I.B. (PG) COLLEGE, PANIPAT

SUSTAINABLE DEVELOPMENT GOALS


SUSTAINABLE DEVELOPMENT
GOALS
INFOGRAPHIC
01
No Poverty
02
Zero Hunger
03
Good Health & Well Being
04
Quality Education
05
Gender Equality
06
Clean Water & Sanitation
07
Clean Energy
08
Economic Growth
09
Industry, Innovation, Infrastructure
10
Reduced Inequalities
11
Sustainable Cities
12
Respon-sible Consum-ption
13
Climate Action
14
Life Below Water
15
Life on Land
16
Peace, Justice, & strong Institution
17
Partnership for the Goal

12 RESPONSIBLE CONSUMPTION AND PRODUCTION

SUBSTANTIALLY REDUCE WASTE GENERATION

SUSTAINABLE MANAGEMENT AND USE OF NATURAL RESOURCES

PROMOTE UNIVERSAL UNDERSTANDING OF SUSTAINABLE LIFESTYLES

RESPONSIBLE MANAGEMENT OF WASTE

I.B. (PG) College, Panipat is striving at its best to achieve the Sustainable Development Goal (SDG) of "Responsible Consumption And Production" in various ways as follows:

Energy and Water Conservation

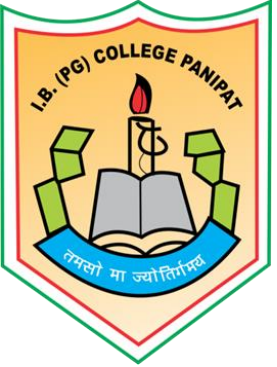
College implements measures to conserve energy and water across campus. This involves installing energy-efficient appliances, repairing leaks promptly, and promoting responsible water usage practices in dorms and other facilities.

Waste Reduction and Recycling

College has established a comprehensive waste reduction and recycling program. This involves promoting responsible consumption habits, providing easily accessible recycling bins for various materials (paper, plastic, glass, etc.), and exploring composting options for food waste.

Sustainable Living Education

College offers workshops or training programs on sustainable living practices like energy conservation, water conservation, and responsible waste management, empowering students to make informed choices beyond the college environment.



DBS CERT

CERTIFICATE

This is to Certify that

Environmental Management System

of

I.B. COLLEGE, PANIPAT

(ESTD. 1956)

G.T.ROAD, PANIPAT-132103 (HARYANA), INDIA

has been independently assessed by DBS
and is compliant with the requirement of:

ISO 14001:2015

For the following scope of activities:

IMPARTING HIGHER EDUCATION TO UNDERGRADUATE AND POSTGRADUATE STUDENTS IN DIVERS AREAS OF ACADEMICS AND TO PROVIDE FURTHER SUPPORT SERVICES

Certificate Number: Draft

Date of Certification:	**13th October 2021**
1st Surveillance Audit Due:	**12th October 2022**
2nd Surveillance Audit Due:	**12th October 2023**
Certificate Expiry:	**12th October 2024**

This Certificate is property of DBS Certifications and remains valid subject to satisfactory surveillance audits

Head of Certification

IAS ACCREDITED MSCB-157

IAF

The certificate remains the property of DBS Certifications Private Limited, to whom it must be returned upon request.

DBS CERTIFICATIONS PVT. LTD.
142, IInd Floor, Avtar Enclave, Paschim Vihar, Delhi-110063, (INDIA) info@dbscertification.com, www.dbscertification.com
ACCREDITED BY :
International Accreditation Service (IAS) 3060, Saturn Street Suite 100, Brea, Ca 92821-1732, United States of America

DBS CERT

CERTIFICATE

This is to Certify that

Quality Management System

of

I.B. COLLEGE, PANIPAT

(ESTD. 1956)

G.T.ROAD, PANIPAT-132103 (HARYANA), INDIA

has been independently assessed by DBS
and is compliant with the requirement of:

ISO 9001:2015

For the following scope of activities:

IMPARTING HIGHER EDUCATION TO UNDERGRADUATE AND POSTGRADUATE STUDENTS IN DIVERS AREAS OF ACADEMICS AND TO PROVIDE FURTHER SUPPORT SERVICES

Certificate Number: Draft

Date of Certification:	**13th October 2021**
1st Surveillance Audit Due:	**12th October 2022**
2nd Surveillance Audit Due:	**12th October 2023**
Certificate Expiry:	**12th October 2024**

This Certificate is property of DBS Certifications and remains valid subject to satisfactory surveillance audits

Head of Certification

IAS ACCREDITED MSCB-157

IAF

The certificate remains the property of DBS Certifications Private Limited, to whom it must be returned upon request.

DBS CERTIFICATIONS PVT. LTD.
142, IInd Floor, Avtar Enclave, Paschim Vihar, Delhi-110063, (INDIA) info@dbscertification.com, www.dbscertification.com
ACCREDITED BY :
International Accreditation Service (IAS) 3060, Saturn Street Suite 100, Brea, Ca 92821-1732, United States of America

State Level Energy Conservation Award by Hon'ble Energy Minister, Haryana Sh. Ranjeet Singh, IAS Secretary Haryana Energy

NEW & RENEWABLE ENERGY DEPARTMENT, HARYANA

HAREDA

STATE LEVEL ENERGY CONSERVATION AWARD

Appreciation Certificate

This is to certify that **I.B. PG College, Panipat** has been awarded Appreciation Certificate in the category of **Institutions & Organizations category below 500 kW** for the year **2022-23,** in appreciation of the achievements in energy conservation in their campus.

S. Narayanan, IFS
Director General,
New & Renewable Energy
Department, Haryana & HAREDA

No.-2630 Date:- 11/07/23

HAREDA

G20

Certificate for promoting Green Energy

This certificate is awarded to

I.B. (PG) College,G.T. Road, Panipat

in recognition of the successful installation of a Solar Power Plant-50 KW and hence contributing significantly to energy conservation efforts in the college premises by promoting Green Energy.

This achievement demonstrates the college's commitment to sustainable practices and the advancement of renewable energy sources. By harnessing the power of solar energy, the college has taken a significant step towards reducing its carbon footprint and promoting a cleaner and greener environment.

The solar power plant installed at the college has made a significant impact on energy conservation, providing a reliable and sustainable source of electricity. The efforts put forth by I.B. (PG) College, G.T. Road, Panipat in embracing solar energy as an alternative power source are commendable. By adopting this eco-friendly solution, the college has set a remarkable example for other educational institutions to follow in their quest for a more sustainable future.

This certificate is presented to I.B. (PG) College, G.T. Road, Panipat as a testament to their commitment to energy conservation and sustainable practices.

The Department of New & Renewable Energy, Panipat extends heartfelt congratulations and best wishes to I.B. (PG) College, G.T. Road, Panipat for their outstanding achievements in energy conservation.

Project Officer
New & Renewable Energy Deptt.
Panipat

ACKNOWLEDGMENT

We profoundly thank the officials of **I.B. College, Panipat** for entrusting us with the work of conducting Green & Energy Audit at **I.B. College, Panipat** and giving us an opportunity to be a part of spreading the awareness of Energy Efficiency and Audit of building by making it a showcase example of Green & Energy Efficient Building.

We express our immense gratitude to **Dr. Ajay Kumar Garg, Principal and Prof. Ajay Pal Singh, Asst. Prof., Deptt. of Commerce** for extending their utmost cooperation and help in coordination for Green & Energy Audit of **I.B. College, Panipat.** We are also thankful to all technical staff for their active help during data collection.

Further, we would like to express our gratitude to all the officials for providing us with the required support to complete the task successfully.

PGSEPL Team looks forward to associating with you in your future endeavours.

31/5/22

Pradeep Dhingra
AEA - 191

Er. Pradeep Dhingra

(Accredited Energy Auditor)

(Green and Energy Audit)

2022-23

Green & Energy Audit Report

PGS Energy Services (P) Ltd.

I.B. COLLEGE, PANIPAT
G.T. ROAD, PANIPAT
HARYANA-132103

CHANGE FOR
GREEN

GREEN IS NO LONGER AN OPTION.
ITS THE ONLY WAY FORWARD....

SAVE THE EARTH

BECOME A GREEN CITIZEN

"Whenever someone saves energy, or uses it more efficiently, he reduces the demand for oil, coal, electricity etc. Less consumption of these means lower emission of carbon dioxide in the atmosphere that is the major contributor to global warming. Your discretion in energy conservation can help emit less global warming pollution"

Green & Energy Audit – I.B. COLLEGE, PANIPAT

Table of Contents

ABBREVIATIONS

AEA	Accredited Energy Auditor
ASSOCHAM	Associated Chambers of Commerce and Industry of India
ACs	Air Conditioners
ECRM	Energy Conservation & Retrofit Measures
EE	Energy Efficiency
EER	Energy Efficiency Ratio
ESCO	Energy Service Company
FMCG	Fast Moving Commercial Goods
FTL	Fluorescent Tube Light
GEF	Global Environment Facility
GHG	Green House Gases
GLS	General Lighting Service (Incandescent Lamp)
ILER	Installed Load Efficacy Ratio
IRR	Internal Rate of Return
JAPCC	Jharkhand Action Plan on Climate Change
kVA	Kilo Volt Ampere
kW	Kilo Watt
kWh	Kilowatt Hour
LED	Light Emitting Diode
MoEFCC	Ministry of Environment, Forest and Climate Change
MRV	Monitoring, Reporting and Verification
MTOE	Metric Tonnes of Oil Equivalent
MU	Million Units
MWh	Megawatt Hour
NAPCC	National Action Plan on Climate Change
NPV	Net Present Value
O&M	Operation and Maintenance
PF	Power Factor
RE	Renewable Energy
ROI	Return on Investment
SAPCC	State Level Action Plan on Climate Change
SEC	Specific Energy Consumption
tCO_2e	Tonnes of CO_2 equivalent
TR	Ton of Refrigeration

ACKNOWLEDGMENT

We profoundly thank the officials of **I.B. College, Panipat** for entrusting us with the work of conducting Green & Energy Audit at **I.B. College, Panipat** and giving us an opportunity to be a part of spreading the awareness of Energy Efficiency and Audit of building by making it a showcase example of Green & Energy Efficient Building.

We express our immense gratitude to **Dr. Ajay Kumar Garg, Principal and Prof. Ajay Pal Singh, Asst. Prof., Deptt. of Commerce** for extending their utmost cooperation and help in coordination for Green & Energy Audit of **I.B. College, Panipat**. We are also thankful to all technical staff for their active help during data collection.

Further, we would like to express our gratitude to all the officials for providing us with the required support to complete the task successfully.

PGSEPL Team looks forward to associating with you in your future endeavours.

Er. Pradeep Dhingra

(Accredited Energy Auditor)

CORPORATE OVERVIEW OF THE AUDITING FIRM

PGS Energy Services Pvt. Ltd. is an Accredited Energy Auditor and ESCO Empanelled firm with Bureau of Energy Efficiency, (BEE), Ministry of Power, Govt. of India. The EC Act 2001 was the first major legislative Act to institutionalize energy conservation efforts. BEE and State Designated Agencies (SDAs) act as nodal agencies cum regulators for implementing the Act at National and State levels respectively to reduce *Energy Intensity in the Economy*. We are also working as Energy Professional with BEE & EESL for Perform Achieve & Trade (PAT scheme).

A well-conducted Green and energy audit would reveal areas of wastage of energy and if recommendations are implemented by the concerned organization, a significant reduction in energy consumption levels can be achieved.

We offer value added services in the field of Energy Conservation which leads to increased Efficiency and reduction in operational costs. **"Our vision is a prosperous future for our country where energy is Clean, Abundant, Reliable and Affordable."**

Core Activities of our business are:

- Comprehensive Energy Audits of Electrical & Thermal utilities ,Harmonics Study & Analysis and solution to reduce harmonics , Thermography ,Noise level study of furnaces, boilers etc, Star rating of existing buildings, BPO & Hospitals
- Renewable Energy (Solar) Power projects
- Total Energy Management solution, DPR for Biomass, Co-generation, & WHRS projects
- PAT Consultancy, Mandatory Energy Audit under PAT *
- Investment Grade Energy Audit of commercial buildings

PGSEPL STUDY TEAM

Green and Energy Audit team participated in study

1. Er. Pradeep Dhingra – AEA
2. Dr. Balkar Singh – CEA
3. Mr. Manish Mishra – CEA
4. Mr. Upkar Rathore – Asst. Manager
5. Er. Ratnesh Kumar - Engineer
6. Er. Arjun Kumar - Engineer

AEA Certificate

BUREAU OF ENERGY EFFICIENCY

Examination Registration No. : EA-5927

Accreditation Registration No.: AEA-8191

Certificate of Accreditation

This is to certify that Mr./Ms. Pradeep Dhingra having its trade/registered office at Chandigarh has been given accreditation as accredited energy auditor. The certificate shall be effective from 9th day of October 2014

The certificate is subject to the provisions of the Bureau of Energy Efficiency (Qualifications for Accredited Energy Auditors and Maintenance of their List) Regulations, 2010.

This certificate shall be valid until it is cancelled under regulation 9 of the Bureau of Energy Efficiency (Qualifications for Accredited Energy Auditors and Maintenance of their List) Regulations, 2010

On cancellation, the certificate of accreditation shall be surrendered to the Bureau within fifteen days from the date of receipt of order of cancellation.

Your name has been entered at AEA No. 8191 in the register of list of accredited energy auditors. Your name shall be liable to be struck out on the grounds specified in regulation 8 of the Bureau of Energy Efficiency (Qualifications for Accredited Energy Auditors and Maintenance of their List) Regulations, 2010.

Given under the seal of the Bureau of Energy Efficiency, Ministry of Power, this 16th day of January 2015

Secretary,
Bureau of Energy Efficiency
New Delhi

BACKGROUND & SUMMARY

The building sector in India is growing at a rapid pace and now there is an imminent need to introduce green concepts and techniques in this sector, which can aid growth in a sustainable manner. The green concepts and techniques in the building sector can help address issues like water efficiency, energy efficiency, reduction in fossil fuel use for commuting etc. Most importantly, these concepts can enhance occupant health, productivity and well-being.

IGBC's GRIHA rating system takes into account the provisions of the National Building Code 2005; the Energy Conservation Building Code 2007 announced by BEE (Bureau of Energy Efficiency) and other IS codes and evaluate the environmental performance of a building holistically over its entire life cycle, thereby providing a definitive standard for what constitutes a 'green building'.

To comply with GRIHA criterions and ECBC building norms, Green & Energy Audit is an essential step towards energy management, includes assessment of current energy performance and evaluation of energy performance index of the building.

In this view to assess the environmental impact & building energy & water usage **I.B. College, Panipat** has awarded the job of "**Green & Energy Audit of I.B. College, Panipat at G.T. Road Panipat, Haryana-132103**" to PGS Energy Services Pvt. Ltd. on as per actual year thought the competitive bidding process as per procedure in vogue.

- **I.B. College, Panipat Facility**

I.B. College, Panipat is a premier co-educational institution in Haryana. It was founded in 1956 in the memory of the well-wisher of Leiah Biradari Late Sh. Inder Bhan Dhingra. Keeping in view the requirement of education for women, Late Seth Brij Lal Dhingra with the help of his energetic friends Late Sh. Shanu Lal Narang & Late Sh. Sukh Dayal Sachdeva, founded this College for women only. In 1966, the College started working as a co-educational institute. The College progressed by leaps and bounds under the leadership of Late Dr. Somnath Dhingra and Late Sh. Ram Kishan Gandhir who worked in the capacity of erstwhile President & Vice President respectively.

At present, it has a student strength of more than 3000, with 126 teaching staff and more than 90 non-teaching staff members. The College has the honour to own a sprawling campus with well-ventilated classrooms, fully-equipped science labs, computer labs and

spacious AC seminar hall. In the pursuit for excellence, the College is constantly upgrading its infrastructure and in the same direction, construction of a new and modern science block is in full swing. The College has steadily built up over the past six decades, maintaining high traditions of scholastic excellence along with the culture of discipline and social service. The overall goal is to prepare the students to play roles in the society with responsibility and commitment.

Electrical power: The establishment has a 0.4 KV H.T. connection from Uttar Haryana Bijli Vitran Nigam limited. The contract demand/Electrical load of the unit is 450kW. The campus has Solar SPV of capacity 50 kWp and a backup of two Diesel Generators of 125 kVA & 70 kVA.

