QUESTION BOOK

ESG

CHAPTER 15: GREEN INITIATIVES

QUESTION 1:

Prayak and Pragna were IIT pass-outs and were planning to have a start-up which addresses the waste management issues. They spent couple of months visiting various organisations and government agencies, as part of their research. They made a pitch to one of the investors about their project and explained to them that waste management refers to various schemes to manage and dispose of wastes. It can be by discarding, destroying, processing, recycling, reusing, or controlling wastes. The prime objective of waste management is to reduce the number of unusable materials and to avert potential health and environmental hazards. The investor asked them what are the various sources of wastes which they have identified and plan to address through their start-up. In this context. Briefly explain the various sources of waste generation. (JUNE 2025) (5 MARK)

Ans:

The various sources of waste are briefly discussed below:

(a) Domestic waste: the waste materials produced from our households in our daily activities are called domestic waste. These include:
   (i) Kitchen waste like vegetables, fruits, and other food waste.
   (ii) Garbage, newspapers, rags, house dust.
   (iii) Other wastes like bags, bottles, tins, etc.

(b) Industrial wastes: All industries generate waste materials. The wastes typically comprise of ashes, building material wastes, toxic wastes, metal containers, plastic containers, paints, oil, and other complex synthetic materials.

(c) Agricultural wastes: Modern agricultural methods and the use of various chemicals have led to the production of large amounts of agricultural waste.

  (i) Agricultural wastes include crop residues like husk and straws, farm animal waste, and chemicals like pesticides, fungicides and fertilizers.

  (ii) These wastes can enter the water resources from agricultural fields.

  (iii) Chemicals used in agriculture are toxic in nature.

(d) Commercial wastes: substantial waste is generated from commercial establishments such as restaurants, hotels, markets, offices, printing shops, auto repair shops, medical institutions, and hospitals. There are mainly two kinds of wastes biodegradable waste and non- biodegradable waste.

QUESTION 2:

John and Savo, have recently completed their MBA from Manipal University and were working on various ideas for start-ups. During their research, they noted that many Indian cities are facing a major problem of bio-medical waste management. Huge volume of wastes has meant that landfill sites are facing the problem of overcapacity. On the other hand, the waste-to energy plants constructed to solve the problem are also facing flak due to their inefficiency and release of poisonous pollutants. The manner of bio-medical waste disposal is identified as one of the main reasons behind this problem. They were planning to develop solutions using technology to address the bio-medical waste issue. In one of the conversations, Savo mentioned to John, due to technology and use of gadgets, the e-waste is also going to be a challenge in future. They were making a pitch for one of the investors proposing solutions to this problem. In this background, answer the following

(i) What is bio-medical waste, elucidate various approaches used for disposal of bio-medical wastes. (DEC 2024) (8 MARKS)

Ans:

(a) Bio-medical waste is the waste generated during treating or testing people or animals. This waste can be dangerous because it may spread infections. It must be handled and disposed off carefully to keep people and the environment safe.

(b) Bio medical consists of Waste like tissues, organs and body parts, Animal wastes, Needles, syringes, scalpels & broken glass, Discarded medicines, Dressing, bandages, plaster casts, etc.

(c) The following approaches are generally used for disposal of bio-medical wastes:

1. Autoclaving: It is a sterilization process which uses high pressure steam at the end of which all the microorganisms are destroyed. It is a safe and effective way to make equipment and waste free from infection.
2. Incineration: Incineration is a method of waste disposal where waste is burned at very high temperatures generally at 5000°C. It is used to destroy bio-medical waste like used bandages, syringes, and body parts.
3. Microwaving: In this process the waste is first mixed with water and then heated to kill microorganisms it is considered a more efficient approach than incinerating it. Also this method of waste disposal is cost effective as compared to incineration.
4. Chemicals: For liquid bio-medical waste, a common way to make it safe is chemical disinfection. Chlorine is usually added to the liquid to kill germs and harmful microbes. This helps stop the spread of infection and makes the waste safer to handle.

(ii) Explain in brief 'e-waste management' and measures to reduce e-waste. (5 MARK)

Ans:

(a) E-waste refers to waste created by electronic products which are unwanted or are not working, in other words it is at the end of its useful life. E-waste contains both valuable and hazardous materials that require special handling and recycling methods.

