

Class XI ECONOMICS

CHAPTER - 9

ENVIRONMENT AND SUSTAINABLE DEVELOPMENT

IMPORTANT QUESTIONS

MULTIPLE CHOICE AND VERT SHORT ANSWER QUESTIONS (1 Mark)

Question 1

Factor contribute to global warming-

- a) Deforestation**
- b) Decrease in cattle production**
- c) Burning of coal and petroleum products**
- d) Hydrogen gas released in animal waste**

Answer

(b) Burning of coal and petroleum products

Question 2

Ozone depletion refers to the phenomenon of reductions in the amount of ozone in the:

- a) Exosphere**
- b) Stratosphere**
- c) Troposphere**
- d) Mesosphere**

Answer

(b) Stratosphere

Question 3

What is environment?

Answer

Environment is defined as the total planetary inheritance and the totality of all resources. It refers to an ecological awareness that concerns itself with rectifying and sustaining the planet during its current challenges.

Question 4

What is meant by renewable resources?

Answer

Renewable resources are those which can be used without the possibility of being exhausted, such as trees, fishes etc.

Question 5

What do you mean non-renewable resources?

Answer

Non-renewable resources refer to those resources which get exhausted with extraction and use such as fossil fuel, coal etc.

Question 6

The problem of ozone depletion is caused in the stratosphere by high levels of compounds

- a) Chlorine and Bromine
- b) Chlorine and Carbon
- c) Silicon and Bromine
- d) Silicon and hydrogen

Answer

(a) Chlorine and Bromine

Question 7

CFC stands for

- (a) Chlorofluorocarbons
- (b) Hydro fluorocarbons
- (c) Ultra fluorocarbons
- (d) Photo fluorocarbons

Answer

(a) Chlorofluorocarbons

Question 8

Why have some resources become extinct?

Answer

Some resources have become extinct because their extraction has been above the rate of regeneration.

Question 9

Define global warming.

Answer

Global warming is a gradual increase in the average temperature of the earth's lower atmosphere and ocean.

Question 10

Example of overuse of environmental resources are

- (a) Deforestation and Land degradation**
- (b) Reforestation and Land up gradation**
- (c) None**
- (d) Both**

Answer

(a) Deforestation and Land degradation

Question 11

The black soil of the Deccan Plateau is particularly suitable for cultivation of

- (a) Jute**
- (b) Maize**
- (c) Textile**
- (d) Cotton**

Answer

(d) Cotton

Question 12

The Chipko Movement, which aimed at protecting forest in the

- (a) Kerala**
- (b) Himalayas**
- (c) Karnataka**
- (d) Maharashtra**

Answer

(b) Himalayas

Question 13

Which of the following factor not responsible for land degradation

- (a) Shifting cultivation**
- (b) Gain of vegetation occurring due to deforestation**
- (c) Improper crop rotation**
- (d) Unsustainable fuel wood and fodder extraction**

Answer

- (b) Gain of vegetation occurring due to deforestation
-

Question 14

Give two examples of resources overuse.

Answer

- Excessive tree felling
 - Excessive exploitation of fossil fuel
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Question 15

Give two examples of misuse of resources.

Answer

- Use of rivers to absorb industrial effluents
 - Use of wood as a household fuel
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SHORT ANSWER QUESTIONS (3 OR 4 MARKS)

Question 16

What do you mean by global warming?

Answer

Global warming is the gradual rise in the earth's temperature caused by high levels of carbon dioxide and other gases in the atmosphere. It is an increase in the average temperature worldwide believed to be caused by the greenhouse effect. The natural greenhouse effect maintains the Earth's temperature at a safe level making it possible for humans and many other lifeforms to exist. However, since the Industrial Revolution human activities have significantly enhanced the greenhouse effect causing the Earth's average temperature to rise by almost 1°C. This is creating the global warming we see today. To put this increase in perspective it is important to understand that during the last ice age,

a period of massive climate change, the average temperature change around the globe was only about 5°C.

Question 17

Write some line on ozone depletion.

