no records to verify that the college conducted tests to check indoor air quality. Indoor Air Quality check of the campus was conducted by CDG Inspection Ltd. at the time of audit. Following are the outcomes of the check conducted: Indoor Air Pollution Level: 11 PM2.5 – 29 Reference doc/pic no.: C1
Is there a proper system of exhaust of indoor air?	Every classroom, staff room, corridor, etc. comprises windows for proper ventilation. The staff room, library, and IT lab in the campus all have ventilation systems.

	The indoor air flow rate was checked at the time of the audit, and the outcome was 0.2 m/s. Reference doc/pic no.: C2
Supplies: • Are 'Material Safety Data Sheets (MSDS)' available for different types of supplies (Ex: solvent, wax, adhesives, paints, flammables etc.)? • Are storage areas separate & ventilated properly? • Are less or nonhazardous materials used when possible? • Does the organization have a defined system to evaluate & find out safer alternatives? • Is there a defined procedure available for disposal of used substances?	• No 'Material Safety Data Sheets (MSDS)' available for different types of supplies. • Yes, storage areas are separate, and those storage areas have enough ventilation. • Yes, the campus is plastic- and chemical-free. • The institute follows guidelines of IQAC as per GGSIPU/UGC Guide-lines. • There is a defined procedure available for disposal of used substances. The institute has provided training on Disposal of used Substances to its employees. Reference doc/pic no.:- C3 & C4
General Cleanliness: • Are rooms dusted and vacuumed thoroughly and regularly? What are related checks & controls? • Does the organization ensure to use of environment-friendly, non-scented cleaning products?	• Yes, the class rooms, library, staff room, and other areas were found to be clean and tidy at the time of the audit. • No related record found at the time of audit.
Pest control methods & products used (check & control).	As per Green Committee meeting on 1st September 2021, institute decide to stop the use of pesticides in the campus green area for control of chemical effect in the soil and environment. Reference doc/pic no.: C5
Does the organization ensure use of low emitting paints, coatings, furniture etc.? What are related checks & controls?	Yes, institute ensure use of low emitting paints which are available in market. Reference doc/pic no.: C6
Is there any sign of mold infestation?	No sign of mold infestation in the institute.
Does the organization eliminate any bird or animal nests or droppings near outdoor air intakes?	No, the organisation doesn't harm any animal or bird nests.

What are the methods adopted by the organization to control/prevent dust within the buildings?	The methods adopted by the institute to control/prevent dust within the buildings are as follows: • There are large, continuous trees all around the campus. • Glass building • Water sprinklers Reference doc/pic no.:C7, C8, C9 & C10

Related records / images

C1: Indoor Air Quality Level

C2: Indoor Air Flow Rate

KASHI INSTITUTE OF TECHNOLOGY

Circular on Disposal (Eco friendly products) Policy

C3: Waste Disposal Policy	C4: Training on Disposal of used Substances
 KASHI INSTITUTE OF TECHNOLOGY	 KASHI INSTITUTE OF TECHNOLOGY
C5: Green Committee report to ban pesticides in campus	C6: Report on paints
	
C7: Continuous trees around campus	C8: Continuous trees around campus

	
C9: Continuous trees around campus	C10: Water sprinklers

Observations:
• Institute should ensure to use of environment-friendly, non-scented cleaning products.

WATER POLLUTION

Water Pollution Management (objective, practices / methods to minimize water pollution)	
Source of water pollution within the premises.	Water pollution results when contaminants mix with the water bodies. Contaminants can come from one sewage discharges as there is no effluent treatment plant in premises or the chemistry lab discharges. The main source of water in the organization is water bore wells available in the campus.
Measures taken to prevent / stop water wastage.	• Waste water is used to clean and irrigate gardens, plants, and trees, among other things. • To reduce water waste, campus employees and students carry refillable water bottles.
Does the institute harvest rainwater? Give details.	Yes, the institute harvests rainwater. Rainwater harvesting system is installed by the campus. Reference doc/pic no.:- C11

