

I.B. (PG) COLLEGE, PANIPAT

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

An ISO 9001:2015 & ISO 14001: 2015 Certified Premier Co-Educational

Institute

(Affiliated to Kurukshetra University, Kurukshetra)

Supporting Documents for 7.1.2

7.1.2: The Institution has facilities and initiatives for

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1 Energy Conservation

Green initiatives, encompassing energy conservation and environmental protection, are of utmost importance in the current era. Energy conservation initiatives are vital to reduce our reliance on non-renewable energy sources and curb greenhouse gas emissions. Additionally, environmental protection is crucial for maintaining the delicate balance of ecosystems and safeguarding biodiversity. Green initiatives not only benefit the planet but also contribute to the creation of green jobs, technological advancements, and economic growth. Several initiatives have been implemented to make the campus eco-friendly, including utilization of solar power for renewable energy, implementation of a rainwater harvesting system, and adherence to Green Campus.

- O Solar Power: I.B. College has taken a significant step towards alternative sources of energy by harnessing solar energy, a major renewable energy source. Taking a significant step towards becoming an environmentally friendly campus, The College installed solar power panels on the college premises. For this, the New Science Block of the college was selected for the installation of solar panels on the rooftop (Figure 1). This has been done in collaboration with the Tata Power Solar Systems, Limited, Bangaluru, Karnataka. This solar power plant has the capacity to produce 50 kW from the Rooftop Solar PV System. The installation of this grid solar power plant offers numerous benefits to the college and its surrounding community. Firstly, it significantly reduces the college's dependence on traditional energy sources, such as fossil fuels, which helps mitigate the negative environmental impact associated with conventional electricity generation. By producing electricity from a renewable source, the college actively contributes to the global efforts to combat climate change and promote sustainability.
- **O** Wheeling to the Grid: The college uses solar energy generated; in the event of excess production, the extra energy is fed back into the main grid. A two-way meter is installed for this purpose to make it easier to transmit electricity from and to the grid.
- **O Power Efficient Equipment**: The college campus has embraced sustainable technology by implementing energy-efficient solutions such as LED lighting and three to five-star rated air conditioning units. The use of LEDs (light-emitting diodes) for lighting purposes offers numerous advantages over traditional incandescent or fluorescent bulbs. LEDs consume significantly less energy, resulting in reduced electricity consumption and lower utility bills for the college (Figure 2).

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Figure 1 Solar Power Panels

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Science Block

S. No.	Location	No. of Luminaries	Wattage	Avg. Lux	Lux/W/sq.m	ILER	kWh/Year
1	Computer Lab (1) Fourth Floor	Led (36W*4)	144	218.0	96.89	2.11	300.67
2	Computer Lab (2) Fourth Floor	Led (36W*4)	144	216.0	87.13	1.89	300.67
3	Computer Lab (3) Fourth Floor	Led (36W*4)	144	225.0	90.76	1.97	300.67
4	Class Room 1 Fourth Floor	Led (36W*4)	144	218.0	87.94	1.91	300.67
5	Office Fourth Floor	Led (36W*4)	144	234.0	64.15	1.49	300.67
6	Class Room 2 (Fourth Floor)	Led (36W*4)	144	268.0	73.13	1.70	300.67
7	Class Room 3 (Fourth Floor)	Led (36W*4)	144	297.0	82.65	1.92	300.67
8	Scminar Lab	Led (36W*8)	288	229.0	99.35	2.07	601.34
9	Botany Lab (3rd Floor)	Led (36W*10)	360	299.0	73.72	1.54	751.68
10	Math Staff Room (3rd Floor)	Led (36W*2)	72	199.0	47.26	1.31	150.34
11	Zoology Lab (3rd Floor)	Led (36W*5)	180	205.0	94.31	1.96	375.84
12	Staff Room (3rd Floor)	Led (36W*4)	144	311.0	84.02	1.95	300.67
13	Museum (3rd Floor)	Led (36W*4)	144	223.0	88.54	1.92	300.67
14	Biotech (3rd Floor)	Led (36W*6)	216	245.0	99.03	2.06	451.01
15	Library (3rd Floor)	Led (36W*4)	144	228.0	91.00	1.98	300.67
16	Class Room 1 (3rd Floor)	Led (36W*4)	144	231.0	92.42	2.01	300.67
17	Class Room 2 (3rd Floor)	Led (36W*4)	144	246.0	89.63	1.95	300.67
18	Library (2nd Floor)	Led (36W*4)	144	272.0	92.17	2.00	300.67
19	Class Room 2 (2nd Floor)	Led (36W*4)	144	209.0	91.70	1.99	300.67
20	Lab Attendant-2 (2nd Floor)	Led (36W*3)	108	248.0	100.85	2.10	225.50
21	Class Room 1 (2nd Floor)	Led (36W*4)	144	257.0	104.09	2.26	300.67
22	Chemistry Lab-1 (2nd Floor)	Led (36W*10)	360	297.0	72.93	1.52	751.68
23	Staff Room (2nd Floor)	Led (36W*5)	180	269.0	69.36	1.51	375.84
24	Chemistry Lab-2	Led (36W*8)	288	279.0	100.64	2.01	601.34