Answer

Ozone layer depletion, is simply the wearing out (reduction) of the amount of ozone in the stratosphere. Unlike pollution, which has many types and causes, Ozone depletion has been pinned down to one major human activity. Industries that manufacture things like insulating foams, solvents, soaps, cooling things like Air Conditioners, Refrigerators and 'Take-Away' containers use something called chlorofluorocarbons (CFCs). Depletion begins when CFC's get into the stratosphere. Ultra violet radiation from the sun breaks up these CFCs. The breaking up action releases Chlorine atoms. Chlorine atoms react with Ozone, starting a chemical cycle that destroys the good ozone in that area. One chlorine atom can break apart more than 100,000 ozone molecules. Ozone layer depletion increases the amount of UVB that reaches the Earth's surface. Laboratory and epidemiological studies demonstrate that UVB causes non-melanoma skin cancer and plays a major role in malignant melanoma development.

Question 18

What is Chipko Movement? How India has benefitted from it?

Answer

The Chipko movement was a non-violent agitation in 1973 that was aimed at protection and conservation of trees, but, perhaps, it is best remembered for the collective mobilisation of women for the cause of preserving forests, which also brought about a change in attitude regarding their own status in society. The name of the movement 'chipko' comes from the word 'embrace', as the villagers hugged the trees and encircled them to prevent being hacked. The uprising against the felling of trees and maintaining the ecological balance originated in Uttar Pradesh's Chamoli district (now Uttarakhand) occurred in the year 1973. Here it should be noticed that the original Chipko andolan dates back to the 18th century and was started by Rajasthan's Bishnoi community. It was started by Sunderlal Bahuguna, a noted environmentalist. Bahuguna is also known for coining the Chipko slogan 'ecology is permanent economy'.

One of the major achievement of the Chipko movement was the ban on cutting the trees for the 15 years in the forests of Uttar Pradesh in 1980. Later on the ban was imposed in Himachal Pardesh, Karnataka, Rajasthan, Bihar, Western Ghats and Vindhayas. All this was done on the order of the Indian Prime Minister after the strong protests by the activists throughout the country.

Question 19

What is pollution control board?

Answer

Central Pollution Control Board (CPCB) was constituted in 1974 under the Water (Prevention and Control of Pollution) Act, 1974. Further, it was entrusted with the powers and functions under the Air (Prevention and Control of Pollution) Act, 1981. Its functions are to promote cleanliness of streams and wells in different areas of the states by prevention, control and abatement of water pollution. They need to check on the improvement of the quality of air and to prevent, control or abate air pollution in the country. They are supposed to co-ordinate the activities of the State Pollution Control Boards and resolve disputes among them and to lay down, modify or annul, in consultation with the state governments concerned, the standards for stream or well, and lay down standards for the quality of air. They co-ordinates the activities of the State Pollution Control Boards by providing technical assistance and guidance and also resolves disputes among them. It is the apex organisation in country in the field of pollution control, as a technical wing of MoEF. The monitoring of meteorological parameters such as wind speed and wind direction, relative humidity (RH) and temperature were also integrated with the monitoring of air quality. This information on Air Quality at ITO is updated every week. CPCB in collaboration with concerned SPCBs/PCCs established a nationwide network of water quality monitoring, which has running 1019 stations in 27 States and 6 Union Territories. The inland water quality monitoring network is operating under a three-tier program i.e. Global Environment Monitoring System (GEMS), Monitoring of Indian National Aquatic Resources System (MINARS) and Yamuna Action Plan (YAP).

Question 20

Define Biocomposting.

Answer

The process of natural decomposition is very important to one type of waste disposal. Biocomposting is a form of waste disposal where organic waste decomposes naturally under oxygen-rich conditions. Although all waste will eventually decompose, only certain waste items are

considered compostable and should be added to compost containers. Food waste, such as banana peels, coffee grinds and eggshells, are great items to compost. In addition to food waste, yard waste, such as grass clippings and leaves, can also be added to compost containers. These items will help increase decomposition and help reduce odour as materials break down. As with household food waste, there are also some types of yard waste that should be avoided. Perennial weeds, which are plants that come back year after year, should not be added to compost because they will grow back and spread. By composting these items, it makes it possible to reduce the overall amount of waste being sent to landfills and mass-burn incinerators. In addition to reducing waste, the process of composting also creates a usable product. The final compost, humus, is nutrient-rich and can be used to amend poor soils and fertilize gardens instead of using chemical fertilizers. The added compost also helps soil retaining power and therefore can improve growing conditions.

LONG ANSWER QUESTIONS (5 OR 6 MARKS)

Question 21

What is air pollution? Write some measures to control it.

Or

India has increasing rate of air pollution. What shall be done to check the same?

