

NCERT Solutions for 11th Class Economics: **Chapter 9-Environment** National Council Of Educational Research and Sustainable Development







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NCERT Solutions for 11th Class Economics: Chapter 9-Environment and Sustainable Development

Class 11: Economics Chapter 9 solutions. Complete Class 11 Economics Chapter 9 Notes.

NCERT Solutions for 11th Class Economics: Chapter 9-Environment and Sustainable Development



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1. What is meant by environment?

Answer

Environment is defined as the total planetary inheritance and the totality of all resources. It includes all the biotic and abiotic factors that influence each other.

2. What happens when the rate of resource extraction exceeds that of their regeneration?

Answer

When the rate of resource extraction exceeds that of their regeneration, the environment fails to perform its third and vital function of life sustenance and this results in an environmental crisis.

3. Classify the following into renewable and non-renewable resources (i) trees (ii) fish (iii) petroleum (iv) coal (v) iron-ore (vi) water

Answer

Water, trees and fish are the renewable resources. Petroleum, coal and iron ore are non-renewable resources.

4. Two maj	jor environmental iss	sues facing the world today
are	and	•

Answer





global warming, ozone depletion.

- 5. How do the following factors contribute to the environmental crisis in India? What problem do they pose for the government?
- (i) Rising population
- (ii) Air pollution
- (iii) Water contamination
- (iv) Affluent consumption standards
- (v) Illiteracy
- (vi) Industrialization
- (vii) Urbanization
- (viii) Reduction of forest coverage
- (ix) Poaching
- (x) Global warming.

Answer

(i) Rising population: The rising population creates pressure on available resources. The intensive and extensive extraction of both renewable and non-renewable resources has led to exhaustion of the vital resources. Also, the explosive population size has triggered excessive demand for housing, thereby, resulting in widespread deforestation and fast depletion of other natural resources leading to ecological imbalances. Therefore, it is high time for the Indian government to take preventive measures to control population explosion.





- (ii) Air Pollution: It is widespread in urban areas of India. Increased vehicular population is the major reason of air pollution in cities. Even in villages, burning of firewood and cow dung cakes contributes to air pollution. This causes hypertension, asthma, respiratory and cardio-vascular problems. Therefore, the Indian government should take various steps to control air pollution, avoid deforestation, increase health investment and also search for new alternative pollution free technology such as CNG, etc.
- (iii) Water contamination: Contamination of water or pollution of water is posing a serious threat to human life. It is one of the principal causes of all deadly diseases such as diarrhea, hepatitis, cholera, etc. It occurs due to dumping of industrial waste, agricultural waste and sewerage into the water bodies. Thus, the Indian government should put a check on wastewater disposal. This calls for high capital investment for installation and maintenance of purifier machines.
- (iv) Affluent consumption standards: The recent influence of the West and a rise in purchasing power of the middle class has led to affluent consumption standards and unnecessary luxuries with a lifestyle of conspicuous consumption have increased. This placed a huge stress on the environment in terms of resources supply and assimilation of waste. The resources have become extinct and wastes generated are beyond the absorptive capacity of the environment leading to environmental crises. The government is compelled to spend huge amounts on research and development to explore alternative environment friendly resources. Also, upgradation of environmental quality entails huge cost.
- (v) Illiteracy: It is a social problem leading to the lack of awareness about environment and the harmful effects of various practices or products on the environment. The lack of knowledge and skills may lead to excessive extraction of resources and, thereby, its misuse. Thus, the government





should take measures to create awareness and spread technical knowledge among people about various efficient and economising methods.

(vi) Industrialization: On one hand, it enhances our living standards but, on the other hand, it causes deforestation, depletion of natural resources. In the blind rage to achieve economic development, industrialisation acts as a catalyst. In order to speed up the process of industrialisation, natural resources are exploited at a rapid pace. More trees are being felled and, increasing volume of toxics and industrial wastes are dumped into the water bodies. All these culminate to ecological imbalances posing threat to sustainable economic development. Thus, the government should take measures to check undue and unnecessary industrial growth in order to restore ecological balance.

(vii) Urbanisation, On the one hand, it infuses modernisation of lifestyle but, on the other hand, it leads to deforestation. In order to meet the growing demand for houses, more trees are to be felled, decreasing the land-per-man ratio. Rapid urbanisation puts an excess burden on the natural resources, causing depletion. Urbanisation also reduces the availability of land for farming purpose and lowers farm outputs. Hence, the government should take measures to mitigate the impact of urbanisation by promoting small and cottage rural industries, rural infrastructural development, thereby, reducing the rural-urban migration. Further, the government should also promote afforestation and most importantly, adopt measures to arrest population explosion.

