

CBSE CLASS X
Social Science (087)

ANSWER KEY

AI-generated question paper

Code: W46IFU

Questions: 10

Maximum Marks: 20

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SELECTIONS USED

Subject	Social Science
Lessons	3 Water Resources
Level of understanding	Initial understanding
Question selection	Curated chapter coverage (~3 questions per section)
Model	claude-sonnet-4-6

Composition — Difficulty: 5 straightforward · 5 medium | Types: 6 Short · 3 Very short · 1 MCQ

Q1. medium initial-understanding § Introduction

[3]

Although water is continuously renewed through the hydrological cycle, why do many regions still face water scarcity?

◆ Water Resources

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Model Answer

Although water is renewed through the hydrological cycle, many regions face water scarcity due to the following reasons:

- Over-exploitation and excessive use:** Growing population demands more water for domestic use, agriculture, and industries, leading to overuse of surface and groundwater.
- Unequal access:** Water is not equally distributed among different social groups, leaving many without adequate supply.
- Industrialisation and urbanisation:** Industries are heavy users of freshwater and also require hydroelectric power, adding pressure on water resources.
- Water pollution:** Domestic and industrial wastes, pesticides, and fertilisers pollute available water, making it hazardous and unusable despite being physically present.

Thus, water scarcity is not just about low rainfall but also about mismanagement, overuse, and pollution.

Source: *Water Resources, Chapter 3, Section — Water Scarcity and the Need for Water Conservation and Management*

Explanation

Examiners look for **four distinct causes** beyond just "low rainfall." The key insight the passage stresses is that water scarcity can occur even where water is abundant — due to large population demands, industrial pressure, unequal access, and pollution. Mentioning all four earns full marks. Avoid vague statements; use terms like *over-exploitation*, *unequal access*, and *pollution* precisely as the textbook does.

Q2. medium initial-understanding § WATER SCARCITY AND THE NEED FOR WATER CONSERVATION AND MANAGEMENT [2]

An agricultural region receives abundant annual rainfall. Yet its farmers are facing acute water shortage. Give TWO possible reasons to explain this apparent contradiction.

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Model Answer

Two possible reasons for water shortage despite abundant rainfall:

1. **Over-exploitation of groundwater:** Farmers excessively use tube-wells and borewells for irrigation, causing groundwater levels to fall, reducing water availability over time.
1. **Water pollution:** Abundant water may be rendered unusable due to contamination by pesticides, fertilisers, and industrial/domestic wastes, making it hazardous for agricultural or domestic use.

Source: *Water Resources, Chapter 3 – Water Scarcity and the Need for Water Conservation and Management*

Explanation

The question tests the concept that water scarcity is **not always about low rainfall**. Examiners expect students to go beyond the obvious and cite causes like over-exploitation and pollution, both explicitly mentioned in the chapter. Write one clear point per reason – no need to elaborate beyond one sentence each for a 2-mark answer.

Q3. straightforward initial-understanding § WATER SCARCITY AND THE NEED FOR WATER CONSERVATION AND MANAGEMENT [1]

Which of the following is the LARGEST consumer of freshwater resources?

- (A) Domestic households
- (B) Industries
- (C) Irrigated agriculture
- (D) Hydroelectric power plants

- A Domestic households
- B Industries
- C Irrigated agriculture
- D Hydroelectric power plants

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Model Answer

(C) Irrigated agriculture

Irrigated agriculture is the largest consumer of freshwater resources, as it requires huge amounts of water to expand irrigated areas, especially for dry-season farming.

Source: *Water Scarcity and the Need for Water Conservation and Management, Chapter 3*

Explanation

The textbook explicitly states: "*Irrigated agriculture is the largest consumer of water.*" This is a direct factual line – memorise it exactly. Hydroelectric plants use water but return most of it; industries are heavy users but secondary to agriculture; domestic use is the least among the four options.

Q4. medium initial-understanding § WATER SCARCITY AND THE NEED FOR WATER CONSERVATION AND MANAGEMENT [3]

A city has more than enough water resources to meet the needs of its population, yet many of its residents face water scarcity. Give TWO reasons to explain how this situation is possible.

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Model Answer

A city may have abundant water resources yet face scarcity due to the following reasons:

- 1. Over-exploitation and falling groundwater levels:** Large urban populations use their own groundwater pumping devices, causing excessive extraction, which depletes and degrades the available water resources.
- 1. Water pollution:** Even if water is available in sufficient quantity, it may be polluted by domestic and industrial wastes, chemicals, pesticides, and fertilisers, making it hazardous and unfit for human use.

Additionally, **unequal access** among different social groups means water may be plentiful overall but not reach all residents equally.

Source: *Water Resources, Chapter 3 – Water Scarcity and the Need for Water Conservation and Management*

Explanation

The examiner expects **two distinct reasons** clearly stated — the question is 3 marks, so one well-explained point + one additional point (with a brief mention of the third) is ideal. The two core reasons from the textbook are **(1) over-exploitation/depletion of groundwater** by urban households and industries, and **(2) water pollution** rendering available water unusable. Unequal access is a bonus point. Avoid vague answers like "misuse" — use textbook terminology such as "over-exploitation," "depletion," and "domestic/industrial wastes." Always link the reason back to the specific situation described (a city with enough water overall).

Q5. straightforward initial-understanding § MULTI-PURPOSE RIVER PROJECTS AND INTEGRATED WATER RESOURCES MANAGEMENT [1]

Why did Jawaharlal Nehru call dams the 'temples of modern India'?