Is there any water recycling system? Give details.	No related record found at the time of audit.
Is there any effluent treatment plant in premises? No. of outlets for discharge of effluent?	Not Available
What is the quality of effluent in KLD?	NA
Whether operating STP/ETP satisfactorily?	NA
Whether provided flow meters on outlet & inlet of ETP/STP?	NA
Whether provided separate electricity meter on ETP/STP?	NA
Whether maintained Logbook for consumption of Electricity/ Chemicals/Quantity of effluent?	NA
Detail of land in case effluent is discharged for percolation/ irrigation purpose with justification for its 100% utilization.	NA
Status of ZLD (Zero Liquid Discharge) as per CPCB	NA
Locate the point of entry of water and point of exit of waste water in the organisation.	There is closed sewer outside the campus.

Related records / images

C11: Rainwater Harvesting System

Observations:
1. There is should be a systematic procedure for water recycling on campus. 2. It is recommended to have STP or Effluent Treatment Plant in the institute to prevent contaminants from mixing with the water bodies.

Water Consumption & Water Efficiency Use of water (indoor and outdoor water) & practices related to efficient /reduced use of water.)	
Sources of water supply	The main source of water in the organization is water bore wells available in the campus.
Number of water storage tanks and their storage capacity. Total water storage capacity.	Number of water storage tanks:10 Storage capacity: 5000 Liters each Total water storage capacity: **10 x 5000 = 50,000 Litres**
Water used in irrigation	Data not available
Water used in cleaning	Data not available

Observations:
1. Institute should maintain record or log book total water consumption per day and how much water used for irrigation and cleaning purposes.

Description	Requirement*	Actual consumption
Water consumption per head /day	Without boarding facility: 45 liter per head / day	45 liter per head / day
*As per Central Ground Water Authority Guidelines water requirements (Ref. NBC 2016, BIS) of an educational institute for drinking and domestic use.		

SANITARY CONVENIENCE TO BE PROVIDED

Fitments	Educational Institutes (non-Residential)				Educational Institutes (Residential)			
	Boys		Girls		Boys		Girls	
	Req.*	Actual	Req. *	Actual	Req. *	Actual	Req.	Actual
Water closets	1 per 40 pupils or part thereof	15	1 per 25 pupils or part thereof	7	1 for every 8 pupils or part thereof	170	1 for every 6 pupils or part thereof	80

Ablution taps	1 in each water closet	-	1 in each water closet	-	1 in each water closet	Combine 10	1 in each water closet	nil
Urinals	1 per 20 pupils	26	-	-	1 for every 25 pupils or part thereof	94	-	56
Wash basins	1 per 60 pupils, Min 2	10	1 per 40 pupils, Min 2	8	1 for every 8 pupils or part thereof	126	1 for every 6 pupils or part thereof	67
Bath	-	-	-	-	1 for every 8 pupils or part thereof	20	1 for every 6 pupils or part thereof	40
Drinking water fountains or taps	1 for every 50 pupils or part thereof	10	1 for every 50 pupils or part thereof	5	1 for every 50 pupils or part thereof	61	1 for every 50 pupils or part thereof	32
Cleaner's sinks	1 per floor, minimum							

*As per IS 1172:1993

NOISE POLLUTION

Noise Pollution Management (objective, practices / methods to minimize noise pollution)

Noise level in dB(A) Leq	**Standard Level***	**Actual Level**
Day Time	50	Max.65.8 Min.63.4

*As per The Noise Pollution (Regulation and Control) Rules, 2000; rule 3(1) and 4(1)
Day time from 6:00am to 10:00pm
Nighttime from 10:00pm to 6:00am

Related records / images

Building Sustainability	
Ensure that walls, floors, roofs, and windows are as energy efficient as possible.	The walls, floors, roofs, and windows of the institute are energy efficient. Glass is used as a building material for energy efficiency. Glass allows in a lot of natural light; it considerably reduces electricity consumption, thus doing away with the need for artificial lighting. To ensure a sustainable environment, the institute has "Green Campus" initiatives. Following those initiatives: • Ban on the use of Plastic • Restricted Entry of Automobiles • Landscaping with trees and plants • Pedestrian Friendly Pathways Reference doc/pic no.: D1&D2
Design for good indoor air quality	Yes, every classroom, staff room, corridor, etc. comprises windows for proper ventilation.

