

Chapter 3 - Environment And Society

Question 1:

Describe in your own words what you understand by the term 'ecology'.

Answer:

Ecology refers to the complex network of biological and physical systems and processes between the biotic and abiotic components of environment. It is responsible for the type of environment around living beings. Humans are also a constituent of ecology. Various physical features like mountains, rivers, plains and oceans, each with their unique flora and fauna, form their own ecology. The ecology of a place is affected by the interaction between its geography and hydrology. The flora and fauna of a particular region adapt themselves according to its ecology, in order to survive. Ecology of a place has an impact on the human living conditions and the lifestyle, food, clothing, occupation and culture of the people of that place.

Question 2:

Why is ecology not limited only to the forces of nature?

Answer:

Ecology is not limited to the forces of nature as it gradually gets modified by human actions. Many seemingly natural features and phenomena associated with the environment are the caused by human activities. For example, the change in climate because of global warming seems to be a natural process, but is an outcome of the human activities. The conservation of soil and water, usage of pesticide, and other man-made materials in agriculture are other examples of human transformation of nature. Artificial environment is prominently visible in cities in the form of built environment made from concrete, cement, brick, stone, glass and tar.

Question 3:

Describe the two-way process by which social environments emerge.

Answer:

Social environments emerge as a result of a two-way process in the form of interaction between biophysical ecology and human interventions. This can be explained as the shaping of human society by nature and the shaping of nature by human society. For example, the soil fertility of Indo-Gangetic plain enables agriculture and sustains high density of population while the arid and dry condition in Rajasthan barely supports pastoral form of life. This represents the impact of nature on human life. Contrary to this, technological developments like invention of automobiles have had an impact on the landscape. Air pollution and global warming are examples of the impact of human activities on nature.

Question 4:

Why and how does social organisation shape the relationship between the environment and society?

Answer:

Social organisation shapes the relationship between the environment and the society because the relations of property determine the usage of natural resources. For example, there would be a difference in the ownership of forests by the government and the private companies. This is because both of them would have different purposes and aim out of these resources. Hence the use of forests by both of them would be different.

The ownership of natural resources also vary with the division of labour. For instance, the relationship of landless labours and women with resources would be different than that of men because women experience scarcity of resources more acutely in a rural area, as they have to go to fetch water and collect firewood without controlling these resources.

Question 5:

Why is environmental management a complex and huge task for society?

Answer:

Environmental management is a complex and huge task for society because sufficient information is not available about the biophysical processes to predict and control them. The relation between humans and environment has become complex as industrialisation has accelerated the extraction of resources. This has affected ecosystems in ways which were not possible earlier. The industrial management systems are fragile and often vulnerable. This has also given rise to many environmental problems and risks. Disasters like the Bhopal Gas Tragedy are consequence of such hazards.

Question 6:

What are some of the important forms of pollution-related environmental hazards?

Answer:

Some of the important forms of pollution-related environmental hazards are as follows:

(i) Air Pollution - It is caused by emissions from industries and vehicles in urban areas and burning of wood and coal for domestic use in rural areas. It is one of the major environmental problems in both - urban and rural areas. Air pollution causes many diseases, such as respiratory disease that may result in serious illness and death.

(ii) Water Pollution - It is another form of pollution that affects the quality of water on surface and groundwater. It is mainly caused by domestic sewage, factory effluents and water from farms, which have large amounts of pesticides and synthetic fertilisers. Rivers and other bodies are particularly affected by water pollution.

(iii) Noise Pollution - Noise pollution mainly occurs in the cities as a result of continuous honking by vehicles, use of amplified loud speakers, traffic and construction work, etc. Noise pollution has been a subject in many court orders, for its control.

Question 7:

What are the major environmental issues associated with resource depletion?

Answer:

The depletion of resources is associated with the using up of non-renewable natural resources. The major environmental issues as associated with resource depletion are as follows:

- (i) The depletion of land and water resources. The decline in groundwater levels has caused an acute shortage of water all over India, particularly in states of Haryana, Punjab and Uttar Pradesh. With the growing demands of agriculture, industries and urban sector, the water shortage is one of the major problems faced by the world today. The fertile soil of the land also gets destroyed due to erosion, water-logging and salinization and activities like production of bricks.
- (ii) Depletion of biodiversity habitats like forests, grasslands and wetlands is another major environmental concern. This has been caused by expansion of areas under agriculture. Many species of flora and fauna have been endangered by the loss of biodiversity. This includes the tiger population, which is now threatened by declining numbers.

Question 8:

Explain why environmental problems are simultaneously social problems.

Answer:

Environmental problems are simultaneously social problems, as the way they affect different social groups is associated with 'social inequality'. This is because social status determines the extent to which a person is able to cope up with environment related problems. For example, in places like Gujarat where water is scarce, the rich farmers invest in deep bore tube wells to get underground water, whereas the poor farmers cannot afford to get tube wells. The depletion of water is compounded when the rains fail, as the wells of poorer farmers become dry.

However, some environmental problems, like air pollution and loss of biodiversity, are universal concerns. Differences in perception exist over the constitution of public interest in terms of environment. These differences often result in decisions which hurt the interest of weaker groups and minorities. For example, debates over construction of large dams and the displacement of people.

Question 9:

What is meant by social ecology?

Answer:

Social ecology emphasises the role of social relations in environmental practices and perceptions. It is particularly related to the organisation of property and production. Various social groups share a different relation with the environment and have a different approach to it. The varied interests and ideologies generate environmental conflicts. Thus, social ecology indicates the solution of environmental problems by changing relations between environment and society. To achieve this

result, it advocates changing the relation between different social groups like men and women, urban and rural people, landlords and labourers. Change in social systems enables the development of new methods of managing the environment.

Question 10:

Describe some environment related conflicts that you know of or have read about. (Other than the examples in the text.)

Answer:

Note: Any answer supported with explanation would solve the purpose.

One sample answer has been provided to you:

Some of the environment related conflicts are:

(i) The Chipko Movement or the Chipko Andolan.- It was a socio-ecological movement which started in the Garhwal region of Uttarakhand. It was started by women, who hugged the trees to protect them when the lumbermen came to cut them. Later, this movement spread all over India and came to be known as the Chipko Movement.

(ii) Narmada Bachao Andolan- This was a movement for the rights of people who were displaced by the construction of Sardar Sarovar Dam on the river Narmada. Medha Patkar and Baba Amte were the leading figures associated with this movement. The Supreme Court initially stopped the ongoing work at the dam site and later ordered the monitoring of the dam project along with its environmental aspects.