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Model Answer

Jawaharlal Nehru called dams the 'temples of modern India' because they would integrate development of agriculture and the village economy with rapid industrialisation and growth of the urban economy.

Source: *Chapter 3, Multi-purpose River Projects and Integrated Water Resources Management*

Explanation

The exact phrase and reason are directly quoted in the passage. Examiners expect you to mention **both** key outcomes — agricultural/rural development **and** industrialisation/urban growth — to score full marks. Do not just say "they were useful"; be specific about what Nehru believed they would achieve.

Q6. straightforward initial-understanding § MULTI-PURPOSE RIVER PROJECTS AND INTEGRATED WATER RESOURCES MANAGEMENT

[2]

Apart from irrigation, state any two other purposes for which large dams are built in India today.

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Model Answer

Apart from irrigation, large dams are built for the following purposes:

1. **Electricity generation** – Dams are used to generate hydroelectric (hydel) power for domestic and industrial use.
2. **Flood control** – Dams help regulate river flow to control floods, as seen in the Hirakud project on the Mahanadi river.

(Other valid purposes include: domestic and industrial water supply, inland navigation, fish breeding, recreation.)

Source: Chapter 3, Multi-purpose River Projects and Integrated Water Resources Management

Explanation

The passage explicitly states: *"Today, dams are built not just for irrigation but for electricity generation, water supply for domestic and industrial uses, flood control, recreation, inland navigation and fish breeding."* Choose any **two** from this list. Examiners expect the answer to name the purpose clearly – one line each is sufficient for a 2-mark answer. Adding a brief example (like Hirakud for flood control or Bhakra-Nangal for hydel power) strengthens the answer but is not compulsory.

Q7. medium initial-understanding § MULTI-PURPOSE RIVER PROJECTS AND INTEGRATED WATER RESOURCES MANAGEMENT [3]

Dams were originally built to control floods, yet they have sometimes caused floods instead. How does this happen?

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Model Answer

Dams are built to store and regulate river water, but they can ironically cause floods due to **sedimentation in the reservoir**. Over time, sediment accumulates at the bottom of the reservoir, reducing its water-holding capacity. When excessive rainfall occurs, the reduced reservoir cannot hold the extra water. The dam gates must be opened suddenly, releasing large volumes of water downstream and causing floods. As the textbook states, "dams that were constructed to control floods have triggered floods due to sedimentation in the reservoir." Moreover, big dams have mostly been unsuccessful in controlling floods during excessive rainfall.

Source: Water Resources, Chapter 3 (Multi-purpose River Projects and Integrated Water Resources Management)

Explanation

- The key cause is **sedimentation reducing reservoir capacity** — this is the direct answer examiners expect.
- Quote or paraphrase the textbook line about dams triggering floods — it shows you have read the source.
- For 3 marks: name the problem (sedimentation), explain the mechanism (reduced capacity), and state the consequence (uncontrolled release → floods). Three clear points = 3 marks.

Q8. straightforward initial-understanding § RAINWATER HARVESTING [1]

What is 'palar pani' and why is it considered special in the arid regions of Rajasthan?

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Model Answer

'Palar pani' is the local term for rainwater in Rajasthan. It is considered the purest form of natural water and is stored in underground tanks called tankas for drinking purposes.

Source: *Rainwater Harvesting, Chapter 3*

Explanation

The passage directly states: "*Rainwater, or palar pani, as commonly referred to in these parts, is considered the purest form of natural water.*" For a 1-mark answer, mention (1) what it means — rainwater, and (2) why it is special — purest natural water. No extra detail needed.

Q9. medium initial-understanding § RAINWATER HARVESTING

[3]

People across India developed rainwater harvesting techniques suited to their local geography and climate. Name any three region-specific traditional rainwater harvesting methods used in India, mentioning the region for each and briefly explaining how the method works.

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Model Answer

Three region-specific traditional rainwater harvesting methods in India:

1. **Guls/Kuls – Western Himalayas:** Diversion channels built in hilly terrain to redirect stream water for irrigating agricultural fields.
1. **Khadins/Johads – Rajasthan (arid/semi-arid regions):** Agricultural fields were converted into rain-fed storage structures where water stands and slowly moistens the soil, recharging groundwater.
1. **Inundation Channels – Bengal (flood plains):** Channels built to divert floodwater of rivers into fields, used for irrigating crops during flood season.

Source: *Water Resources, Chapter 3, Rainwater Harvesting section*

Explanation

- The examiner expects one method per mark, each with **region + method name + brief working**.
- All three examples are directly from the textbook passage — use the exact names (guls/kuls, khadins/johads, inundation channels) as they carry marks.
- Bamboo drip irrigation (Meghalaya) is also valid as a fourth option if needed.
- Avoid writing vague descriptions — name the structure and state how it works in one line.

Q10. straightforward initial-understanding § BAMBOO DRIP IRRIGATION SYSTEM

[1]

Which traditional irrigation technique, used in Meghalaya, involves channelling spring or stream water to fields through bamboo pipes?

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Model Answer

The traditional irrigation technique used in Meghalaya is the **Bamboo Drip Irrigation System**, in which spring or stream water is channelled to fields through a network of bamboo pipes.

Source: *Chapter 3, Bamboo Drip Irrigation System*

Explanation

The examiner expects the name "Bamboo Drip Irrigation System" and a brief description linking bamboo pipes to water transport. Mentioning that it is a 200-year-old system or that water is transported by gravity can add value but is not strictly required for 1 mark. The key term to remember is **bamboo drip irrigation**.

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