PGS Energy Services Pvt. Ltd.

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Figure 2 Sample Data of Using LEDs in the College Campus from Green Energy Audit Report

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2 Waste Management

The employees and the students were made aware to segregate the solid waste before it is disposed in the different bins as per the marking placed at various locations on the campus. The college has entered into a Memorandum of Understanding (MoU) with Exigo Recycling Private Limited, Panipat. Exigo Recycling is an officially authorized e-waste recycling plant recognized by the Haryana State Pollution Control Board, Panchkula. This partnership aims to enhance e-waste management practices within the college.

The college has implemented an innovative and eco-friendly solution called the **vermicomposting system**. This system serves as an organic waste management method that utilizes the power of earthworms to break down and decompose organic waste materials. Implementing the vermicomposting system helps to reduce the amount of organic waste that would otherwise end up in landfills, contributing to environmental pollution. It also promotes sustainability and showcases our commitment to adopt eco-friendly practices.

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Figure 3 Heap of collected organic waste to be used for composting, Vermicomposting System and Waste Collection System.

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EXIG® 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 manuser by Exigo Recycling Pvt. Ltd. Item Description Collection Date Our Receiving Details Filtral Recycling Date Desktop, Monitor.etc. 27.12.2019 MRN No. ERPL-2063N 23.12.2019 The larms mensioned above have been disposed of in an environmentally sale manner as par the proscribed norms of the Company and the rules laid alone by the Publish coerned submittles.

This Safe Dispose Certificate includes the activities of collection, insupposition, beinger disnaming and treatment using mechanical immunal process wherein the elements are recovered from the latest meridioned above and converted from the contraction of new products. The them is entitled above and converted from the manufacturing of new products. The them is entitled above and converted from their original puppose and hard settle recognized and hard settle recognized and hard settle recognized. Our Pollution Control Board: Passbook Authorization No.: HSPCRIPA 2019-1921 dt. 26.09.2019 valid till 09.08.2024

Application no. :7441571 Indiany id: 18PTF910909 Duay: 03/03/2020



HARAYANA STATE POLLUTION CONTROL BOARD C-11, SECTOR-6, PANCHKULA PHONE:-0172-2577870-73,FAX-NO-2581201

Authorization No.HSPCB/2020/7441571EWREF02 Date of Submission :17/02/2020

Dated:03/03/2020

M/s EXIGO RECYCLING PRIVATE LIMITED BARSAT ROAD PANIPAT PANIFAT

E waste Authorization under Rule 13 of the E waste (management) Rules, 2016 for Dismantler, Recycler of E-Waste.