(b) E-waste management means collecting, handling, recycling, and safely disposing of electronic waste. E-waste management is essential to protect the environment and public health.

Measures to reduce E-waste are as follows:

(i) Cloud storage –organizations can store data backup on cloud storage rather than on physical storage devices which will significantly contribute in reducing E-waste.

(ii) Donate and re-sale – Organizations may think of donating or reselling the old gadgets which still has some life left and then buy a new electronic gadget.

(iii) Reduce purchase and organize them accordingly – The most common source of E-waste is the purchase of goods. In this view the organizations can avoid purchasing anything that cannot be reused or destroyed by the maker.

QUESTION 3:

'Resource Efficiency' is using the earth's limited resources in a sustainable manner while minimizing the impacts on the environment. Continued worldwide population growth is resulting in a global increase in demand for products and associated resources. Currently, our society consumes more resources than the earth can provide and renew. Only improved efficiency can counteract the soaring consumption of natural resources. In this context, Briefly explain the ways and means to improve resource efficiency in business organizations. (8 MARKS) (JUNE 2024)

Ans:

Resource efficiency means using of limited resources of the earth in a sustainable manner. The aim is to maximize the benefits of the product and services while minimizing the consumption and waste. Currently the consumption requirement is more than what the earth can provide and renew.

The following measures can be taken to improve the resource efficiency:

(a) Application of waste hierarchy: the first thing to be done is to prevent and the least we could do is proper disposal. Under the waste hierarchy one should identify what type of waste the business creates and if any of the waste can be repurchased.

(b) Waste assessment: under this organizations asses their processes and the materials being used to identify as to what is creating more waste and how one can reduce the same.

(c) Controlling the waste: the management can train the teams in reducing wastages which in turn will also help in preserving the environment.

(d) Reduce energy consumption: practices can be adopted by anyone and everyone to reduce energy consumption which may include turning off lights as well as equipment when not in use.

(e) Understanding the legislation: It is essential for the organization to understand and comply with the legislations.

(f) Using re-use and re-fill approach.

(g) Become more energy efficient.

(h) Implementation of environmental management system: Implementing environmental management system such as ISO 14001, can help an organization to improve its environmental performance, reduce environmental liability, and decrease costs.

QUESTION 4:

Discuss the following terms: (DEC 2017) (3 MARKS EACH)

A) Green washing

B) Carbon footprint

Ans.

A. Green washing

(i) Greenwashing refers to the practice where a company falsely presents itself as environmentally responsible.

(ii) This may involve making untrue or misleading claims about green initiatives, while in reality the company continues to engage in activities that harm the environment.

(iii) Many companies use greenwashing to benefit from the growing public concern for environmental issues. By creating a positive image, they aim to attract investors, gain a competitive edge in the market, and avoid criticism. Often, the intention behind greenwashing is profit, as eco-friendly products are among the fastest-growing segments in the market.

B. Carbon footprint.

(i) A carbon footprint is the total amount of greenhouse gases, especially carbon dioxide, released into the atmosphere as a result of human activities.

(ii) This includes things like driving cars, using electricity from fossil fuels, flying, manufacturing goods, and even producing certain types of food, such as meat.

(iii) A larger carbon footprint means more harm to the environment and a greater contribution to climate change. Reducing carbon footprint is important to help slow global warming.

(iv) This can be done by using public transport, saving energy, using renewable sources, planting trees, and choosing eco-friendly products.

QUESTION 5:

Why sustainability is considered an imperative in the present age? (DEC 2017) (5 MARK)

Ans:

(a) Sustainability and sustainable development means the practices adopted while using the resources that meets the needs of the present without compromising the ability of future generation to meet their needs.

(b) Sustainability is becoming more imperative and is now seen as a sign of smart and responsible business leadership. Over time, As businesses grow and expand worldwide, they also face more pressure and risks related to the environment.

(c) Increased industrialization has increased competition for natural resources like oil, making sustainability a global concern. Now, things like carbon emissions and water use matter a lot to investors and other people involved with the company.

(d) Many customers prefer eco-friendly products or want companies to improve their products for the environment. To meet these demands, companies are using new technologies that save energy, use renewable sources, reduce waste, and cut pollution. In short, sustainability is now essential for long-term business success.