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**CBSE Class 12 Geography**  
**NCERT Solutions**  
**Chapter 15**  
**Land Resources and Agriculture**

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**1. Choose the right answer of the following from the given options.**

**(i) Which one of the following is NOT a land-use category?**

1. Fallow land
2. Marginal land
3. Net area sown
4. Culturable wasteland

**Ans. (2) Marginal land**

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**(ii) Which one of the following is the main reason due to which share of forest has shown an increase in the last forty years?**

1. Extensive and efficient efforts of afforestation
2. Increase in community forest land
3. Increase in notified area allocated for forest growth
4. Better peoples' participation in managing forest area.

**Ans. (1) Extensive and efficient efforts of afforestation**

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**(iii) Which one of the following is the main form of degradation in irrigated areas?**

1. Gully erosion
2. Wind erosion
3. Salinisation of soils
4. Siltation of land

**Ans. (3) Salinisation of soils**

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**(iv) Which one of the following crops is not cultivated under dryland farming?**

1. Ragi
2. Jowar
3. Groundnut
4. Sugarcane

**Ans. (4) Sugarcane**

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**(v) In which of the following group of countries of the world, HYVs of wheat and rice were developed?**

1. Japan and Australia
2. U.S.A. and Japan
3. Mexico and Philippines
4. Mexico and Singapore

**Ans. (3) Mexico and Philippines**

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**2. Answer the following questions in about 30 words.**

**(i) Differentiate between barren and wasteland and culturable wasteland.**

Ans. Barren and waste land- The land which cannot be used for cultivation is called barren land such as hilly terrains, desert, ravines. The barren land covers all barren and uncultivated lands in mountains and hill slopes, deserts and rocky areas. These areas cannot be brought under plough except at high input cost with possible low returns. The largest amount of land in this category is in Andhra Pradesh followed by Rajasthan, Madhya Pradesh, Gujarat, Uttar Pradesh and Bihar.

Culturable wasteland- The “wasteland survey and reclamation committee” defines “culturable waste” as the land available for cultivation but not used for cultivation for one reason or the other. This land was used in the past but has been abandoned for some reason. It is not being used at present due to such constraints as lack of water, salinity or alkalinity of soil, soil erosion, water-logging, an unfavourable physiographic position, or human neglect.

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Uttar Pradesh, Punjab and Haryana as well as in several other parts of the country were used for agriculture in the past but had to be abandoned due to some deficiencies in the soil resulting from faulty agricultural practices.

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**(ii) How would you distinguish between net sown area and gross cropped area?**

**Ans.** Net Sown area is the total area sown with crops in a country. Area sown more than once is counted once only. This area has a special significance in an agricultural country like India because agricultural production largely depends upon this type of land.

Gross Cropped Area (GCA) is the total area sown once as well as more than once in a particular year. When the crop is sown on a piece of land for twice, the area is counted twice in GCA.

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**(iii) Why is the strategy of increasing cropping intensity important in a country like India?**

**Ans.** The strategy of increasing cropping intensity is important in a country like India because-

1. To increase the production of foodgrains for the increasing population and to meet out the demand of raw materials for the agro-based industries.
  2. A higher cropping intensity is desirable not only fuller utilisation of land resources but also for reducing unemployment in the rural areas.
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**(iv) How do you measure total cultivable land?**

**Ans.** Total cultivable land can be measured by adding up net sown area, all fallow lands and cultivable wasteland.

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**(v) What is the difference between dryland and wetland farming?**

**Ans.** Dry farming is an improved system of cultivation in which maximum amount of moisture is conserved in low and untimely rainfall for the production of optimum Quantities

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of crop on economic and sustames basis.Dryland farming takes place in the regions having annual rainfall less than 75 cm. These regions grow hardy and drought resistant crops such as ragi, bajra, moong, gram and guar (fodder crops) and practise various measures of soil moisture conservation and rainwater harvesting.

In wetland farming, the rainfall is in excess of soil moisture requirement of plants during rainy season. Such regions may face flood and soil erosion hazards. These areas grow various water intensive crops such as rice, jute and sugarcane and practise aquaculture in the fresh water bodies.

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**3. Answer the following questions in about 150 words.**

**(i) What are the different types of environmental problems of land resources in India?**

**Ans.** Different types of environmental problems of land resources in India are as follows:

1. 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.
2. Water logging and salinisation-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. Water logging also leads to low mechanical strength of soil and low crop yield.Salinity is often associated with prolonged wetness and lack of surface cover and therefore increases the vulnerability of soils to erosion.
3. Alkanisation of land-The chemical fertilizers applied to accelerate production of crops kills the naturally occurring soil nutrients. Poor irrigation practices like irrigating with water that contains sodium bicarbonate leads to poor soil structure.
4. Drought-Soil moisture, essential for soil microbial activities, is reduced in drought conditions. As a result, soil quality is lowered because of minimized organic activity and continued dry spell which kills soil organisms. The end result is dry and cracked soil and it even becomes easier for decertification to occur.

**(ii) What are the important strategies for agricultural development followed in the post-independence period in India?**

**Ans.** After Independence, the immediate goal of the Government was to increase foodgrains production by:

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1. Land reform policy-The most important contribution of land reforms was abolition of intermediaries and giving land titles to the actual cultivators. This released productive forces and the owner cultivators put in their best to augment production on their holdings. Land reforms were important in increasing agricultural production. The Community Development Programme, decentralised planning and the Intensive Area Development programmes were also initiated for regenerating Indian agriculture that had stagnated during the British period. In order to encourage the farmers to adopt better technology, incentive price policy was adopted in 1964 and the Agricultural Price Commission was setup to advice the Government on the fixation of support prices of agricultural crop.

2. New agricultural strategy-In order to achieve the goal of self sufficiency in agriculture, new agricultural strategy has been initiated in 1966-67. The fundamental of this strategy is the application of science and technology for increasing yield per hectare. This strategy, known as New Agricultural Strategy or Green Revolution, is based on the extension of high yielding varieties responsive to heavy doses of fertilizers and the package of improved practices in selected areas with assured rainfall or irrigation facilities. The programmes included under the new strategy are: (1) the high yielding varieties programme, (2) multiple cropping programme, (3) integrated development of dry areas, (4) plant protection measures, (5) increased use of fertilizer (6) new irrigation concept.

3. Economic reforms- Economic reforms process involved deregulation, reduced government participation in economic activities, and liberalization. Although there is no any direct reforms for agriculture but the sector was affected indirectly by devaluation of exchange rate, liberalization of external trade and disprotection to industry. During this period opening up of domestic market due to new international trade accord and WTO was another change that affected agriculture. This raised new challenges among policymakers. Because of this, New Agricultural Policy was launched by Indian Government in July 2000. This aim to attain output growth rate of 4% per annum in agricultural sector based on efficient use of resources.

4. The Planning Commission of India initiated agro-climatic planning in 1988 to induce regionally balanced agricultural development in the country. It also emphasised the need for diversification of agriculture.