Building Area: The College have 5 blocks inside the campus including Commerce block, Arts block, BBA/BCA block, Girls wing block and Science block with a small garden at the center of the campus. The built-up area details are as below:

SN	Block	No of floors x floor area (sq. ft)	Block built up area (m^2)
1	Commerce block	3 floors x 21033 sq. ft	1954 m^2
2	Arts block	3 floors x 6279 sq. ft	583 m^2
3	BBA/BCA block	3 floors x 5446 sq. ft	506 m^2
4	Girls wing block	4 floors x 4128 sq. ft	385 m^2
5	Science block	5 floors x 11412 sq. ft	1060 m^2
	TOTAL	**Floor area: 173194 sq. ft.**	**Built up area: 4488 m^2**

Critical Comments

1.) The I.B. College, Panipat has contracted load 450 kW and there are 2 Nos. Transformer as 1X250 KVA and 1X 63KVA transformer. During audit, load at 2nd Transformer 63KVA was very low.

2.) The transformer has total harmonics distortion Thdv 2.5% and Thdi 12.4 % Which are within the limits.

3.) In the institute solar is grid connected and the capacity of solar is 50 kWp.

4.) The energy consumption of all utilities has been taken into consideration for EPI analysis since it is the total consumption of DG and EB power.

5.) DG sets are used for only during emergency and grid power shut-off. A trail run was made during data collection and the performance evaluation is presented.

6.) We checked ACs which are inefficient and operating at Low efficiency which leads to high power consumption. It is suggested to replace with BEE 5-star models.

7.) Water audit is also done and its consumption and recycle details also mentioned in the report.

8.) College authorities maintained Solid & E waste management and the details are mentioned in the report.

9.) In lighting section, ILER is calculated and recommended to replace CFL and tube light with LED lights.

10.) The Institute have Energy Performance Index (EPI) unit as below:

Particulars	EPI (kWh/annum/m²)
As per EB bill + DG power + Solar	24.66 kWh/annum/m²

Table 32.1 Green & Energy Audit data

A. Energy Consumption			
SN	Item		Value
1	Name of the building	I.B. (PG) College, G.T. Road, Panipat, Haryana	
2	Type of building (office, institution, hotel, hospital, and so on)	Institution	
3	Working hours(day working/24hour working)	8	
4	Working days/week (5/6/7 days per week)	6	
5	Area of the building (exclude parking, lawn, roads, and so on)	1. Built Up Area (m²) (Excluding Basement Area)	4488
		2. Conditioned Area (in m²)	1379
		3. Conditioned Area (as % of Built-Up Area)	15.6
6	Connected Load(kW) or Contract Demand(kVA)	450 kW	
7	Installed capacity of DG/GG sets (kVA or kW)	No.	2
		Capacity	125+70 kVA
8	Installed capacity of Transformers (kVA)	No.	2
		Capacity	250+50 kVA
9	Installed capacity of Air Conditioning system (TR)		22.5
10	Installed Lighting load (kW)		20
11	a) Annual Electricity consumption, purchased from utilities (kWh)		105689
	b) Annual Electricity consumption, through diesel generating (DG)/ gas generating (GG) sets (kWh)		4988
	c) Total annual Electricity consumption, utilities + DG/GG sets (kWh)		110677
12	a) Energy consumption for lighting (kWh) (data collected from indoor lighting sub meter)		42824
	b) Energy consumption for HVAC (kWh)	• HVAC plant/AC units (Data collected from HVAC sub meter/ AC unit)	85506.24
		• AHU fans (Data collected from AHU fans sub meter)	N/A
13	HSD (or any other fuel oil used, specify)/ gas consumption in DG/GG sets (litres/cu metres) in the year		2371
14	Fuel (FO, LDO, LPG, NG) used for generating steam/water heating in the year (in appropriate units)		NA
15	**EPI (Energy Performance Index) Energy includes electricity purchased and generated (excluding electricity generated from onsite renewable resources)**	**kWh/m²/year**	**24.66**

1. METHODOLOGY OF STUDY

During the course of the audit, we followed the standard methodology and procedures as prescribed by Bureau of Energy Efficiency (BEE) and as per the requirements of GRIHA. The basic approach followed during the audit was first to establish a rapport with the management of I.B. College, Panipat by giving them information the basic purpose of the audit and then gathering the requisite information and verifying the information provided in a systematic manner with the cooperation and support of staff as well as independent evaluation by the audit team wherever needed and feasible. The audit and preparation of report was done in an atmosphere of mutual exchange of information and ideas and mutual concurrence on the substance of final report. During the audit there was continual interaction between the staff and audit team on the various aspects of operation, equipment, maintenance and possible outcomes. This was done to ensure that any setup made regarding energy conservation and environmental benefit are as realistic and practical as possible and can be implemented with minimum disruptions to existing eco-system in a cost-effective manner within a reasonable time-frame.

The main basic steps followed during the course of the audit are as follows:

- Fixing dates for site visit and chalking out other details
- Discussions with management and staff about data collection as per scope of work
- Visit to utility & building area for collection & recording of energy data with calibrated instruments.
- Identification and study of the major energy equipment.
- Preparation of the draft audit & validation report.
- Presentation of the draft report and discussions with College management for their acceptance of the report.
- Preparation of final report with any changes if necessary and submission of report.

• Instruments used for the study

The specialized measuring instruments that were used to support the audit investigations and analysis are listed below:

- Krykard Power Analyzers – 3 Phase & Single Phase
- Lux Meter
- Hygrometer
- Anemometer

Instruments Used

Figure 1: Instruments used

Electrical Measuring Instruments:

These are instruments for measuring major electrical parameters such as kVA, kW, PF, Hertz, kVAr, Amps and Volts. In addition some of these instruments also measure harmonics.

Infrared Thermometer:

This is a non-contact type measurement which when directed at a heat source directly gives the temperature read out. This instrument is useful for measuring hot spots in furnaces, surface temperatures etc

Lux meters:

Illumination levels are measured with a lux meter. It consists of a photo cell which senses the light output, converts to electrical impulses which are calibrated as lux.

Speed Measurements:

In any audit exercise speed measurements are critical as they may change with frequency, belt slip and loading.

A simple tachometer is a contact type instrument which can be used where direct access is possible.

Building Energy Bill Analysis

Auditors collected the energy bills of previous years and the details have been presented below:

Table 1: Building Energy Bill Analysis

Electricity Bill IB Collage Panipat - 2022-23										
S.No	Month	Account No; 5173940000					Account No; 3566221023			
		kWh	kVAh	PF	SD (kVA)	MD1 (kVA)	Solar Generated kWh	Grid kWh	Total kWh	SD (kW)
1	May-22	11336	11338	1.0	150	70.92	4880	0	4880	49.90
2	Jun-22	11548	11546	1.0	150	75.80	3660	1358	5018	49.90
3	Jul-22	10326	10324	1.0	150	82.80	5660	3402	9062	49.90
4	Aug-22	8922	8924	1.0	150	56.28	5380	1380	6760	49.90
5	Sep-22	11150	11150	1.0	150	92.52	7280	3000	10280	49.90
6	Oct-22	8494	8494	1.0	150	118.16	5140	540	5680	49.90
7	Nov-22	4800	4800	1.0	150	33.60	2380	120	2500	49.90
8	Dec-22	4518	4520	1.0	150	24.08	3940	1440	5380	49.90
9	Jan-23	3758	3758	1.0	150	21.40	4060	100	4160	49.90
10	Feb-23	3992	3992	1.0	150	16.80	4220	-1040	3180	49.90
11	Mar-23	4040	4038	1.0	150	29.60	6580	0	6580	49.90
12	Apr-23	10818	10818	1.0	150	0.00	3800	647	4447	49.90

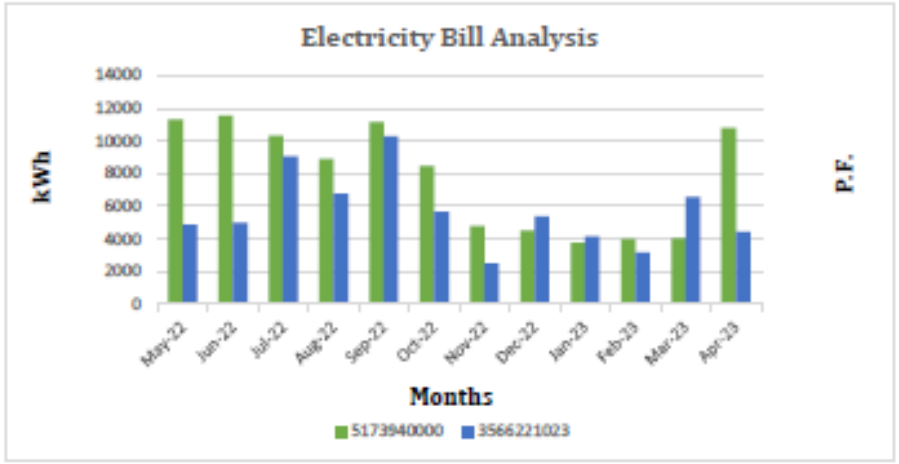


Figure 2: Electricity Bill Analysis (kVAh vs Months)

2. ELECTRICAL SUPPLY AND DISTRIBUTION SYSTEM

• Transformer

IB collage has 0.40 kV LT connection with 1 no. 250 kVA and 1 no. 200 kVA transformer, both the transformers were energized at a time and share load simultaneously. Auditors have recorded the data of both the transformers and the details have been presented in enclosed annexures and observations have been mentioned below:

S. No.		1	2
Tag No.		TR - 1	TR – 2
Rated Parameter			
Spec.		LT Side	LT Side
Supply Voltage (kV)		0.40	0.40
Rating		250	63
Hz		50.00	50.00
Measured Parameter			
Voltage	RY	388.5	390.2
	YB	382.0	393.4
	BR	386.7	389.6
THDv (%)	R	2.7	2.5
	Y	2.9	2.2
	B	2.9	2.1
Current	R	412.3	12.7
	Y	301.6	10.2
	B	264.2	33.2
THDi (%)	R	10.6	25.9
	Y	8.5	30.7
	B	15.8	12.4
Hz		49.96	49.99
Power Factor		0.981	0.922
Measured kW		213.7	11.7
Measured kVA		217.8	12.7
MWh in 24 Hrs		5.13	0.28
Loading (%)		87.1	20.1

Risk and Sensitivity Analysis

Auditing Team inspected Fire Sensors, Water Sprayers and Fire alarm which were working satisfactorily and also inspected cables which were found to be of appropriate size. No abrupt heating of cables was observed. The PVC coatings/insulation of the connecting wires of Sub-station panels were satisfactory.

• Diesel Generator System

During Audit, it was observed that only one DG set was in operation and the others were on standby mode. The previous one-year data for all the two units - energy generation and fuel consumption are as below:

SN	DG Number and Location	RATING (in KVA)	Total DG kWh generation 23-24	Total Diesel Consumption (in ltr.) 23-24
1	DG-1	125	4988	2371
2	DG-2	70		
	Total	**195**	**4988**	**2371**

Analysis of DG set were audited by performing 15-min trail run of both units. The analysis is as below:

DG Set – 1 (125 kVA)		
Particulars	**Unit**	**DG Set**
Fuel Consumed during the test period of one hour	Lts	10.5
Power Generated during the test period of one hour	KWh	23.7
Load variations on the DG Set	KVA	19.9 to 26.4
DG Loading (%)	%	17 to 23%
Specific Power Generation	**KWh/ ltr**	**2.26**
Fuel Rate	Rs/ Ltr	89.5
Basic Power Generation Cost	Rs per Kwh	39.65

DG Set – 1 (70 kVA)		
Particulars	**Unit**	**DG Set**
Fuel Consumed during the test period of one hour	Lts	10
Power Generated during the test period of one hour	KWh	19.5
Load variations on the DG Set	KVA	21.5 to 24.6
DG Loading (%)	%	33 to 37%
Specific Power Generation	**KWh/ ltr**	**1.95**
Fuel Rate	Rs/ Ltr	89.5
Basic Power Generation Cost	Rs per Kwh	45.90

3

3. ELECTRICAL UTILITY LOAD

Pumps

S. No.	Equipment Name	Rated	Voltage	THDv %	Hz	Current	THDi %	P.F.	Measured kW	Measured kVA	(%) Loading	kWh/year
1	Water Pump - 1	3.7	388.6	1.8	50.00	9.7	5.2	0.797	5.20	6.53	128%	5432.27
2	Water Pump - 2	3.7	376.5	3.0	49.96	11.8	5.1	0.675	5.19	7.69	128%	5422.49
3	Water Pump - 3	3.7	387.9	3.6	49.98	8.6	4.6	0.701	4.05	5.78	100%	4228.48
	Total	**11.2**							**14.45**			**15083.2**

Motors

S. No.	Equipment Name	Rated	Voltage	THDv %	Hz	Current	THDi %	P.F.	Measured kW	Measured kVA	(%) Loading	kWh/year
1	Lift - 1	4.1	393.3	2.1	50.03	5.0	14.5	0.582	1.98	3.41	44%	2069.5
2	Lift - 2	4.1	394.5	2.5	50.02	4.9	20.3	0.578	1.94	3.35	43%	2020.32
	Total	**8.2**							**3.9**			**4089.82**

Water Cooler

S. No.	Equipment Name	Voltage	THDv %	Hz	Current	THDi %	P.F.	Measured kW	Measured kVA	kWh/year
1	Water Cooler – 1	223.1	3.4	49.99	2.3	11.1	0.815	0.4	0.5	284.377
2	Water Cooler – 2	213.6	4.5	49.93	1.8	9.9	0.812	0.3	0.4	212.294
3	Water Cooler – 3	221.7	3.2	49.96	2.1	10.9	0.811	0.4	0.5	256.753
4	Water Cooler – 4	220.9	4.1	49.98	2.4	9.8	0.816	0.4	0.5	294.175
5	Water Cooler – 5	219.8	3.7	49.97	1.9	10.3	0.811	0.3	0.4	230.309
6	Water Cooler – 6	214.6	3.6	49.99	2.2	10.2	0.814	0.4	0.5	261.328
7	Water Cooler – 7	215.4	3.3	49.98	2.3	10.1	0.812	0.4	0.5	273.551
8	Water Cooler – 8	217.6	3.4	49.97	2.1	10.5	0.809	0.4	0.5	251.383
9	Water Cooler – 9	218.4	4.1	49.96	2.0	9.4	0.810	0.4	0.4	240.589
	Total							**3.4**		**2304.76**

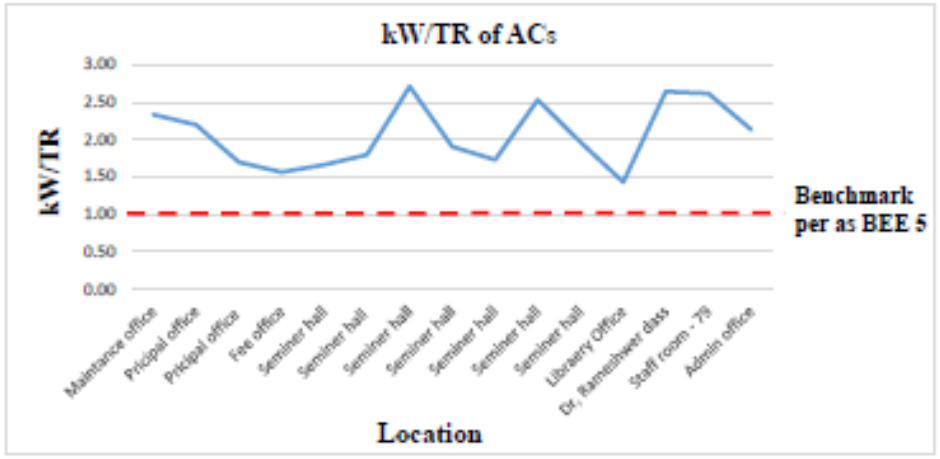
Refrigerator

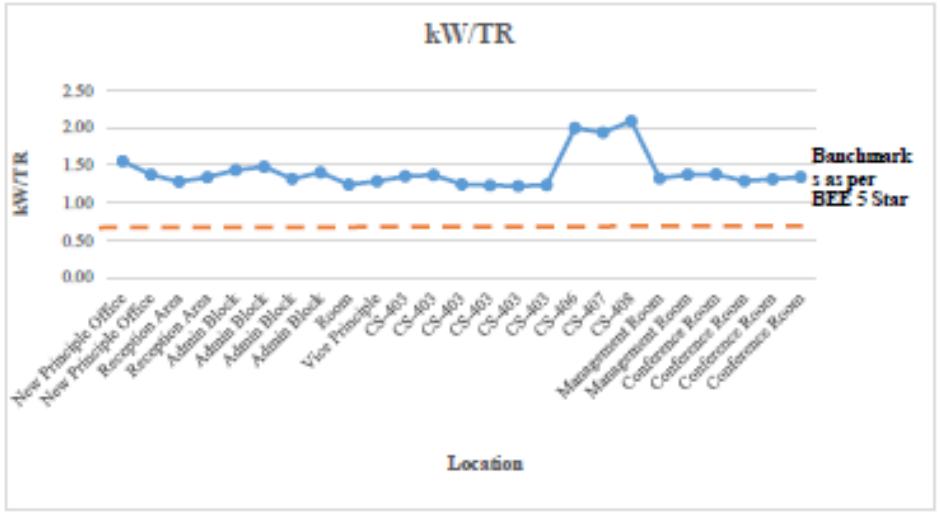
S. No.	Equipment Name	Voltage	THDv %	Hz	Current	THDI %	P.F.	Measured Wattage	Measured kVA	kWh/year
1	Refrigerator - 1	221.8	3.8	49.96	0.8	7.3	0.613	0.1	0.2	227.11
2	Refrigerator - 2	221.5	4.0	50.00	0.9	9.6	0.709	0.1	0.2	295.12
3	Refrigerator - 3	222.3	3.9	49.99	1.1	7.6	0.643	0.2	0.2	328.30
4	Refrigerator - 4	221.5	3.8	49.96	0.9	7.4	0.712	0.1	0.2	296.36
5	Refrigerator - 5	221.7	3.7	49.97	0.7	7.7	0.724	0.1	0.2	234.60
6	Refrigerator - 6	221.4	4.1	49.99	0.8	8.1	0.637	0.1	0.2	235.58
7	**Total**							**0.8**		**1617.078**

