Class X - Social Science

Resources and Development

CBSE NOTES

Resources and Development - Practice Worksheet

Strengthen your foundation with key concepts and basic applications.

Practice Questions

1. Define resources and classify them based on their origin, exhaustibility, ownership, and status of development.

Hint: Refer to the section where resources are defined and classified.

Solution: Resources are everything available in our environment which can be used to satisfy our needs, provided it is technologically accessible, economically feasible, and culturally acceptable. They are classified as: (a) On the basis of origin - biotic (living) and abiotic (non-living), (b) On the basis of exhaustibility - renewable (can be replenished) and non-renewable (limited stock), (c) On the basis of ownership - individual, community, national, and international, (d) On the basis of status of development - potential (not yet utilized), developed (surveyed and quality determined), stock (potential but lack of technology), and reserves (subset of stock). Examples include forests (biotic and renewable), minerals (abiotic and non-renewable).

2. Explain the concept of sustainable development and its importance.

Hint: Look for the definition and discussion on sustainable development in the chapter.

Solution: Sustainable development means development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It is important because it ensures long-term ecological balance, prevents resource depletion, and promotes equitable resource distribution. The Rio de Janeiro Earth Summit in 1992 emphasized sustainable development through Agenda 21, aiming for global cooperation in environmental protection, poverty alleviation, and health improvement. Examples include using solar energy instead of fossil fuels to reduce pollution and conserve resources for the future.

3. Describe the process of resource planning in India.

Hint: Refer to the section on resource planning in India.

Solution: Resource planning in India involves three stages: (i) Identification and inventory of resources across regions through surveying and mapping, (ii) Developing a planning structure with appropriate technology and institutional setup, (iii) Matching resource development plans with national development plans. It is crucial due to India's diverse resource availability, ensuring balanced regional development and preventing resource depletion. For example, states like

Jharkhand are rich in minerals but lack infrastructure, while Rajasthan has solar energy but scarce water resources, necessitating careful planning.

4. What are the major problems caused by indiscriminate use of resources?

Hint: Check the section discussing the consequences of resource misuse.

Solution: Indiscriminate use of resources leads to: (i) Depletion of resources for few individuals' greed, (ii) Accumulation of resources in few hands, creating societal divisions (haves and have-nots), (iii) Global ecological crises like global warming, ozone layer depletion, pollution, and land degradation. For example, overuse of fossil fuels causes air pollution and climate change, while deforestation leads to loss of biodiversity and soil erosion. These problems threaten sustainable existence and global peace.

5. Explain the land use pattern in India and reasons for its variation.

Hint: Refer to the land use pattern and factors influencing it.

Solution: India's land use pattern includes forests, land not available for cultivation (barren, buildings), other uncultivated land (pastures, fallow), and net sown area. Variations occur due to physical factors (topography, climate, soil) and human factors (population density, technology, culture). For instance, Punjab has over 80% net sown area due to fertile plains, while Arunachal Pradesh has less than 10% due to hilly terrain. The desired 33% forest cover is unmet, affecting ecological balance and livelihoods dependent on forests.

6. Discuss the causes and measures to control land degradation.

Hint: Look for the section on land degradation and conservation.

Solution: Land degradation is caused by deforestation, overgrazing, mining, over-irrigation (waterlogging, salinity), and industrial waste. Measures include afforestation, controlled grazing, shelter belts, terrace farming, contour ploughing, and proper waste management. For example, in Rajasthan, growing thorny bushes stabilizes sand dunes, while in Punjab, avoiding over-irrigation prevents soil salinity. These practices ensure sustainable land use and productivity.

7. Describe the characteristics and distribution of alluvial soils in India.

Hint: Refer to the section on alluvial soils.

Solution: Alluvial soils are fertile, found in northern plains and river deltas, formed by deposits from rivers like Ganga and Brahmaputra. They vary in texture (sandy to clayey) and age (old bangar with kanker nodules, new khadar more fertile). Rich in potash, phosphoric acid, and lime, they support crops like wheat, rice, and sugarcane. Examples include the Indo-Gangetic plains and delta regions of Mahanadi, Godavari, Krishna, and Kaveri rivers.

8. What are the features of black soil and where is it predominantly found?

Hint: Check the section detailing black soil.

Solution: Black soil, or regur, is black, clayey, and ideal for cotton. It retains moisture, develops cracks in heat, and is rich in calcium, magnesium, and lime but poor in phosphorous. Found in Deccan trap regions (Maharashtra, Madhya Pradesh, Gujarat), it forms from lava flows. Its high fertility supports crops like cotton, hence called black cotton soil. Proper tilling post-rain ensures good aeration and productivity.

9. Explain the formation and types of soil erosion.

Hint: Refer to the section on soil erosion and its types.

Solution: Soil erosion is the denudation and washing away of soil due to natural forces (wind, water) and human activities (deforestation, faulty farming). Types include: (i) Gully erosion - water cuts deep channels (ravines in Chambal), (ii) Sheet erosion - topsoil washed uniformly, (iii) Wind erosion - loose soil blown away. For example, up-down slope ploughing accelerates water flow, causing erosion, while contour ploughing prevents it.

10. How can soil conservation be achieved in hilly and arid regions?

Hint: Look for soil conservation techniques in different regions.

Solution: In hilly areas, terrace farming, contour ploughing, and afforestation prevent erosion. For example, Himalayas use terrace farming to slow water flow. In arid regions, shelter belts (rows of trees) and thorny bushes stabilize sand dunes (e.g., Rajasthan). Strip cropping (alternate grass and crops) reduces wind impact. These methods maintain soil fertility and prevent degradation, ensuring sustainable agriculture.

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