8. Ecology and Society

Do you know that all human being and other creatures depend on nature to fulfill their needs? This dependence is direct and indirect. All creatures interact with the natural environment to fulfill their needs. Human beings and all the creatures being the earth are the only ones who have tried to control nature and environment by developing techniques and tools. The concept of ecology is based on interrelationships between organisms and the environment. That is, a science, which studies the interrelationships between all the organisms and physical environment of the Earth.

Meaning of ecology

The word ecology was coined in 1869 by the German zoologist Ernst Haeckel. In the beginning, the term oecology was used in place of ecology. We study interactions between the physical environment and humans and all creatures under ecology and how the environment controls and determines the activities of human and organisms. It is also studied in ecology that, how of human beings try to harm and control the environment. Ecology is a branch of biology. Ecology is the science that studies the interdependence of vegetation, organisms and humans with the environment in their natural state. In other words, ecology is the study of interactions of organisms with each other and with their physical environment around them. You know that animals and birds compete with each other for their diet, and herbivorous vegetarian animals compete with each other to get grass and other vegetarian food, and carnivorous animals try to kill other animals. It is necessary to maintain natural balance in ecology. All the creatures, trees, plants, insects, animals, birds and various types of vegetation found on our earth are dependent on each other. From vegetation we get food, wood, medicine and shelter etc. Birds make nests on trees, animals and birds eat fruits because of this the seeds of trees spread from one place to another through their waste, which helps in growing new plants. Harbivorous animals eat vegetation, and carnivorous animal and bird eat other animals and

birds, and similarly insects also maintain the balance by eating waste and inanimate items. This ecosystem is the result of millions of years of natural evolution. In eco system, only limited number of creatures can fulfill their needs by staying dependent, this ability is called holding capacity. This ability maintains its balance naturally. In the ecosystem, elimination of any one component or making less or more creates imbalance. Only human being is the creature who can disturb the balance of nature, because other creatures are completely dependent on the ecosystem, whereas human beings have developed the technique of changing and controlling the nature according to their needs. Because of human needs are unlimited, whereas the needs of all other organisms are limited to food and shelter. It is extremely important to understand the relationship between man and ecosystem. Millions of years ago, the needs of the primitive man were limited, but our needs in the present society have become unlimited, as a result which water, minerals, vegetation, petroleum products, land, forests, sea etc. are being exploited. We have to keep in mind that we are responsible for this natural imbalance, while all the creatures are paying for this imbalance, so we will discuss some of the major challenges arising from ecological imbalance.

Environment

Before understanding the environmental crisis, we have to understand the environment in our surrounding, from the microbes to all creatures, vegetation and all the activities related to them and lifeless air, climate, river, pond, mountain, sea, rocks, grounds etc. everything together, forms our environment. Environment is a cover around us, we will study some scholars' definitions to understand the environment—

Gisbert P.—"Environment is anything immediately surrounding an object and exerting a direct influence on it."

MacIver & Page—In the geographical environment, all the condition included, which nature provide to human.

Herskovits M.J.—"Environment is the some total of all external condition and the influences on the development cycle of biotic elements over the earth's surface."

From the above definitions it is clear that whatever is present around us is constantly affecting us is called environment. The four major components of the environmental framework are as follows—

- **1. Hydrosphere :** Hydrosphere is a layer of water, that extends on the surface of the earth as oceans, rivers, lakes, ponds and other forms.71 percent of the part of earth is water and 29 percent is land. We know that water is life and it is not possible to survive without water but most of the water on the earth is not potable.
- **2. Atmosphere :** The air cover surrounding the earth's surface is called atmosphere. Due to the Atmosphere, the harmful ultraviolet rays of sun do not reach on the earth and the temperature of the earth remains constant, so that, the organisms living here are safe. We know that due to the oxygen gas found in the Atmosphere, we can breathe.
- **3. Lithosphere :** The entire outer layer of the Earth is called lithosphere, on which the continent and the ocean are located. Lithosphere is a major source of minerals and soil, we grow plants on lithosphere and make houses for living.
- **4. Biosphere :** The part of the lithosphere, atmosphere and the hydrosphere where life exists is called biosphere. The changes in the biosphere affect all the organisms.

These four important components of the environmental structure determine the condition and direction of life on earth.