Answer

Air pollution is the contamination of the natural air by mixing it with different pollutants such as harmful fumes and chemicals. This type of contamination can be caused by burning material or by gases emitted by vehicles or harmful fumes emitted as a by-product of industries. Global warming is one of the biggest side effects of air pollution as per the experts. Air pollution is a most serious problem of the current time all over the world especially in the large cities because of the huge level of industrialization. The release of such air pollutants in heavy concentrations such as smog, particulates, solid materials, etc. are getting settled over the city, causing air pollution and health hazards to the people. Lots of dirty wastes produced by people on daily basis especially in the big cities polluting the whole atmospheric air to a great extent.

Some of the ways to control air pollution are as follows:-

- Industrial estates should be established at a distance from residential areas.
- Removal of poisonous gases by passing the fumes through water tower scrubber or spray collector.

- Attempt should be made to develop pollution free fuels for automobiles, e.g., alcohol, hydrogen, battery power. Automobiles should be fitted with exhaust emission controls.
 - Growing plants capable of metabolising nitrogen oxides and other gaseous pollutants, e.g., Vitis, Pimis, Jtniperus, Quercus, Pyrus, Robinia pseudo-acacia, Viburnum, Crataegus, Ribes, Rhamnus.
 - Afforestation of the mining area on priority basis.
 - Development and employment of non-combustive sources of energy, e.g., nuclear power, geothermal power, solar power, tidal power, wind power, etc.
 - In countries like India, traditional use of fuel wood, coal, etc., should be checked and newly devised smoke-free furnaces be used.
 - Some methods of controlling air pollution are filtering, settling, dissolving, absorption, etc. For these methods cheap devices should be developed.
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Question 22

State some major environmental issues which world is facing today?

Or

What are the biggest challenges world is facing today in terms of environment?

Answer

Our environment is constantly changing. There is no denying that. However, as our environment changes, so does the need to become increasingly aware of the problems that surround it. With a massive influx of natural disasters, warming and cooling periods, different types of weather patterns and much more, people need to be aware of what types of environmental problems our planet is facing. Soon more than 9 billion people will share our planet. Increasing demands for food, water, energy and infrastructure are pushing nature to its limits. And the impacts of climate change are touching down everywhere we look.

The biggest problems of environment today is listed below:

- **Pollution:** Pollution of air, water and soil require millions of years to recoup. Industry and motor vehicle exhaust are the number one pollutants. Heavy metals, nitrates and plastic are toxins responsible for pollution. While water pollution is caused by oil spill, acid rain, urban runoff; air pollution is caused by various gases and toxins released by industries and factories and combustion of fossil fuels.

- **Global Warming:** Climate changes like global warming is the result of human practices like emission of Greenhouse gases. Global warming leads to rising temperatures of the oceans and the earth's surface causing melting of polar ice caps, rise in sea levels and also unnatural patterns of precipitation such as flash floods, excessive snow or desertification.
- **Overpopulation:** The population of the planet is reaching unsustainable levels as it faces shortage of resources like water, fuel and food. Population explosion in less developed and developing countries is straining the already scarce resources.
- **Urban Sprawl:** Urban sprawl refers to migration of population from high density urban areas to low density rural areas which results in spreading of city over more and more rural land. Urban sprawl results in land degradation, increased traffic, environmental issues and health issues.
- **Public Health Issues:** The current environmental problems pose a lot of risk to health of humans, and animals. Dirty water is the biggest health risk of the world and poses threat to the quality of life and public health. Run-off to rivers carries along toxins, chemicals and disease carrying organisms.
- **Genetic Engineering:** Genetic modification of food using biotechnology is called genetic engineering. Genetic modification of food results in increased toxins and diseases as genes from an allergic plant can transfer to target plant. Genetically modified crops can cause serious environmental problems as an engineered gene may prove toxic to wildlife.

The need for change in our daily lives and the movements of our government is growing. Although it's true that we cannot physically stop our ozone layer from thinning. There are still so many things we can do to try and put a dent in what we already know. By raising awareness in our local community and within our families about these issues, we can help contribute to a more environmentally conscious and friendly place for us to live.

Question 23

Write short note on sustainable development.

