

Model question paper
Electronic Waste Management - Issues and Challenges
BCV456C

Question with Solutions

1. Which factor determines the success of e-waste collection programs?
 - a) Cost-effectiveness
 - b) Accessibility
 - c) Public awareness
 - d) All of the above**
2. Which of the following element/s is/are cause of e-waste?
 - a) Lead
 - b) Cadmium
 - c) Beryllium, or Brominates flame retardants
 - d) All of the above**
3. **What does the 'WEEE' directive stand for??**
 - a) Waste Electrical and Electronic Equipment**
 - b) World Environmental Electronic Equipment
 - c) Waste Emissions and Electronic Equipment
 - d) World Energy and Environmental Equipment
4. Which of the following are the main contributors of the e-waste in the world?
 - I. Refrigerators/freezers, washing machines, dishwashers
 - II. Small household appliances (toasters, coffee makers, irons, hairdryers)
 - III. Personal computers, telephones, mobile phones, laptops, printers, scanners, photocopiers
 - IV. Gas cylinder, chimneys & home appliances
 - a) Only I, II, III**
 - b) Only I & II
 - c) Only I, III, IV
 - d) All of the above
5. How are electronic items dangerous?
 - a) They degrade over time, releasing cancer-causing chemicals into the air.
 - b) Lead and mercury in components can cause metabolic changes in users.
 - c) They leach toxic metals in landfills and into ground water.**
 - d) They create electromagnetic fields that interfere with animal reproduction.
6. Which toxic compound is not found in e-waste?
 - a) Mercury
 - b) Cadmium
 - c) Neon
 - d) Lead**
7. What does e- waste stand for?
 - a) Environment waste

- b) **Electronic waste**
- c) Equipment waste
- d) None of the above

8. **What are** the health hazards which can be caused by E-Waste?

- a) Lung cancer
- b) DNA damage
- c) Brain
- d) **All of the above**

9. Which country produces the most e-waste per year?

- a) India
- b) **China**
- c) USA
- d) France

10. How much lead is in a cathode ray tube (CRT), commonly called a picture tube?

- a) 1.75 pounds
- b) Between 2 and 3 pounds
- c) 19 pounds
- d) **Between 4 and 7 pounds**

11. The most valuable part of a PC or TV is the

- a) Lead in the CRT
- b) Circuit boards that contain silver and gold
- c) **Copper in the cathode yoke**
- d) None of the above

12. Which of the following is the correct related to E-waste?

- a) E-waste is a popular, informal name for electronic products nearing the end of their "useful life.
- b) Computers, televisions, VCRs, stereos, copiers, and fax machines are common electronic products.
- c) **Both A and B**
- d) None of the above

13. **What percentage of e-waste is typically recycled globally?**

- a) 10%
- b) **20%**
- c) 40%
- d) 60%

14. With reference to the E-Waste Management Rules, 2016, consider the following statements:

1. These are notified by the Ministry of Electronics and Information Technology.
2. These are not applicable to refurbishers, dismantlers and recyclers.

3. Deposit Refund Scheme is an additional channel for implementation of Extended Producer Responsibility (EPR).
4. Urban Local Bodies are mandated to prepare an integrated plan for effective implementation of the provisions.

Which of the statements given above are *not* correct?

- a) 1, 2 and 3 only
- b) 1, 2 and 4 only**
- c) 2 and 4 only
- d) 1, 2, 3 and 4
15. Which of the hazardous pollutant occurs in plastic?
- a) Lithium
- b) PCBs**
- c) Lead
- d) Copper
16. Nickel is released from _____
- a) Display
- b) Calculator
- c) Alloy**
- d) Transformers
17. In 2006, the IAER projected that _____ electronic and electrical appliances would become e-waste by 2010.
- a) 1 billion
- b) 2 billion
- c) 3 billion**
- d) 4 billion
18. According to the Comptroller and Auditor- General's (CAG) report what is the amount of e-waste generated annually?
- a) 4LT**
- b) 5LT
- c) 6LT
- d) 7LT
19. What is the hazardous pollutant released from LED's?
- a) Arsenic**
- b) Barium
- c) Cobalt
- d) Cadmium
20. What is the hazardous pollutant released from electron tubes?
- a) Arsenic
- b) Barium**

- c) Cobalt
 - d) Cadmium
21. What is the hazardous pollutant released from batteries?
- a) Arsenic
 - b) Barium
 - c) Cobalt
 - d) **Cadmium**
22. What is the hazardous pollutant released from calculators?
- a) Lithium
 - b) **Mercury**
 - c) Lead
 - d) Copper
23. Open burning to recover copper wires causes _____
- a) **Silicosis**
 - b) Lung disease
 - c) Kidney inflammation
 - d) PAH exposure
24. Which of the following give out carcinogenic brominated dioxins and furans?
- a) Lead
 - b) Barium
 - c) Zinc
 - d) **Plastic**
25. Which organization is responsible for setting standards for e-waste management?
- a) **EPA (Environmental Protection Agency)**
 - b) FDA (Food and Drug Administration)
 - c) WHO (World Health Organization)
 - d) NASA (National Aeronautics and Space Administration)
26. Which of the following metal affects mental development in children?
- a) **Lead**
 - b) Barium
 - c) Zinc
 - d) Silver
27. Which authority is responsible for implementing and enforcing e-waste management rules in India?
- a) Ministry of Electronics and Information Technology (MEITY)
 - b) Ministry of Environment, Forest and Climate Change (MoEFCC)
 - c) Central Pollution Control Board (CPCB)
 - d) **All of the above**
28. Which legislation governs e-waste management in India?
- a) **The E-Waste (Management) Rules, 2016**
 - b) The Environmental Protection Act, 1986