(viii) Reduction of forest coverage: The need for reduction of forest coverage or deforestation arises due to the growing demand for land, wood, rise in population and river valley projects. Deforestation leads to reduction in oxygen level in air, soil erosion, climate change and global warming due to rise in the CO2 level. Thus, measures are needed to promote afforestation, opening up of sanctuaries and national park such as Jim Corbett National Park.





- (ix) Poaching: It is the illegal capturing, killing and hunting of animals. Due to this, many animals are on the verge of extinction. The excessive hunting and killing of animals result in serious ecological imbalances. Thus, in order to save the rare species such as Tiger, Asian Elephants, Grevy's Zebra, etc. more sanctuaries and national parks are to be set up. There is also need for various environmental legislations like Endangered Species Act in the USA that imposes strict penalties on the law breakers.
- (x) Global Warming: It is a gradual increase in the average temperature of the earth due to environmental pollution and deforestation. It is caused by the emission of Green House Gases that include, particularly, carbon dioxide. The increase in the level of carbon dioxide raises the temperature of the earth surface. This risen temperature accelerates the melting of polar ice that further leads to the rise in the sea level. Thus, the incidence of natural calamities rises due to disturbed ecological balance, thereby, posing a threat to human life.

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6. What are the functions of the environment?

Answer

Function of Environment are:

- \rightarrow It supplies resources:
- \rightarrow It assimilates waste
- → It sustains life by providing genetic and bio diversity and
- \rightarrow It also provides aesthetic services like scenery etc.

7. Identify six factors contributing to land degradation in India.

Answer





The factors contributing to land degradation in India are:

- → Loss of vegetation occuring due to deforestation
- → Unsustainable fuel wood and fodder extraction
- → Shifting cultivation
- → Encroachment into forest lands
- → Forest fires and over grazing
- → Non-adoption of adequate soil conservation measures.

8. Explain how the opportunity costs of negative environmental impact are high.

Answer

Opportunity cost is the cost that is foregone when we make a choice or a decision.

When the rate of resource extraction is higher than that of its renewal then many resources get exhausted. Therefore, we are compelled to spend huge amounts on technology and research to explore new resources. Added to these are the health costs of degraded environmental quality — decline in air and water quality have resulted in increased incidence of respiratory and water-borne diseases. Hence, the expenditure on health is also rising. To make matters worse, global environmental issues such as global warming and ozone depletion also contribute to increased financial commitments for the government. Therefore, the opportunity costs of negative environmental impact are high.

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9. Outline the steps involved in attaining sustainable development in India.





Answer

The steps involved in attaining sustainable development in India are:

- \rightarrow Use of non-conventional sources of energy: This will help in reducing our dependency on thermal power and hydel power. Thus, use of non-conventional sources of energy will help in ensuring sustainable development.
- \rightarrow LPG, Gobar gas in rural areas: Use of LPG and gobar gas in rural areas will help in reducing the extraction of firewood for fuel. Thus, it will help in reducing air pollution and felling of trees.
- → CNG in urban areas: As the example of Delhi shows, increased use of CNG in urban areas can help in improving air quality.
- → Wind power: Wind power is a renewable source of energy and can be harnessed with available technology. Many wind farms are already operational in India.
- → Solar power through photovoltaic cells: Solar panels are being used for powering traffic lights and hoardings in many cities. Solar cells are also being used in water heaters and for lightning purposes.
- → Mini-hydel plants: Mini hydel plants can be ideal for hilly areas which have large number of streams. Mini hydel plants can help in supplying electricity to remote areas and also in preventing transmission losses.

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10. India has abundant natural resources - substantiate the statement.

Answer





India has abundant natural resources in terms of rich quality of soil, hundreds of rivers and tributaries, lush green forests, plenty of mineral deposits beneath the land surface, vast stretch of the Indian Ocean, ranges of mountains, etc. The black soil of the Deccan Plateau is particularly suitable for cultivation of cotton, leading to concentration of textile industries in this region. The Indo-Gangetic plains are the most fertile, densely populated and cultivated plains in the world. It stretches from the Arabian Sea to the Bay of Bengal. India's forests, though unevenly distributed, provide green cover for a majority of its population and natural cover for its wildlife. Large deposits of iron-ore, coal and natural gas are found in the country. India alone accounts for nearly 20 per cent of the world's total iron-ore reserves. Bauxite, copper, chromate, diamonds, gold, lead, lignite, manganese, zinc, uranium, etc. are also available in different parts of the country.

11. Is environmental crisis a recent phenomenon? If so, why?

Answer

Yes, the environmental crisis is a very recent phenomenon. Before the industrial revolution, the rate of extraction of resources was very low and it was less than that of renewal of resources. But after so many years of industrial revolution and subsequent development, the rate of extraction of resources has grown manifold. This has resulted in exhaustion of resources in many countries. It has also resulted in high levels of environmental pollution. Hence, it can be said that environmental crisis is a recent phenomenon.

