SER No	CONTENT
	LESSON PLAN **LESSON PLAN: E 3** **WASTE MANAGEMENT** Period - One Type - Lecture Code - E 3 Term - II (SD/SW) **Training Aids** 1. Computer, Projector, Charts, Pointer. Black Board & Chalk **Time Plan** 2. (a) Introduction - 05 Mins (b) Types of Waste - 15 Mins (c) Disposal and Management of Waste - 15 Mins (d) Conclusion - 05 Mins **INTRODUCTION** 3. Waste Management refers to the collection, transport, processing or disposal, managing and monitoring of waste materials. Waste materials usually relate to materials produced by human activity and the process is generally undertaken to reduce their effect on health, environment or aesthetics. All wastes materials, whether they are solid, liquid, gaseous or radioactive, fall within the gamut of waste management. **AIM** 4. To acquaint the cadets about Types of Waste and its Management. **PREVIEW** 5. The lecture will be conducted in following parts:- (a) Part I - Type of Waste. (b) Part II - Disposal and Management of Waste.
(a)	**PART I : TYPES OF WASTE** 6. Waste material can be of following types :- (a) **Solid Waste.** This can be further classified into different types depending on their source as under :- (i) Household waste is generally classified as municipal. (ii) Industrial waste as hazardous waste.

(iii) Biomedical waste or hospital waste as infectious waste.

(iv) Electronic wastes such as TV's, refrigerators and computers.

(b) **Liquid Waste**

. This can be classified into following types:-

(i) Chemicals released by industries.

(ii) Waste water released by households through the sever lines.

(c) **Radioactive Waste**.

These are wastes that contain radioactive material. Radioactive wastes are usually by-products of nuclear power generation and other applications of nuclear fission or nuclear technology, such as research and medicine. Radioactive waste is hazardous to most forms of life and the environment and is regulated by government agencies in order to protect human health and the environment.

(d) **Municipal Solid Waste.**

Municipal solid waste consists of household waste, construction and demolition debris, sanitation residue and waste from the streets. This garbage is generated mainly from the residential and commercial complexes. This waste comprises of :-

(i) Organic waste such as vegetable and fruit peels, leftover foodstuff, etc.

(ii) Paper.

(iii) Cotton and Woollen clothes.

(iv) Wood.

(v) Plastic Bags.

(vi) Tin, aluminium and other metal items such as cans.

(vii) Glass Bottles.

(e) **Hospital or Bio-Medical Waste.**

Hospital waste is generated during the diagnosis, treatment, or immunization of human beings or animals or in research activities in these fields or in the production or testing of biologicals. It may include Soiled Waste, Disposables, Anatomical Waste, Discarded Medicines and Chemical Wastes.

(f) **E-Waste.**

Electronic waste or E-waste as it is popularly called, is a collective terminology for the entire stream

of electronic wastes such as Used TV's, Refrigerators, Telephones, Air Conditioners, Computers, Mobile Phones etc.

(g) **Hazardous Waste.**

Sources of hazardous waste mainly include industries like textile, tannery, petrochemicals, pharmaceuticals, pesticides, paint and dye, petroleum, fertilisers, asbestos, caustic soda, inorganic chemicals and general engineering industries. Hazardous wastes contain heavy metals, cyanides, pesticides, complex aromatic compounds (such as PCBs), and other chemicals which are toxic, reactive, corrosive or have a serious damaging effect on the environment.

(b)

PART II : MANAGEMENT OF WASTE

Actions by Individuals

7. Some steps which all individuals can take whilst contributing to the waste management may include:-

(a) Segregation of household waste into bio-degradable and non-biodegradable.

(b) Reduce use of plastic bags and replace with paper or jute/cloth bags.

(c) Recyclable waste such as paper, glass, cloth etc could be segregated and disposed off accordingly.

(d) Keep the surroundings of your house and around the house clean. Do not dump waste just outside the house on the road.

(e) Colonies could start vermin-composting and natural composting.

(f) What is waste for you, is wealth for somebody else. There has been a tradition in India of finding an innovative use for everything - tyres, battery cases, plastic bins and what not. Think of reuse of the thing you would like to discard.

Actions by Civic Bodies

8. The major functions of civic body may include the following :-

(a) Prohibiting littering of street.

(b) Organizing house to house waste collection.

(c) Conducting awareness programs to disseminate information to public.

(d) Providing adequate community storage facilities.

(e) Use of colour code bins and promotion of waste segregation.

(f) Transport of wastes in covered vehicles.

(g) Processing of wastes by adopting an appropriate combination of composting, anaerobic digestion, Pellatisation etc.

(h) Up gradation of the existing dump sites and Disposal of inert wastes in sanitary landfills.

CONCLUSION

9. Management of waste is an essential and an inescapable requirement today. We as individuals also have to play our part in handling our household waste and help the government in addressing this major problem.