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## Mains Practice Questions

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**Q.** More than a year after the e-waste management rules were notified, there is little evidence that it is being implemented. Examine the causes behind India's problem of e-waste and the reasons due to which rules have been ineffective. (250 words)

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**Approach:**

- Explain what is e-waste and state key features of the e-waste management rules in India.
- State causes behind e-waste generation.
- List the loopholes in the rules and their implementation.
- Suggest steps that can be taken to manage increasing e-waste in the country.

**Introduction**

- Developing countries like India are burdened with the problem of E-waste which is either locally generated or internationally imported, causing serious harm to human health and the environment.
- E-waste is categorized as hazardous waste due to the presence of toxic materials such as mercury, lead and brominated flame retardants (which are considered as hazardous waste according to the Basel Convention).
- The Global E-Waste Monitor, 2017 published by the United Nations University estimated that India generates about 2 million metric tonnes of e-waste (2016) annually.
- Of the total e-waste produced in 2016, only 20% (8.9 MT) is documented to be collected properly and recycled, while there is no record of the remaining, e-waste.
- E-waste in India is regulated under E-waste (Management) Rules 2016 which replaced the E-waste (Management and Handling) Rules, 2011.

**Body**

**Causes**

- **Consumerist culture:** Consumption and productions of electrical and electronic equipment have increased with higher levels of disposable incomes because of Urbanization and industrialization.
- **Affordability and necessity:** ICT devices are becoming more affordable. Many people own multiple devices. Replacement cycles for mobile phones and computers, and also for other devices and equipment, are becoming shorter
- **Illegal import of E-waste:** 50 to 80% of e-waste collected by the US is exported to India, China, Pakistan, Taiwan and a number of African countries because of the availability of cheaper labour for recycling.

- The **Indian Information Technology (IT) sector** is one of the major contributors to the global economy. At the same time, it is responsible for the Generation of the bulk of E-waste or Waste Electrical and Electronic Equipment (WEEE) in India.
- **Lack of infrastructure and processing technology** for return, recycle and reuse of the e-waste.
- **Lack of awareness** of hazards of e-waste on environment and health.

### **Problems with the Regulation Policy**

- The rules **do not focus on technology transfers** for the recycling of electronic waste. Also, the lack of an updated inventory of e-waste generated makes it difficult to quantify the e-waste recycled and disposed of. This is not taken account by the existing rules.
- **Lack of sufficient e-waste management infrastructure** has not been focussed upon by the rules.
- **Implementation problems:** no independent mechanism in place to check or verify the claims made in authorizations. The robust rules are flailed by the slack implementation.
- The law states that the responsibility of producers is not confined to waste collection, but also to ensure that the waste reaches the authorised recycler/dismantler. However, there is **no monitoring system** and there is no guarantee that the waste collected by producers does not go to unauthorised recyclers.
- Unorganised **sector:** The rules do not take into account the problem of ill-equipped skilled labour to handle e-waste recycling. Most Indians end up selling their e-waste to the informal sector, which poses severe threats to human lives, with its improper and highly hazardous methods of extracting the trace amounts of precious metal from it and handling e-waste for profit.
- **Consumers' accountability:** No information is provided along with the product packing about the e-collection center for the product sold. The responsibility of the consumers is not specified along with the product.
- The **deposit refund scheme (DRS)** that aids the recycling of the product **is not operational** in India.
- **Informal sector and lack of incentive:** The rules mandate an individual to drop the e-waste at an authorised collector, but do not provide any incentive against it. This forces e-waste to end up with the informal sector and loses track on further recycling.
- **Lack of holistic planning:** E-waste management rules are not in line with the problems that have emerged because of the promotion of government initiatives like 'Make in India' and 'Digital India'.
- **Lack of reliable e-waste data** at the country level.

### **Way Forward**

- **Better e-waste data** is needed that will eventually contribute to minimizing e-waste generation, prevent illegal dumping and improper treatment of e-waste, promote recycling, and create jobs in the refurbishment and recycling sector.
- **Fee Policies Awareness** has to be created through media, publications, advertisements, posters, and product user documentation, accompanying the equipment to regulate the flow of e-waste.
- **Incentives:** Similar to Japan and Taiwan, an effective take-back program providing incentives for producers to design products that are less wasteful, contain fewer toxic components and are easier to disassemble, reuse, and recycle may help in reducing the wastes.
- End-of-life management should be made a priority in the design of new electronic products.
- **Training:** There should be training programs and effective methods to improve the job quality and satisfaction level of workers in the recycling industry.
- **Infrastructure:** Institutional infrastructures, including e-waste collection, transportation, treatment, storage, recovery, and disposal, need to be established, at national and/or regional levels for the environmentally sound management of e-waste.
- **Collection centers:** Establishment of e-waste collection, exchange and recycling centers should be encouraged in partnership with private entrepreneurs and manufacturers.

## **Conclusion**

Management of E-waste will help address the SDGs related to environmental protection (Goals 6, 11, 12, and 14) and health (Goal 3). It will also address Goal 8 that focuses on employment and economic growth since the sound management of e-waste can create new areas of employment and drive entrepreneurship.