Air Condition System

S.N.	Location	Rated Tonnage	Measured kW	PF	Measured Tonnage	kW/TR	EER	Star Rating	kWh/Year
1	Maintenance office	1.5	1.73	0.85	0.74	2.34	1.51	Non star	2356.52
2	Old Principal office	1.5	1.88	0.83	0.86	2.20	1.60	Non star	2555.84
3	Principal office	1.5	1.46	0.97	0.86	1.70	2.07	3 star	1986.42
4	Fee office	1.5	1.29	0.99	0.83	1.56	2.25	5 star	1757.77
5	Seminar hall	1.5	1.58	0.93	0.95	1.66	2.11	Non star	2148.87
6	Seminar hall	1.5	1.58	0.99	0.88	1.80	1.96	Non star	2145.99
7	Seminar hall	1.5	2.13	0.95	0.79	2.71	1.30	Non star	2894.03
8	Seminar hall	1.5	1.89	0.99	0.99	1.91	1.84	Non star	2568.45
9	Seminar hall	1.5	1.72	0.78	0.99	1.73	2.03	Non star	2334.21
10	Seminar hall	1.5	2.05	0.91	0.81	2.53	1.39	Non star	2792.42
11	Seminar hall	1.5	1.79	0.81	0.91	1.97	1.79	Non star	2439.5
12	Library Office	1.5	1.22	0.90	0.85	1.43	2.45	Non star	1655.65
13	Dr, Rameshwar dass	1.5	1.11	0.73	0.42	2.64	1.33	2 star	1506.95
14	Staff room - 79	1.5	1.22	0.91	0.47	2.62	1.34	3 star	1662.88
15	Admin office	1.5	1.12	0.92	0.52	2.13	1.65	5 star	1516.66
1	New Principal Office	1.5	1.29	0.98	0.84	1.55	2.28	2 Star	1760.72

S.N.	Location	Rated Tonnage	Measured kW	PF	Measured Tonnage	kW/TR	EER	Star Rating	kWh/Year
2	New Principal Office	1.5	1.33	0.98	0.97	1.37	2.57	2 Star	1812.19
3	Reception Area	1.5	1.26	0.97	0.98	1.28	2.77	2 Star	1707.02
4	Reception Area	1.5	1.36	0.98	1.01	1.34	2.64	2 Star	1846.03
5	Admin Block	1.5	1.29	0.97	0.90	1.43	2.47	2 Star	1760.90
6	Admin Block	1.5	1.33	0.95	0.90	1.48	2.39	2 Star	1812.68
7	Admin Block	1.5	1.41	0.97	1.07	1.32	2.68	2 Star	1911.52
8	Admin Block	1.5	1.37	0.96	0.98	1.40	2.52	2 Star	1860.17
9	Room	1.5	1.21	0.92	0.98	1.24	2.85	3 Star	1647.33
10	Vice Principle	1.5	1.27	0.96	0.99	1.28	2.75	3 Star	1726.53
11	CS-403	1.5	1.36	0.98	1.00	1.35	2.61	2 Star	1847.15
12	CS-403	1.5	1.41	0.97	1.03	1.37	2.58	2 Star	1912.31
13	CS-403	1.5	1.33	0.96	1.07	1.24	2.84	3 Star	1811.72
14	CS-403	1.5	1.44	0.96	1.17	1.23	2.87	3 Star	1956.05
15	CS-403	1.5	1.46	0.97	1.20	1.22	2.90	3 Star	1991.46
16	CS-403	1.5	1.41	0.96	1.14	1.23	2.86	3 Star	1915.55
17	CS-406	2.0	1.95	0.97	0.98	1.99	1.77	Non-Star	2653.44
18	CS-407	2.0	1.96	0.98	1.01	1.94	1.82	Non-Star	2662.40
19	CS-408	2.0	2.02	0.98	0.97	2.09	1.69	Non-Star	2744.68
20	Management Room	1.5	1.43	0.97	1.08	1.32	2.67	2 Star	1943.91
21	Management Room	1.5	1.41	0.96	1.03	1.37	2.57	2 Star	1921.32
22	Conference Room	1.5	1.45	0.97	1.06	1.38	2.56	2 Star	1977.30
23	Conference Room	1.5	1.28	0.98	0.99	1.29	2.74	2 Star	1740.08
24	Conference Room	1.5	1.36	0.96	1.04	1.31	2.69	2 Star	1853.98
25	Conference Room	1.5	1.30	0.97	0.97	1.34	2.64	2 Star	1761.34
26	BS-304	2	1.96	0.97	0.91	2.17	1.63	Non-Star	2672.38
27	Examination Centre	1.5	1.45	0.97	1.09	1.33	2.65	3 Star	1973.92
	Total		**62.88**						**85506.24**





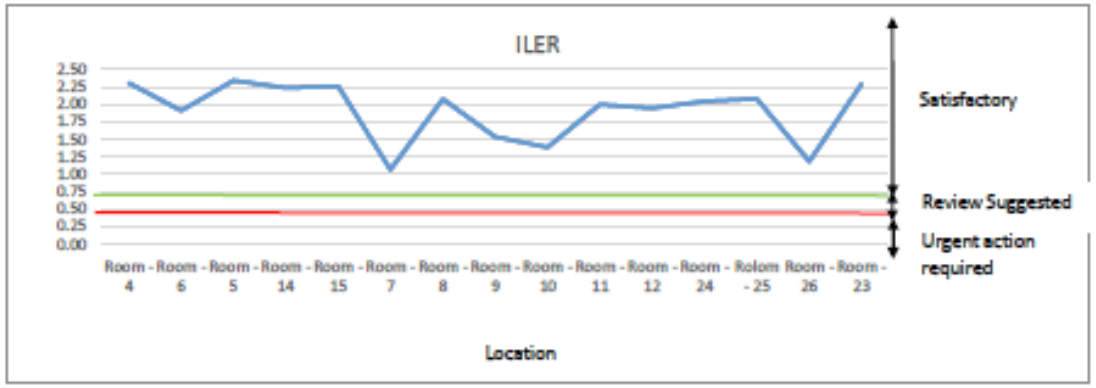
Green & Energy Audit – I.B. COLLEGE, PANIPAT

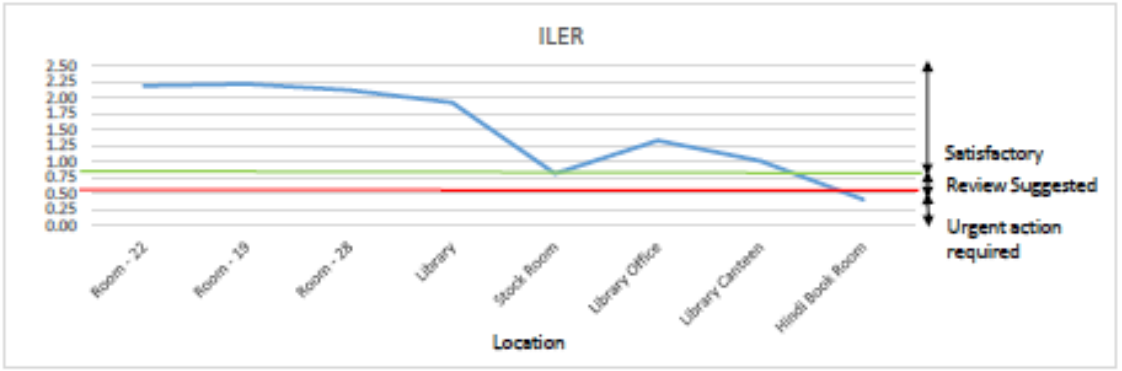
Lighting System

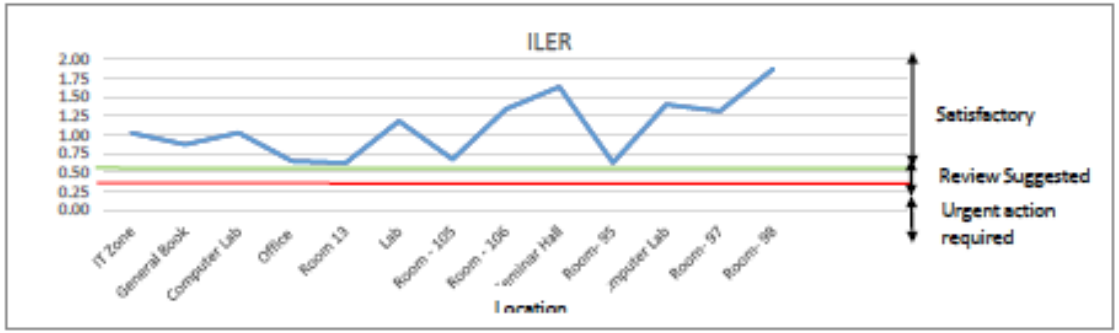
- Commerce Block

S. No.	Location	No. of Luminaries	Wattage	Avg. Lux	Lux/W /sq.m	ILER	kWh/year
1	Room - 4	Led (18W*2)	36	208.0	83.05	2.31	75.17
2	Room - 6	T.B (36W*3)	108	218.0	82.15	1.91	225.50
3	Room - 5	Led (18W*2), T.B (36W*1)	72	155.0	100.71	2.34	150.34
4	Room - 14	Led (18W*4)	72	160.0	96.19	2.24	150.34
5	Room -15	Led (18W*3), T.B (36W*1)	90	184.0	97.21	2.26	187.92
6	Room - 7	T.B (36W*4)	144	101.0	45.78	1.06	300.67
7	Room - 8	Led (18W*4)	72	188.0	83.07	2.08	150.34
8	Room - 9	Led (18W*2), T.B (36W*2)	108	110.0	65.98	1.53	225.50
9	Room - 10	Led (18W*3), T.B (36W*1)	126	115.0	59.49	1.38	263.09
10	Room - 11	Led (18W*1), T.B (36W*3)	126	158.0	91.97	2.00	263.09
11	Room - 12	Led (18W*3), T.B (36W*1)	90	152.0	83.70	1.95	187.92
12	Room - 24	T.B (36W*3)	108	197.0	81.81	2.05	225.50
13	Room - 25	Led (18W*2), T.B (36W*2)	108	203.0	89.46	2.08	225.50
14	Room - 26	T.B (36W*3)	108	125.0	54.33	1.18	225.50
15	Room - 23	Led (18W*1), T.B (36W*2)	90	193.0	91.69	2.29	187.92
16	Room - 22	Led (18W*1), T.B (36W*2)	90	173.0	94.17	2.19	187.92
17	Room - 19	Led (18W*1), T.B (36W*1)	54	144.0	102.08	2.22	112.75
18	Room - 28	Led (18W*3), T.B (36W*1)	90	166.0	97.52	2.12	187.92
19	Library	Led (18W*24), T.B (36W*9)	756	658.0	92.50	1.93	1578.53
20	Stock Room	Led (18W*15), Halogen (100W*2)	470	296.0	37.45	0.81	981.36
21	Library Office	Led (36W*4)	144	519.0	48.00	1.33	300.67
22	Library Canteen	Led (18W*2), T.B (36W*3)	144	245.0	36.43	1.01	300.67
23	Hindi Book Room	T.B (36W*2)	72	145.0	14.66	0.41	150.34

24	IT Zone	Led (18W*2)	36	178.0	36.88	1.02	75.17
25	General Book	Led (18W*3)	54	215.0	31.35	0.87	112.75
26	Computer Lab	Led (18W*3), T.B (36W*7)	306	130.0	47.25	1.03	638.93
27	Office	Led (18W*4), T.B (36W*1)	108	242.0	23.47	0.65	225.50
28	Room 13	T.B (36W*6)	216	125.0	26.87	0.62	451.01
29	Lab	Led (18W*6), T.B (36W*5)	288	168.0	56.74	1.18	601.34
30	Room - 105	T.B (36W*2)	72	115.0	24.35	0.68	150.34
31	Room - 106	Led (18W*1), T.B (36W*3)	126	185.0	61.65	1.34	263.09
32	Seminar Hall	CFL (15W*18), LED (36W*8), Halogen (50W*2), CFL (36W*17)	1270	469.0	85.25	1.64	2651.76
33	Room- 95	Bulb (100W*1)	100	185.0	25.22	0.63	208.80
34	Computer Lab	Led (18W*6), T.B (36W*2)	180	165.0	64.47	1.40	375.84
35	Room- 97	Led (18W*1), T.B (36W*2), CFL (9W*1)	99	88.0	60.42	1.31	206.71
36	Room- 98	Led (18W*1), T.B (36W*2)	90	112.0	80.73	1.88	187.92
	Total		**6223**				**12993.62**