Use of natural daylight in building interiors as a source of ambient light.	Yes, there is use of natural daylight in building interiors as a source of ambient light.
Use of low emitting materials for building modifications, maintenance, and cleaning.	No related low-emitting materials for building modifications were found.

Related Images:

	
D1: Campus Building	D2: Restricted Automobiles

Observations:
• Institute should ensure use of low emitting materials for building modifications, maintenance, and cleaning.

Lighting	
Use of energy efficient lighting system (bulb & other products)	For energy efficiency, LED lights are used to illuminate the campus mostly. Reference doc/pic no.:-D3 & D4
Use of natural day light	Yes, there is a use of natural daylight in every classroom, library, garden, and lab.

Related Images:

	
D3: Energy efficient LED lights	D4: Energy efficient LED lights

ILLUMINATION LEVELS AND GLARE INDEX

Sr. No.	Area	Standard Illumination (Lux)*	Standard Glare Index*	Actual Illumination (Lux)
a)	Classrooms	300	16	276
b)	Lecture rooms (including demonstration areas)	300	16	117
c)	Reading rooms	150 to 300	19	178
d)	Laboratories (Chemical lab) (Mechanical lab)	300	16	 305 287
e)	Corridors	70	-	204
f)	Libraries	300	16	351
g)	Auditorium I. Hall II. Foyer III. Stage area	 70 70 300	 - - 16	
h)	Gymnasiums	150	-	678
j)	Cafeterias	100	-	-
K)	Staff rooms	150	-	401

* Recommended illumination Levels and Glare index as per National Lighting Code 2010 [ETD 24: Illumination Engineering and Luminaries] Part 5 Section 3

Related Images:

	
D5: Classroom Lux reading	D6: Chemical lab Lux reading
	
D7: Gymnasium Lux reading	D8: Mechanical lab Lux reading

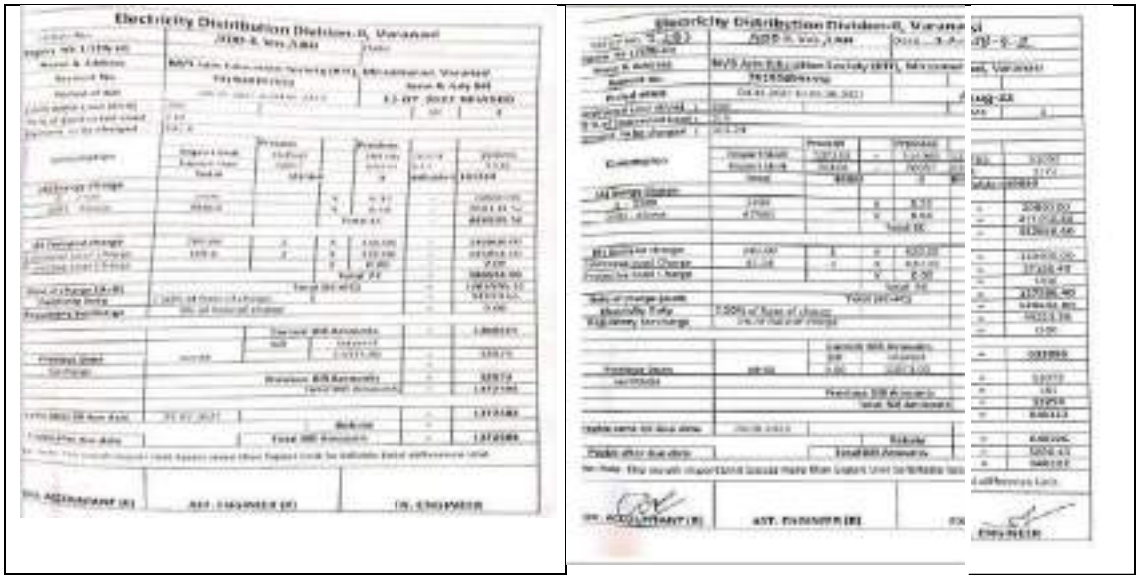
	
D9: Reading room Lux reading	D10: Seminar hall Lux reading
	
D11: Staff room Lux reading	D12: Corridors Lux reading

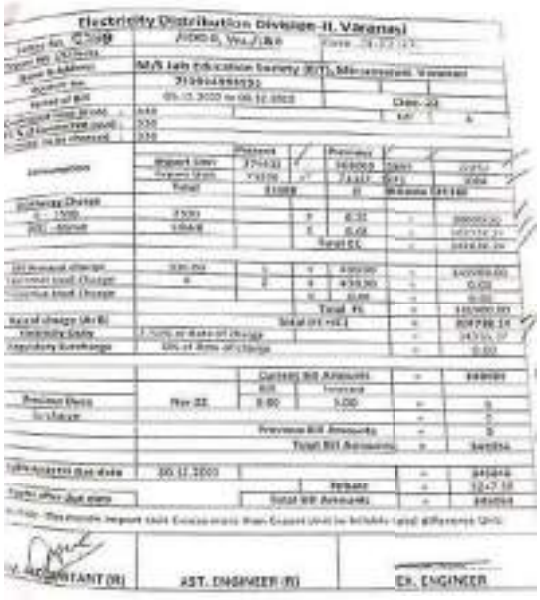
Electrical Equipment's	
Details of electrical equipment, its energy efficiency & practices	Institute has taken measures to conserve electricity by installing a main switch outside each room including class rooms and faculty rooms. By turning off this switch we are able to turn off all the lights and fans in the room in one go. Although, there are separate switches to turn on and turn off lights and fans separately.

ELECTRICITY CONSUMPTION

Month	Electricity Consumption (Last 6 months)
July 2022	101364 KWH
August 2022	49880 KWH
September 2022	79200 KWH
October 2022	57856 KWH
November 2022	26020 KWH
December 2022	21168 KWH

Related Images:





Energy Efficiency (consumption, objective, practices / methods to achieve energy efficiency objectives)	
Current energy uses.	

Energy Sources	**Consumption (Unit)**
Electricity	19708 KWH (Jan 2023)

Short-term energy efficiency goals & roadmap to achieve those goals.	The institute short-term energy efficiency goals are as follows: • Solar panel installation • Natural Light The institute is installing solar panels in their buildings for energy efficiency and using natural daylight as an alternative to light bulbs. Reference doc/pic no.:- E1, E3 & E4
Long-term energy efficiency goals & roadmap to achieve those goals.	For long term energy efficiency goals institute took initiative by implementing Energy conservation measures within the campus. Reference doc/pic no.:- E2 Institute also maintain logbook for solar plant reading to maintain electric efficiency in the campus. Reference doc/pic no.:- E5

On-Site Energy Generation
(Details of renewable energy generation projects on organization's property for organization's use)

There is a rooftop Solar Power Plant in the institute of 215 KWH capacity .The Solar Plant is connected with Grid through net metering and extra Power generated is accounted in bills of Institute as per DVVNL, Tariff rules and regulations. The units generated in year 2021-22 are shown in table below:

