

Water Management-

- i) **Rainwater Harvesting:** Rainwater harvesting systems have been installed in all campus buildings. This collected rainwater has been used for various purposes, including irrigation, flushing toilets, and ground water replenishment.



Fig.: Rainwater Harvesting unit installed near Zoology department.

- ii) **Leak Reporting and Repair:** Immediate repair to prevent water wastage has been done. A caretaker or maintenance team responsible for quick action on leak repairs has been done.
 - iii) **Toilet Choices:** More Indian-style toilets (squat toilets) rather than western-style toilets have been installed as Indian-style toilets typically use less water per flush.
1. **Energy Audit:** The college has adopted various measures, such as replacing CRT monitors with LCD monitors, using LED lighting, introducing automatic street lighting control, upgrading air conditioners for energy efficiency, and utilizing transparent glass windows for natural lighting to conserve energy.



Fig.: Star rated air conditioners for energy efficiency



Fig.: Installation of LED lights for energy efficiency

3.Renewable Energy Installation: Solar panels have been installed in the campus for clean energy generation.



Fig.:Solar Panels installed in the campus

Bio-degradable and non bio-degradable waste:

Solid Waste Management: The college focuses on reducing waste generation and implementing the segregation of waste into bio-degradable and non bio-degradable wastes by the use of placement of green and blue dustbins in the college campus. The use of paper is minimized through digitization of attendance and assessment records.



Fig.: Placement of separate dustbins for segregation of wastes.



MEMORANDUM OF UNDERSTANDING (MOU)

This Memorandum of Understanding is between Delhi Public School, Patna, hereinafter referred to as "DPS Patna," and College of Commerce, Arts & Science, Patna, hereinafter referred to as "the College."

POINTS OF AGREEMENT

- Both parties share a concern for environmental sustainability and recognize the need to contribute to waste reduction efforts. Therefore, DPS Patna agrees to process waste papers provided by the College.
- The College shall send its used papers to DPS Patna as and when required.
- DPS Patna will efficiently process the waste papers received, ensuring environmentally friendly recycling methods.
- The recycled papers will be returned to the College for reuse in various capacities, such as in-house circulation of notices and rough works.
- Both institutions acknowledge that this MOU is an attempt to create wealth from waste, promoting sustainable practices and fostering environmental consciousness.

The initiative aims to contribute to environmental sustainability, reduce carbon footprint, and promote responsible waste management practices.


(Signature)
B. Vinay
Principal, DPS Patna
Date:


(Signature) 23.08.21
Prof. Tapan Kumar Shandilya
Principal, COCAS
Date: _____
College of Commerce, Arts & Science
Patna-800020



Fig.: Memorandum of Understanding (MOU) between the college and DPS, Patna

E-Waste Management: Electronic waste of the college has been handled responsibly by maintaining AMC for CPUs and monitors, followed expert recommendations for disposal, and selling obsolete but workable computers and equipment as scrap. These e-wastes has been deposited to the **karo sambhav** team of Patna located at Boring Canal Road.



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College of Commerce, Arts & Science

Kankarbagh, Patna – 800 020
(A Constituent Unit of Patliputra University, Patna-20)
NAAC RE-ACCREDITED 'A' Grade, with CGPA 3.10

OFFICE OF THE PRINCIPAL

Ref:-

Date:-

TO WHOMSOEVER IT MAY CONCERN

KSPL/BC/2023-24/91

Our office, **College of Commerce, Arts and Science, Patna** has handed over the following e-waste material to Karo Sambhav Pvt. Ltd. for responsible recycling in accordance with the E-Waste Management, Rules, 2022.

We have handed over **400 Kg** of e-waste to Karo Sambhav Pvt. Ltd. on 11th July 2023.
The e-waste given by us comprises the following items: -

Sr. No	ITEW Category as per e-waste (management) rules 2022	Item Description	Quantity of e-waste generated (in Kg)
1	ITEW 2	CPU	110.5
2	ITEW 24	UPS	71
3	ITEW 2	Keyboard	16.35
4	CEEW 4	AC Indoor	9.5
5	ITEW 2	LCD Monitor	53
6	LSEEW 29	Water Purifier	17.4
7	CEEW 4	Stabilizer	19.5
8	ITEW 2	CRT Monitor	38
9	ITEW 17	Projector	12.7
10	ITEW 6	Printer	23
11	LSEEW 13	Fan	6.3
12	ITEW 2	SMPS	1.45
13	LSEEW 21	Mixer	3.75
14	ITEW 2	Motherboard	2.3
15	ITEW 1	Adaptor	10.1
16	ITEW 2	Mouse	1
17	ITEW 12	Telephone	3.5
18	ITEW 2	Hard Disk	0.4
19	ITEW 26	Modem	0.25
Total Quantity			400 Kg

Authorized Signatory
Place: Patna


11/07/23
College of Commerce, Arts & Science
Patna- 800020
10/08/23

Fig.: E-wastes given to Karo Sambhav



#RECYCLEGIRI CHAMPION



CERTIFICATE OF RECOGNITION

AWARDED TO

College of Commerce Arts and Science
for joining the **circular economy** movement.

Thank you for recycling 400 kg of e-waste in FY 2023-24,
saving 800.0 kg of CO₂ emissions



CO₂ offset by 5 trees in their lifetime



Taking a regular car off the road by 4000 kms

PRINCIPAL PARTNERS



ASSOCIATE PARTNERS



OTHER PARTNERS



11/07/2023
Date



Please scan the QR code to verify this certificate

Pranshu Singhal
Founder and Director
Karo Sambhav

Fig.: Certificate by Karo Sambhav to the college.

