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Class: X	**Subject:** Social Science	**Session:** 2025-26
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Chapter 3 : Water Resources

SECTION A : Multiple Choice Questions (1 Mark Each)

Q1. Which of the following is a multipurpose river valley project? [CBSE 2023] [1]

(a) Indira Gandhi Canal (b) Bhakra Nangal Dam (c) Periyar Canal (d) Suez Canal

Ans: (b) Bhakra Nangal Dam on the Sutlej River. It provides irrigation, hydroelectricity, flood control, and water supply to Punjab, Haryana, and Rajasthan.

Q2. Jawaharlal Nehru called dams as: [CBSE 2022] [1]

(a) Temples of modern India (b) Pillars of democracy

(c) Engines of growth (d) National treasures

Ans: (a) Temples of modern India. He believed large dams would drive industrial development, agricultural growth, and transform the economy.

Q3. What percentage of the world's water is freshwater? [CBSE 2024] [1]

(a) 2.5% (b) 10% (c) 50% (d) 75%

Ans: (a) Only 2.5% of total water on earth is freshwater. Of this, most is locked in ice caps and glaciers. Less than 1% is accessible for human use.

Q4. Bamboo drip irrigation is practised in: [CBSE 2021] [1]

(a) Rajasthan (b) Meghalaya (c) Tamil Nadu (d) Gujarat

Ans: (b) Meghalaya. In this indigenous system, water from hill streams is channelled through bamboo pipes to irrigate betel and black pepper plantations.

Q5. Narmada Bachao Andolan is associated with: [CBSE 2020] [1]

(a) Saving forests (b) Opposition to Sardar Sarovar Dam

(c) Anti-pollution movement (d) Land reform

Ans: (b) Opposition to Sardar Sarovar Dam on the Narmada River. Led by Medha Patkar, it protested against displacement of tribal communities and environmental destruction.

Q6. Rainwater harvesting means: [CBSE 2023] [1]

(a) Storing rainwater for reuse (b) Draining rainwater into rivers

(c) Selling rainwater (d) Polluting water bodies

Ans: (a) Storing rainwater for future use by collecting it from rooftops, open spaces, and recharging groundwater through pits, trenches, and wells.

Q7. Rooftop rainwater harvesting is commonly practised in: [CBSE 2024] [1]

(a) Rajasthan (b) Shillong, Meghalaya (c) Mumbai (d) Both (a) and (b)

Ans: (d) Both Rajasthan and Shillong. In Rajasthan, houses have underground tanks (tankas). In Shillong, rooftop harvesting is common due to heavy rainfall.

Q8. Which river has the highest number of dams in India? [CBSE 2022] [1]

(a) Ganga (b) Narmada (c) Godavari (d) Krishna

Ans: (b) Narmada. The Narmada valley has numerous dams including the Sardar Sarovar and Indira Sagar, making it the most dammed river in India.

Q9. Tankas are traditional water harvesting structures of: [CBSE 2021] [1]

(a) Tamil Nadu (b) Rajasthan (c) Meghalaya (d) Himachal Pradesh

Ans: (b) Rajasthan. Tankas are underground tanks built in houses to store rainwater. They were common in the Great Indian Desert region of western Rajasthan.

Q10. Assertion (A): Multipurpose projects cause environmental damage. Reason (R): Large dams lead to deforestation and displacement of communities. [CBSE 2024] [1]

(a) Both true and (R) correctly explains (A)
(b) Both true but (R) does not explain (A)
(c) (A) is true but (R) is false
(d) (A) is false

Ans: (a) Both true and (R) correctly explains (A). Dams submerge forests, displace tribal communities, change river ecology, and cause sedimentation problems.

SECTION B : Short Answer Questions (3 Marks Each)

Q11. Why are multipurpose river valley projects called "temples of modern India"? Also mention problems. [CBSE 2023] [3]

- **Benefits:** They provide irrigation, hydroelectricity, flood control, water supply, fisheries, and recreation. Bhakra Nangal transformed agriculture in Punjab-Haryana.
- **Industrial Growth:** Cheap electricity from dams powered industrialisation. They helped India achieve food security through the Green Revolution.
- **Problems:** However, they cause displacement of tribals, submerge forests and farmland, alter river ecology, cause sedimentation, and trigger inter-state water disputes.

Q12. Describe any three traditional methods of rainwater harvesting in India. [CBSE 2024] [3]

- **Tankas (Rajasthan):** Underground tanks in houses to collect rooftop rainwater. Used for drinking water in arid western Rajasthan for centuries.
- **Bamboo Drip (Meghalaya):** 200-year-old system using bamboo pipes to channel stream water to plantations. Reduces water use through slow drip irrigation.
- **Guls/Kuls (Himachal):** Diversion channels in western Himalayas to carry glacier meltwater to villages for irrigation. Johads (Rajasthan) are earthen check dams.

Q13. Why is water scarcity increasing in India? Give three reasons. [CBSE 2022] [3]

- **Growing Demand:** Population growth, urbanisation, and industrialisation have increased water demand manifold. Agriculture alone consumes 80% of water.
- **Overexploitation:** Groundwater is being pumped faster than recharge. Punjab, Haryana, and Rajasthan have critically low groundwater levels.
- **Pollution:** Rivers and lakes are polluted by industrial waste, sewage, and agricultural chemicals, making water unfit for use even where available.