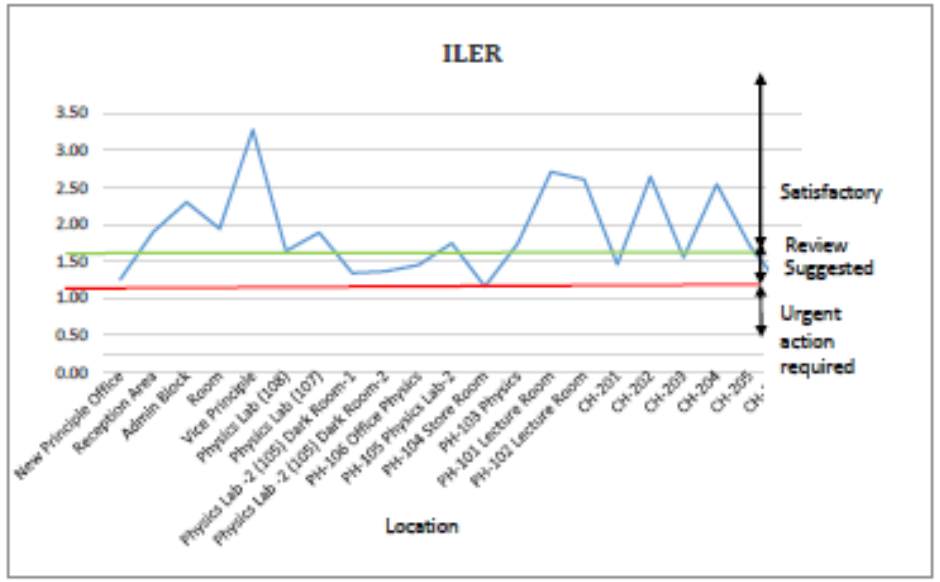


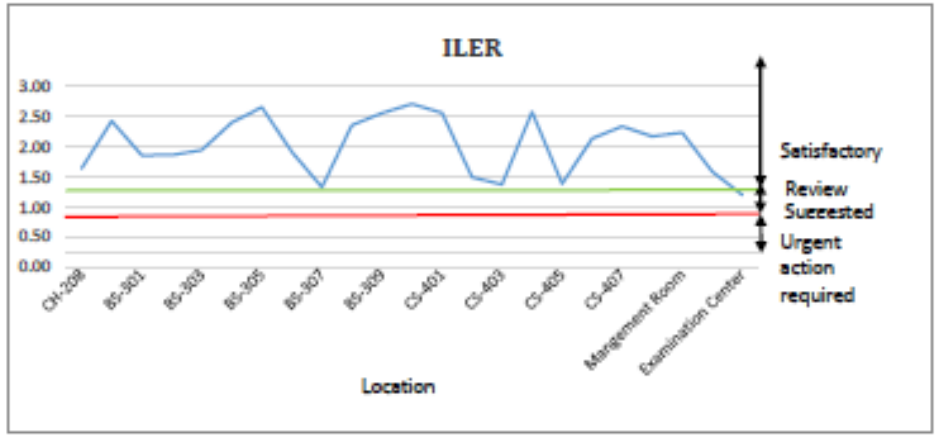


- Science Block

S. No.	Location	No. of Luminaries	Wattage	Avg. Lux	Lux/W/sq.m	ILER	kWh/Year
1	New Principal Office	Led (19*15w)	285	250	60.35	1.26	595.07
2	Reception Area	Led (18*15w)	270	295	91.25	1.90	563.75
3	Admin Block	Led (16*15w)	240	225	115.00	2.30	501.11
4	Room	Led (4*15w)	60	261	77.69	1.94	125.28
5	Vice Principle	Led (3*15w)	45	202	141.01	3.28	93.96
6	Physics Lab (108)	Led(6*36w)	216	199	82.09	1.64	451.00
7	Physics Lab (107)	Led(6*36w)	216	222	90.65	1.89	451.00
8	Physics Lab -2 (105) Dark Room-1	Led(4*36w)	144	249	61.82	1.34	300.67
9	Physics Lab -2 (105) Dark Room-2	Led(4*36w)	144	267	54.54	1.36	300.67
10	PH-106 Office Physics	Led(4*36w)	144	316	62.38	1.45	300.67
11	PH-105 Physics Lab-2	Led(6*36w)	216	210	83.84	1.75	451.00
12	PH-104 Store Room	Led(3*36w)	108	227	46.45	1.16	225.50
13	PH-103 Physics	Led(4*36w)	144	250	75.00	1.74	300.67
14	PH-101 Lecture Room	Led(4*36w)	144	211	124.62	2.71	300.67
15	PH-102 Lecture Room	Led(4*36w)	144	203	119.90	2.61	300.67
16	CH-201	Led(4*36w)	144	218	62.74	1.46	300.67
17	CH-202	Led(4*36w)	144	206	121.67	2.64	300.67
18	CH-203	Led(3*36w)	108	233	62.13	1.55	225.50
19	CH-204	Led(4*36w)	144	198	116.94	2.54	300.67
20	CH-205	Led(10*36w)	360	265	85.46	1.71	751.67
21	CH-207	Led(5*36w)	180	275	48.66	1.13	375.83
22	CH-208	Led(10*36w)	360	255	82.24	1.64	751.67
23	CH-209	Led(6*36w)	216	265	121.46	2.43	451.00
24	BS-301	Led(4*36w)	144	214	85.60	1.86	300.67
25	BS-302	Led(4*36w)	144	239	85.72	1.86	300.67

S. No.	Location	No. of Luminaries	Wattage	Avg. Lux	Lux/W/sq.m	ILER	kWh/Year
26	BS-303	Led(4*36w)	144	226	89.40	1.94	300.67
27	BS-304	Led(6*36w)	216	214	115.29	2.40	451.00
28	BS-305	Led(6*36w)	216	245	132.71	2.65	451.00
29	BS-306	Led(4*36w)	144	227	88.12	1.92	300.67
30	BS-307	Led(4*36w)	144	216	61.20	1.33	300.67
31	BS-308	Led(5*36w)	180	241	108.45	2.36	375.83
32	BS-309	Led(2*36w)	72	184	117.71	2.56	150.33
33	BS-310	Led(5*36w)	180	277	124.65	2.71	375.83
34	CS-401	Led(9*36w)	324	215	128.12	2.56	676.50
35	CS-402	Led(9*36w)	324	262	59.80	1.50	676.50
36	CS-403	Led(9*36w)	324	241	55.01	1.38	676.50
37	CS-404	Led(4*36w)	144	185	123.59	2.57	300.67
38	CS-405	Led(9*36w)	324	292	66.65	1.39	676.50
39	CS-406	Led(4*36w)	144	243	98.28	2.14	300.67
40	CS-407	Led(4*36w)	144	266	107.58	2.34	300.67
41	CS-408	Led(4*36w)	144	247	99.90	2.17	300.67
42	Management Room	Led(3*36w)	108	195	102.80	2.23	225.50
43	Conference Hall	Led(8*36w)	288	224	79.47	1.59	601.34
44	Examination Center	Led(4*15w)	60	295	57.77	1.20	125.28
	Total		**8088**				**16887.50**

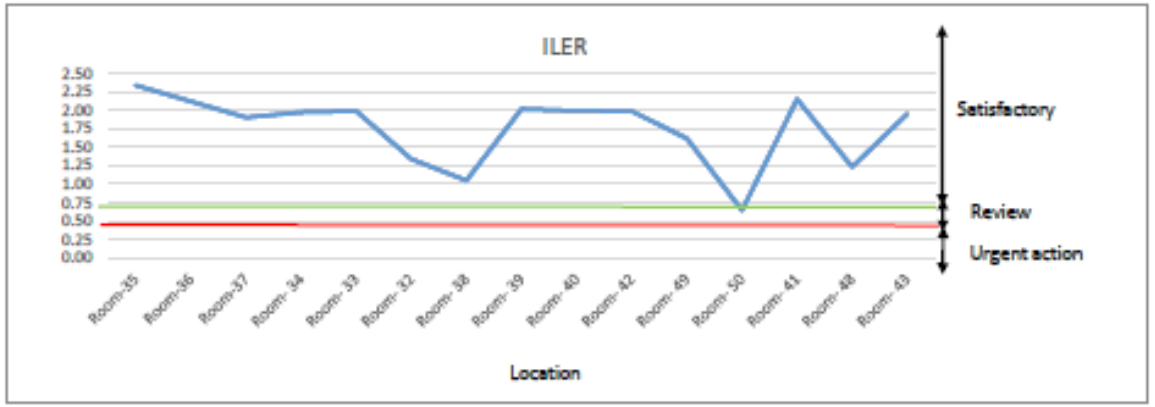


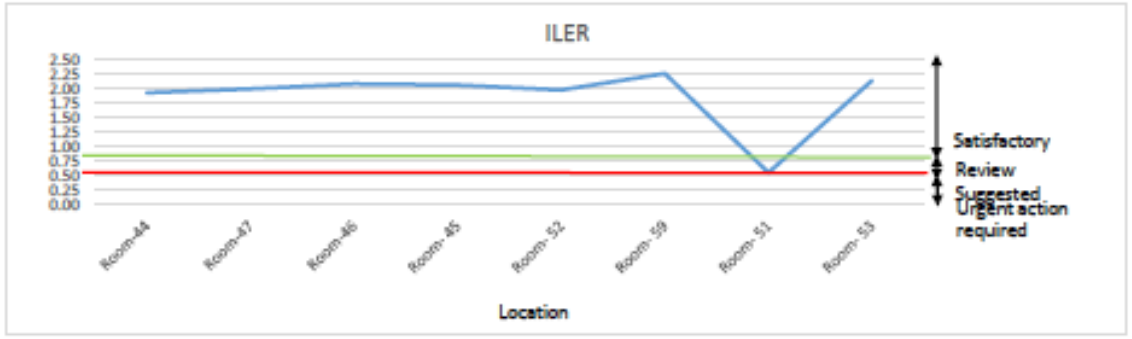


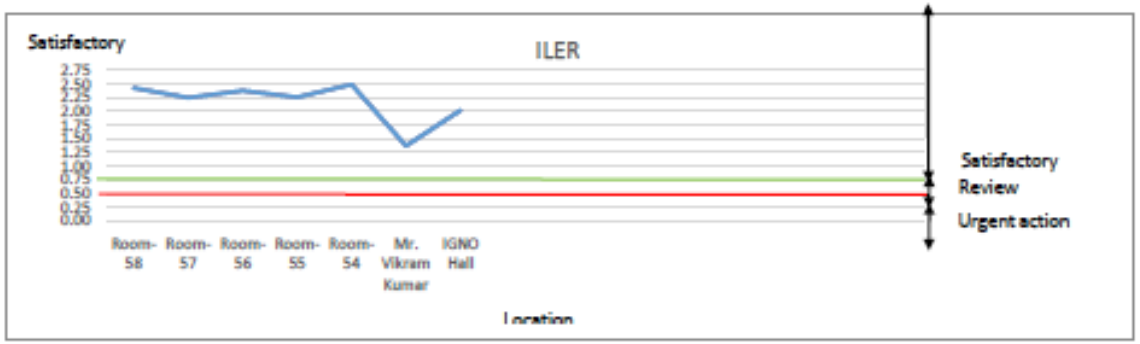
- Arts Block

S. No.	Location	No. of Luminaries	Wattage	Avg. Lux	Lux/W/sq.m	ILER	kWh/Year
1	Room-35	Led (18W*4)	72	195.0	107.68	2.34	152.64
2	Room-36	Led (18W*3), T.B (36W*1)	90	164.0	97.61	2.12	190.80
3	Room-37	Led (18W*3), T.B (36W*1)	90	147.0	87.60	1.90	190.80
4	Room- 34	Led (18W*4)	72	154.0	85.02	1.98	152.64
5	Room- 33	Led (18W*1), T.B (36W*1)	54	158.0	79.73	1.99	114.48
6	Room- 32	T.B (36W*2)	72	188.0	48.33	1.34	152.64
7	Room- 38	Led (18W*1), T.B (36W*2)	90	105.0	45.21	1.05	190.80
8	Room- 39	Led (18W*2)	36	152.0	72.73	2.02	76.32
9	Room- 40	Led (18W*2), CFL (9W*1)	45	214.0	71.83	2.00	95.40
10	Room- 42	Led (18W*3), T.B (36W*1)	90	185.0	79.67	1.99	190.80
11	Room- 49	CFL (18W*3)	54	101.0	64.86	1.62	114.48
12	Room- 50	Bulb (100W*1), T.B (36W*1)	136	210.0	23.26	0.65	288.32
13	Room- 41	Led (18W*2)	36	138.0	77.46	2.15	76.32
14	Room- 48	Bulb (100W*1), LED (18W*3)	154	240.0	49.48	1.24	326.48
15	Room- 43	Led (18W*3)	54	142.0	78.07	1.95	114.48
16	Room-44	Led (18W*4)	72	163.0	88.78	1.93	152.64
17	Room-47	Led (18W*4)	72	173.0	85.87	2.00	152.64
18	Room-46	Led (18W*3), T.B (36W*1)	90	167.0	95.71	2.08	190.80
19	Room- 45	Led (18W*4)	72	187.0	88.72	2.06	152.64
20	Room- 52	Led (18W*3)	54	164.0	79.12	1.98	114.48
21	Room- 59	Led (18W*3)	54	154.0	90.46	2.26	114.48
22	Room- 51	Bulb (100W*1), T.B (36W*1)	136	168.0	20.03	0.56	288.32
23	Room- 53	Led (18W*3)	54	185.0	85.61	2.14	114.48
24	Room- 58	Led (18W*3)	54	155.0	111.60	2.43	112.75
25	Room- 57	Led (18W*3)	54	173.0	89.96	2.25	112.75

S. No.	Location	No. of Luminaries	Wattage	Avg. Lux	Lux/W/sq.m	ILER	kWh/Year
26	Room- 56	Led (18W*3)	54	183.0	95.06	2.38	112.75
27	Room- 55	Led (18W*3)	54	175.0	90.22	2.26	112.75
28	Room- 54	Led (18W*3)	54	152.0	99.59	2.49	112.75
29	Mr. Vikram Kumar	Led (18W*2), T.B (36W*1)	72	207.0	49.34	1.37	150.34
30	IGNO Hall	Led (18W*8), Halogen (50W*2)	244	195.0	96.90	2.02	509.47
	Total		**2335**				**4931.45**

