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7.1.3 - Describe the facilities in the Institution for the management of the following types of degradable and non-degradable waste (within 200 words)

Solid waste management

Liquid waste management

Biomedical waste management

E-waste management

Waste recycling system

Hazardous chemicals and radioactive waste management

Table of Content

1.	Introduction	2
	A.Solid and Liquid Waste	2
	B.Biomedical Waste	2
	C.E-Waste Management	2
	D.Waste Recycling System	2
	E.Hazardous Chemicals and Radioactive Waste Management	3
2.	Management of the various types of degradable and non-degradable waste	3
	A.Solid Waste Management	3
	B.Biomedical Waste Management	3
	C.E-Waste Management	3
	D.Composting and Organic Fertilizer Production	4
	E.Approximate Production Capacity	4
3.	Geotagged photo for Solid Waste Composting Pits	
4.	Geotagged photo for Segregation of garbage	.5
5.	Biomedical Waste Management	.6
6.	E- Waste Management	
7.	MoU between Unique Eco Recycle and IIST for e-waste	.8
8.	Certificate of membership for e-waste with unique eco recycle	.9

For IIST

Chief Administrative Officer



Indor@Institute of Science and Technology, Indore

Principal



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1. Introduction

IIST takes a proactive and environmentally responsible approach to waste management, employing a variety of systems and practices to handle both degradable and non-degradable waste. The institution's waste management efforts are outlined as follows:

A. Solid and Liquid Waste

The institute processes garden and kitchen waste through a composting system consisting of four pits. This system effectively reduces waste while generating organic fertilizer for the institute's own organic-farming initiatives. Approximately 40-50% of raw waste is converted into high-quality compost, with 100 kg of material yielding around 30 kg of fertilizer within a month. The process is monitored and maintained by the Chemical and Civil Engineering departments, ensuring its efficiency and sustainability.

B. Biomedical Waste

Sanitary pads and other biomedical waste are handled with care through specialized *incinerators*. Additionally, a dedicated incinerator is provided in the girls' washroom to dispose of sanitary pads safely and hygienically.

C. E-Waste Management

IIST is committed to reducing e-waste through several initiatives. Old computers are repurposed by being donated to physically disabled students and staff, extending their useful life. Scrap electronic components, such as parts from broken computers, are resold to repair shops, and smaller items like wires and microchips are collected in separate bins for proper disposal and recycling.

D. Waste Recycling System

The composting pits at IIST offer a practical solution to organic waste disposal. Composting is a natural process that transforms food scraps and yard waste into nutrient-rich fertilizer, providing environmental benefits by reducing waste and

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enhancing soil health. This system supports the institute's commitment to sustainable waste management.

E. Hazardous Chemicals and Radioactive Waste Management

Currently, IIST does not have a specific system in place for the management of hazardous chemicals and radioactive waste. However, this area is a potential focus for future development to further enhance the institute's waste management framework.

Through these initiatives, IIST demonstrates a strong commitment to reducing its environmental footprint while promoting sustainability on campus.

2. Management of the various types of degradable and non-degradable waste

The institution has established effective facilities for the management of both degradable and non-degradable waste, focusing on sustainable practices. These facilities are categorized as follows:

A. Solid Waste Management

The garden and kitchen waste generated by the Institute is efficiently converted into organic fertilizer. This process takes place in a designated area where four composting pits are used to decompose organic material. Given the significant amount of organic waste produced daily, this method ensures that the waste is managed responsibly and turned into valuable resources. Most of the waste is biodegradable and, through composting, is transformed into high-quality organic fertilizer used in the Institute's organic farming.initiatives.

B. Biomedical Waste Management

Biomedical waste, including sanitary pads and other medical waste, is carefully disposed of using specialized incinerators, ensuring safe and hygienic treatment. The Institute also provides dedicated incinerators, such as one located in the girls' washroom for the disposal of sanitary pads.

C. E-Waste Management

The institution actively promotes the reduction of electronic waste (e-waste) through various initiatives. Outdated computers are donated to physically disabled students and staff, providing





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continued use. Scrapped parts are resold to repair shops, and smaller e-waste items like wires and microchips are collected separately for proper recycling and disposal.

D. Composting and Organic Fertilizer Production

The Institute manages its organic waste effectively through composting, which is a natural process that transforms food scraps, garden clippings, and other organic materials into nutrient-rich fertilizer. This method not only reduces waste but also provides the Institute with a valuable resource for its agricultural projects.

E. Approximate Production Capacity

The composting process achieves a conversion rate of approximately 40-50% of raw material weight into organic fertilizer. For instance, 100 kg of organic waste results in approximately 30 kg of organic manure within one month. This process is closely monitored by the Chemical Department and maintained by the Civil Department to ensure optimal functioning.

Cost Comparison:

- Market price for organic fertilizer: ₹30 to ₹50 per kg
- Cost of organic fertilizer produced on the IIST campus: ₹15 per kg

This waste management system significantly reduces the Institute's environmental footprint while providing a cost-effective solution for its organic farming needs.

