

# Infrastructure Chapter 8 NCERT Solutions for Class 11

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## **Question 1. Explain the term ‘infrastructure’.**

**Answer.** Infrastructure refers to the basic supporting structure which is built to provide different kinds of services in an economy. Infrastructural installations do not directly produce goods but help in promoting production activities in an economy. Examples of infrastructure are: transport, communication, banking, power etc.

## **Question 2. Explain the two categories into which infrastructure is divided. How are both interdependent?**

**Answer.** There are two types of infrastructure: (a) economic infrastructure, (b) social infrastructure.

Economic infrastructure directly supports the economic system from inside. Examples are energy, transport and communication. Social infrastructure indirectly supports the economic system from outside. Examples are health, education and housing.

Economic and social infrastructure are complementary to each other. Economic infrastructure improves the quality of economic resources and raises the production, but it cannot be possible until population is literate to use them efficiently. Thus, both of them are needed for the growth and development of the country.

## **Question 3. How do infrastructure facilities boost production?**

**Answer.** The prosperity of a country depends directly upon the development of agricultural and industrial production. Agricultural production requires power, credit, transport facilities, etc.; the deficiency of which leads to fall in productivity. Industrial production requires machinery and equipment, energy, banking and insurance facilities, marketing facilities, transport services which include railways, roads and shipping and communication facilities etc. All these facilities help in raising agricultural and industrial productivity.

## **Question 4. Infrastructure contributes to the economic development of a country. Do you agree? Explain.**

**Answer.** Infrastructure contributes to the economic development of a country and it is an important determinant of its growth and development. It raises productivity, induces investment in different areas of economic activity, raises size of the market, facilitates outsourcing and employment. Thus, it is an essential support system for the economic development of the country.

## **Question 5. What is the state of rural infrastructure in India?**

**Answer.** A majority of people live in rural areas. The state of rural infrastructure in India is as follows:

1. Rural women are still using bio-fuels such as crop residues, dung and fuel wood to meet their energy requirement.

2. They walk long distances to fetch fuel, water and other basic needs.
3. The census 2001 shows that in rural India only 56 per cent households have an electricity connection and 43 per cent still use kerosene. About 90 per cent of the rural households use bio-fuels for cooking.
4. Tap water availability is limited to only 24 per cent of rural households. About 76 per cent of the population drinks water from open sources such as wells, tanks, ponds, lakes, rivers, canals, etc.
5. Another study conducted by the National Sample Survey Organisation noted that by 1996, access to improved sanitation in rural areas was only 6 per cent.

**Question 6. What is the significance of ‘energy’? Differentiate between commercial and non-commercial sources of energy.**

**Answer.** Energy is a critical aspect of development process of a nation. It is essential for industries, agriculture and related areas like transportation of finished goods. It is also used for domestic purposes like cooking, lighting, heating, etc.

Difference between Commercial and Non-commercial Sources of Energy

**Question 7. What are the three basic sources of generating power?**

**Answer.** Sources of generating power are:

1. water—it gives hydroelectricity.
2. oil, gas, coal—they give thermal electricity.
3. radioactive elements like uranium, plutonium—they give atomic power or nuclear power.

**Question 8. What do you mean by transmission and distribution losses? How can they be reduced?**

**Answer.** Transmission and Distribution (T&D) losses refer to theft of power which has not been controlled.

Nation's average loss is 23%.

T&D losses can be reduced by having:

1. Appropriate size of conductors
2. Proper load management
3. Meter supply
4. Privatisation of distribution work
5. Introduction of energy audits. Some steps have already been initiated in this direction.

**Question 9. What are the various non-commercial sources of energy?**

**Answer.** Vegetable wastes, firewood and dried dung.

**Question 10. Justify that energy crisis can be overcome with the use of renewable sources of energy.**

**Answer.** There is energy crisis in the country. The demand for all commercial fuels is more than its supply.

Government is encouraging the use of hydel and wind energy.

Bio-gas generation programmes have been boosted up. For a tropical country like India, where sun is an abundant source, solar energy should be given highest priority.

**Question 11. How has the consumption pattern of energy changed over the years?**

**Answer.** Pattern of energy consumption in India is as follows:

1. In India, different sources of energy are converted into a common unit 'million tonne of oil equivalent' (MTOE).
2. At present, commercial energy consumption is 65 per cent of total energy consumed in India.
3. Coal has the largest share of 55 per cent, followed by oil at 31 per cent, natural gas at 11 per cent and hydro energy at 3 per cent.
4. Non-commercial energy sources account for over 30 per cent of the total energy consumption.
5. There is import dependence on crude and petroleum products, which is likely to grow to more than 100 per cent in the near future.
6. Atomic energy is an important source of electric power. At present nuclear/atomic energy accounts for only 2.4 per cent of total primary energy consumption.