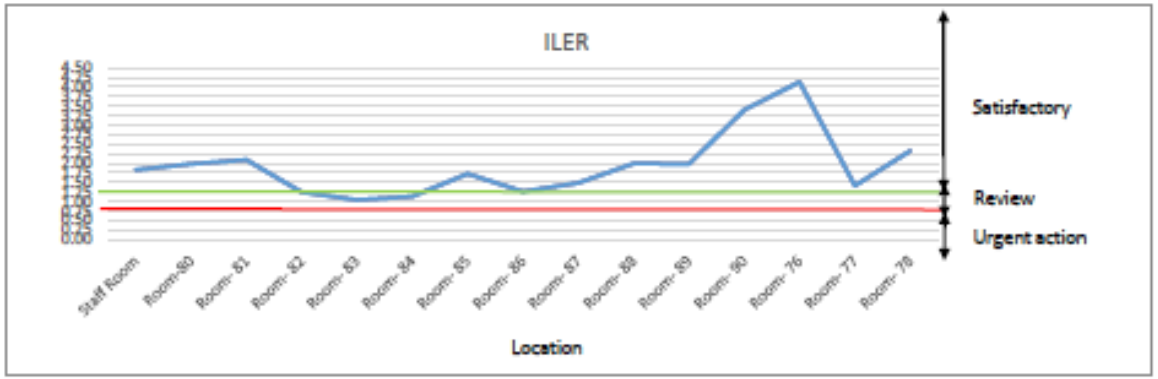






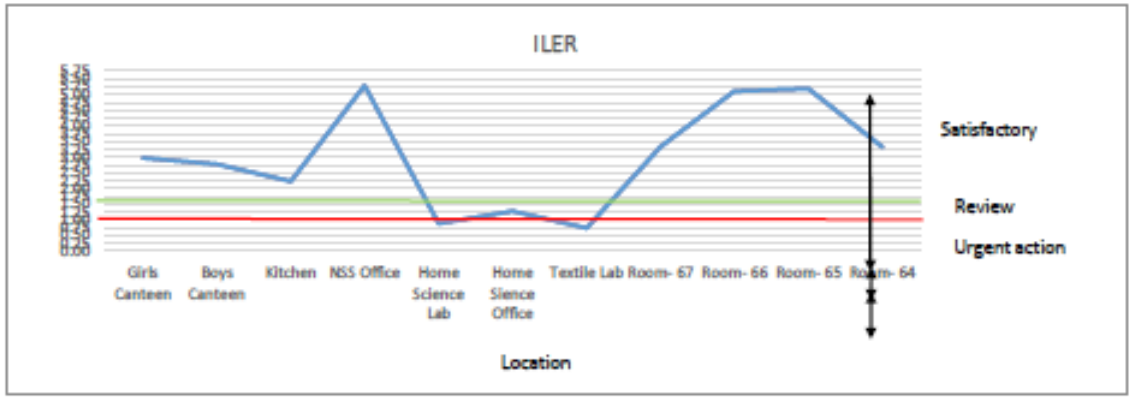
- **Girls Wing Block**

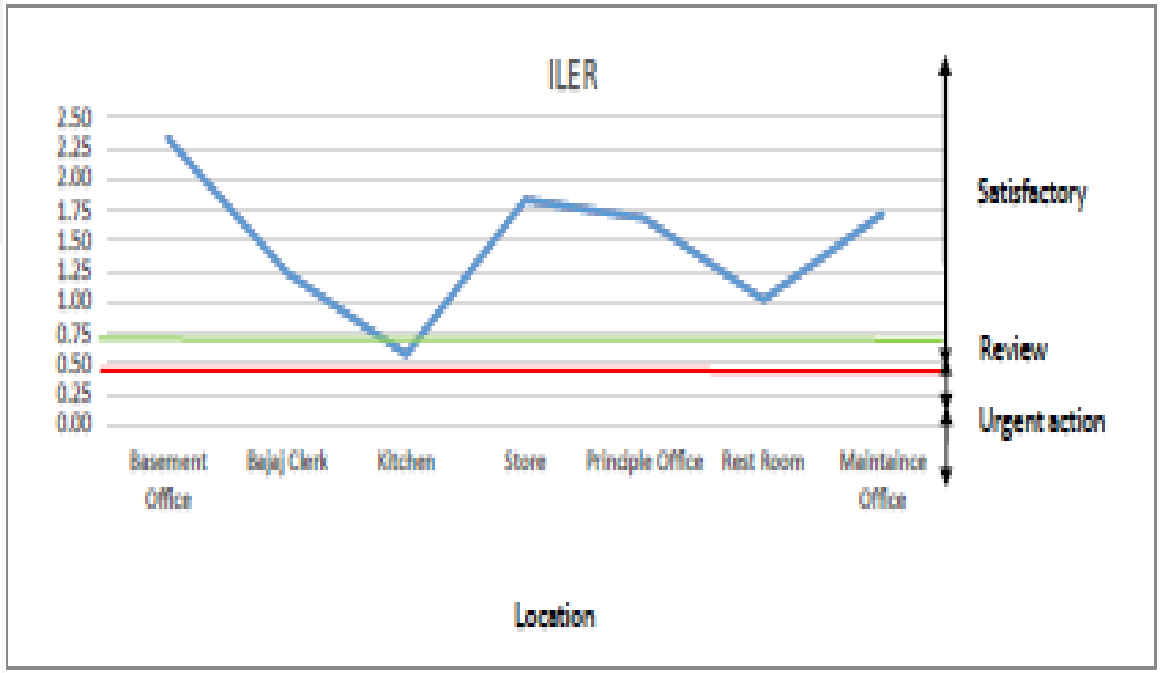
S. No.	Location	No. of Luminaries	Wattage	Avg. Lux	Lux/W/sq.m	ILER	kWh/Year
1	Staff Room	Led (36W*3), LED (18W*1), LED.B (9W*1)	135	248.0	73.07	1.83	281.88
2	Room-80	Led (18W*1)	18	133.0	71.39	1.98	37.58
3	Room- 81	Led (18W*1)	18	182.0	75.23	2.09	37.58
4	Room- 82	Led (36W*3)	108	165.0	49.74	1.24	225.50
5	Room- 83	Led (36W*4)	144	185.0	41.66	1.04	300.67
6	Room- 84	Led (36W*4)	144	180.0	40.76	1.13	300.67
7	Room- 85	Led (18W*3), T.B (36W*4)	198	239.0	79.50	1.73	413.42
8	Room- 86	Led (18W*3), LED (36W*4)	198	175.0	58.21	1.27	413.42
9	Room- 87	Led (18W*3), LED (36W*4)	198	205.0	68.19	1.48	413.42
10	Room- 88	Led (36W*4)	144	206.0	91.90	2.00	300.67
11	Room- 89	Led (18W*3), T.B (36W*4)	198	274.0	91.14	1.98	413.42
12	Room- 90	Led (18W*3), LED (36W*1)	90	214.0	156.60	3.40	187.92
13	Room- 76	Led (18W*2)	36	215.0	177.73	4.13	75.17
14	Room- 77	Led (18W*3), T.B (36W*6)	270	260.0	60.65	1.41	563.76
15	Room- 78	Led (18W*5), T.B (36W*1)	126	173.0	107.11	2.33	263.09
	Total		**2025**				**4228.20**



- **BBA, BCA, Canteen Block**

S. No.	Location	No. of Luminaries	Wattage	Avg. Lux	Lux/W/sq.m	ILER	kWh/Year
1	Girls Canteen	Led (18W*5)	90	120.0	142.60	2.97	187.92
2	Boys Canteen	Led (18W*6)	108	136.0	132.94	2.77	225.50
3	Kitchen	Led (18W*1), T.B (36W*1)	54	182.0	88.93	2.22	112.75
4	NSS Office	Led (18W*2), LED.B (9W*1)	45	233.0	227.25	5.28	93.96
5	Home Science Lab	T.B (36W*4), LED (18W*6), CFL (9W*1)	261	143.0	40.29	0.88	544.97
6	Home Sience Office	Led (18W*2)	36	191.0	45.84	1.27	75.17
7	Textile Lab	Led (18W*9), T.B (36W*9)	486	265.0	33.65	0.73	1014.77
8	Room- 67	Led (18W*3)	54	167.0	143.29	3.33	112.75
9	Room- 66	Led (18W*3)	54	265.0	204.18	5.10	112.75
10	Room- 65	Led (18W*3)	54	275.0	207.32	5.18	112.75
11	Room- 64	Led (18W*3)	54	170.0	132.85	3.32	112.75
	Total		**1296**				**2706.05**





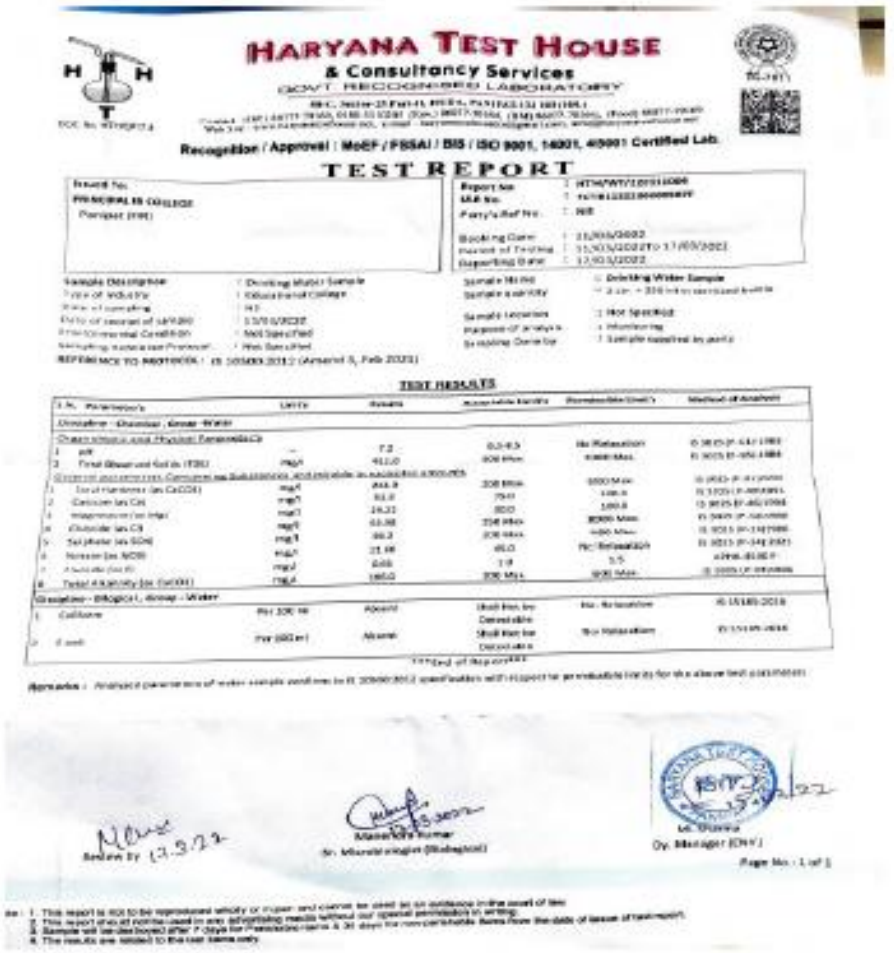
- **Principal Office**

S. No.	Location	No. of Luminaries	Wattage	Avg. Lux	Lux/W/sq.m	ILER	kWh/year
1	Basement Office	Led (18W*5), T.B (36W*1)	126	162.0	100.44	2.34	263.09
2	Bajaj Clerk	Led (18W*2)	36	190.0	44.67	1.24	75.17
3	Kitchen	T.B (36W*2)	72	175.0	20.57	0.57	150.34
4	Store	Led (18W*1), LED.B (9W*1)	27	185.0	66.04	1.83	56.38
5	Principle Office	Led (18W*6)	108	186.0	72.33	1.68	225.50
6	Rest Room	Led (18W*2), LED (15W*2), LED.B (9W*1)	75	225.0	36.69	1.02	156.60
7	Maintenance Office	Led (18W*2), T.B (36W*1)	72	230.0	61.84	1.72	150.34
	Total		**516**				**1077.41**

4 4. Water Audit

A. Water Audit				
S.N.	Item	Value		
1	What are the different sources of water supply to the building? Municipal Supply/ Ground Water/ Tanker	Ground Water		
2	Is there a raw water treatment plant on site?	Yes/ NO	NO	
3	Is there a wastewater treatment plant on site?	Yes/ NO	NO	
4	Provide water quality test reports for portable and treated water specifying the following parameters			
	Parameter	Acceptable limit	Drinking Water	Treated/ recycled water
	Total hardness (as CaCO3) (mg/litre)	200	248	
	Total dissolved solids (mg/litre)	Max. 100	412	
	Chlorides as chlorine (mg/litre)	250	63.98	
	Colour (hazen)	5		
	Turbidity (NTU)	1		
	Alkalinity (mg/l)	200	196	
	Calcium (as Ca), mg/litre	20-75	51.3	
	Boron (mg/litre)	<2	Not available	
	Sulphates (as SO4)(mg/litre)		46.2	
	Nitrates (as NO3) (mg/litre)		12.6	
	Conductivity at 25 °C (uS/cm)	<300	Not available	
	pH	6.5-8.5	7.2	
	Anionic (mg/litre) detergents as MBAS		Not available	
	Arsenic (mg/litre)		Not available	
	Iron (mg/litre)	1	Not available	
	Fluorides (mg/litre)		0.65	
	Cyanide (mg/litre)	Absent	Absent	
	Chromium (mg/litre)	Absent	Absent	
	Total Coli forms (CFU/100ml)	Absent	Absent	
	Escherichia coli (CGU/100ml)	Absent	Absent	
	Chemical Oxygen Demand (COD) (mg/L)	4.5		
	Biochemical Oxygen Demand (BOD) (mg/L)	Max. 30		
	Oil & Grease (mg/L)	0		
	Total Suspended Solids (TSS) (mg/L)	Max. 100		
	Total Coliform Bacteria (MPN/100ml)	<2 to 1600		

Test Report of Drinking Water



HARYANA TEST HOUSE
& Consultancy Services
GOVT RECOGNISED LABORATORY
Recognition / Approval : MoEF / PBSAI / BIS / ISO 9001, 14001, 45001 Certified Lab.

TEST REPORT

TEST RESULTS

Rain Water Harvesting structures inside the campus

The College campus have three pits of Rain Harvesting for Water conservation.

5 5. Solid Waste Audit

Solid Waste Audit			
S.N.	Item		
1	Total quantity of waste generated (kg/day)		8 KG
2	Are multi-coloured bins provided for waste segregation at source?	Yes/NO	Yes
3	Is there a provision of space for hygienic storage of segregated waste?	Yes/NO	Yes
4	If answered 'yes' for '3', please provided details for the storage space for the following type of waste:		
	1. Biodegradable	Yes- 13' x 13' x 4'	
	2. Recyclable	Lab – 23' x 23'	
	3. Inert and miscellaneous	10' x 8' x3'	
	4. Hazardous	NA	
5	Quantity of waste generated (Kg) This data should be collected for at least 2 representative days in a week.		
		Type of waste (Kg)	
a.	Biodegradable	3 Kg	
b.	Recyclable	2 Kg	
c.	Inert and miscellaneous	3 Kg	
d.	Hazardous	NA	
6	Is there a treatment plant for biodegradable waste?	Yes/NO	Yes
7	If answered 'yes' for '6' then provide the following details		
	1. Type of plant	Vermicompost Plant	
	2. Capacity	13' x 13' x 4'	
8	Provide a narrative (max. 250 words) on how each type of waste generated by the building is being weighed and disposed. Also specify procedure adopted for e-waste disposal	Type of Solid Waste generated: – Inside the campus, solid wastes are generated in the form of glass, polythene, thermacol, paper, food waste (peels of fruits & vegetables, left portion of food). These are segregated into a set of 3 dustbins. Dustbins sets: – Yellow - Only Paper Blue - Food waste - peels of fruits & vegetables, left portion of food. Red - Glass, polythene, thermocol Weight of waste generated per day: - Glass – 200 gm. Inert – 3kg. Polybags and poly cover – 1.5 kg. Thermacol – 1.3 kg. Paper – 2 kg. Eatables – 1 kg. Biodegradable & Recyclable – 5 kg. Leaves of plants – 2 kg. (Varies according to season) **Disposal of Waste:–** Polythene's , glass & thermacol are picked up by workers of Nagar Nigam, Panipat.	

		Paper waste is recycled and converted into paper pulp which is used to make different useful products (paper mould –Art) – sent to nearby paper plants Peels of fruits & vegetables are used to make bio enzyme. This bio enzyme is used as a fertilizer. Different types of bio enzymes are prepared like orange bio enzyme, banana, mango, lemon. Food waste & tree leaves are used for Vermi- Composting plant. Fertilizes or compost made after decay & decomposition of food waste is used as a fertilizer for garden plants from the College campus. E-waste generated from the College:- 1. Computer parts 2. CCTV Cameras 3. Battery 4. Generator part 5. UPS, Power Cables, Printers All the E-Waste generated from the College are collected at one place and at the end of the year it is sold to "Exigo-E-Waste plant", Samalkha. In this plant all the e-waste is recycled accordingly by taking into consideration the importance of environmental protection. It is environment tally safe disposal method of e-waste management by the company. For this certificate is provided to a College by the company.

Provisions of space for Segregated waste at Laboratory building

6. RESULTS AND CONCLUSION

The total energy consumption as per the EB bill, Transformer recording, DG generation and all utility consumption are as below:

- Electricity consumption as per EB (May 22-Apr 23) = 105689 kWh/year
- Solar Generation = 56980 kWh/year
- DG power generation (22-23) = 4988 kWh/year
- All utility consumption (during audit) = 116798.2 kWh/year

The decreased power consumption of transformer during audit when compared to the all-utility consumption was due to non-operation of utilities during recording. Therefore, energy consumption as per EB bill and as per all utilities has been taken into consideration for EPI analysis.

$$\text{Energy Performance Index, EPI (kWh/annum/m}^2\text{)} = \frac{Total\ Energy\ consumption\ \left(\frac{kWh}{year}\right)}{Total\ builtup\ area\ (m2)}$$

Particulars	EPI (kWh/annum/m²)
As per EB bill + DG	= (105689 + 4988)/4488
	= 24.66 kWh/annum/m²

Energy-Efficient Upgrades

- **Ordinary lights have been replaced by LED lights to reduce consumption of electricity.**

By replacing ordinary lights with LED lights, our college demonstrates its commitment to energy conservation, cost efficiency, and sustainable practices. It sets an example for students and the community, encouraging them to embrace energy-efficient technologies and contribute to a greener future.

Energy-Efficient Upgrades

3 stars – 5 stars Air Conditioning systems are installed in the college to minimize the electricity consumption

- 5-star rated ACs are highly energy-efficient, consuming significantly less electricity compared to lower-rated models.
- By using 5-star rated ACs, the college reduces its carbon footprint and contributes to environmental sustainability.
- Lower energy consumption means lower greenhouse gas emissions, supporting the college's eco-friendly initiatives.

Behavioral Change Campaigns

Energy Conservation Initiative

The most important form of energy we use in the campus is electricity. Even after adopting all the necessary steps to conserve and minimize the loss of electricity, we have gone one step ahead and have spread the message among our students and faculty to help us in saving electricity. On Every switch Board of the college the energy saving message is displayed: "SWITCH OFF THE LIGHTS AND FANS WHEN NOT IN USE" .

Water Conservation Measures

Wastewater Treatment: RO Waste Water Plant

(Used for watering the plants)

Access to Safe Drinking Water

Provision for clean drinking water(RO) for all, students as well as faculty

Water Cooler

Water Purifier

Implementing Clean Energy Solutions

To reduce the carbon emission, grid-based solar power plant of capacity 50kW has been installed in the college.

Solar power is a renewable energy source, meaning it is derived from sunlight, which is abundant and inexhaustible. By harnessing solar energy, the college reduces its reliance on fossil fuels, promoting environmental sustainability. Solar power generation produces no greenhouse gases emissions, air pollutants, or harmful by-products, unlike traditional fossil fuel-based energy sources. It helps mitigate the college's carbon footprint, contributing to a cleaner and greener environment.

College has its own dedicated transformer & power factor to reduce transmission losses.