- iv) **Awareness Campaigns:** various awareness campaigns, workshops, and events to educate and engage the college community in sustainable practices have been organized.



Fig.: Awareness programmes for sustainable practices on World Environment Day

- v) **Clean Campus Initiatives:** The college is actively engaged in coordinating cleanliness activities within and beyond the campus, aligning with the vision of the Swachh Bharat Abhiyan. This includes raising awareness about cleanliness and hygiene through regular drives, rallies, and the active participation of students and staff in cleanliness efforts. The college also organizes events and competitions related to the Swachh Bharat initiative and promotes a pledge to maintain cleanliness.



Fig.: Cleanliness drive by the students in the college campus.



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Fig.: Certificate by the Bihar State Pollution Control Board (BSPB) to the college.

- vi) **Clean Air Initiatives:** The college encourages the use of public or college transportation to reduce air pollution and limits the entry of private vehicles within the campus. Smoking and the use of tobacco products are strictly prohibited to maintain a smoke-free campus.



Fig.: Awareness Programme on NO TOBACCO DAY in the college campus.



Fig: Poster session on NO TOBACCO DAY

Paperless Operating Procedure-Digital communication, and e-assignments are encouraged in the curriculum.

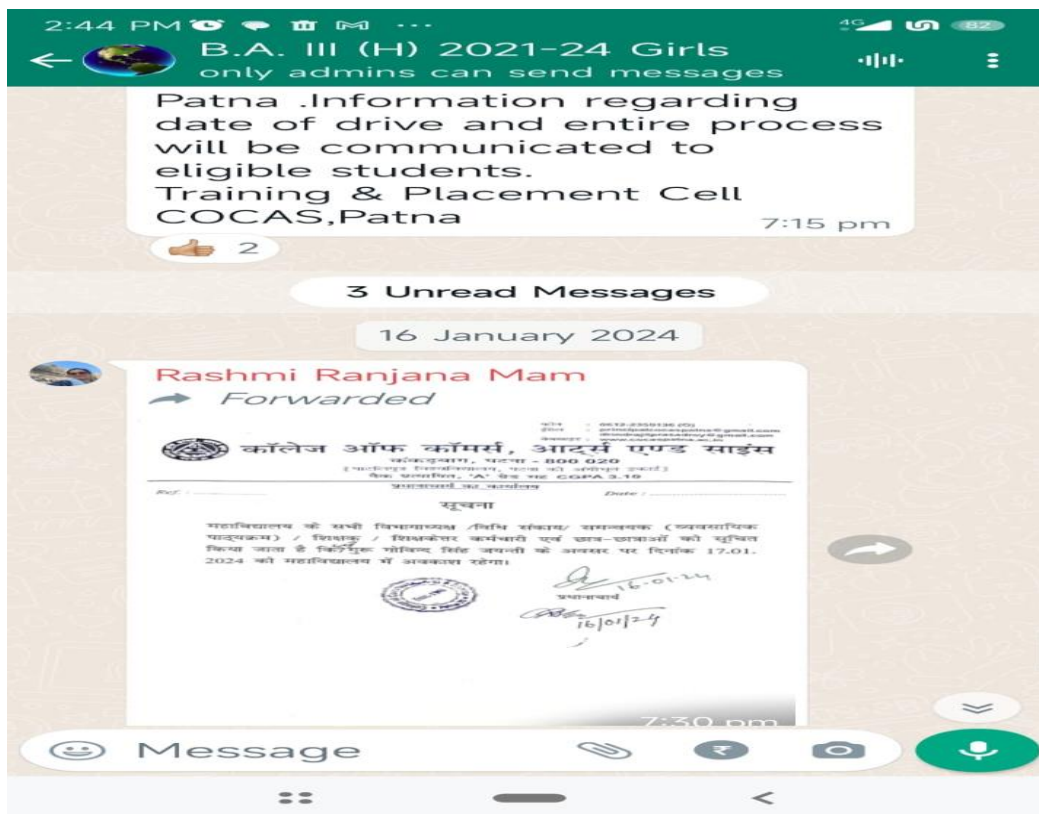


Fig.: Encouragement of digital communication on digital platform.



Fig.: E-assignment on Google classroom.

- vii) **Plantation drives:** The college organizes annual plantation drives to decrease carbon footprint and enhance the college ambience.



Fig.: Newspaper clipping of plantation drive in the campus.



Fig.: A view of the Plantation drive in the campus.

- viii) **Plastic-Free Campus:** The college strictly enforces a ban on single-use plastics within its premises and promotes the use of eco-friendly alternatives. Sensitization programs and initiatives extend to students and stakeholders to ensure a plastic-free campus and raise awareness about the harmful effects of plastic use.
- ix) **Biodegradable Waste:** The Botanical garden at the College of Commerce, Arts, and Science, Patna operates a Vermicompost unit, utilizing organic waste generated on campus for vermicomposting and solid waste management. The vermicompost produced serves as a nutrient-rich manure for the Botany garden and other plants on campus. This initiative also provides students with valuable training in vermicomposting, potentially equipping them to manage small-scale industries in the future.



Fig.: Vermicompost in Botany department.