Or

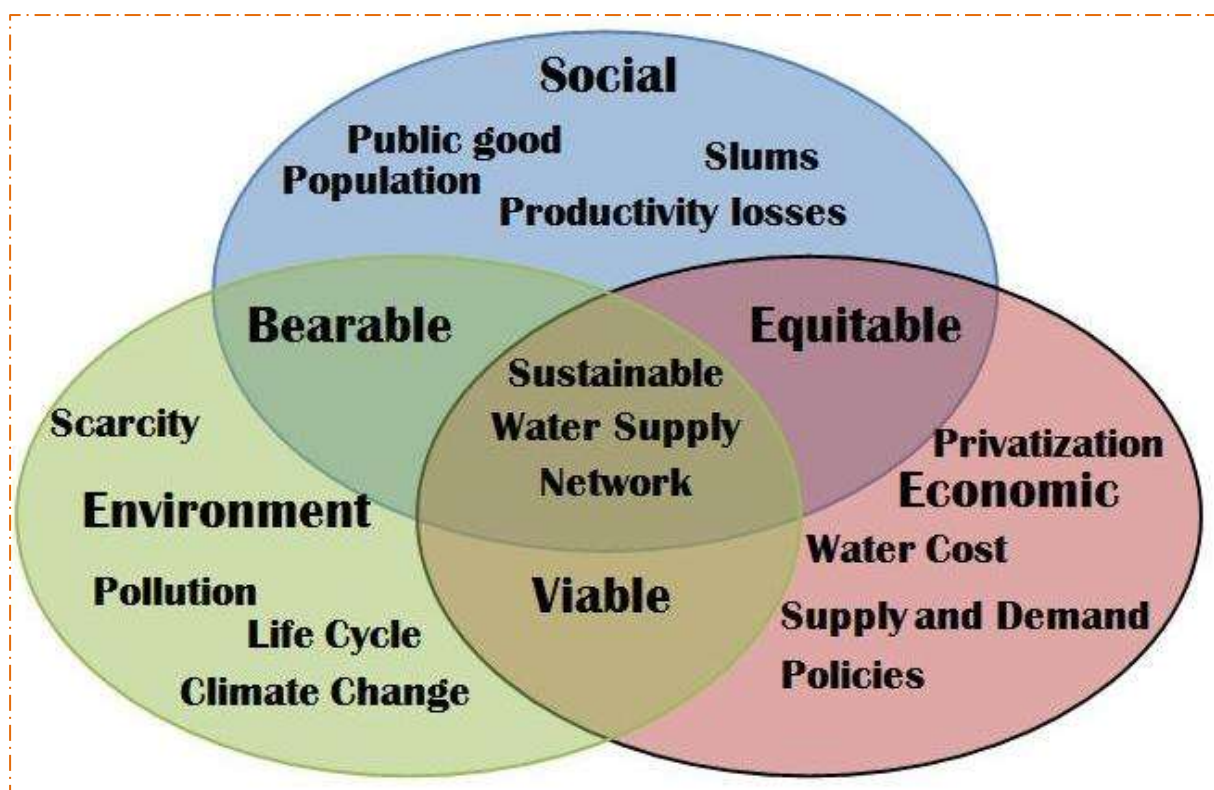
How can nations today achieve sustainable development?

Answer

Sustainable development is a way for people to use resources without the resources running out. The term used by the **Brundtland Commission** defined it as development with sustainability that "meets the needs of the present without compromising the ability of future generations to meet their own needs." It is the concept of needs and limitations imposed by technology and society on the

environment's ability to meet the present and future needs. Thus, the concept of sustainable development provides framework for the integration of environmental policies and development strategies having implications at international, national regional and local levels. Development should not endanger the natural systems that support life on earth. Hence, the concept of sustainable development leads us to new resource consumption strategies, which are:

- Conservation or reduction of excessive resource use.
- Recycling and reuse of materials and
- More use of renewable resources like solar energy rather than non-renewable resources such as oil and coal.



Sustainable development also requires meeting the basic needs of all deprived people in this world and extending to all, the opportunities to satisfy their aspirations for a better life. Otherwise, the world, in which poverty and inequity are endemic, will always be prone to ecological and other crisis. Ecological interactions do not respect the boundaries of individual ownership and political jurisdictions. For example, the irrigation practices, pesticides, and fertilizers used on farm affect the productivity of the neighbouring ones, especially among small farms. Development today must not undermine the development and environment needs of present and future generations. Eradicating poverty and reducing disparities in living standards in different parts of the world are essential to

achieve sustainable development and to meet the needs of the majority of people. Nations shall use the precautionary approach to protect the environment. Where there are threats of serious or irreversible damage, scientific uncertainty shall not be used to postpone cost-effective measures to prevent environmental degradation. Environmental issues are best handled with the participation of all concerned citizens. Nations shall facilitate and encourage public awareness and participation by making environmental information widely available.