Implementing Clean Energy Solutions

TATA POWER SOLAR

IRN : b6a1848893034dd554e1b8f822d8e89359be4f65cea02bec8429d7dc628d540

TATA

Tata Power Solar Systems Limited
Plot No: 284, Survey No. 127 & 137, Industrial Area, Bommasandra - Jigani Link Road, Bangalore Karnataka 560105
Tel : 08067774000, GSTIN : 29AAACT4660J1Z2, PAN No: AAACT4660J State Code : 29

Original

Invoice No :9631051439 Date 27.09.2021 **TAX INVOICE**

Customer Bill to Address:	Customer Ship to Address:		
I B Post Graduate College G T Road Panipat Panipat 132103 Haryana India	I B Post Graduate College G T Road Panipat Panipat 132103 Haryana India	Transporter :Mahaveera-03 Pallets Way Bill : Vehicle No :TN04AA3787 Sales Order No :88184189 Weight : Reference :	PO No:IBC/645/2021 Mode Of Transport :Road Final Destination :Panipat Delivery Terms :CIF Project No:P.31020221R097 Delivery No :85029165
GSTIN :06AAATI3496G1ZL State Code :06	GSTIN :06AAATI3496G1ZL State Code :06	Payment Terms :Payable Immediately	

HSN CODE - 854140 - (Solar Power Generation System - Principal Supply Solar Modules) SAC - 998335 (Engineering Services for Power Projects)

SL No	Item	Description	Qty	UOM	Value/ Unit	Tax Value. INC Disc		CGST Amount	IGST Amount
1	800008441	PV PANEL JNBM144-440MONO/1.2M	93.000	EA	13,234.82	12,30,838.26			
						5% on 70% value 18% on 30% value			43,079.34 66,465.27
Fright :0.00	Insurance				Subtotal	12,30,838.26	0	0	1,09,544.61

Note :

TCS is calculated above Threshold limit on PAN base

Total	13,40,382.87
Less Subsidy Amt	0.00
TPS Down payment	0.00
Net total Amount	13,40,382.87

Amount in Words : THIRTEEN LAKH FORTY THOUSAND THREE HUNDRED EIGHTY TWO RUPEES EIGHTY SEVEN PAISE ONLY.

Waste Reduction and Recycling

EXIGO

An ISO 14001, 2001 & 45001 Certified Company

Certificate

OF SAFE DISPOSAL

SDC No.: ERPL: 2029

Date:27.12.2019

This is to certify that the materials picked from
Old Housing Board Colony, Prakash Nagar, Haryana 132103
For,IB College, Panipat
as per details given below have been
Disposed off in an environmentally safe and secure manner by Exigo Recycling Pvt. Ltd.

ITEM	Item Description	Collection Date	Our Receiving Details	Final Recycling Date	Quantity
E-waste	Desktop, Monitor,etc.	27.12.2019	MRN No. ERPL-2062N	23.12.2019	325 Kgs.

The Items mentioned above have been disposed off in an environmentally safe manner as per the prescribed norms of the Company and the rules laid down by the Pollution control authorities.

This Safe Disposal Certificate includes the activities of collection, transportation, storage, dismantling and treatment using mechanical/manual process wherein the elements are recovered from the Items mentioned above and converted into raw materials for future manufacturing of new products. The Items mentioned above are no longer fit for their original purpose and have been recycled and turned into raw materials and sent to the manufacturing industry.

Our Pollution Control Board: Passbook Authorization No.: HSPCB/PR/2019/1921 dt. 26.09.2019 valid till 09.08.2024

For, Exigo Recycling Pvt. Ltd.
(Authorized Signatory)

Operational E-Waste collection centre

Separate dustbins have been placed at different places to segregate the solid waste

Vermicomposting unit has been developed in the college

Vermicompost Unit

Vermicompost Unit- Initial stage

Vermicompost Unit - Raw material (Grass, Plant leaves etc.)

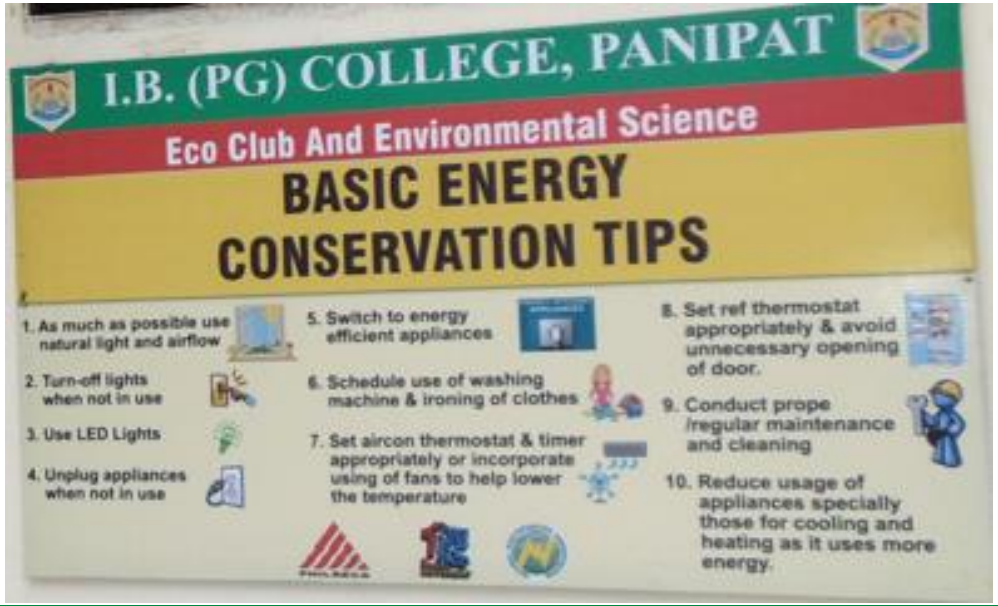
Vermicompost Unit - Raw material (Cattle Dung)

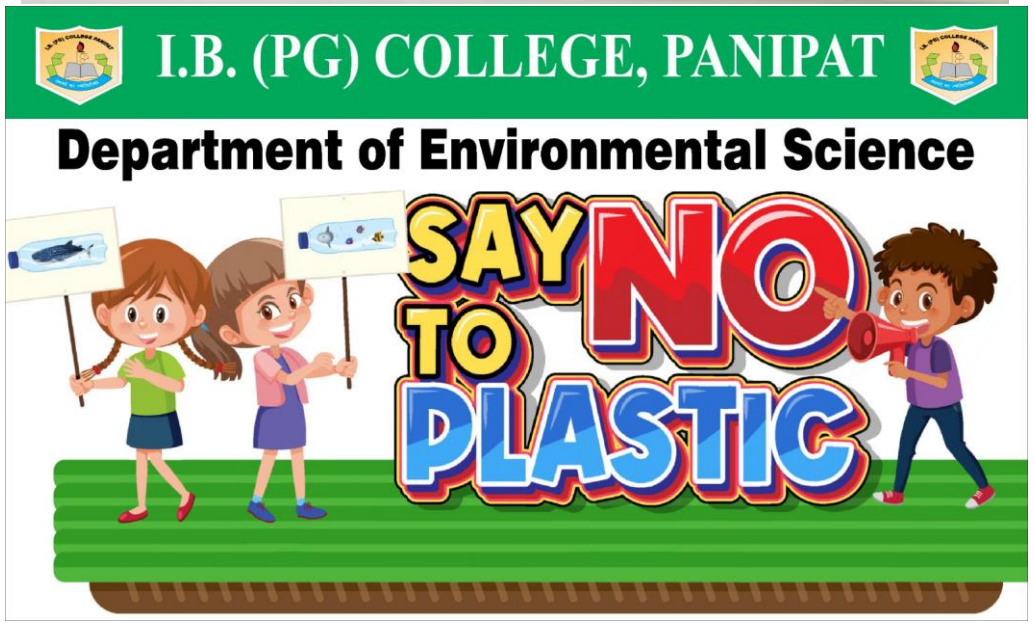
Vermicompost Unit- Ready for Decomposition

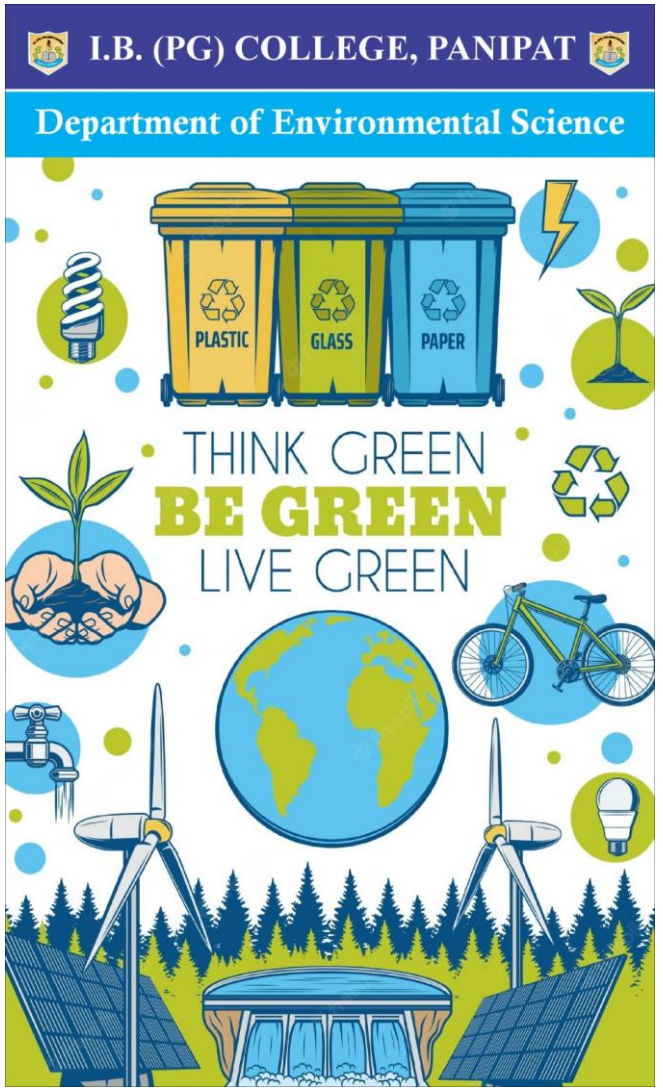
Vermiculture
(*Eisenia fetida*)
Earthworm species

Vermicomposting Unit – Decomposed Organic Matter (Organic Fertilizer)

Sustainable Living Education







Sustainable Living Education

Tree plantation campaign was conducted under Sanskarshala Club, NCC and NSS under Harit Haryana Abhiyan and Unnat Haryana Abhiyan.

Environmental Awareness

स्वयंसेवकों ने रैली निकालकर दिया पर्यावरण के संरक्षण का संदेश

संवाद न्यूज एजेंसी

पानीपत। आईबी महाविद्यालय में एनएसएस यूनिट की ओर से स्पेशल एनएसएस शिविर के पांचवें दिन का आयोजन खोतपुरा गांव में किया गया। सुबह के सत्र में स्वयंसेवकों को योगा और मेडिटेशन करवाया गया। इसके पश्चात स्वयंसेवकों द्वारा पर्यावरण की सुरक्षा के लिए गांव खोतपुरा में रैली निकाली। जिसमें स्वयंसेवकों ने चलो उठो सब हाथ मिलाएं, पर्यावरण को स्वच्छ बनाएं, आओ मिलकर वृक्ष लगाएं, पर्यावरण को स्वच्छ बनाएं के नारे लगाए।

रैली के पश्चात स्वयंसेवकों द्वारा साक्षरता अभियान चलाया गया जिसमें स्वयंसेवकों ने जन-जन के घर जाकर उनको हस्ताक्षर करना सिखाया और बताया कि आज के समय में सभी के लिए शिक्षा का क्या महत्व है। शाम के सत्र में डॉ. प्राणनाथ द्वारा पौधरोपण का कार्यक्रम किया गया जिसके मुख्य अतिथि डॉ. प्राणनाथ, सरपंच विनोद संधू और राजेश संधू रहे। इस मौके पर कॉलेज प्राचार्य डॉ. अजय कुमार गग, कासिम अली, लेफ्टिनेंट राजेश कुमार, भारद्वाज और प्रोफेसर सुमन मलिक ने प्रोफेसर नीतू मनोचा, प्रोफेसर रितु अहम भूमिका निभाई।

कार्यक्रम के दौरान उपस्थित एनएसएस के छात्र व प्रोफेसर। संवाद

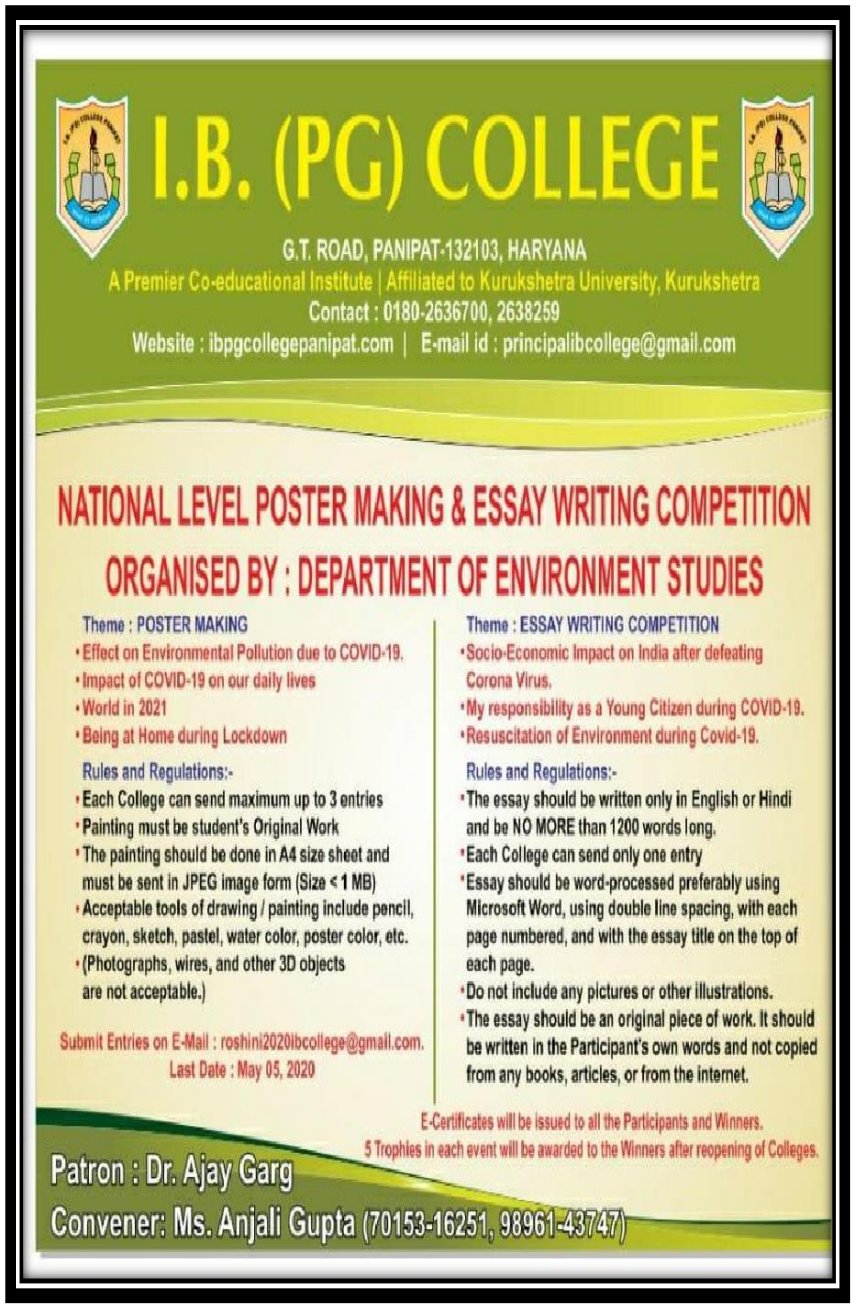
महिला कॉलेज में सात दिवसीय एनएसएस कैंप शुरू