Environmental Crisis

To understand the environmental crisis, we have to learn about the environmental challenges and causes. Nature is self-healing, that is, there is a limit to the supporting of all the organs of nature and environment. Gradually, by making short-term changes in self again, it regain its true are original form. But due to human interference, this quality of nature has become secondary and due to the side effects of human intervention, we environmental pollution. Now we will understand environmental pollution—

Environmental pollution

Environmental pollution is due to the disturbance of the environment's natural balance and due to the entry of contaminated substances in the environment and in its parts. In other words, due to the contamination of water, air, soil etc. and the presence of toxic and unwanted substances, we have adverse effects on the organisms and vegetation and the ecosystem. This situation is called environmental pollution.

Due to pollution, slowly the environmental degradation occurs. The main types of environmental pollution are as follows—

- 1. Water Pollution: Natural water is pure, but chemicals and other harmful substances are dissolved in water sources such as oceans, rivers, groundwater, lakes, ponds, and wells etc. thereby water becomes polluted. polluted water becomes harmful to agriculture, fisheries and human, animals and birds. Elements polluting the water are called water pollutants. The following major pollutants are responsible for water pollution are given below—
 - 1. Industrial pollutant: Contaminated water waste and other from industries, chemical waste which contain lead, zinc, mercury, chromium, plastic, grease, oil, acids, etc, pollute natural water sources.
 - 2. Domestic pollutant: Large quantity of water is used in household work such as bathing, laundry and cleaning. Because of the use of caustic soda and food particles, etc., dissolve in water, as a result water become contaminated.
 - 3. Sewage: The sewage flowing from the domestic and public toilets pollutes a large quantity of water. When stool and urine are mixed in water then called sewage. Due to lack of proper drainage system in most of our cities and rural areas, it pollutes pure water sources.
 - **4. Agriculture pollutant :** At present, pesticides and chemical fertilizers are used in a large quantity in agricultural activities, these substances are dissolved in water sources with rain and pollute water.
 - **5. Radioactive pollutant :** Radioactive substances are produced in the explosion and

these substances mix in water and pollute the water.

Negative impact of water pollutant—Many diseases in humans and animals occur due to the use of polluted water and also many serious diseases occur due to the use of vegetables and fruits grown in polluted water. Due to water pollution, there is a crisis in the life of aquatic plants and aquatic creatures and the food chain is also affected due to water pollution.

- **2. Air pollution :** When smoke, dust, gas and other pollutants are found in pure air, then the air becomes harmful to humans, animal, birds, trees and other creatures and is called air pollution, In other words polluting pure air is called air pollution. The main air pollutant's are as following—
 - 1. Contaminated gases arising from factories.
 - **2.** Poisonous smoke discharged from vehicles contain nitrogen oxides and carbon monoxide.
 - **3.** Smoke of wood and dung, used in domestic purpose.
 - **4.** Mercury refining industry, bleaching of textiles, oil refining industry and various industrial poisonous smoke.
 - **5.** gases emitting from volcanic eruptions (natural pollutant).

Negative impact of air pollutant—All organisms use more air in comparison to food and water, its not possible for any organism to be healthy in pollutant air. A healthy person inhales 15 to 16 kilograms oxygen in 24 hours. Due to air pollution, respiratory system, eyes, kidneys and other organs of the body cause serious diseases. Air pollution also causes severe side effects on organisms and vegetations. Especially, air pollution is becoming a serious challenge in metropolitan cities.

- 3. Land pollution—Due to rapid industrialization and urbanization, solid waste is increasing which contaminate the physical, chemical and biological properties of the land, as a result the quality of land is decreasing. Its called land pollution. We know the earth is a stable unit and it is not possible to increase land. Approximately 80% of food items are obtained from soil, but the agricultural land is very limited and this land is also shrinking in use due to pollution. The major land pollutant are as following—
 - 1. Harmful chemical waste emitting from factories.

- 2. Household waste, polythene bags and other waste items.
- 3. Chemical fertilizers used in agricultural work.
- 4. Old electronic goods and old junk vehicles.
- 5. Waste from energy generating centers and factories.
- 6. Sewage.
- 7. Radioactive substances derived from nuclear plants.
- 8. Mining waste.

Negative impact of Land pollution—Due to lack of soil fertility, the production is affected. Crops become polluted and poisonous. Flies, mosquitoes and other insects grow rapidly which spread the disease. Living clean places are limited and water pollution is also spreading rapidly due to land pollution.

