ES ANSWERS

1.1 give sources, effects, and control measures of water pollution.

Ans :

detail →

Here are some more detailed sources, effects and control measures for water pollution:

Sources:

- Urbanization [1]
- Deforestation [1]
- Industrial effluents [1]
- Social and Religious Practices [1]
- Use of Detergents and Fertilizers [1]
- Agricultural run-offs- Use of insecticides and pesticides [1]

Effects:

- Water pollution harms not just humans, but the whole ecosystem [1]
- Toxins drained from pollutants travel up to the food chain and eventually affect humans [1]
- The effect of water pollution depends upon the type of pollutants and their concentration [1]
- The location of water bodies is an important factor to determine the levels of pollution [1]
- Water bodies in the vicinity of urban areas are extremely polluted [1]

- This is the result of dumping garbage and toxic chemicals by industrial and commercial establishments [1]
- Water pollution drastically affects aquatic life [1]

Control Measures:

- Avoid the wastage of water [3]
- Laws for industrial units should be implemented strictly so that polluted water is not disposed of directly into rivers and lakes [3]
- Industrial effluents should be treated chemically before disposing them off in water bodies [3]
- Some chemical methods that help in the control of water pollution are precipitation, the ion exchange process, reverse osmosis, and coagulation [1]
- As an individual, reusing, reducing, and recycling wherever possible will advance a long way in overcoming the effects of water pollution [1]

simple →

Sure, here's a simpler version:

Sources of Water Pollution:

- Waste from homes and factories
- Chemicals from farms
- Oil spills
- Burning of fossil fuels
- Dumping garbage in rivers and seas

Effects of Water Pollution:

- Death of animals and plants
- Loss of species and biodiversity
- Harm to ecosystems and food chains
- Health problems for humans

- Contamination of drinking water

Control Measures of Water Pollution:

- Plant more trees around water bodies
- Don't clean things in water that is used for drinking
- Use fewer chemicals on farms
- Use plants to clean water
- Clean oil spills with special materials
- Plant trees that can absorb wastewater.

1.2 Give sources, effects and control of Air pollution

Ans →

Here are some sources, effects and control measures for air pollution:

Sources:

- Burning of Fossil Fuels [1]
- Automobiles [1]
- Industrial Waste [4]
- Sewage Waste [4]
- Domestic Resources [4]

Effects:

- Air pollution has resulted in several respiratory disorders and heart diseases among humans [1]
- The cases of lung cancer have increased in the last few decades [1]

Control Measures:

- Reducing the use of fuel and fire products [3]
- Treating the materials emitted from industries and factories [3]
- Using Compressed Natural Gas (CNG) for vehicles and engines [3]

- Using natural resources like wind, solar and geothermal energies reduces air pollution and improves a cleaner and better environment [3]

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6. Write scope and importance of environmental studies.

Ans →

Here are some points on the scope and importance of environmental studies:

Scope:

- The study creates awareness among people [5]
- Knowledge about ecological systems and cause and effect relationships [5]
- Necessary information about biodiversity richness [5]
- The potential dangers to the species of plants, animals and microorganisms in the environment [5]

Importance:

- To clarify contemporary environmental ideas, such as how to preserve species diversity [1]
- To live more sustainably [1]
- To optimize the usage of natural resources [1]
- To comprehend the actions of an organism in its natural habitat [1]
- To understand how organisms in populations and communities interact [1]
- To raise public awareness and education about environmental concerns and issues at all levels of government [1]
- To protect the environment for the next generation [1]

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7. Explain in detail methods for conservation of biodiversity with examples.

Ans →

Here are some methods for conservation of biodiversity with examples:

- **In-situ Conservation:** This method involves conserving species within their natural habitat. Protected areas such as national parks, wildlife sanctuaries and biosphere reserves are examples of in-situ conservation [1].
- **Ex-situ Conservation:** This method involves breeding and maintaining endangered species in artificial ecosystems such as zoos, nurseries, botanical gardens, gene banks, etc. Examples of ex-situ conservation include aquariums, botanical gardens, cryopreservation, DNA banks and zoos [3].
- **Conserving all the varieties of food, timber plants, livestock, microbes and agricultural animals** [1].
- **Identifying and preserving all the economically important organisms** [1].
- **Preventing overexploitation of natural resources and supporting local farms** [1].
- **Saving the bees and planting local flowers, fruits and vegetables** [1].
- **Taking shorter showers and respecting local habitats** [5].

