Chapter 9: Geographical Perspective on Selected Issues and Problems

Exercises — Exercises

Q1 Which one of the following rivers is highly polluted? (a) Brahmaputra (b) Satluj (c) Yamuna (d) Godavari

(c) Yamuna. The chapter shows the Yamuna choked with effluent foam near Delhi, polluted by Delhi's domestic and industrial waste, agricultural run-off and heavy water extraction for irrigation.

Q2 Which one of the following diseases is caused by water pollution? (a) Conjunctivitis (b) Diarrhoea (c) Respiratory infections (d) Bronchitis

(b) Diarrhoea. Contaminated water commonly causes diarrhoea, intestinal worms and hepatitis, whereas respiratory infections and bronchitis are linked to air pollution.

Q3 Which one of the following is the cause of acid rain? (a) Water pollution (b) Land pollution (c) Noise pollution (d) Air pollution

(d) Air pollution. Oxides of sulphur and nitrogen released into the atmosphere by burning fossil fuels and by industries turn rainwater acidic, lowering its pH.

Q4 Push and pull factors are responsible for: (a) Migration (b) Land degradation (c) Slums (d) Air pollution

(a) Migration. Push factors such as low job opportunities and poverty in villages, together with pull factors such as high labour demand and better prospects in cities, drive people from rural to urban areas.

Q5 What is the difference between pollution and pollutants?

Pollution is the state of environmental contamination resulting from the release of substances and energy from human waste products. Pollutants are the specific substances, such as gases, chemicals, solids or noise, that cause this contamination.

Q6 Describe the major source of air pollution.

The main sources are the combustion of fossil fuels such as coal, petrol and diesel, along with mining and industries. These processes release oxides of sulphur and nitrogen, hydrocarbons, carbon dioxide, carbon monoxide, lead and asbestos into the atmosphere.

Q7 Mention major problems associated with urban waste disposal in India.

In most cities and towns, 30 to 50 per cent of waste is left uncollected and piles up on streets and open spaces. It causes foul smells, attracts flies and rodents that spread diseases, and untreated waste ferments and releases toxic biogas such as methane.

Q8 What are the effects of air pollution on human health?

Air pollution causes diseases of the respiratory, nervous and circulatory systems. Urban smog, a smoky fog caused by atmospheric pollution, is very harmful to health. Polluted air also harms flora, fauna and property, and can cause acid rain.

Q9 Describe the nature of water pollution in India.

Surface water in rivers, canals and lakes is never fully pure, but it becomes polluted when suspended, organic and inorganic substances increase beyond the water's self-purifying capacity. Natural sources such as erosion, landslides and decay contribute, yet human activities are the real concern, and industry is the largest contributor. Industries such as leather, pulp and paper, textiles and chemicals dump wastes, heavy metals and toxic effluents into rivers and lakes, destroying aquatic life. Agricultural chemicals such as fertilisers, pesticides and herbicides are washed into rivers, lakes and tanks and seep into groundwater, raising nitrate levels. Cultural activities like pilgrimages, religious fairs and tourism add to the load. Domestic sewage and urban run-off are further sources. As a result, almost all surface water sources in India are contaminated and unfit for drinking. The Ganga and Yamuna are especially polluted. Water-borne diseases like diarrhoea, intestinal worms and hepatitis result; about one-fourth of communicable diseases in India are water-borne, according to the WHO. The Namami Gange Programme was launched to clean the Ganga.

Q10 Describe the problem of slums in India.

Urban centres in India are highly differentiated. High-income localities enjoy wide roads, water, sanitation and green spaces, while at the other extreme are slums, jhuggi-jhopari clusters and shanty colonies. They are inhabited by rural migrants who came in search of livelihood but could not afford proper housing because of high rents and land costs, so they occupy degraded, environmentally unsuitable land. Slums are areas of dilapidated houses, poor hygiene and ventilation, and a lack of basic amenities such as drinking water, light and toilets. Open defecation, unregulated drainage and overcrowded narrow lanes create serious health and environmental hazards. Most slum dwellers work in low-paid, risky, unorganised jobs, so they are undernourished, prone to illness and unable to educate their children properly. Poverty makes them vulnerable to drug abuse, alcoholism, crime, vandalism, apathy and finally social exclusion. The Swachh Bharat Mission, part of the urban renewal efforts, aims to improve life in slums.

Q11 Suggest measures for reduction of land degradation.

Land degradation, caused by soil erosion, waterlogging, salinisation and alkalinisation, lowers the land's productive capacity and can turn it into wasteland. Because human action causes much of it, people-centred management is the answer. Watershed management is a key measure: it links land, water and vegetation and improves livelihoods through natural resource management and community participation. In Jhabua, Madhya Pradesh, such programmes treated about 20 per cent of the district and improved soil quality. Communities can revive common property resources by planting trees, with each household planting and maintaining one, and by growing fodder grass on pastures. Social fencing for at least two years followed by stall feeding of cattle prevents overgrazing, and sharing the benefits with users avoids conflict over encroachment. Land should not be used continuously without maintaining its fertility, so soil conservation, drainage to check waterlogging and control of salinity are needed. Government-NGO partnership and community participation make these efforts successful.