4. Noise pollution—sound help us in hearing but the excessive sound adversely affect our physical and mental actions, it is called noise pollution. Humans and other creatures get problems with excessive noise and unwanted sounds, this sound is called noise pollution. The intensity of the sound is measured in decibels. Noise pollution can be understand from decibels of some of the major sources—

Sr.No.	Source	Sound intensity
1.	Sound of wall clock	30 decibel
2.	Conversation	50 decibel
3.	Train	90 decimal
4.	Loud music	120 decibel
5.	Lightning	120 decibel
6.	Jet plane	140 decibel
7.	Rocket launching	180 decibel

We have understood the intensity of sound by the noice generated by different sources. Scientific studies have proved that if people are in contact with more than 85 decibels, then the person may be deaf. The major sound pollutants are as follows—

- 1. Means of transport: The noise arising from traffic on the roads and blowing horns is the major cause of noise pollution. This problem is serious particularly in metropolitan cities. Similarly, trains also increase noise pollution. Air traffic is expanding in the present times and noise from the aircraft is also increasing the noise pollution.
- **2. Factories and machines :** Due to urbanization and industrialization, the number of big

industries and factories have increased, the noise generated by them is increasing the noise pollution. Apart from large industries, saw mills and other machines in urban areas are also increasing the noise pollution.

3. Means of entertainment: Noise pollution is also increasing due to the means of entertainment such as cinema, television, radio and music and other mediums. The use of loud speaker and DJs devices in various programs and the increasing use of firecrackers is also responsible for noise pollution.

Negative impact of noise pollution: Due to noise pollution, there is a negative impact on the health and behavior of humans and other organisms. Irritability, deafness, hypertension, stress, insomnia, depression and mental illness, etc. are increasing. Excessive noise reduces our work efficiency and disturbs our mutual conversation

5. Radioactive pollution—The main reason for this pollution is nuclear explosion, due to which large amount of radioactive substances noise in the environment. Sometimes the pollution occurs due to the leakage in the nuclear reactors. The side effects of nuclear power was realized at the time of World War II when the US dropped nuclear bombs on two cities (Hiroshima and Nagasaki) of Japan, killing millions of people and animals and vegetation was destroyed. Due to radioactive pollution there are many physical and mental diseases. The biggest thing is in this pollution is extremely difficult to check it.

This pollution can be stopped by the nonproliferation of nuclear power.

6. Light pollution or Luminous pollution: Modern lifestyle has given a new type of pollution that is called light pollution. Due to the excessive use of artificial light in developed countries and in metros, it negatively impacts the lives of ordinary citizens and other organisms. Extreme and unnecessary use of the artificial lights is called light pollution.

This causes anxiety, irritability, insomnia and other diseases. The artificial light interferes with the natural light, which affects the daily routine of all creatures.

So far we have come to know the major types of environmental pollution. Climate change is taking place due to environmental pollution and current speed of change in climate has endangered the lives of all creatures including humans. Now we will understand climate and climate change.

Climate change and social responsibility

Climate—Meteorologists record the weather of different places every day and these figures are kept safe for years, this long-term average weather is called the climate of that place. Human and all creatures, vegetation, soil, water sources, etc. are affected by the climate, hence climate plays an important role in controlling and determining the environment. Our life is mostly affected by the climate. Our food, clothing, methods of agriculture and crops etc. are determined according to the climate. Being in a place for a long time, humans and other creatures and vegetation develop adaptation to the climate and adapt themselves according to the climate.

Climate change—Change is the law of nature. Climate is constantly changing but the speed of change in the natural environment is so slow that all organisms adapt themselves to the climate and there is no crisis of any kind. Climate change affect the ecosystem as well as the organisms. Before the Industrial Revolution, human interference in climate change was negligible because our requirements were limited and most of these requirements were met by the use of such tools, techniques and objects which had no negative impact on the environment. But due to industrial revolution and excessive urbanization, a journey of development has started, which has been pushing us towards destruction.

Climate change implies the changes in the average weather at a place that has been going on for many years. This change is mainly in the temperature, rainfall, moisture, wind etc. of that place, and it is matter of great concern as the change in last few centuries is faster than the average speed of change. Animals and other organisms and vegetation are unable to adapt themselves with the rapid change in climate, and it is a crisis of existence in front of species. Climate change is taking place due to our activities of the last 200 years, with which the organism and vegetation are not able to establish equilibrium and these difficulties are constantly increasing.

