

Geography

(India People and Economy) (Chapter - 5) (Exercises) (Land Resources and Agriculture) (Class - XII)

Question 1:

Choose the right answers of the followings from the given options.

- (i) Which one of the following is NOT a land-use category?
(a) Fallow Land (c) Net Area Sown
(b) Marginal Land (d) Culturable Wasteland
- (ii) 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
- (iii) Which one of the following is the main form of degradation in irrigated areas?
(a) Gully erosion (c) Salinisation of soils
(b) Wind erosion (d) Siltation of land
- (iv) Which one of the following crops is not cultivated under dryland farming?
(a) Ragi (c) Groundnut
(b) Jowar (d) Sugarcane
- (v) In which of the following group of countries of the world, HYVs of wheat and rice were developed?
(a) Japan and Australia (c) Mexico and Philippines
(b) U.S.A. and Japan (d) Mexico and Singapore

Answer 1:

- (i) (b) Marginal Land
(ii) (c) Increase in notified area allocated for forest growth
(iii) (c) Salinisation of soils
(iv) (d) Sugarcane
(v) (c) Mexico and Philippines

Question 2:

Answer the following questions in about 30 words.

- (i) Differentiate between barren and wasteland and culturable wasteland
(ii) How would you distinguish between net sown area and gross cropped area?
(iii) Why is the strategy of increasing cropping intensity important in a country like India?
(iv) How do you measure total cultivable land?
(v) What is the difference between dryland and wetland farming?

Answer 2:

- (i) **Barren and wasteland:** The land which normally cannot be brought under cultivation because it is infertile. Although barren lands are generally located in areas associated with arid, semi-arid, polar and tundra climates, they can also be extensively found in milder, temperate, and/or humid climates as well.
Culturable wasteland: The land which is left fallow (uncultivated) for more than five years included in this category. It can be brought under cultivation after improving its fertility.
- (ii) **Net Sown Area:** The physical extent of land on which crops are sown and harvested is known as net sown area. It's the area sown with crops but only counted once.
Gross cropped area: It's the total area sown once and/or more than once in a particular year.

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- (iii) The strategy of increasing cropping intensity in a country like India has two prime reasons. First, India's population is very large and growing rapidly. In order to meet the requirement, there is a need to adopt many such methods so that the demand of humans can be met. Secondly, in order to meet out the demands of agro-inputs and agro-processing units, a strategy to increase crop intensity is the need of the hour.
- (iv) Total cultivable land can be measured by adding up net sown area, all fallow lands and cultivable wasteland.
- (v) **Dryland Farming:** Dryland farming refers to cultivation of crops entirely under natural rainfall without irrigation. It is a form of subsistence farming in the regions where deficit of the soil moisture retards the growth of water consuming crops like rice, sugarcane etc. Dryland areas are characterized by low and erratic rainfall and no assured irrigation facilities.

Wetland Farming: Wetland farming is a type of farming done in the presence of a water land or near a water body. This is an intensive form of farming which requires constant care and systematic treatments. These areas grow various water intensive crops such as rice, jute and sugarcane and practice aquaculture in the fresh water bodies.

Question 3:

Answer the following questions in about 150 words.

- (i) What are the different types of environmental problems of land resources in India?
- (ii) What are the important strategies for agricultural development followed in the post-independence period in India?

Answer 3:

- (i) The different types of environmental problems of land resources in India are as follows:
- **Soil erosion:** Soil erosion removes valuable top soil which is the most productive part of the soil profile for agricultural purposes. The loss of this top soil results in lower yields and higher production costs.
The US, after a major dust storm event in the 1930s, brought a legislation that says the top soil of any land should not remain exposed. So, it is a normal practice there to use mulch in between two crops as it not only helps the land regain its nutrients but also helps save the top soil against erosion.
In India, the practice of using mulch or cover crops has gone down in the past years because of the rampant use of chemical fertilizers.
 - **Water-logging:** In water logged conditions, pore-voids in the soil get filled with water and soil-air gets depleted. In such a condition the roots of plants do not get enough air for respiration.
 - **Alkanisation:** The chemical fertilizers applied to increase crop production kills the naturally occurring soil nutrients. Poor irrigation practices like irrigating with water that contains sodium bicarbonate leads to poor soil structure. The environmental impacts of alkaline residues can be locally severe and can affect terrestrial and aquatic environments.

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(ii) Strategic planning is a management task concerned with the growth and future of an organization. Its job is to ensure that the organization keeps moving in the right direction. The first ever National Agriculture Policy was announced in July, 2000. The Policy seeks to actualize the vast untapped potential of Indian agriculture.

The problem of agricultural development is not that of transforming a static agricultural sector into a modern dynamic sector, but of accelerating the rate of growth of agricultural output and productivity consistent with the growth of other sectors of a modernizing economy. Similarly, a theory of agricultural development should provide insight into the dynamics of agricultural growth-into the changing sources of growth-in economies ranging from those in which output is growing at a rate of 1.0 percent or less to those in which agricultural output is growing at an annual rate of 4.0 percent or more.

The following points highlight the top ten features of new agricultural strategy of India:

- Consolidation of land holdings
- Improved Variety of Seeds
- Greater Intensity of Cropping
- Extension of Irrigation
- Modern Farm Machinery
- Role of Public Institutions
- Package of Inputs
- Guaranteed Minimum Prices
- Agricultural Research and Education
- Plant Protection Measures.

The government introduced Intensive Agricultural District Programme (IADP) and Intensive Agricultural Area Programme (IAAP). Under it "Green Revolution" comprising HYVs were introduced in irrigated areas of Punjab, Haryana, Western Uttar Pradesh, Andhra Pradesh and Gujarat. This strategy of agricultural development increased the food grains production at a very fast rate and helped solve the problem of low availability and production of food.