**Question 12. How are the rates of consumption of energy and economic growth connected?**

**Answer.** Energy is a critical aspect of development process of a nation. It is essential for industries, agriculture and related areas like transportation of finished goods. It is also used for domestic purposes like cooking, lighting, heating, etc. With economic growth, consumption of energy will rise.

**Question 13. What problems are being faced by the power sector in India?**

**Answer.** Emerging Challenges in the Power Sector:

1. Insufficient Installed Capacity
2. Underutilisation of Capacity
3. Losses Incurred by SEBs
4. Uncertain Role of Private Players
5. Public Unrest
6. Shortage of Raw Materials
7. Unable to Cover up the Transmission and Distribution (T&D) Losses
8. Operational Inefficiency
9. Incomplete Electrification
10. Need to Conserve Energy.

**Question 14. Discuss the reforms which have been initiated recently to meet the energy crisis in India.**

**Answer.** The reforms to meet energy crisis in India:

1. Improved Plant Load Factor. The Ministry of Power has launched the 'Partnership in Excellence' programme. In this 26 thermal stations (with PLF less than 60%) have been taken up for improving the efficiency.
2. Encourage Private Sector Participation. In order to overcome the problems of power sector, the government announced a policy in 1991 which allowed private sector participation in power generation and distribution schemes. It is important to resolve the problems and difficulties and frame policies which can ensure effective participation of private sector in this sector.
3. Promote the Use of CFLs to Conserve Energy. A new and advanced lighting technology called the Compact Fluorescent Lamp (CFL) is a more efficient alternative to domestic energy consumption. According to the Bureau of Energy Efficiency (BEE), the Compact Fluorescent Lamps (CFLs) consume 80 per cent less power as compared to ordinary bulbs.

**Question 15. What are the main characteristics of health of the people of our country?**

**Answer.** The main characteristics of health of people of our country:

1. Decline in death rate to 8 per thousand in 2001.
2. Reduction in infant mortality rate to 7 per thousand in 2001.
3. Rise in life expectancy to 64 years in 2001.
4. Control over deadly diseases like cholera, smallpox, malaria, polio and leprosy.
5. Fall in child mortality rate to 23 per thousand in 2001.

**Question 16. What is a 'global burden of disease'?**

**Answer.** Global Burden of Diseases (GBD) is an indicator used by experts to gauge the number of people dying prematurely, due to particular diseases as well as the number of years spent by them in a state of disability owing to the disease.

**Question 17. Discuss the main drawbacks of our health care system.**

**Answer.** Emerging Challenges in the Health:

1. High GBD
2. Poor State of Primary Health Centres
3. Regional Bias—Urban-Rural Divide
4. Income Bias—Poor-Rich Divide
5. Gender Bias—Poor Health of Women.
6. Communicable diseases
7. Poor Provision
8. Privatisation

**Question 18. How has women's health become a matter of great concern?**

**Answer.** Gender Bias—Poor Health of Women:

1. There is growing incidence of female foeticide in the country. Close to 3,00,000 girls under the age of 15 are not only married but have already borne children at least once.

2. More than 50 per cent of married women between the age group of 15 and 49 suffer from anaemia caused by iron deficiency. It has contributed to 19 per cent of maternal deaths.

**Question 19. Describe the meaning of public health. Discuss the major public health measures undertaken by the state in recent years to control diseases.**

**Answer.** Public health refers to the health status of all the people of the country.

Some measures undertaken by the state in recent years to control diseases are:

1. Success in the long-term battle against diseases depends on education and efficient health infrastructure. It is, therefore, critical to create awareness on health and hygiene systems.
2. The role of telecom and IT sectors cannot be neglected in this process.
3. The effectiveness of health care programmes also rests on primary centres. Efforts should be made to make PHCs more efficient.
4. Encouragement should be given to private-public partnership. They can effectively ensure reliability, quality and affordability of both drugs and medical care.

**Question 20. List out the six systems of Indian medicine.**

**Answer.** AYUSH means:

A : Ayurveda

Y : Yoga and Naturopathy

U : Unani

S : Siddha H : Homoeopathy.

**Question 21. How can we increase the effectiveness of health care programmes?**

**Answer.** Health is a vital public good and a basic human right. All citizens can get better health facilities if public health services are decentralised. Some measures that should be taken are:

1. Success in the long-term battle against diseases depends on education and efficient health infra-structure. It is, therefore, critical to create awareness on health and hygiene systems.
2. The role of telecom and IT sectors cannot be neglected in this process.
3. The effectiveness of health care programmes also rests on primary centres. Efforts should be made to make PHCs more efficient.
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