The main causes of climate change are as follows—The major causes of climate change can be divided into two parts—

1. Natural causes—You must have heard that in the place of Thar desert, there was once a sea millions of years ago. Changing of sea into a desert is a very major natural phenomenon. We know that nature is always changing and many natural phenomena affect our climate and change it. For example, In volcanic eruption large amount of gases and liquids nux in the air and affect the climate. The weather was affected for one year due to a volcanic eruption 1815 in Sumatra drifting. Similarly, the various continents of our earth are gradually away from their place and when their plates collide with each other, there are earthquakes and storms occur on the earth. Climate changes also occur due to the change in the place of continents. Other natural phenomena such as meteorite collision with the Earth, etc. also affects the climate.

2. Man made causes—Over the past 150-200 years, we have been responsible for climate change. the means and the pael and manner of development which has been adopted by us has affected the climate adversely. Excessive use of Coal, petroleum products and gases in the industries and in the means of transport have adversely affected the climate. The use of chemical fertilizers and deforestation is also responsible for it. In order to fulfill the needs of the growing population, we are harnessing using the natural resources in an unwise way. To understand climate change more, we have to understand the ozone layer depletion and the greenhouse effect.

Ozone layer depletion—Ozone is a type of gas that is found in the stratosphere. It is blue and is in the form of oxygen. This gas exists in the form of a cover around the earth with the influence of the Earth's gravitational force. Ozone is formed by the reaction of oxygen and the ultraviolet rays of the stratosphere, and it absorbs ultraviolet rays and gets converted into oxygen again. Thus the balance of ozone gas is maintained naturally. The most important function of the ozone layer is to absorb harmful ultraviolet rays from the Sun. As a result more than 99% ultraviolet rays coming out of the sun cannot reach the surface of the Earth and life on earth is protected from its harmful effects.

Ozone layer acts as a shell or umbrella for the earth, which prevents ultraviolet radiation. If this radiation reaches the Earth, DNA and proteins of the

organism will absorb these rays, and DNA will be damaged, which can lead to skin cancer, symptoms of sudden aging on the skin, and the cells can be damaged and it may also cause cataract in the eyes.

Ozone layer decay or holes in the ozone layer mean not enough amount of ozone gas is formed, due to which the ozone layer is becoming thin. Its effect can be seen especially in the Antarctica region, at the end of August and the beginning of October in Antarctica. Small holes in the ozone layer are also visible in Australia, Argentina, Chile etc. The main cause of decay in the ozone hole or in the ozone layer are halogenated gases, among these, chlorofluoro carbons, helens and nitrogen oxides: Major use of chlorofluorocarbon compounds is in air conditioners, refrigerators and packaging industries, Dunlop mattresses, pillows etc. It is also used in the deodorant, shaving cream and hair sprays. Similarly, carbon dioxide, carbon monoxide etc., which are made from petroleum products like fossil fuels, coal and gas, are also damaging the ozone layer.

Greenhouse effect and Increasing global temperature—The way in which the Earth's atmosphere receives the energy from the sun is called greenhouse effect. Due to the greenhouse effect the surface and atmosphere of the Earth remains naturally hot. There is a layer of greenhouse gases such as carbon dioxide, methane, nitrous oxide, and chlorofluorocarbons all around the earth, This layer spreads in every direction of the Earth by absorbing the sun's energy.

In the absence of greenhouse effect, the temperature of the Earth would be minus 18 degrees. It is not possible to develop life on earth at such a low temperature. The Greenhouse effect works like a glass house which allows light to penetrate but does not let the heat to move out. Some part of the sun's energy is absorbed by atmospheric greenhouse gases. These gas molecules produces heat energy and major part of heat energy returns to the Earth's surface. Thus, the Earth's surface and lower atmosphere remains warm. This process keeps the temperature of the Earth warm naturally, but the greenhouse effect has become a problem in the present time, as greenhouse gases are increasing, the earth's temperature is also increasing. The present reason for the increase in greenhouse

gases is the increase in the use of activities and substances that emit these gases. The biggest reason is the use of coal and petroleum substances, which causes large amounts of carbon dioxide and other gases. Similarly, the methods of farming, industrial processes and deforestation have also made this problem very serious.

Due to the increase in greenhouse gases, the temperature of the Earth is rising, which increase the risk of climate change on Earth. drought, excessive rainfall, snowfall, rise in sea level, cyclone, storm, melting of glacier ice, impact on crop production and unusual rainfall are happening in different parts of the world. Ecological systems, vegetation and wildlife are also disturbed.

It is a matter of great concern that in near future we will not be to eradicate the reasons behind the ozone layer and the greenhouse effect. as we do not have any concrete alternative for Petroleum products (fuel, gases, coal) of the Earth. Therefore, even in the coming years the solution to this problem is not possible.