1. M/s EXIGO RECYCLING PRIVATE LIMITED, BARSAT ROAD PANIPAT is hereby granted an authorization for Dismantler, Recycler of E-waste on the premises situated at BARSAT ROAD PANIPAT for the following:

Sr No.	Name of Electrical and Electronic equipment (Nature)	Name of components	Electrical and electronic equipment code	Quantity	Units MT/A	Authorization mode of Disposal/Dismantle
Sr No.	Name of Electrical and Electronic equipment (Nature)	Name of components	Electrical and electronic equipment code	Quantity	Units MT/A	Authorization mode of Disposal/ Dismuntle
Sr No.	Name of Electrical and Electronic equipment (Nature)	Name of components	Electrical and electronic equipment code	Quantity	Units MT/A	Authorization mode of Disposal/ Dismantle
1	Consumer	Television says	CEEWI	8333 33	Kg/Day	producer/manufact

- 1. That the authorization is granted for refurbishing, Dismantling and recycling of E-Waste covered under schedule-1 of E-Waste (Management) Rules, 2016 for electrical and electronic equipment.
- 2. That authorization is granted for Personal Information and technology and telecommunication equipment ITEW1 to ITEW16 as per schedule I, Television sets (including sets based on (Liquid Crystal Display and Light Emitting Diode technology) CEEW1, Refrigerator CEEW2, Washing Machine CEEW3, Air-conditioners excluding centralized air conditioning plants CEEW4 for refurbishing, dismantling and recycling for the quantity as submitted in application form.
- 3. That the unit will submit annual return in time as prescribed in E- wastes (Management) Ruled, 2016.
- 4. That the installed capacity of the unit will be 22600 MT/A as per certificate issued by DIC, Panipat vide no DIC/PNP/2019/719 dated 16/04/2019 and we permitted the per annum capacity of unit is 18000
- 5. That the unit will comply with conditions of Consent to operate granted to the unit.
- 6. That if the unit found non complying with the provision of E-waste (Management) Rules, 2016 the authorization granted to the unit will be revoked or any law of land.
- 7. That the unit will comply with the direction issued by MOEF & CC, CPCB, HSPCB and NGT time to time.

General Term and Conditions of Authorization:

Shailender Digitally signed by Shailender Arora Arora

Date: 2020.03.03 16:07:03 +05'30'

Regional Officer, Shailender Arora Haryana State Pollution Control Board

Figure 4 Certificate of e-Waste disposal and Autherisation of Exigo Recycling Private Limited.

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3 Water Conservation

Four rainwater-harvesting structures have been constructed on campus to collect rainwater. College rainwater harvesting is an effective and sustainable approach to replenishing groundwater reserves. By implementing rainwater harvesting systems on their campuses, institutions can actively contribute to water conservation efforts while educating students about the importance of sustainable practices. Rainwater, which would otherwise go to waste is stored in underground tanks/recharge pits, allowing it to percolate slowly into the ground, replenishing the groundwater table.









Figure 5 Rainwater Harvesting System

Acr ?





Figure 6 Rainwater Harvesting System

4 Green campus initiatives

List of some Green Campus Initiatives

S.N o	Date	Name of Activity organized by the College	Organized by	No.of Participants
1	01.07.20 19	Rally organized under air pollution awareness campaign	NCC	75 participants
2	30.07.20 19	Tree plantation was done by Dr. Raj Kumar Mittal, Vice Chancellor, Chaudhary Bansi Lal University, Bhiwani in the girls wing	NSS	250 Tulsi plants were distributed to the students
3	17.08.20 19	Tree plantation under the joint auspices of Red Cross Society Panipat and National Service Scheme Unit	NSS	150 participants
4	19.10.20 19	Campaign to make farmers aware on crop residue management	NSS	100 participants
5	05.06.20 20	World Environment Day was celebrated which was started by Principal Dr. Ajay Kumar Garg by planting saplings in the courtyard of his house. He told that World Environment Day is celebrated every year on June 5. He told that the theme of this year 2020 is "Celebrate Biodiversity".	Environment department	50
6	11.08.20 20	Unnat Hariyali Haryana Campaign	N. S. S., N. C. C. and Sanskarshala Club	250
7	14.08.20 20	Plantation drive under Harit Haryana Abhiyan Unnat Haryana Abhiyan	N. S. S., N. C. C. and Sanskarshala Club	250