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9. What is need for public awareness in environmental studies? Give its methods.

Ans →

The need for public awareness in environmental studies is to prevent the overexploitation of natural resources and the degradation of the environment. Public awareness can help to educate people about environmental problems and their solutions, and to mobilize them to take action. Public awareness can also help to support the implementation of proper regulations and policies to protect the environment and the health of people [1].

Some methods for raising public awareness about environmental issues include:

- Joining a group to study nature [2]
- Reading newspaper articles and periodicals about environmental issues [2]
- Discussing environmental issues with friends and relatives [2]

- Joining local movements that support activities like saving trees, reducing use of plastics, going for nature treks, practicing 3 Rs (reduce, reuse, & recycle) [2]
- Practicing and promoting good civic sense and hygiene [2]
- Taking part in events organized on World Environment Day, Wildlife week etc. [2]
- Visiting a National park or sanctuary or spending time in whatever natural habitat you have near your home [2]

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4. Elaborate “Dams: its benefits and associated problems”

Ans →

Dams are structures built across rivers, streams or estuaries to retain water. They have several benefits as well as associated problems.

Benefits:

- Dams can supply clean water for human consumption, irrigation and industrial processes [1].
- They can increase the amount of water available for generating hydroelectric power [1].
- Dams can reduce peak discharge of floodwater created by large storms or heavy snowmelt [1].
- They can increase the depth of water in a river to improve navigation and allow barges and ships to travel more easily [1].
- Dams can provide a lake for recreational activities such as swimming, boating and fishing [1].

Associated Problems:

- Dams can cause ecological disruption [1].
- They can displace local communities [1].
- Dams can be expensive to build and maintain [1].
- They can have negative environmental impacts [1].

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2. Discuss the environmental effects of overuse of fertilizers and pesticides.

Ans →

The overuse of fertilizers and pesticides can have negative environmental effects. Here are some of the environmental effects of overuse of fertilizers and pesticides:

- Soil degradation [1]
- Enhanced greenhouse gas emissions [1]
- Accumulation of pesticides [1]
- Decline in the availability and quality of water [1]
- Soil, water, and air pollution [1]
- Damage to non-target creatures such as plants, birds, mammals, fish, and crops [1]

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17. Urban Problems related to energy

Ans →

In simpler terms, cities face several problems related to energy because they have a lot of people and use a lot of energy. Some of these problems include:

- Poverty: As cities grow quickly, it can be hard for local governments to provide services like electricity to everyone .
- Air pollution: Using a lot of energy in a small area can lead to air pollution, which can harm people's health .
- Lack of awareness: Many people don't know how to conserve energy or why it's important .

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19. Ozone Layer Depletion

Ans →

Here are some key points about Ozone layer depletion:

- The ozone layer is a region in the earth’s stratosphere that contains high concentrations of ozone and protects the earth from the harmful ultraviolet radiations of the sun[1].
- Ozone layer depletion is the gradual thinning of the earth’s ozone layer in the upper atmosphere caused due to the release of chemical compounds containing gaseous bromine or chlorine from industries or other human activities[1].
- The main reasons for the ozone hole are chlorofluorocarbons, carbon tetrachloride, methyl bromide and hydrochlorofluorocarbons[1].
- The thinning is most pronounced in the polar regions, especially over Antarctica[2].
- Ozone depletion is a major environmental problem because it increases the amount of ultraviolet (UV) radiation that reaches Earth’s surface, which increases the rate of skin cancer, eye cataracts, and genetic and immune system damage[2].
- The Montreal Protocol was proposed in 1987 to stop the use, production and import of ozone-depleting substances and minimize their concentration in the atmosphere to protect the ozone layer of the earth[1].

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22. Food chain and Food web with example.

Ans →

Sure! Here are 6 bullet points on Food chain and Food web with examples:

- A **food chain** is a linear sequence of organisms through which nutrients and energy pass as one organism eats another. For example, grass-antelope-tiger-vulture is a food chain .
- A **food web** is a connection of multiple food chains. For example, grass in a forest clearing produces its own food through photosynthesis. A rabbit eats the grass. A fox eats the rabbit .
- Food chain follows a single path whereas food web follows multiple paths .
- From the food chain, we get to know how organisms are connected with each other .
- Food webs demonstrate that most organisms consume or are consumed by more than one species .

- Food webs form an integral part of the ecosystem .