

Question 1: Answer the following questions.

(i) What is an ecosystem?

Solution: The system formed by the interaction of all living organisms with each other and with the physical and chemical factors of the environment in which they live, all linked by the transfer of energy and material is called an ecosystem.

(ii) What do you mean by natural environment?

Solution: The environment that consists of all objects created by nature is called natural environment. The natural environment comprises land, water, air, plants and animals.

(iii) Which are the major components of the environment?

Solution: Components of the environment include:

- Natural Components (Air, Water, Land & Living things)
- Human Made Components (components created by human beings)
- Human Components (human populations)
- (iv) Give four examples of a human-made environment.

Solution: Four examples of the human-made environment are buildings, parks, industries and bridges.

(v) What is lithosphere?

Solution: Lithosphere (or the domain of land) is the solid crust or the hard top layer of the Earth. It is made up of rocks and minerals, and is covered by a thin layer of soil. It is an irregular surface with various landforms such as mountains, plateaus, plains and valleys.

(vi) Which are the two major components of the biotic environment?

Solution: Plants and animals are the two major components of the biotic environment.

(vii) What is biosphere?

Solution: Biosphere or the living world is the narrow zone of earth where land, water and air interact with each other to support life. The plant and animal kingdom together form the biosphere.

Question 2: Tick the correct Answer.

- (i) Which is not a natural ecosystem?
- (a) Desert
- (b) Aquarium
- (c) Forest

Solution: (b) Aquarium

- (ii) Which is not a component of human environment?
- (a) Land
- (b) Religion
- (c) Community

Solution: (a) Land

- (iii) Which is a human made environment?
- (a) Mountain
- (b) Sea
- (c) Road

Solution: (c) Road

- (iv) Which is a threat to environment?
- (a) Growing plant

(b) Growing population

(c) Growing crops

Solution: (b) Growing population

Question 3: Match the following:

(i) Biosphere	(a) blanket of air which surrounds the earth	
(ii) Atmosphere	(b) domain of water	
(iii) Hydrosphere	(c) gravitational force of the earth	
(iv) Environment	(d) our surroundings	
	(e) narrow zone where the land water and the air interacts	
	(f) relation between the organisms and their surroundings	

Solution:

(i) Biosphere	(e) narrow zone where the land water and the air interacts	
(ii) Atmosphere	(a) blanket of air which surrounds the earth	
(iii) Hydrosphere	(b) domain of water	
(iv) Environment	(d) our surroundings	

Question 4: Give reasons.

(i) Man modifies his environment

Solution: Man modifies his environment to fulfill his basic needs, as it is the basic life support system. He builds houses to live in and industries to work in which modifies the environment and also its mineral wealth. Humans have used the fossils for their own development, disturbing the ecological system and animal habitats.

(ii) Plants and animals depend on each other

Solution: Plants and animals are interdependent on each other because plants are the producers and animals are the consumers. Plants release oxygen in the atmosphere which is inhaled by human beings and humans exhale carbon dioxide which helps plants in producing their own food.

Extra Questions Very Short Answer Questions

1. What is environment?

Answer: The place, people, things and nature that surround any living organism is called environment.

2. What are the components of lithosphere?

Answer: Lithosphere is the domain that provides us forests, grasslands for grazing, and land for agriculture and human settlements. It is a source of rich mineral wealth.

3. What is hydrosphere? What does it contain?

Answer: The domain of water is called hydrosphere. It consists of various sources of water and different types of water bodies like rivers, lakes, seas, oceans, etc.

4. What is atmosphere?

Answer: It is the thin layer of air that surrounds the earth. The gravitational force of the earth holds the atmosphere around it.

5. How does atmosphere protect us?

Answer: It protects us from the harmful rays and scorching heat of the sun. It consists of a number of gases, dust and water vapour. The changes in the atmosphere produce changes in the weather and climate.

6. What is barter system?

Answer: It is a trade in which goods are exchanged without the use of money.

Short Answer Questions

1. Distinguish between biotic and abiotic environment.

Answer: Biotic environment is the world of living organisms while abiotic environment is the world of non-living beings. Plants and animals are a part of the biotic environment, while land is a part of the abiotic environment.

2. "All plants, animals and human beings depend on their immediate surroundings." Comment.

Answer: (i) Plants, animals and human beings depend on their immediate surroundings. They are interdependent.

- (ii) This relation between the living organisms as well as the relation between the organisms and their surroundings form an ecosystem.
- (iii) There could be an ecosystem of large rainforests, grasslands, desert, mountains, lake, rivers, etc.

Long Answer Questions

1. Distinguish between: Biotic and Abiotic environment

Answer:

Biotic Environment	Abiotic Environment
Biotic components are living components.	Abiotic components are non-living components.
e.g. Plant and animal species.	e.g. Land, soil and air.

2. Give four examples of man-made environment and explain each one of them in detail.

Answer: Four examples of man-made environment are following:

Roads: Urbanisation and industrialisation, followed by the development in transport sector. For the means of transportation, we need to build roads. So, roads are considered to be man-made environment which helps in the development of merchant trade and enhances the economy of the country.

Railways: Another means of transportation is railways, needed for transporting travellers from one place to another and also freight. For the construction of laying down the railway line, lots of trees were cut, forests cleared and tunnels made through the mountains.

Communication: For communication, information technology is developed and reaching all the domains— Earth, water, air and space. We need satellite service for the communication, which puts a major hindrance in natural environment.

Buildings: Amongst the most important man-made environments are the buildings for residential purposes as well as for official purposes. Too much of human habitation has also affected the natural environment.

Hots (Higher Order Thinking Skills)

1. What is the lithosphere? What is significance of lithosphere in a human life?

Answer: (i) Lithosphere is the solid crust or the hard top layer of the earth.

- (ii) It is made up of rocks and minerals and covered by a thin layer of soil.
- (iii) Lithosphere is the domain that provides us forests, grasslands for grazing, land for cultivation and human settlements.
- (iv) It even provides us various minerals.

2. How do humans interact with the environment?

Answer: Human beings interact with the environment and modify it according to their need. Early humans led a simple life and were dependent on nature. With time, humans learnt to grow crops, domesticate animals and lead a settled life. The wheel was invented, surplus food was produced, barter system emerged, trade started and commerce developed. Industrial revolution enabled largescale production. Transportation made movement faster and information revolution made communication faster. Humans, thus, learnt to interact with nature in a harmonious way.

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