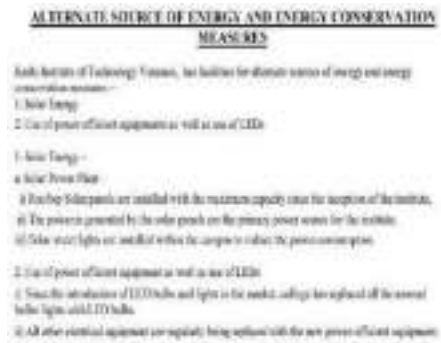
S.No.	MONTH	SOLAR GENERATION (KWH)	EXPORT TO GRID (SOLAR) (KWH)
1.	June 2021	24180	10680
2.	July 2021	23302	3928
3.	August 2021	22447	4148
4.	September 2021	21875	1812
5.	October 2021	17111	2216
6.	November 2021	15970	4064
7.	December 2021	13221	4064
8.	January 2022	13402	552
9.	February 2022	21133	5284
10.	March 2022	23676	10072
11.	April 2022	23707	3876
12.	May 2022	26139	2472

Total	**246163**	**53168**

Table: Solar Power Generation of Year 2021-22

Related records / images

E1: Solar panel purchase order



ALTERNATE SOURCE OF ENERGY AND ENERGY CONSERVATION MEASURES

E2: Energy conservation measures

E3: Solar Plant

E4: Solar Plant

E5: Solar Reading Log book records

DRINKING WATER

Drinking Water Quality (As per IS 10500: 2012)
The institute doesn't conducted any drinking water quality tests as per IS 10500:2012 standards. At the time of audit drinking water pH test was conducted by the CDG inspection Pvt. Ltd. And it can be considered fit for drinking purposes.
Related records / images 

Observations:
The institute should conduct drinking water quality tests as per IS 10500:2012 standards.

WASTE MANAGEMENT

Type of waste - **Plastic waste** N/A (Campus is Plastic Free)
Type of waste – **Paper waste** **Approximate annual quantity-** Approximately 400 KG annually **Source of waste –** All departments, exam cell, registrar office, Admission Cell, Account Office **Handling methods-** All waste paper handover to the vendors. **Measures to reduce the waste quantity**- Institute taken initiative to reduce the paper waste by conducting some online exams in future and using electronic way of communication through mail and ERP system.
Type of waste – **Electronic waste** **Approximate annual quantity-** Approximately 50 KG annually **Source of waste –** From IT department or administration waste like keyboard, mouse, monitor etc. **Handling methods-** Institute sell out all e-waste to the vendors. **Measures to reduce the waste quantity**- Institute use the some components of e-waste in the student projects. **Type of waste** – **Hazardous waste** **Approximate annual quantity-** Not Applicable as there is no hazardous waste in the campus

Source of waste - NA

Handling methods- NA

Measures to reduce the waste quantity- NA

Type of waste – Garden waste

Approximate annual quantity- Approximately 1800 KG annually

Source of waste – Garden Area, Trees, Plants, Grass, etc.

Handling methods- Dumping all garden waste in the dig area

Measures to reduce the waste quantity- Institute taken initiative by using garden waste as manure.

Type of waste – Food waste

Approximate annual quantity- Approximately 1800 KG annually

Source of waste – Canteen and mess

Handling methods- Institute sell all food waste to the vendor

Measures to reduce the waste quantity- Improving the food quality and quantity and conducting awareness program regularly.

Related Images:

F1: Segregation of paper waste to handover the vendor

F2&F3: Segregation of E-Waste to sell the vendor/third party

F4&F5: Segregation and collection of Garden waste for composting

F5&F6: Separate bins for safe disposal of waste

F7&F8: Food waste used for hogs feeding

COMPOSTING PLANT

How much organic waste is generated in a day? What type of organic waste is generated?	Quantity of waste not provided by the institute. Type of organic waste generated is Kitchen waste, food waste and garden waste.

Details & capacity of compost plan installed in the organisation.	Not available
Details of composting method used	The biodegradable waste includes food items, vegetable and fruit peels, leaves, flowers, water, etc. Simple steps have been taken to manage this waste and reuse it for organic purposes. Food waste, kitchen waste, and garden waste are first segregated into compost bins.
Compost facility maintenance & inspection plan	Not available

Observations:
It is recommended that the institute adopt a proper composition method for complete decomposition. The institute can install a decomposition machine on its campus for safe composting and sustainability.

