Chapter 3: Land Resources and Agriculture

Exercises — Exercises

Q1 Which one of the following is NOT a land-use category? (a) Fallow land (b) Marginal land (c) Net Area Sown (d) Culturable Wasteland

(b) Marginal land. Fallow land, net area sown and culturable wasteland are all categories in the land revenue records, whereas marginal land is only a general description of poor-quality land and not a recorded land-use category.

Q2 What one of the following is the main reason due to which share of forest has shown an increase in the last forty years? (a) Extensive and efficient efforts of afforestation (b) Increase in community forest land (c) Increase in notified area allocated for forest growth (d) Better peoples' participation in managing forest area.

(c) Increase in notified area allocated for forest growth. Land revenue records count the area demarcated by the Government for forest growth, so this category can rise without any actual increase in forest cover.

Q3 Which one of the following is the main form of degradation in irrigated areas? (a) Gully erosion (b) Wind erosion (c) Salinisation of soils (d) Siltation of land

(c) Salinisation of soils. Faulty irrigation strategies have caused alkalisation, salinisation and waterlogging in irrigated areas, so large tracts have lost fertility. Gully and wind erosion are more typical of rainfed areas.

Q4 Which one of the following crops is not cultivated under dryland farming? (a) Ragi (b) Jowar (c) Groundnut (d) Sugarcane

(d) Sugarcane. Dryland farming grows hardy, drought-resistant crops such as ragi, bajra, moong, gram and guar, and jowar and groundnut are also dryland crops. Sugarcane is water intensive and is largely an irrigated crop in India.

Q5 In which of the following group of countries of the world, HYVs of wheat and rice were developed? (a) Japan and Australia (b) U.S.A. and Japan (c) Mexico and Philippines (d) Mexico and Singapore

(c) Mexico and Philippines. New high yielding varieties of wheat came from Mexico and of rice from the Philippines, and both became available for cultivation in India by the mid-1960s.

Q6 Differentiate between barren and wasteland and culturable wasteland.

Barren and wasteland covers barren hilly terrain, deserts and ravines, which normally cannot be brought under cultivation with available technology. Culturable wasteland is land left uncultivated for more than five years, which can be made cultivable through reclamation practices.

Q7 How would you distinguish between net sown area and gross cropped area?

Net sown area is the physical extent of land on which crops are sown and harvested, counted once. Gross cropped area is the total area sown in a year, counting land sown more than once separately, so it is NSA plus the area sown repeatedly.

Q8 Why is the strategy of increasing cropping intensity important in a country like India?

The scope of adding land to net sown area is limited, and India is land scarce but labour abundant. A high cropping intensity gets more output from the same land, uses the land fully, and raises labour demand, which helps reduce rural unemployment.

Q9 How do you measure total cultivable land?

Total cultivable land is estimated by adding up net sown area, all fallow lands (current fallow and fallow other than current fallow) and culturable wasteland. This gives the total stock of agricultural land resources, usually expressed as a percentage of reporting area.

Q10 What is the difference between dryland and wetland farming?

Dryland farming is confined to regions with annual rainfall below 75 cm. It grows hardy crops such as ragi, bajra, moong, gram and guar, and uses moisture conservation and rain water harvesting. Wetland farming occurs where rainfall exceeds plant needs in the rainy season, growing water-intensive crops such as rice, jute and sugarcane, and facing flood and erosion hazards.

Q11 What are the different types of environmental problems of land resources in India?

Degradation of cultivable land is the main environmental problem, and it can deplete soil fertility. It is alarming in irrigated areas, where a large tract has lost fertility through alkalisation, salinisation of soils and waterlogging. Excessive use of insecticides and pesticides has led to their concentration in toxic amounts in the soil profile. Leguminous crops have been displaced from the cropping pattern in irrigated areas, and the fallow period has shrunk because of multiple cropping, which has ended the natural fertilisation process of nitrogen fixation. Rainfed areas in humid and semi-arid tropics suffer soil erosion by water and wind, often induced by human activities. Increasing pressure on land from agricultural and non-agricultural uses has also reduced wastelands and culturable wastelands, and tree crops and groves have declined under pressure from agricultural land. Together these problems threaten the long-term productivity of land

resources.

Q12 What are the important strategies for agricultural development followed in the post-independence period in India?

After Independence the immediate goal was to raise foodgrains production by switching from cash crops to food crops, intensifying cropping on already cultivated land, and bringing cultivable and fallow land under the plough. Production stagnated in the late 1950s, so the Intensive Agricultural District Programme and Intensive Agricultural Area Programme were launched. Two consecutive droughts in the mid-1960s caused a food crisis and foodgrains were imported. India then adopted package technology of high yielding varieties of wheat (Mexico) and rice (Philippines) with chemical fertilisers in irrigated areas of Punjab, Haryana, Western Uttar Pradesh, Andhra Pradesh and Gujarat. This Green Revolution made the country self-reliant in foodgrains, though it was initially confined to irrigated areas and caused regional disparities until the 1970s, after which it spread to eastern and central parts. In the 1980s the Planning Commission turned to rainfed areas and started agro-climatic planning in 1988, stressing diversification into dairy, poultry, horticulture, livestock and aquaculture. Liberalisation in the 1990s further influenced agriculture.