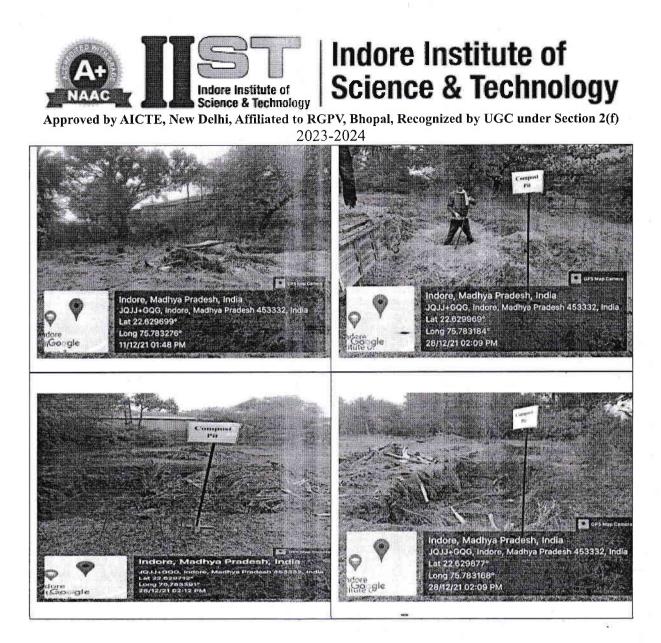
3. Geotagged photo for Solid Waste Composting Pits



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4. Geotagged photo for Segregation of garbage

The Institute is located in Indore District, within Indore City, which has been recognized as the seventh time cleanest city in India. Although situated in a rural area, the Institute rigorously follows all the guidelines and norms set by the Municipal Corporation of Indore to ensure cleanliness and sustainability.

As part of its waste management best practices, the Institute segregates waste into two categories: "Gila Kachra" (wet waste) and "Shukha Kachra" (dry waste). These waste types are collected in separate dustbins—green-colored bins for wet waste and blue-colored bins for dry waste.

Chief Administrative Officer



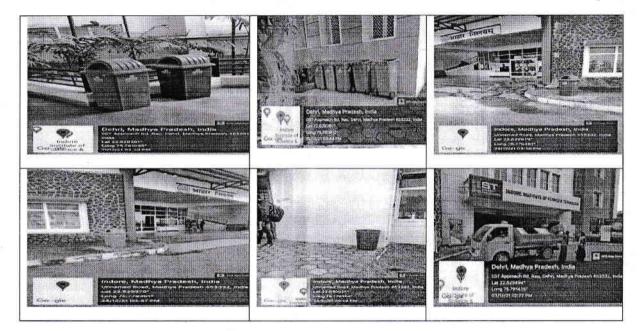
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- 1. Dry Waste ("Shukha Kachra"): This waste is sent to the Nagar Palika (municipal authority) for further processing and recycling.
- 2. Wet Waste ("Gila Kachra"): Wet waste is composted on campus, converting it into valuable organic manure, as previously detailed in the composting process.

To ensure efficient waste segregation, a total of 30 dustbins are placed across the campus—16 outside and 14 within the main building. This waste management system reflects the Institute's commitment to environmental sustainability and supports the cleanliness efforts of Indore City.



5. Biomedical Waste Management

Biomedical waste, including sanitary pads and other medical waste, is carefully managed through incineration. The Institute utilizes specialized incinerators to ensure the safe and hygienic disposal of such waste. For sanitary pads specifically, a dedicated sanitary pad incinerator is installed in the girls' washroom, ensuring that this waste is treated securely and efficiently. This system upholds the Institute's commitment to maintaining a clean and safe environment for all.



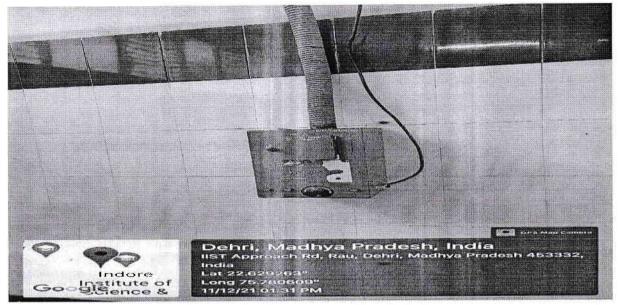


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Sanitary Pad Incinerator in Girls Wash Room

6. E- Waste Management

The Indore Institute of Science and Technology (IIST) has implemented several E-waste management initiatives aimed at fostering an eco-friendly environment on campus. As part of these efforts, the Institute has donated old computers to physically disabled students and staff, including peons, providing them with continued use of functional technology. Additionally, scrap parts from outdated machines are resold to computer servicing shops, minimizing e-waste and supporting the reuse of electronic components. To further streamline e-waste disposal, a dedicated collection bin is provided for smaller electronic items, such as microchips, wires, and other components, ensuring responsible disposal and recycling. These initiatives reflect IIST's commitment to sustainability and reducing its environmental footprint.

Separate Dustbins for Collection of E-waste



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Page 7 of 9

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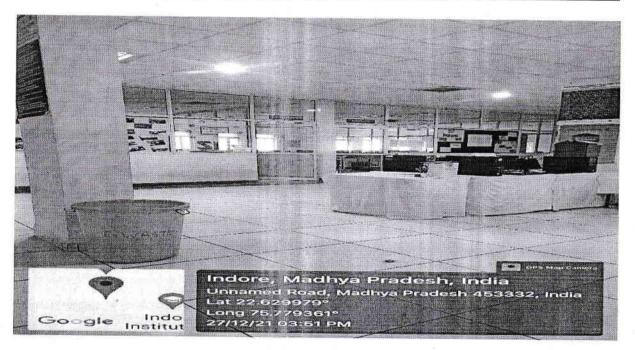
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7. MoU between Unique Eco Recycle and IIST for e-waste. BINCH 2 Admin

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This is to certify that M/s ... Shaif Educational and . Welfare . Society, Indore has completed formalities for taking membership of Unique Eco Recycle. We are pleased

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Certificate of membership for e-waste with unique eco recycle

Friday, 27 December 2024

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