RAINWATER HARVESTING

Provide details of the rainwater harvesting facility.	Yes, the institute harvests rainwater. Rainwater harvesting system is installed by the campus. Reference doc/pic no.:- F9
Rainwater harvesting system maintenance plan	No related record found at the time of audit.

Related Images:

F9: Rainwater Harvesting System

Observations:
It is recommended that the institute should maintain Rainwater harvesting system maintenance record & plan

Training	
Has the organization provided waste management/handling training to concerned employees. Give details.	Yes Reference doc /pic no.: G1
Has the organization provided training for energy saving?	No related records were found.
Has the organization conducted training for solid waste management?	Yes Reference doc /pic no.:G2
Has the organization conducted awareness training for water saving?	Yes Reference doc /pic no.: G3&G4

Related images:

G1: Waste management training to concerned employees	G2: solid waste management awareness program
	
G3: Awareness program for water saving	G4: Awareness program for water saving

Environmental Practices	
Waste recycling	No related records were found
Waste Decomposition	Yes, separate composting pits are present in the campus for waste decomposition
Rainwater harvesting	Yes
Environmentally Preferable Purchasing (EPP) or Green Purchasing	Yes, replacement of FTL with LED Tube lights and star rated ACs
Distinct receptacles for trash and recycling	Yes
Low-emission transportation	Yes, all buses are used for college transportation are pollution under control Reference doc/pic no.: H7, H8, H9, H10
maximum use of clean energy	Yes, Solar plant installed and LED lights and star rated ACs are used for energy efficiency Reference doc/pic no.: H1, H2, H5, H6
Preference to electronics over the paper	Yes
Campus garden	Yes Reference doc/pic no.: H3 & H4

	
H1: Solar Plant	H2: LED Lights
	
H3: Campus Garden	H4: Campus Garden
	
H5: Star Rated ACs	H6: Star Rated ACs

	
H7: Buses PUC Certificate	H8: Buses PUC Certificate
	
H9: Buses PUC Certificate	H10: Buses PUC Certificate

Environmental Initiatives / Green Initiatives

- Poster presentation on “Save Tree & Water” for creating awareness among students and staff.
- The students of Kashi Institute of Technology, Varanasi have performed a nukkad natak to spread awareness about the harms of using plastic.
- Kashi Institute of Technology believes that the single use plastic should be completely

banned in college premises.

- Institute restricted use of automobiles in the campus for green, clean and safe environment only pollution check control buses are implied by the institute.
- Plantation drive program done by the institute for grow more and more trees and created awareness among the people how plants are important for the survival of human being's life.

Related Images:

Poster Presentation for Save Trees Awareness Program

Poster Presentation for Save Trees Awareness Program

Save Trees awareness program through rangoli and poster making program

Plantation Drive Program for grow more and more to create awareness

Nukkad natak pr sentation to create awareness for water saving

Green Belt/ Landscaping

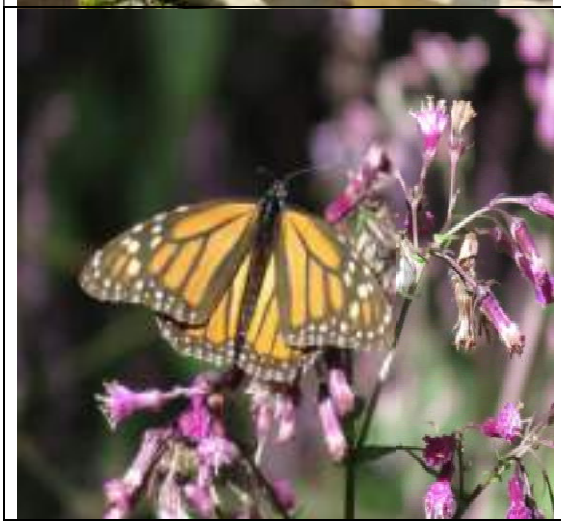





Biodiversity








Name of Inspector	Ashutosh Tiwari
Name of Reviewer	Pooja Gairathi