Today, all aspects of sustainability whether physical, economic and social are at stake. Integration of different domains of knowledge like disciplines, sectors and institutions proves to be essential challenge to obtain viable results and well supported development processes.

Question 24

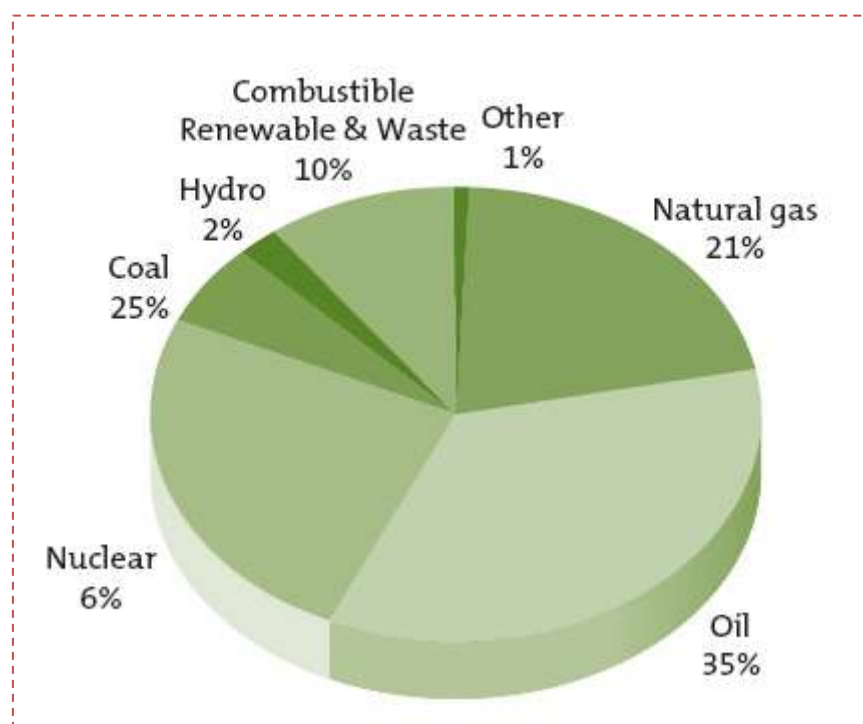
India has plenty of natural resources. How much do you agree with this statement?

Or

Comment on India's natural resource availability. How much India is lucky?

Answer

Yes, I do agree with this statement. Natural resources are generally defined as all those things given by nature on, above and under the surface of the earth. In this broad sense natural resources include land, water, forests, fisheries and animals, mineral ores and sources of energy like coal, petroleum, gas and uranium, etc.



Well, let us check India in terms of natural resources:-

1. **Land Resources:** Nearly 10% of the world's agricultural land is in India. Despite being only the 7th largest country, India has the world's most alluvial plains, world's largest deltas and the undivided India had the world's largest area of agricultural land by a long margin.
 2. **Forest Resources:** The per capita forest in India (0.5 hectare) is much less than that in the world (1.9 hectares). According to the National Policy on Forests (1988), one-third (33%) of the country's area should be covered by forests in order to maintain ecological balance.
 3. **Mineral Resources:** Huge reserves of iron ore & a thriving economy around that. India was a pioneer in iron usage and a lot of smelting methods. It developed the Crucible steel and Wootz steel that became quite popular across the world. The strength in iron & steel provided both strong weapons & great implemented that helped the rise of great many empires in India.
 4. **Leadership in textile production:** India had massive amounts of cotton & pioneered in textile production since the Indus Valley Civilization 5000 years ago. By 18th century, India had the largest textile industry. This is one of the principal things that attracted the Europeans. Later the English won over it, automated and brought the industrial revolution.
 5. **Availability of huge manpower:** India has always had a large manpower. This provided good for anyone raising a large army or an army of workers. Europeans used Indian labour for both fighting their wars as well as building their other colonies.
 6. **Long coastline:** The long coastlines of India in the centre was unrivalled by the other civilizations and this enabled India to connect to the innovations coming out of both east and the west. It was through this trade it was able to export its religions and practices to rest of the world.
 7. **Water Resources:** The chief sources of water are rain water, sea water, ground and surface water. It is essential to enforce water quality standards to specify suitability of water for drinking, irrigation, industry, public health and environmental safety purposes.
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