Social responsibility:

We have understood that human activity is responsible for the changing ecology, climate change and the damage to the environment. Due to modernization, materialism and changing lifestyles, we have begun to exploit the natural resources in order to fulfill our greed and the consequences of these have created crisis of existence of the whole world.

History of the development of human civilization is the history of interaction, cooperation, conflict and adjustment with the natural environment. The desire for development based on modern science and technology has made us insensitive towards natural resources.

Our ancient traditions and customs show deep sensitivity for conservation and development of natural resources. In ancient Indian *Hindu grantha*, *Matsya Purana*, a tree has been considered as equal to 10 sons, which shows our respect towards trees. There is a shlok in the grantha, Dharmasindhu—

'हस्तान्द्वादश सत्यंज्य मूत्रं कुयोज्जलाशयात्। अवकाशे षोडस वा पुरीषे तु चतुर्गुणम्।'

Which means that a we should release urine at the distance of 12 hands or 16 hands and stool at four times more than that. Such examples prove that our traditional beliefs have given great importance to plantation and purity of water sources. Many religions of the world and the beliefs of tribal society also show sensitivity towards nature.

Presently, a predominantly developed nation is responsible for the deterioration of environment, But it is a matter of regret that the rest of the nations have followed the same path of development.

We have to make some efforts to protect our nature and environment to show the way for future generations to live a respectable life.

We have to adopt the following measures as a social responsibility—

- 1. Population control—First of all, we need to control the growing population as the pressure on agriculture, land, industries and natural resources is increasing only to meet the needs of the growing population.
- 2. Recycle—We should reuse the material if possible. Things like paper which can be used again after recycling, we should recycle them, by not doing this, there is unnecessary exploitation of environment and natural resources. If we use 1, 000 kg of paper by recycling then there will be no need to cut 7 trees.
- **3. Industrial pollutant**—We have to limit the use of harmful substances used in industries, To emit less harmful chemicals in the environment. The hazardous waste water of industries entering in the rivers have to be stopped, as most of our rivers are getting contaminated due to industrial waste.
- **4. Solid waste management**—Solid waste mainly consists of plastic, paper, food waste, leather, textiles, metal pieces, glass, rubber etc. which we throw out as garbage from homes, offices etc. This garbage freeds and mosquitoes and during rain, flies it entres underground.

We can divide the waste into three parts.

- 1. biodegradable
- 2. recyclable
- 3. unable to biodegradation

The most dangerous waste is that which can not is biodegradable. Which is mainly due to the use of plastic items. It is becoming a big problem. Plastic waste cannot be completely destroyed, and as it is present in the environment, the environment is contaminated. Therefore, we should reduce the use the things made of polythene and plastic, by which pollution can be reduced.

- **5. Reform in agriculture**—The use of abiotic fertilizers and chemical fertilizers has increased in order to increase the crop production, due to which the amount of toxic chemicals is increasing in the land and it also penetrates in to the land. We should use more and more organic manure, which does not harm environment.
- 6. Rain water harvesting—We use water from the river, pond and well since ancient times. In present times we have taps in our houses, thus we have forgotten the importance of storage and depleted conservation of water. We have to make serious efforts for rainwater harvesting because underground water is becoming lesser in present times. Rainwater harvesting and plantation are also needed for improving underground water.
- **7. Sewage management**—Due to unplanned urbanization, most of the cities do not have proper disposal of sewage, due to which the sewage is drained into nearby water sources, and water becomes polluted. There should be a proper seweage system to prevent such type of water pollution. It is also used in composting.
- **8. Plantation**—The trees absorb carbon dioxide and release oxygen, it's of great help. From trees, we get fruits, flowers, wood, medicines, etc. and it also prevent soil erosion. That is why we should plant more trees and stop the destruction of forests.
- **9. Vehicles pollution**—The use of vehicles is increasing now a days, the poisonous smoke of vehicles causes serious problems to us. To prevent this, we should use batteries and solar—based vehicles instead of vehicles running on petroleum products.
- **10. Alternative energy**—At present we should reduce our dependence on energy based on petroleum and coal. For this, we can adopt the appliance based on solar energy and wind energy.
- 11. Environmental awareness—Making the young generation aware of the environment is the biggest requirement of the day. It is necessary for the present generation to understand how the environment can be made safe. For this students should take experimental work based on tree plantation, prevention of trees, rain water harvesting

and purification of water and limited use of plastic products.