- c) The Hazardous Waste (Management, Handling, and Transboundary Movement) Rules, 2008
- d) The Solid Waste Management Rules, 2016

29. Under the E-Waste (Management) Rules, 2016, who is responsible for the collection of e-waste from the end-users?

- a) **Manufacturers**
- b) Retailers
- c) Bulk consumers
- d) Informal recyclers

30. What is the penalty for non-compliance with the E-Waste (Management) Rules, 2016?

- a) Fine of up to Rs. 1,00,000 and/or imprisonment for up to 5 years
- b) Fine of up to Rs. 10,00,000 and/or imprisonment for up to 10 years
- c) **Fine of up to Rs. 5,00,000 and/or imprisonment for up to 3 years**
- d) Fine of up to Rs. 50,000 and/or community service

31. Which statement best describes the global trend in e-waste generation?

- a) Decreasing due to improved recycling efforts
- b) **Increasing due to technological advancements and rising consumption**
- c) Stagnant due to regulatory measures
- d) unpredictable due to economic fluctuations

32. What is e-waste?

- a) **Waste generated from electronic gadgets**
- b) Waste generated from agricultural activities
- c) Waste generated from industrial processes
- d) Waste generated from food packaging

33. What are the main categories of e-waste?

- a) **Large appliances, small appliances, IT and telecommunications equipment, consumer electronics, lighting equipment, and electrical and electronic tools**
- b) Glass, metal, plastic, and paper
- c) Food waste, organic waste, and inorganic waste
- d) Industrial waste, commercial waste, and residential waste

34. Which component of e-waste often contains valuable metals like gold, silver, and copper?

- a) **Printed circuit boards (PCBs)**
- b) Plastic casings
- c) Glass screens
- d) Power cords

35. Which of the following is an example of large appliances e-waste category?
- a) Mobile phones
 - b) Laptops
 - c) **Refrigerators**
 - d) MP3 players
36. Which practice can individuals adopt to contribute to e-waste reduction
- a) Upgrading to new devices frequently
 - b) **Donating or selling old electronics**
 - c) Throwing electronics in regular trash bins
 - d) Ignoring old electronics
37. Which type of e-waste is commonly referred to as "white goods"?
- a) **Large appliances**
 - b) Small appliances
 - c) IT and telecommunications equipment
 - d) Consumer electronics
38. What does "urban mining" refer in context of the e-waste
- a) Extracting minerals from urban landscapes
 - b) **Recovering valuable metals from electronic waste**
 - c) Digging for metals in city parks
 - d) None of the above
39. What is the first step in the e-waste recycling process?
- a) Shredding
 - b) **Sorting**
 - c) Melting
 - d) Crushing
40. What is the primary purpose of e-waste recycling?
- a) **To reduce the need for raw materials**
 - b) To generate revenue for recycling companies
 - c) To increase landfill space
 - d) To create more electronic products
41. Which method is most environmentally friendly for e-waste disposal?
- a) Landfilling
 - b) Incineration
 - c) **Recycling**
 - d) Exporting to developing countries
42. What is the significance of the "take-back" provision in the E-Waste (Management) Rules, 2016?

- a) **It allows consumers to return old electronic products to manufacturers for proper disposal**
 - b) It allows manufacturers to export e-waste to other countries
 - c) It allows retailers to dispose of e-waste in any manner they choose
 - d) It allows informal recyclers to collect e-waste from households
43. What is the deadline for achieving the targets of EPR under the E-Waste (Management) Rules, 2016?
- a) 2020
 - b) 2022**
 - c) 2025
 - d) 2030
44. Which of the following is NOT considered a part of the e-waste management infrastructure as per the rules in India?
- a) Collection Centers
 - b) Dismantling and Recycling Units
 - c) Landfills**
 - d) Authorized Refurbishment Centers
45. What is Extended Producer Responsibility (EPR) as per the e-waste management rules in India?
- a) The responsibility of consumers to manage e-waste
 - b) The responsibility of manufacturers to manage e-waste throughout the product lifecycle**
 - c) The responsibility of retailers to manage e-waste disposal
 - d) The responsibility of informal recyclers to manage e-waste
46. Which of the following is NOT a requirement for e-waste management under the E-Waste (Management) Rules, 2016?
- a) Registration of producers and recyclers
 - b) Implementation of Extended Producer Responsibility (EPR)
 - c) Mandatory labeling of electronic products
 - d) Export of e-waste to developing countries**
47. How does e-waste contribute to air pollution?
- a) By emitting greenhouse gases
 - b) By releasing toxic fumes when burned**
 - c) By increasing oxygen levels in the atmosphere
 - d) By reducing particulate matter
48. Which of the following is NOT a common consumer electronic e-waste item?
- a) TVs
 - b) Washing machines**
 - c) Computers
 - d) Cameras
49. Which of the following is a disadvantage of informal e-waste recycling?

- a) It provides job opportunities for informal workers
- b) It is usually safer for the environment
- c) **It often involves hazardous practices**
- d) It is more expensive than formal recycling methods

50. Which international treaty aims to reduce the movement of hazardous waste between nations, especially from developed to less developed countries?

- a) Kyoto Protocol
- b) **Basel Convention**
- c) Montreal Protocol
- d) Paris Agreement