

**SOLID WASTE MANAGEMENT (22CE856)**

**T5 ASSESSMENT**

**MODULE 01**

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| SUBMITTED BY | SUBMITTED TO |
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**INDEX**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S.No.** | **Date** | **T5 Assessment** | **Content** | **Page No.** |
| **01** | **28/08/2024** | **01** | **Solid waste management – Primary goals, sustainable disposal mechanism for e-waste** |  |
| **02** | **02/09/2024** | **02** | **Solid waste – Properties, Composting practices** |  |
| **03** | **04/09/2024** | **03** | **Solid waste management practices – Reduce Reuse and Recovery** |  |
| **04** | **08/09/2024** | **04** | **Solid waste management – Functional elements and Windrow composting** |  |



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**MODULE 01**

**Question 1**

**Date:- 25/8/2024**

1. **By the principles of solid waste management policy, define primary goals of solid waste management and describe with a realistic approach.**
2. **Create a suitable disposal mechanism for an electronic waste generated in a mobile accessories store in your vicinity.**

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**a) Primary Goals of Solid Waste Management (SWM) and Realistic Approach**

**Primary Goals of Solid Waste Management:**

1. **Minimize Waste Generation:**
   * **Goal:** Reduce the amount of waste produced at the source.
   * **Realistic Approach:** Implement source reduction practices like encouraging the use of reusable products, promoting responsible consumption, and adopting eco-friendly packaging. For example, a community program can educate households and businesses on reducing waste through workshops and incentives for using less packaging or recycling more.
2. **Efficient Collection and Transportation:**
   * **Goal:** Ensure waste is collected and transported efficiently and safely.
   * **Realistic Approach:** Develop an optimized collection schedule based on waste generation patterns and ensure the use of appropriate vehicles and infrastructure. For instance, a city could use data analytics to optimize collection routes and schedules to reduce fuel consumption and operational costs.
3. **Effective Waste Separation:**
   * **Goal:** Separate different types of waste (e.g., recyclables, organic waste, hazardous waste) at the source to facilitate recycling and proper disposal.
   * **Realistic Approach:** Implement segregated waste bins in households, commercial establishments, and public places with clear labeling and instructions. For example, a neighborhood can have different bins for paper, plastic, glass, organic waste, and hazardous waste with regular community clean-up drives to promote proper segregation.
4. **Promote Recycling and Reuse:**
   * **Goal:** Enhance recycling rates and encourage the reuse of materials.
   * **Realistic Approach:** Set up recycling programs and facilities that process different types of waste materials. Provide incentives for businesses and individuals who actively participate in recycling programs. For example, a local government could partner with recycling companies to create drop-off centers and offer tax breaks to businesses that demonstrate significant recycling efforts.
5. **Safe Disposal of Non-Recyclable Waste:**
   * **Goal:** Ensure that non-recyclable and hazardous waste is disposed of safely to protect human health and the environment.
   * **Realistic Approach:** Establish safe landfills and incineration facilities with proper environmental controls. Implement regular inspections and monitoring to ensure compliance with safety standards. For example, a region can have a well-managed landfill with leachate collection systems and methane gas recovery, adhering to environmental regulations.
6. **Public Awareness and Education:**
   * **Goal:** Increase public awareness about the importance of waste management and engage the community in waste reduction practices.
   * **Realistic Approach:** Launch educational campaigns and outreach programs in schools, workplaces, and community centers to inform people about the impacts of waste and how they can contribute to better waste management. For instance, schools can integrate waste management education into their curricula and organize student-led recycling initiatives.

**b) Disposal Mechanism for Electronic Waste (E-Waste) from a Mobile Shop**

**Disposal Mechanism for E-Waste in a Mobile Shop:**

1. **Establish E-Waste Collection Points:**
   * **Create Collection Bins:** Set up dedicated e-waste collection bins or containers within the mobile shop for customers and employees to drop off old or unwanted electronic devices.
   * **Designate a Storage Area:** Allocate a specific area in the shop for the temporary storage of collected e-waste to prevent contamination and ensure proper handling.
2. **Partner with Certified E-Waste Recyclers:**
   * **Identify Certified Recyclers:** Establish a partnership with certified e-waste recycling companies that follow environmentally friendly practices.
   * **Regular Pickup Schedule:** Arrange for regular pickups of e-waste by the recycler to ensure timely and efficient processing of the collected items.
3. **Customer Awareness and Incentives:**
   * **Inform Customers:** Educate customers about the importance of proper e-waste disposal and encourage them to use the shop’s e-waste collection point.
   * **Offer Incentives:** Provide incentives such as discounts or vouchers for customers who bring in their old electronic devices for recycling.
4. **Data Security:**
   * **Ensure Data Erasure:** For any collected devices containing personal or sensitive information, ensure that data is securely erased or devices are handled by professionals who can guarantee data destruction before recycling.
5. **Compliance and Documentation:**
   * **Adhere to Regulations:** Follow local and national regulations for e-waste disposal and recycling. Ensure that all collected e-waste is handled according to legal requirements.
   * **Maintain Records:** Keep detailed records of the quantity and types of e-waste collected and disposed of, as well as any certifications or documentation provided by the recycling partners.
6. **Sustainable Practices:**
   * **Promote Repair and Refurbishment:** Encourage repair and refurbishment of electronic devices where feasible, to extend their lifecycle and reduce waste.
   * **Use Eco-Friendly Products:** Promote and stock products that are designed for easy recycling or that have a lower environmental impact.

By implementing these practices, the mobile shop can effectively manage e-waste and contribute to a more sustainable waste management system.