So far, we have discussed environmental pollution, climate change and social responsibility to conserve them. If we want to give a direction to all of our efforts and obligations, then we can say that sustainable development is the need of the present time. Brundtland Commission 1987 was a World Commission on Environment and Development. According to this commission, the ability to meet the needs of the current generation is sustainable development, while not compromising the ability to fulfill the needs of next generation. Sustainable development is also called constant development. According to this belief, development is essential to meet current and future needs, but it should not be compromised with the potential of the natural environment. Fulfilling our needs by maintaining the environmental potential is sustainable development.

We should keep in mind that buying of goods gives us the right to use it but it does not give the right to destroy it. For example, we can buy food and use it but we do not have the right to waste because this affects the needs of other human beings and creatures and unnecessary increases load on nature.

Important point

- All the creatures are dependent on nature to fulfill all their needs.
- Ecology studies interrelationships between all living organisms and the environment of the Earth.
- In ecosystem, only a limited number of organisms can meet their requirement at one time, it is called sustainable potential.
- Ecological system is the result of millions of years of natural evolution.
- Only humans can deteriorate the balance of the Ecological system.
- Humans are harming Ecological balance, which is affecting all creatures.
- As earth being a stable unit, it is not possible to increase.
- The average weather of a place is called climate.
- Change is the law of nature and it is very slow and natural.
- Due to ozone gas, ultraviolet rays of the sun can not reach the Earth.

- Due to the ozone layer, we remain safe from ultraviolet radiation.
- Holes in the ozone layer implies not enough amount of ozone gas is formed, due to which the ozone layer is becoming thin.
- Mainly developed nations are responsible for harming the environment.
- Plastic and polyethylene are not completely degradable and its use is harmful for the environment.
- Earth's temperature is increasing due to the increase in greenhouse gases.

Questions for Practice

Multiple Choice Questions:

- 1. Ecology studies—
 - (A) Only human society
 - (B) Only animal society
 - (C) Relationship between organisms and physical Environment
 - (D) None of these
- 2. Which of the following creatures can harm the natural equilibrium?
 - (A) humans
- (B) animals
- (C) birds
- (D) none of these
- 3. Decibel unit is—
 - (A) To measure the intensity of the sound
 - (B) To measure the intensity of the wind
 - (C) To measure the pollution of water
 - (D) To measure the pollution of land
- 4. The main reason for radioactive pollution is—
 - (A) nuclear testing
 - (B) volcanic eruptions
 - (C) industrialization
 - (D) urbanization
- 5. Alternative energy is—
 - (A) solar energy and wind energy
 - (B) Energy produced from petroleum products
 - (C) nuclear energy
 - (D) other

Very Short Answer Type Questions:

- 1. What do we study in ecology?
- 2. What is the percentage of water on earth?
- 3. What is the percentage of land on earth?
- 4. How many parts are there of the structure of the environment?

- 5. Write a side effect of noise pollution.
- 6. Write a side effect of water pollution.
- 7. Write a side effect of air pollution.
- 8. What is climate?
- 9. The reasons for climate change can be divided into how many parts?
- 10. Describe one of the gasess that damages the ozone layer.
- 11. What we call 'life' air (प्राणवाय्)?
- 12. What is the name of unit to measure the intensity of noise pollution?

Short Answer Type Questions:

- 1. What is sustainable capacity?
- 2. Define environment.
- 3. What is Hydrosphere?
- 4. Write the meaning of atmosphere.
- 5. What is lithosphere?
- 6. Explain environmental pollution.
- 7. What is pollutant?
- 8. What is sewage?
- 9. What is the source of radioactive pollution?
- 10. Write two negative impacts of the water pollution.
- 11. What is the meaning of air pollution?
- 12. Write two reasons of land pollution.
- 13. What is the meaning of luminous pollution or Light pollution?
- 14. What is the meaning of climate change?
- 15. Give one human reason for climate change.
- 16. What is greenhouse effect?
- 17. Describe any one measure to prevent environmental pollution.
- 18. What is recycling?

Essay Type Questions:

- 1. Write the meaning of ecology and and describe two parts of the environmental structure.
- 2. Highlight two types of environmental pollution.
- 3. Write an essay on climate change.
- 4. Discuss four measures as a social responsibility to protect the environment.
- 5. Write four suggestions to prevent environmental pollution.

Answer Key:

1. (C) 2. (A) 3. (A) 4. (A) 5. (A)