S.N o	Date	Name of Activity organized by the College	Organized by	No.of Participants
8	21.08.20 20	Van Mahotsav in college premises under Unnat Hariyali Haryana campaign	N. S. S., N. C. C. and Sanskarshala Club	As the chief guest in this program, I.B. Deputy head of the organization Mr. Ashok Nagpal and social worker Virendra Singla attended
9	28.11.20 20	Tree planting	N. S. S. and N. Joint auspices of CC unit	30
10	13.02.20	Local I.B. A felicitation ceremony was organized in Post Graduate College, Panipat under the aegis of Hindi Department and Alumni Council. Mrs. Neelam Danda, wife of Mr. Mahipal Dhanda MLA (Rural Panipat), assumed the role of the chief guest. Former students Sudesh and Anju Dahiya along with Mrs. Neelam Dhanda planted saplings in the college premises. Principal Dr. Ajay Kumar Garg told that Kumari Reena has brought laurels to the school by getting first position in Kurukshetra University, Kumari Pooja got fourth, Sanu got fifth, Deepika got seventh and Tamanna got ninth. In M. Hindi second year, Kumari Sadhna got second, Ritu Bala got ninth position.	Department of Hindi & Alumni Council	100
11	28.06.20 21	A week-long tree plantation drive was conducted. On this occasion, the principal of the college, Ajay Kumar Garg, started the campaign by planting saplings.	NSS & NCC Unit	40

S.N o	Date	Name of Activity organized by the College	Organized by	No.of Participants
12	13.08.20	12 Haryana N.C. As per the instructions of C. Battalion, Sonipat, I.B. (P.G.) College in Panipat, N.C. Saplings were planted by C. Cadets. This plantation was done under the "Tree Plantation Drive One Cadet One Tree" program from 28 July to 15 August 2021.	NC C.	50
13	07.09.20 21	Foundation Day of Bank of India celebrated. College Principal Dr. Ajay Kumar and Bank's Assistant General Manager Rajnikant Bhunya participated in this program and planted saplings in the college premises.	N. CC, N. S. S. and Sanskarshala Club	15
14	05.08.20	N.S.S., N.C.C. Sanskarshala Club started tree plantation week. This program was organized under the government's campaign Ek Ped Vishwas. This campaign will run from August 5 to August 11.	N.S.S., N.C.C. Sanskarshala Club	15
15	23.08.20	Plantation drive was conducted from August 5 to August 15 under Ek Peed Vishwas. Under this campaign, NSS volunteers and NCC cadets planted about 80 saplings in the surrounding area and motivated people to plant more and more saplings. Also made aware and took an oath that we will take full care of the sapling we have planted.	Under the joint auspices of NSS Unit, NCC Unit and Sanskarshala Club	80
16	13.04.20 23	Tree plantation program organized under the aegis of anniversary of Jallianwala Bagh massacre	Department of Physical Education N.S.S. NCC and sanskarshala club	25

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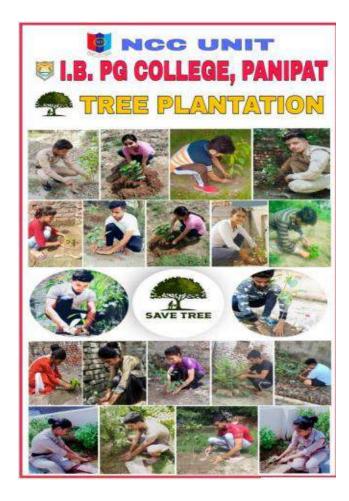


Figure 7 Tree Plantation

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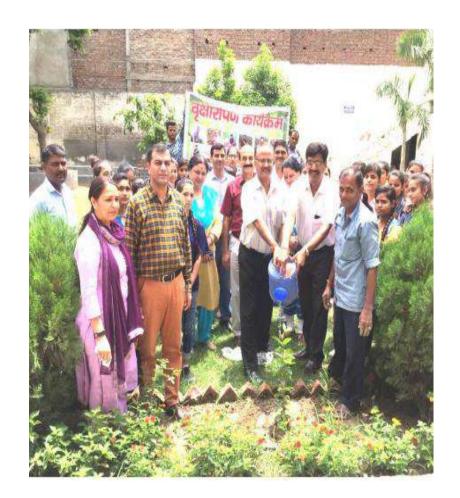




Figure 8 Tree Plantation



Figure 9 Green Campus Initiative

5 Disabled-friendly, barrier free environment.









Figure 10 Ramp Facility



Figure 11 Lift Facility

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Figure 12 Differently Abled Friendly washrooms

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