

1. **Respiratory and Cardiovascular Health Issues:** Air pollutants such as particulate matter (PM), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), and ozone (O₃) can irritate the respiratory system, exacerbate conditions like asthma and bronchitis, and increase the risk of cardiovascular diseases.
2. **Impaired Lung Function:** Prolonged exposure to air pollutants can lead to reduced lung function and hinder lung development, particularly in children.
3. **Premature Deaths:** Air pollution is associated with premature deaths due to respiratory and cardiovascular diseases, strokes, and lung cancer.

Effects of Land Pollution:

(ii) **Land Pollution** refers to the degradation of land quality due to human activities such as improper waste disposal, industrial processes, agricultural practices, and deforestation. The effects of land pollution are diverse and impact various aspects of the environment:

1. **Soil Contamination:** Improper disposal of hazardous waste, chemicals, and heavy metals can lead to soil contamination, rendering land unsuitable for agriculture and posing risks to ecosystems and groundwater.
2. **Reduced Soil Fertility:** Land pollution can deplete soil nutrients, impairing soil fertility and affecting crop yields. The excessive use of fertilizers and pesticides contributes to soil degradation.
3. **Groundwater Pollution:** Pollutants can leach into the groundwater, contaminating drinking water sources and affecting aquatic ecosystems.

Q. Differentiate between Natural and Man-made Ecosystems.

ANS. Natural Ecosystems:

Natural ecosystems, also known as native or pristine ecosystems, are ecological communities that have developed and evolved over time without significant human intervention. These ecosystems are shaped by natural processes and interactions between living organisms and their environment. Here are some key characteristics of natural ecosystems:

1. **Origin:** Natural ecosystems form spontaneously over a long period without direct human involvement. They have evolved based on climatic conditions, soil types, and the presence of native species.
2. **Biodiversity:** These ecosystems have high biodiversity, with a variety of plant and animal species that are adapted to the specific environmental conditions of the region.
3. **Succession:** Natural ecosystems undergo ecological succession, a process where plant and animal communities change over time as the ecosystem matures.

Man-made Ecosystems:

Man-made ecosystems, also referred to as artificial or anthropogenic ecosystems, are intentionally created or significantly altered by human activities. These ecosystems are designed to serve specific purposes, such as agriculture, urban development, or recreational spaces. Here are some key characteristics of man-made ecosystems:

1. **Human Intervention:** Man-made ecosystems are deliberately established or modified by humans for various purposes, including agriculture, urbanization, aquaculture, and landscaping.

2. **Simplified Biodiversity:** Man-made ecosystems often have lower biodiversity compared to natural ecosystems because they are designed to meet specific human needs and may not provide suitable habitats for many native species.
3. **Control:** Humans have a high degree of control over man-made ecosystems, including the species composition, soil quality, and water management.

Q. Discuss the role of an individual towards Environment.

ANS. The role of an individual towards the environment is crucial in shaping the overall health and sustainability of our planet. Every person can contribute to positive environmental outcomes through their daily choices, actions, and attitudes. Here are some ways individuals can play a significant role in protecting and preserving the environment:

1. **Reduce, Reuse, Recycle:** Practice the 3Rs to minimize waste generation. Reduce consumption, reuse items when possible, and recycle materials like paper, plastics, glass, and metals to reduce the strain on landfills and conserve resources.
2. **Conserve Energy:** Use energy-efficient appliances, turn off lights and electronics when not in use, and consider using renewable energy sources like solar or wind power. Energy conservation helps reduce greenhouse gas emissions and slows down climate change.
3. **Save Water:** Conserve water by fixing leaks, using water-saving fixtures, and practicing mindful water usage at home and in outdoor spaces. Water scarcity is a global issue, and every drop saved matters.
4. **Minimize Single-Use Plastics:** Avoid single-use plastics like plastic bags, straws, and disposable water bottles. Opt for reusable alternatives to reduce plastic pollution in oceans and landfills.
5. **Support Sustainable Transportation:** Use public transportation, carpool, bike, walk, or consider electric vehicles to reduce air pollution and traffic congestion.
6. **Choose Sustainable Products:** Opt for products with minimal packaging, choose eco-friendly options, and support companies that prioritize environmental sustainability in their production processes.
7. **Plant Trees and Native Plants:** Planting trees and native vegetation helps combat deforestation, supports biodiversity, and improves air quality.