- 12. Give two instances of
- (a) Overuse of environmental resources
- (b) Misuse of environmental resources.

Answer





- (a) Overuse of environmental resources
- \rightarrow The increasing irrigation and construction of flood storage reservoirs are resulting in the drying up of rivers.
- → The growing population and their ever growing demand are resulting in large scale deforestation. This leads to soil erosion, making the soil infertile.
- (b) Misuse of environmental resources.
- \rightarrow Excess use of diesel and petrols are depleting the non-renewable sources of energy.
- → Wood is obtained from trees. Using wood instead of eco friendly alternative fuels for cooking purposes brings about deforestation.

13. State any four pressing environmental concerns of India. Correction for environmental damages involves opportunity costs. Explain.

Answer

The four pressing environmental concerns of India are; air pollution, groundwater pollution, deforestation and soil erosion.

The opportunity cost of correction for environmental damages refers to the huge amount of expenditure incurred on searching for new efficient alternatives. The heavy intensive and extensive extraction of both renewable and non-renewable resources demands expenditure for exploring new alternative resources in order to avoid an environmental crisis. The discovery of such resources requires heavy investment by the government. Also, implementation and maintenance of these alternative resources involve very high cost. For example to control air pollutions we need to fit vehicles with catalytic converters which means increased cost of the vehicle. Therefore, the correction for environmental damages involves opportunity cost that is very high.





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14. Explain the supply-demand reversal of environmental resources.

Answer

Before the beginning of the Industrial Revolution the supply of natural resources was higher than demand. But, in today's scenario with population explosion and industrial revolution, the demand for environmental resources is far more than its supply. Therefore, the available resources should be carefully utilised. This reversal in the demand and supply relationship is referred to as the supply-demand reversal of the environmental resources.

15. Account for the current environmental crisis.

Answer

The current environmental crisis is result of our unsustainable practices. The population explosion and affluent consumption have placed an undue and excess burden on the environment. The resources are increasingly exhausted day by day, but the regeneration of resources is constant. So, when the resources are extracted at a rapid pace than its regeneration, then the carrying capacity of the environment reduces. Then environment fails to perform its function of sustaining life, consequently, resulting in an environmental crisis. The current environmental crises includes land degradation, global warming, biodiversity loss, waste management etc.

16. Highlight any two serious adverse environmental consequences of development in India. India's environmental problems pose a dichotomy-they are poverty induced and, at the same time, due to affluence in living standards. Is this true?

Answer





The two serious issues or consequences of development in India are land degradation and Air pollution.

- \rightarrow Land Degradation: The gradual but consistent loss of fertility of land is referred to as degradation of land. This is emerging as a serious concern in the context of environmental issues in India. The factors responsible for land degradation are soil erosion, deforestation, shifting cultivation, improper crop rotation etc.
- → Air Pollution: In India, air pollution is widespread in urban areas where vehicles are the major contributors and in a few other areas which have a high concentration of industries and thermal power plants. Vehicular emissions are of particular concern since these are ground level sources and, thus, have the maximum impact on the general population.

The environmental problems points to the paradoxical situation in the country. Deforestation in India is a rapid consequence of population explosion and widespread poverty. The poor people in the rural areas are compelled to fell trees for earning their livelihood. The growing demand for natural resources to carry out production activity in the urban areas is also equally responsible for the present environmental degradation. There are two different opinions on the effect of environmental activities. One opinion advocates for India's prosperity by resorting to industrial production, while, the other opinion highlights the threat of pollution due to rapidly growing industrial sector. This can be understood as in the wake of rapid urbanisation, the expansion of vehicular traffic generates pollution of noise and air.

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17. What is sustainable development?

Answer





Development that meets the need of the present generation without compromising the ability of the future generation to meet their own needs is called sustainable development.

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18. Keeping in view your locality, describe any four strategies of sustainable development.

Answer

The strategies of attaining sustainable development which I should use in locality are:

- → Switching to alternate sources of energy; like solar energy and wind energy
- \rightarrow Promoting afforestation to recover the loss of greenery.
- → Promoting the use of CNG in vehicles
- → Building better public transport facilities.

19. Explain the relevance of intergenerational equity in the definition of sustainable development.

Answer

Sustainable development is the real economic development which emphasis on satisfying the current needs of population keeping in mind availability of resources for future generation. Sustainable development maximises the welfare of both present and future generations. This development does not mean a check on the existing pace of economic growth. It only means a judicious or optimum utilisation of resources in such a manner that pace of economic growth sustains with inter generational equity.

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