Q14. What are the arguments against multipurpose river valley projects? [CBSE 2021] [3]

- **Displacement:** Millions of tribals and farmers displaced. Rehabilitation is often inadequate. Narmada Bachao Andolan highlighted this issue.
- **Ecological Damage:** Dams submerge forests, kill aquatic life, change river flow patterns, and cause waterlogging and salinity in irrigation areas.
- **Inter-state Disputes:** Multi-purpose projects trigger disputes between states over sharing of water. Krishna-Godavari and Cauvery disputes are ongoing examples.

Q15. Explain the importance of water conservation and management. [CBSE 2020] [3]

- **Limited Resource:** Only 2.5% of earth's water is fresh, and less than 1% is accessible. With growing population, per capita water availability is declining rapidly.
- **Groundwater Crisis:** India is the largest user of groundwater. Over one-third of wells have dried up due to overexploitation. Urgent conservation is needed.
- **Methods:** Rainwater harvesting, drip irrigation, watershed management, reducing wastage, and treating/recycling wastewater can help manage this crisis.

SECTION C : Long Answer Questions (5 Marks Each)

Q16. "Rainwater harvesting is the need of the hour." Explain with examples from different parts of India. [CBSE 2024] [5]

Ans: Rainwater harvesting is essential for water security:

- **Rajasthan:** In the arid region, tankas (underground tanks) collected rooftop rainwater for drinking. Paar system channelled rainwater to recharge wells through sandy soil.
- **Meghalaya:** Bamboo drip irrigation - an ingenious 200-year-old system using bamboo pipes to channel stream water to plantations at the rate of 20-80 drops/minute.
- **Tamil Nadu:** First state to make rooftop rainwater harvesting mandatory for all buildings. This significantly improved groundwater levels in Chennai.
- **Himachal Pradesh:** Kuls (diversion channels) carry glacier meltwater to villages. In western Himalayas, these centuries-old systems still provide irrigation water.
- **Modern Relevance:** With groundwater depleting and rainfall becoming unpredictable, every building should harvest rainwater. It is the cheapest, simplest, and most sustainable solution.

Q17. Explain the advantages and disadvantages of multipurpose river valley projects. [CBSE 2023] [5]

Ans: Large dams have both benefits and drawbacks:

- **Irrigation:** Dams store water for year-round irrigation, enabling multiple crop seasons. Bhakra Nangal irrigates millions of hectares in Punjab and Haryana.
- **Electricity:** Hydropower is clean, renewable energy. Dams like Hirakud, Damodar Valley, and Tehri generate thousands of megawatts of electricity.
- **Flood Control:** Dams regulate river flow, reducing flood damage downstream. They also provide water for domestic and industrial use in cities.
- **Displacement:** Millions displaced without adequate rehabilitation. Tribal communities lose ancestral lands, forests, and livelihoods. Social costs are enormous.
- **Environmental Cost:** Reservoirs submerge forests, change river ecology, cause downstream erosion, sedimentation, and waterlogging in command areas.

Q18. What is the significance of water as a resource? Why must we conserve it? [CBSE 2022] [5]

Ans: Water is the most essential natural resource:

- **Life Support:** Water is essential for all life. Humans need it for drinking, cooking, sanitation, agriculture, and industry. No substitute exists for water.
- **Agricultural Need:** India uses over 80% of freshwater for irrigation. Growing population requires more food, which requires more water for agriculture.
- **Declining Availability:** Per capita water availability has declined due to population growth. Many regions face severe water stress during summers.
- **Groundwater Depletion:** Over-extraction of groundwater for farming and industry has lowered water tables. Many wells and borewells have dried up permanently.
- **Conservation:** Rainwater harvesting, drip and sprinkler irrigation, wastewater recycling, and watershed management must be adopted urgently to ensure water security.

Q19. Describe the Narmada Bachao Andolan and its significance. [CBSE 2021] [5]

Ans: The NBA is one of India's most important environmental movements:

- **Background:** The Sardar Sarovar Dam on Narmada River would submerge 245 villages in MP, Maharashtra, and Gujarat, displacing hundreds of thousands of people.
- **Movement:** Led by Medha Patkar and others from 1985 onwards. Used non-violent protests, fasts, rallies, and legal challenges to highlight displacement and environmental damage.
- **Issues Raised:** Inadequate rehabilitation of displaced tribals, loss of forests and biodiversity, and questioning the very model of large dam-based development.
- **Supreme Court:** In 2000, the Supreme Court allowed construction to continue but ordered proper rehabilitation of all affected families before submergence.
- **Legacy:** NBA raised national awareness about the social and environmental costs of large dams. It influenced policy on rehabilitation and environmental impact assessment.

Q20. How have traditional water harvesting systems helped Indian communities? Explain with examples. [CBSE 2020] [5]

Ans: Traditional systems demonstrate indigenous wisdom:

- **Tankas (Rajasthan):** Underground cylindrical tanks collected rainwater from rooftops. Provided clean drinking water through the dry season. Some tankas were beautifully decorated.
- **Khadins (Jaisalmer):** Long earthen embankments built across slopes to trap rainwater and allow it to percolate into soil, creating moist farmland for crops.

- **Johads (Alwar, Rajasthan):** Earthen check dams revived by Rajendra Singh. These recharged groundwater, revived dried rivers, and restored green cover in 1000+ villages.
- **Eris (Tamil Nadu):** Temple tanks served as rainwater storage. Managed by village committees, they provided irrigation and recharged wells.
- **Modern Lesson:** These low-cost, community-managed systems are often more sustainable than large dams. They should be revived alongside modern technology for water security.

--- End of Chapter 3 PYQ ---

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