मतलौडा। राजकीय महिला महाविद्यालय मतलौडा में बुधवार को सात दिवसीय एनएसएस (राष्ट्रीय सेवा योजना) कैंप की शुरुआत हुई। इसका शुभारंभ प्राचार्य डॉ. संदीप कंधवाल एवं उप प्राचार्य डॉ. रामनिवास जंगम ने किया। 22 फरवरी तक चलने वाले इस सात दिवसीय कैंप को प्रथम यूनिट में असिस्टेंट प्रोफेसर लीना और द्वितीय यूनिट में प्रियंका की ओर से आयोजित किया गया। एसोसिएट प्रोफेसर एवं उप प्राचार्य डॉ. रामनिवास जंगम ने एनएसएस के स्वयंसेवकों को मानव अधिकारों की जानकारी देते हुए जागरूकता फैलाने का आह्वान किया। दूसरे सत्र में असिस्टेंट प्रोफेसर डॉ. धर्मवीर लांगयान ने रिसोर्स पर्सन के तौर पर संत शिरोमणि गुरु रविदास जयंती की सभी को शुभकामनाएं दीं। सायंकाल के सत्र में रेडक्रॉस पानीपत से लेक्चरर सोनिया और विवेक ने स्वयंसेवकों को प्राथमिक उपचार के बारे में जानकारी दी। इस अवसर पर मंच संचालन असिस्टेंट प्रोफेसर प्रदीप दलाल ने किया। इस अवसर पर महाविद्यालय के अन्य स्टाफ सदस्य भी मौजूद रहे। संवाद

आईबी कॉलेज में पौधरोपण सप्ताह शुरू

पानीपत। आईबी कॉलेज में आजादी के अमृत महोत्सव के तहत एनएसएस, एनसीसी संस्कारशाला क्लब ने पौधरोपण सप्ताह शुरू किया है। कार्यक्रम का आयोजन सरकार की मुहिम एक पेड़ विश्वास... के तहत किया गया। प्राचार्य डॉ. अजय कुमार गर्ग ने बताया कि अभियान 11 अगस्त तक चलेगा। एनएसएस के स्वयंसेवक और एनसीसी कैडेट्स अपने आसपास और सार्वजनिक स्थानों पर अधिक से अधिक पौधे लगाएं। एनएसएस के कार्यक्रम अधिकारी डॉ. जोगेश के अलावा संस्कारशाला के संयोजक प्रो. अश्वनी गुप्ता, डॉ. रामेश्वर दास, डॉ. सुनित शर्मा, डॉ. प्रवीन कौशिक, रितु भारद्वाज आदि मौजूद रहे। संवाद

Promoting Awareness through Educational Campaigns

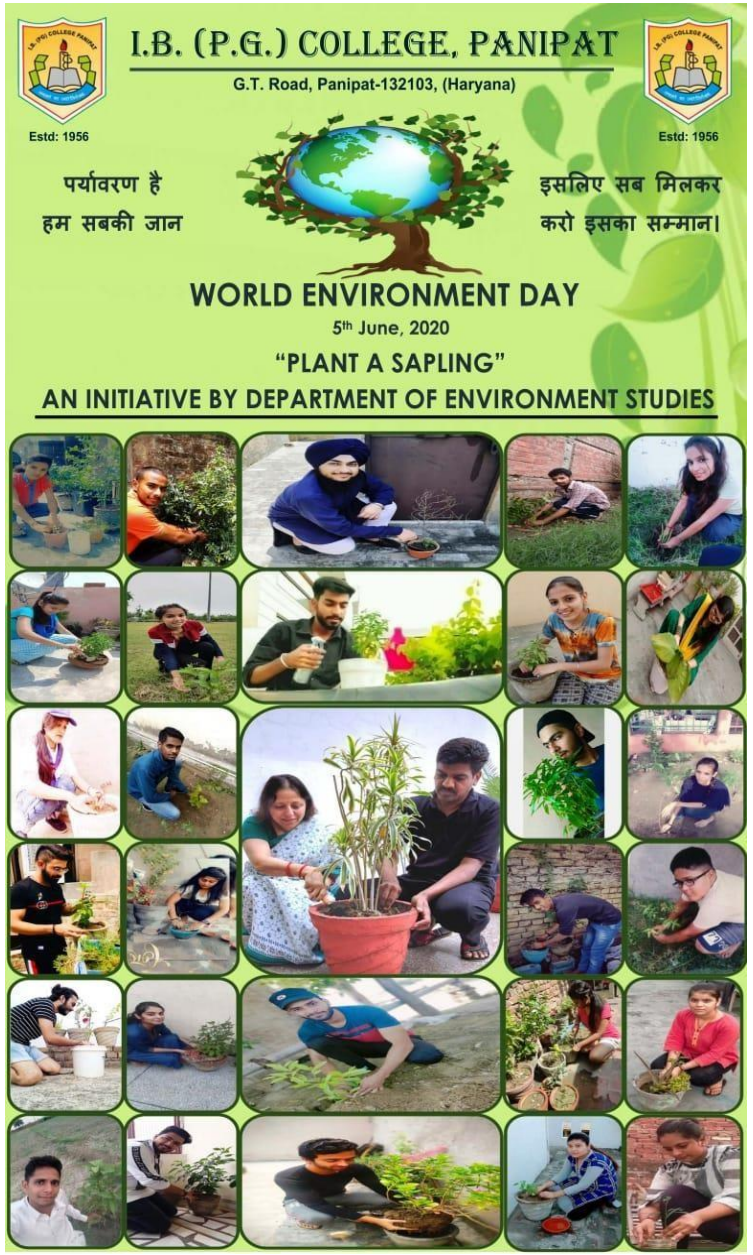


Promoting Awareness through Educational Campaigns

Promoting Awareness through Educational Campaigns

Winners of National Online Collage Making Competition Organized by Department of Environment Studies.

FIRST	SECOND	THIRD
Anshika	Nikita	Divyanshi
B.Sc- II	B.A.- III	B.Sc- II
KVADAV College, Karnal	Vaish Mahila Mahavidyalya, Rohtak	Aggarwal College, Ballabhgarh



Glimpses of the Activities Performed by the Department to Spread Awareness about Environment Protection

Promoting Awareness through Educational Campaigns

दैनिक भास्कर पानीपत भास्कर 15-12-2020

पृथ्वी पर ऊर्जा की सीमित आपूर्ति है, इसका संरक्षण करना हमारी जिम्मेदारी : प्राचार्य

भास्कर न्यूज | पानीपत

आईबी पीजी कॉलेज में सोमवार को राष्ट्रीय ऊर्जा संरक्षण दिवस मनाया गया। पर्यावरण विभाग की ओर से विद्यार्थियों को ऊर्जा संरक्षण के बारे में जागरूक करने के उद्देश्य से एक दिवसीय सेमिनार का आयोजन किया। पर्यावरण विभाग की सहायक प्रोफेसर अंजलि गुप्ता मुख्य वक्ता रहीं।

कॉलेज प्राचार्य डॉ. अजय कुमार गर्ग ने ऊर्जा के संरक्षण के उपाय और ऊर्जा का कम से कम इस्तेमाल कैसे कर सकते हैं इस बारे में विस्तार से जानकारी दी। उन्होंने बताया कि ऊर्जा संरक्षण ये आज के समय की मांग है। सभी के सहयोग से ही ऊर्जा का संरक्षण किया जा सकता है। हमारे पास पृथ्वी पर ऊर्जा की सीमित आपूर्ति है। इसे पुनर्जीवित करने में बहुत समय लगता है। इसलिए हमारी भावी पीढ़ियों को ऊर्जा का संरक्षण करना आवश्यक है। पूरे भारत में राष्ट्रीय ऊर्जा संरक्षण दिवस लोगों द्वारा हर साल 14 दिसम्बर को मनाया जाता है। भारत में ऊर्जा संरक्षण अधिनियम 2001 में ऊर्जा दक्षता ब्यूरो (बीईई) द्वारा स्थापित किया गया। ऊर्जा दक्षता ब्यूरो एक संवैधानिक निकाय है। जो भारत सरकार के अंतर्गत आता है और ऊर्जा का उपयोग कम करने के लिए नीतियों और रणनीतियों के विकास में मदद करता है। प्रो. अंजली गुप्ता ने बताया कि ऊर्जा का संरक्षण करके हम देश के विकास में अपना योगदान दे सकते हैं। इस अवसर पर डॉ. शशि प्रभा, प्रो. अश्वनी गुप्ता, प्रो. अजमेर और अमित आदि मौजूद रही।

आज समाज अंबाला, शुक्रवार, 15 जनवरी 2021 03

आईबी कॉलेज में समूह चर्चा का आयोजन

आज समाज नेटवर्क

समूह चर्चा में हिस्सा लेते विद्यार्थी।

पानीपत। आई.बी. महाविद्यालय पानीपत के पर्यावरण विभाग की तरफ से गुरुवार को ग्रुप डिस्कशन(समूह चर्चा) प्रतियोगिता का आयोजन किया गया। यह प्रतियोगिता डायरेक्टर जनरल हायर एजुकेशन, पंचकुला के एन्वायरन्मेंट ग्रुप फोरम के निर्देशानुसार आयोजित की गई थी। इसमें दो टॉपिक दिए गए थे अल्टरनेट सोर्सेस ऑफ एनर्जी और कंजर्वेशन ऑफ बायोडायवर्सिटी एंड वाइल्ड लाइफ। इस प्रतियोगिता में महाविद्यालय के 22 छात्र-छात्राओ ने भाग लिया। कार्यक्रम की शुरूआत करते हुए प्राचार्य डॉ अजय कुमार गर्ग ने कहा कि हम सब को नवीकरणीय उर्जा संसाधनों का इस्तेमाल करना होगा, जैसे कि सौर ऊर्जा, पवन ऊर्जा आदि, उन्होंने कहा कि इनके इस्तेमाल से पर्यावरण को भी नुकसान नही पहुंचता है। उन्होंने बताया कि कोयला का इस्तेमाल सब के लिए हानिकारक है,हमे इसका कम से कम इस्तेमाल करना चाहिए। उन्होंने इस सफल आयोजन के लिए पर्यावरण विभाग की सहायक प्रोफेसर अंजलि गुप्ता को बधाई एवं शुभकामनाएं दी। निर्णायक मंडल की भूमिका डॉ शशि प्रभा, विभागाध्यक्ष, हिंदी विभाग एवं प्रो नीलम दहिया, एसोसिएट प्रोफेसर, अंग्रेजी विभाग ने निभाई। प्रो अंजलि गुप्ता ने प्रतियोगिता के नियम प्रतिभागियों को बताए।

प्रतियोगिता के परिणाम इस प्रकार रहे:

प्रथम स्थान : कुमारी सिमरन एम.कॉम प्रथम वर्ष।

द्वितीय स्थान : सुधांशु दुबे , बी.कॉम तृतीय वर्ष।

तृतीय स्थान: ख्वाहिश, बी.सी.ए तृतीय वर्ष।

विजेताओं को ट्रॉफीज एवं सभी प्रतिभागियों को प्रशस्ति पत्र प्रदान किये गए। प्रो अंजलि गुप्ता ने निर्णायक मंडल के सदस्यों का धन्यवाद किया इस मौके पर डॉ अर्पणा गर्ग, डॉ विक्रम, प्रो सोनल, प्रो वंदन, आरती, कुलदीप आदि उपस्थित रहे।

समाचार निर्देश

'हमारी धरती को पुनर्स्थापित करना' विषय पर राष्ट्र स्तरीय वेबिनार का हुआ आयोजन

पानीपत कमाल हुसैन स्थानीय आई. बी. स्नातकोत्तर महाविद्यालय पानीपत में पर्यावरण विभाग एवं बायो-साइंसेज विभाग के संयुक्त तत्वावधान में आज 22.04.2021 को वर्ल्ड अर्थ डे के उपलक्ष्य में 'हमारी धरती को पुनर्स्थापित करना' विषय पर राष्ट्र स्तरीय वेबिनार का आयोजन किया गया। इस कार्यक्रम की मुख्य वक्ता गुरुकुल कांगरी विश्वविद्यालय की डॉ. संगीता मदान रही। वेबिनार का शुभारंभ करते हुए डॉ. अजय कुमार गर्ग ने कहा कि आज के वेबिनर का विषय समय के अनुकूल है `हम सब का दायित्व बनता है की हम अपनी धरती का सरंक्षण करे एवं इसकी रक्षा करे । डॉ गर्ग जी ने आगे बताया की आज के इस वेबिनार में विश्व भर से 250 से अधिक प्रतिभागियों ने रजिस्ट्रेशन करा है और कहा की ऐसे आयोजनों से हम सब लोग प्रेरित हो सकते है । वेबिनर की सह-संयोजिका प्रो अंजलि गुप्ता ने मुख्य वक्ता डॉ. संगीता मदान का स्वागत करते हुए उनकी उपलब्धियों पर प्रकाश डाला और वक्तव्य में वर्ल्ड अर्थ डे के बारे में बताया और कहा की आज के दिन का का मुख्य आकर्षण अमेरिकी राष्ट्रपति जो बिडेन द्वारा आयोजित जलवायु परिवर्तन पर एक बहुत ही विशेष शिखर सम्मेलन होगा। इससे पता चलता है कि वैश्विक नेताओं ने भी जलवायु परिवर्तन को बहुत गंभीरता से लेना शुरू कर दिया है।

जल है तो कल है, संचय बेहद जरूरी : डॉ. अजय

पानीपत| आईबी पीजी कॉलेज में सोमवार को एनएसएस इकाई की ओर से महात्मा गांधी की 150वीं जयंती के मौके पर व्याख्यान का आयोजन किया गया। शुभारंभ प्राचार्य डॉ. अजय गर्ग ने किया। बताया कि इस व्याख्यान का विषय जल सरंक्षण रहा।

प्राचार्य ने स्वयंसेवकों को संबोधित करते हुए कहा कि जल है तो कल है। आज लोग जल को अनावश्यक रूप में बर्बाद कर रहे हैं। युवा वर्ग अपने सहयोग और जागरूकता से जल बर्बादी को रोक सकता है और जल संरक्षण में सहयोग दे सकता है। मुख्यवक्ता प्रो. अंजलि गुप्ता ने कहा कि आज के युग में जल संकट एक विकराल समस्या बनता जा रहा है। इस अवसर पर एनएसएस इकाई अधिकारी डॉ. जोगेश, प्रो. पीके नरूला, प्रो. राजेश कुमार, प्रो. निशा गुप्ता आदि मौजूद रहीं।

शैक्षणिक भ्रमण में स्टूडेंट्स वनस्पति संपदा से हुए रूबरू

पानीपत| आईबी पीजी कॉलेज के जीव विज्ञान विभाग के विद्यार्थी बायोलॉजिकल एसोसिएशन द्वारा आयोजित वार्षिक वनस्पति संग्रहण एवं शैक्षणिक भ्रमण कार्यक्रम में शामिल होकर हिमाचल प्रदेश के विभिन्न स्थानों का भ्रमण किया। सोमवार को टीम कॉलेज में पहुंची तो स्कूल प्रबंधन ने उनका स्वागत किया। इस दल को प्रबंध समिति के उप प्रधान अशोक नागपाल, सचिव एलएन मिगलानी और प्राचार्य डॉ. अजय गर्ग ने बताया कि 26 सितंबर को दल को रवाना किया गया था। जिसमें 37 छात्र-छात्राएं शामिल रहीं। नेतृत्व वनस्पति विज्ञान विभाग के अध्यक्ष डॉ. निधान सिंह ने किया।

विश्व जल दिवस पर कार्यक्रम आयोजित

पानीपत/कमाल हुसैन

आई.बी. स्नातकोत्तर महाविद्यालय पानीपत में आज 22 मार्च को विश्व जल दिवस के अवसर पर पर्यावरण विभाग के तत्वावधान में कार्यक्रम का आयोजन किया गया।कार्यक्रम का शुभारंभ करते हुए कॉलेज प्राचार्य डॉ अजय कुमार गर्ग जी ने कहा की विश्व जल दिवस 22 मार्च को मनाया जाता है। इसका उद्देश्य विश्व के सभी विकसित देशों में स्वच्छ एवं सुरक्षित जल की उपलब्धता सुनिश्चित करवाना है साथ ही यह जल संरक्षण के महत्व पर भी ध्यान केंद्रित करता है।

उन्होंने आगे बताया की जल ही जीवन है. जल के बिना जीवन की कल्पना अधूरी है। किताबी दुनिया और किताबी ज्ञान को हममें से बहुत कम ही असल जिंदगी में उतार पाते हैं और इसी का नतीजा है कि आज भारत और विश्व के सामने पीने के

पानी की समस्या उत्पन्न हो गई है। इसके बाद पर्यावरण विभाग की संचालिका प्रो अंजलि गुप्ता ने स्टाफ के सभी सदस्यों को जल संरक्षण की शपथ दिलवाई जिसमे सबने यह प्रण लिया की हम सब इस अमूल्य धरोहर का संरक्षण करेंगे । इस दिन को ध्यान में रखते हुए पर्यावरण विभाग ने एक ऑनलाइन राष्ट्रीय प्रश्नोत्तरी प्रतियोगिता भी करवाई गयी, प्राचार्य डॉ. अजय कुमार गर्ग ने इस प्रतियोगिता के संदर्भ में कहा कि इस तरह की प्रतियोगिताएं स्व:-मूल्यांकन के लिए अत्यंत उपयोगी होती हैं और यह एक उपयुक्त माध्यम है जिससे हम विद्यार्थियों को उपयोगी दिनों के बारे में जागरूक कर सकते है । इस प्रतियोगिता की संयोजिका प्रो अंजलि गुप्ता ने बताया की देश भर से इस क्विज में 426 से अधिक स्नातक एवं स्नातकोत्तर विद्यार्थियों ने उत्साहपूर्वक भाग लिया।

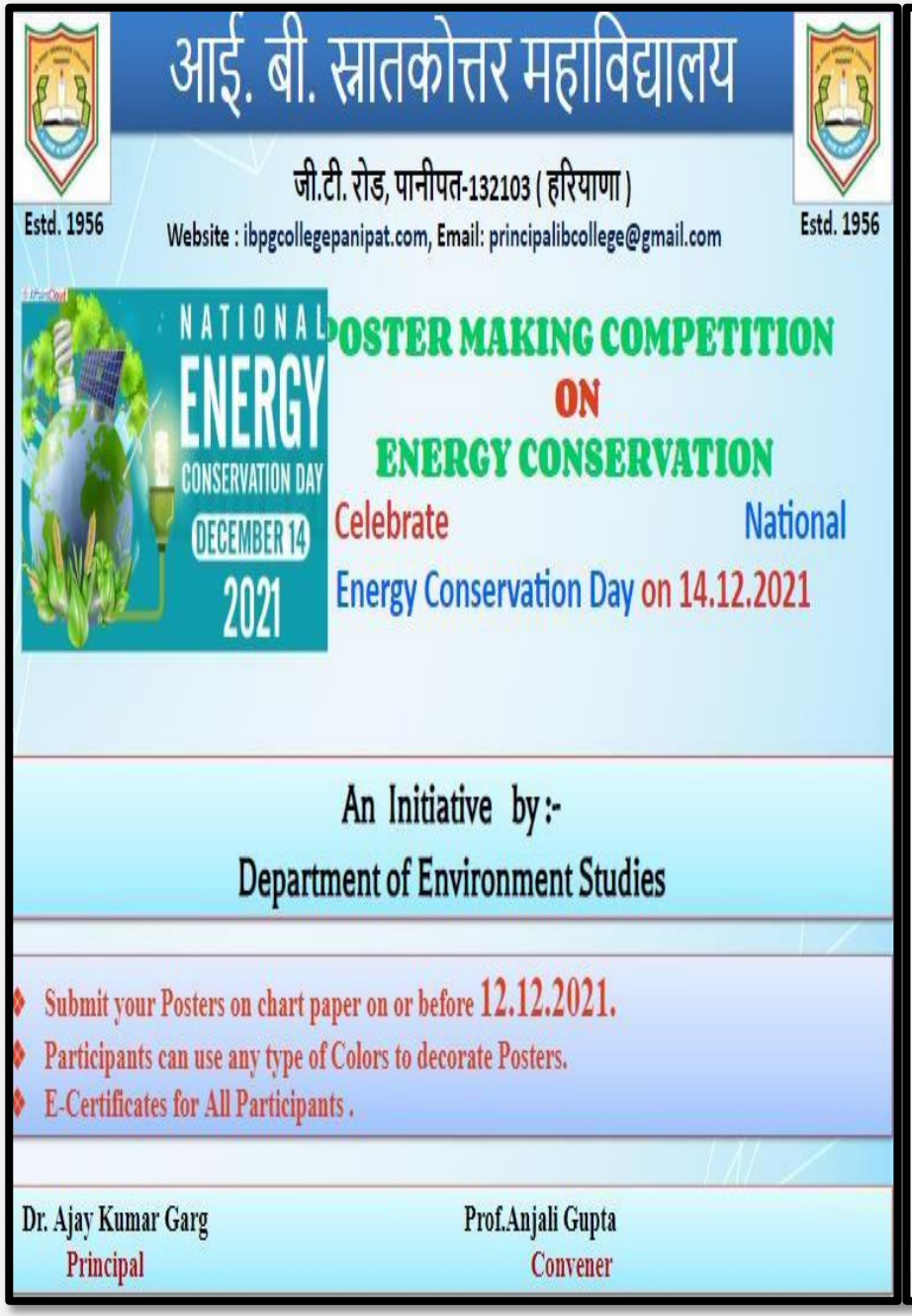
इस क्विज प्रतियोगिता के परिणाम इस प्रकार रहे :

प्रथम स्थान: स्नेहा, बी.एस.सी तृतीय वर्ष, महारानी किशोरी जाट कन्या महाविद्यालय, रोहतक द्वितीय स्थान : खुशबू, बी.एस.सी तृतीय वर्ष, के.वी.ए. डी.ए.वी कॉलेज, करनाल तृतीय स्थान: कशिश, बी.सी.ए प्रथम वर्ष, आई.बी.महाविद्यालय, पानीपत सभी विजेताओं को नकद पुरस्कार से नवाजा जावेगा। इस क्विज के आयोजन में प्रो अश्वनी गुप्ता, प्रो सोनल और प्रो नंदना की भूमिका सराहनीय रही।

प्राचार्य डॉ अजय कुमार गर्ग ने सफल आयोजन के लिए प्रो अंजलि गुप्ता को बधाई दी।

कार्यक्रम में प्रो पी.के. नरूला, प्रो रंजना शर्मा, डॉ मोहम्मद ईसाक, डॉ रामेश्वर दास, डॉ किरण मदान, डॉ पूनम मदान, डॉ. सुनीत शर्मा, डॉ. निधान सिंह, प्रो. पवन, डॉ जोगेश, प्रो राजेश कुमार, डॉ रंजू, प्रो निशा ,प्रो मानित कौर,प्रो साक्षी, प्रो वनिता, प्रो रुहानी , प्रो राजेश बाला ,प्रो सोनिया धींगरा, प्रो रितिका , प्रो करुना, प्रो सोनिया वर्मा, प्रो वंदना, प्रो सोनिया विरमानी, प्रो सुखजिंदर, प्रो मनीष, राम प्रसाद, राम मेहर, अमित कुमार आदि उपस्थित रहे।

Education and Awareness



Education and Awareness

दैनिक भास्कर पानीपत भास्कर 15-12-2020

दैनिक भास्कर

पृथ्वी पर ऊर्जा की सीमित आपूर्ति है, इसका संरक्षण करना हमारी जिम्मेदारी : प्राचार्य

भास्कर न्यूज | पानीपत

आईबी पीजी कॉलेज में सोमवार को राष्ट्रीय ऊर्जा संरक्षण दिवस मनाया गया। पर्यावरण विभाग की ओर से विघार्थियों को ऊर्जा संरक्षण के बारे में जागरूक करने के उद्देश्य से एक दिवसीय सेमिनार का आयोजन किया। पर्यावरण विभाग की सहायक प्रोफेसर अंजलि गुप्ता मुख्य वक्ता रहीं।

कॉलेज प्राचार्य डॉ. अजय कुमार गर्ग ने ऊर्जा के संरक्षण के उपाय और ऊर्जा का कम से कम इस्तेमाल कैसे कर सकते हैं इस बारे में विस्तार से जानकारी दी। उन्होंने बताया कि ऊर्जा संरक्षण ये आज के समय की मांग है। सभी के सहयोग से ही ऊर्जा का संरक्षण किया जा सकता है। हमारे पास पृथ्वी पर ऊर्जा की सीमित आपूर्ति है। इसे पुनर्जीवित करने में बहुत समय लगता है। इसलिए हमारी भावी पीढ़ियों को ऊर्जा का संरक्षण करना आवश्यक है। पूरे भारत में राष्ट्रीय ऊर्जा संरक्षण दिवस लोगों द्वारा हर साल 14 दिसम्बर को मनाया जाता है। भारत में ऊर्जा संरक्षण अधिनियम 2001 में ऊर्जा दक्षता ब्यूरो (बीईई) द्वारा स्थापित किया गया। ऊर्जा दक्षता ब्यूरो एक संवैधानिक निकाय है। जो भारत सरकार के अंतर्गत आता है और ऊर्जा का उपयोग कम करने के लिए नीतियों और रणनीतियों के विकास में मदद करता है। प्रो. अंजली गुप्ता ने बताया कि ऊर्जा का संरक्षण करके हम देश के विकास में अपना योगदान दे सकते हैं। इस अवसर पर डॉ. शशि प्रभा, प्रो. अश्वनी गुप्ता, प्रो. अजमेर और अमित आदि मौजूद रही।

अमर उजाला my city

सेमिनार में बोले वक्ता, समय की है मांग सभी के सहयोग से हो ऊर्जा का संरक्षण

संवाद न्यूज एजेंसी

पानीपत। आईबी महाविद्यालय में राष्ट्रीय ऊर्जा संरक्षण दिवस मनाया गया। इस उपलक्ष्य में पर्यावरण विभाग की ओर से प्रथम वर्ष के विद्यार्थियों के लिए सेमिनार का आयोजन किया गया। इस सेमिनार के आयोजन का मुख्य उद्देश्य विद्यार्थियों को ऊर्जा संरक्षण के बारे में जागरूक करना था।

पर्यावरण विभाग की सहायक प्रोफेसर अंजलि गुप्ता ने सेमीनार के मुख्य वक्ता आईबी कॉलेज के प्राचार्य डॉ. अजय कुमार गर्ग का विधिवत स्वागत किया। डॉ. अजय कुमार गर्ग ने कहा कि ऊर्जा के संरक्षण के उपाय तथा ऊर्जा का कम से कम इस्तेमाल कैसे कर सकते हैं, समझाया। ऊर्जा संरक्षण आज के समय की मांग है तथा सभी के सहभाग से ही ऊर्जा का संरक्षण किया जा सकता है। हमारे पास पृथ्वी पर ऊर्जा की सीमित आपूर्ति है और इसे पुनर्जीवित करने में बहुत समय लगता है। इसलिए हमारी भावी पीढ़ियों को इसे उपलब्ध कराने के लिए ऊर्जा का संरक्षण करना आवश्यक है। पूरे भारत में राष्ट्रीय ऊर्जा संरक्षण दिवस लोगों द्वारा हर साल 14 दिसंबर को मनाया जाता है। भारत में ऊर्जा संरक्षण अधिनियम वर्ष 2001 में ऊर्जा दक्षता ब्यूरो द्वारा निष्पादित किया गया। ऊर्जा दक्षता ब्यूरो एक संवैधानिक निकाय है जो भारत सरकार के अंतर्गत आता है और ऊर्जा का उपयोग कम करने के लिए नीतियों और रणनीतियों के विकास में मदद करता है। इस सेमीनार की आयोजक प्रो. अंजली गुप्ता, पर्यावरण विभाग रही जिन्होंने विद्यार्थियों को बताया कि किस तरह से ऊर्जा का संरक्षण करके हम देश के विकास में अपना योगदान दे सकते हैं। अंत में उन्होंने प्राचार्य डॉ. अजय गर्ग का धन्यवाद किया। इस सेमीनार के आयोजन को सफल बनाने में डॉ. शशि प्रभा, प्रो. अश्वनी गुप्ता तथा प्रो. अजमेर एवं अमित (टेक्निकल स्टाफ) ने मुख्य भूमिका निभाई।

I.B.(PG) COLLEGE PANIPAT

E - ENVIRONMENTAL. C - CONSERVATION. O - ORGANIZATION

ECO CLB

INITIATIVE TOWARDS SUSTAINABILITY

Vision:- Eco Club aims to increase the awareness among students regarding environmental issues.

Zero Waste Mission – Use a set of Three Dustbins (Red, Green and Yellow) for recycling the wastes in the college.

ECO CLB

EDUCATION NOTES

PROGRESSIVE FARMING SETUPS

Panipat: A group of 50 students from IB Postgraduate College, Panipat, visited progressive farming setups in Bajana village of Sonepat district. This visit to mushroom cultivation and strawberry farming setups being run by local farmers provided the students with plenty of practical information about these promising food crops. They learnt the cultivation strategies starting from the basics to the end process. The contingent was led by Prof Pawan Kumar in coordination with Dr Nidhan Singh and other faculty members. Dr Ajay Kumar Garg, principal motivated the students to be a part of such enriching field trips.

Educational Field Trips

छात्र-छात्राओं ने मशरूम व स्ट्रॉबेरी फार्मिंग का किया भ्रमण

पानीपत, 22 फरवरी (खबं): आई.बी. महाविद्यालय के बी.एससी. मैडीकल, बी.सी.ए. व बी.ए. के छात्र-छात्राओं ने जीव विज्ञान और ईको क्लब के संयोजन में गांव बजाना कलां सोनीपत के मशरूम और स्ट्रॉबेरी फार्मिंग का भ्रमण किया। प्राचार्य डा. अजय कुमार गर्ग ने विद्यार्थियों को इस भ्रमण से पहले सम्बोधित करते हुए कहा कि शिक्षा का एक आयाम यह भी है कि हम आत्मनिर्भर होकर रोजगार सृजन भी करें। इस तरह की उन्नत खेती करने वाले किसानों से हम अवश्य ही काफी कुछ सीख सकते हैं। भ्रमण के दौरान मशरूम फार्म में विद्यार्थियों ने जाना कि मशरूम एक तरह का पौधा है जो वास्तव में फंगस है, पर इसमें प्रोटीन एवं पोषक तत्व भरपूर मात्रा में मौजूद होते हैं, विशेषतया विटामिन डी। इस भ्रमण में विद्यार्थियों ने यह समझा कि मशरूम की खेती करने के लिए खाद कैसे बनाई जाती है।

बजाना कलां में बटन मशरूम का उत्पादन बड़े पैमाने पर किया जाता है। इसके साथ-साथ विद्यार्थियों को स्ट्रॉबेरी फार्मिंग की भी जानकारी दी गई जिसमें प्रो. पवन कुमार द्वारा स्ट्रॉबेरी के अद्भुत फायदे भी बताए गए। उन्होंने जानकारी देने वाले दोनों किसानों हरपाल और बलराज का धन्यवाद किया।

कार्यक्रम को सफल बनाने में महाविद्यालय के पूर्व छात्र लियाकत अली और लाइट हाऊस इंटरनैशनल स्कूल के संस्थापक संदीप कुमार का अतुलनीय योगदान रहा। इस एक दिवसीय भ्रमण में लगभग 50 विद्यार्थियों के साथ-साथ प्रो. अंजलि गुप्ता, प्रो. अंजूश्री, प्रो. रजनी, प्रो. किरण भाटिया, प्रो. भावना एवं प्रो. मोनिका मौजूद रहे।

फार्मिंग का भ्रमण कर जानकारी प्राप्त करते छात्राएं। (पंकेस)

Mushroom and Strawberry Farm at Village Bajana Kalan District - Sonipat

Activities ECO CLB

Exhibits

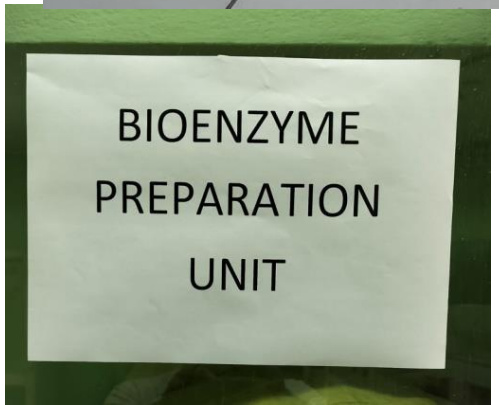
Exhibits ECO CLB

Museum

Paper Bowls using Waste Paper

ECO CLB

Museum



Preparation of Bio Enzyme:

1. Jaggery (Gud) – 1 portion.
2. Citrus peels - 3 portions (Orange, Sweet lime, Lemon etc.)
3. Water - 10 portions.

Uses: 1. As a cleaner and disinfectant various surfaces of the home like the glass windows, floor etc.

2. Biofertilizer, Herbicide and Natural Pesticide.

ECO CLB

Museum

Stuffed animal model made from rice straw

Fountain made from waste materials