CBSE CLASS X

Social Science (087)

ANSWER KEY

AI-generated question paper

Code: BF5PJY **Questions: 29** **Maximum Marks: 58** **Generated: 2026-06-26 09:55**

SELECTIONS USED

Subject	Social Science
Lessons	1 Resources and Development
Level of understanding	Exam-ready
Question selection	CBSE board paper, whole lesson (~80 marks across Sections A-E)
Model	claude-sonnet-4-6

Composition — Difficulty: 10 straightforward · 17 medium · 2 deep | Types: 10 MCQ · 5 Assertion–reason · 5 Very short · 5 Short · 2 Long · 2 Case-based | Sections: A 15Q/15m · B 5Q/10m · C 5Q/15m · D 2Q/10m · E 2Q/8m

Q1. straightforward exam-ready **[1]**

Which one of the following is NOT a basis for classifying resources?
(A) Origin
(B) Exhaustibility
(C) Colour
(D) Ownership

A Origin
B Exhaustibility
C Colour
D Ownership

◆ Resources and Development

Generated by claude-sonnet-4-6 · 2026-06-26 13:26 · grounding rag

Model Answer

(C) Colour

Colour is NOT a basis for classifying resources. Resources are classified on the basis of origin, exhaustibility, ownership, and status of development.

Explanation

The textbook explicitly lists four bases for resource classification: origin, exhaustibility, ownership, and status of development. Colour is used to classify **soils** (e.g., black soil, red soil), not resources in general. Examiners expect students to recall the four standard bases and identify the odd one out.

Q2. straightforward exam-ready **[1]**

Which of the following states is MOST correctly matched with its resource advantage?
(A) Rajasthan — abundant water resources
(B) Arunachal Pradesh — rich in mineral deposits
(C) Jharkhand — rich in minerals and coal
(D) Ladakh — well-developed infrastructure

A Rajasthan — abundant water resources
B Arunachal Pradesh — rich in mineral deposits
C Jharkhand — rich in minerals and coal
D Ladakh — well-developed infrastructure

◆ Resources and Development

Generated by claude-sonnet-4-6 · 2026-06-26 13:26 · grounding rag

Model Answer

(C) Jharkhand — rich in minerals and coal

As stated in the textbook, Jharkhand, Chhattisgarh and Madhya Pradesh are rich in minerals and coal deposits.

Explanation

The source passage directly states this fact. Options A and B are reversed (Rajasthan lacks water; Arunachal Pradesh has water abundance, not minerals), and Ladakh is deficient in infrastructure, not well-developed. Always verify resource-state matching carefully from the textbook examples.

Q3. straightforward exam-ready **[1]**

The term 'Bangar' refers to which type of alluvial soil?
(A) New alluvial soil found close to river channels (Khadar)
(B) Old alluvial soil with a higher concentration of kanker nodules
(C) Alluvial soil particularly rich in phosphoric content
(D) Alluvial soil deposited in delta regions

A New alluvial soil found near river banks
B Old alluvial soil with higher concentration of kanker nodules
C Alluvial soil rich in phosphoric content
D Coarse-grained soil found in piedmont plains

◆ Resources and Development

Generated by claude-sonnet-4-6 · 2026-06-26 13:26 · grounding rag

Model Answer

(B) Old alluvial soil with higher concentration of kanker nodules

Explanation

The textbook explicitly states: "According to their age alluvial soils can be classified as old alluvial (Bangar) and new alluvial (Khadar). The bangar soil has higher concentration of kanker nodules than the Khadar." Option B matches this definition exactly. Do not confuse Bangar (old, more kanker nodules, less fertile) with Khadar (new, finer particles, more fertile).

Q4. straightforward exam-ready **[1]**

Black soil is generally poor in which of the following nutrients?
(A) Calcium carbonate
(B) Magnesium
(C) Phosphoric content
(D) Potash

A Calcium carbonate
B Magnesium
C Phosphoric content
D Potash

◆ Resources and Development

Generated by claude-sonnet-4-6 · 2026-06-26 13:26 · grounding rag

Model Answer

(C) Phosphoric content

Black soils are rich in calcium carbonate, magnesium, potash and lime, but are **generally poor in phosphoric contents**.

Source: Resources and Development, Black Soil section

Explanation

The textbook explicitly states: "These soils are generally poor in phosphoric contents." All other options (calcium carbonate, magnesium, potash) are nutrients that black soil is *rich* in, making (C) the only correct answer.

Q5. straightforward exam-ready **[1]**

In which of the following states is over-irrigation the main cause of land degradation?
(A) Gujarat
(B) Rajasthan
(C) Punjab
(D) Jharkhand

A Gujarat
B Rajasthan
C Punjab
D Jharkhand

◆ Resources and Development

Generated by claude-sonnet-4-6 · 2026-06-26 13:26 · grounding rag

Model Answer

(C) Punjab

Over-irrigation is the main cause of land degradation in Punjab (and Haryana, western UP), leading to waterlogging and increased salinity/alkalinity in the soil.

Source: Resources and Development, Land Degradation and Conservation Measures

---

Explanation

The passage clearly states: *"In the states of Punjab, Haryana, western Uttar Pradesh, over irrigation is responsible for land degradation due to water logging."* The textbook exercise also confirms this — Q1(i) in the Exercises lists over-irrigation as the main cause for Punjab. Students often confuse this with overgrazing (Gujarat, Rajasthan) or deforestation due to mining (Jharkhand). Always link Punjab → over-irrigation → waterlogging → salinity/alkalinity.

Q6. straightforward exam-ready **[1]**

When running water cuts through clayey soils and makes deep channels, the resulting unfit agricultural land is known as:
(A) Sheet erosion
(B) Wind erosion
(C) Bad land / ravines
(D) Terrace land

A Sheet erosion
B Wind erosion
C Bad land / ravines
D Terrace land

◆ Resources and Development

Generated by claude-sonnet-4-6 · 2026-06-26 13:26 · grounding rag

Model Answer

(C) Bad land / ravines

Running water cuts through clayey soils forming deep channels called gullies, making the land unfit for cultivation — known as **bad land** (called **ravines** in the Chambal basin).

Explanation

The textbook (Soil Erosion section, Chapter 1) explicitly states: *"The running water cuts through the clayey soils and makes deep channels as gullies. The land becomes unfit for cultivation and is known as bad land. In the Chambal basin such lands are called ravines."* Sheet erosion is when water flows in sheets washing away topsoil; wind erosion is caused by wind — both are different processes. Terrace land refers to terraced farming on slopes.

Q7. straightforward exam-ready **[1]**

Which soil type develops deep cracks during hot weather that help in the aeration of the soil?
(A) Laterite soil
(B) Arid soil
(C) Black soil
(D) Forest soil

A Laterite soil
B Arid soil
C Black soil
D Forest soil

◆ Resources and Development

Generated by claude-sonnet-4-6 · 2026-06-26 13:27 · grounding rag

Model Answer

(C) Black soil

Black soil develops deep cracks during hot weather, which helps in the proper aeration of the soil.

Source: Resources and Development, Classification of Soils — Black Soil

---

Explanation

The passage explicitly states: *"They develop deep cracks during hot weather, which helps in the proper aeration of the soil"* — this is a defining characteristic of black (regur) soil. Remember this alongside other features: high moisture retention, sticky when wet, rich in calcium carbonate/magnesium/potash. This property is a common MCQ and short-answer point.

Q8. straightforward exam-ready **[1]**

Net Sown Area as a proportion of total geographical area is highest in which of the following states?
(A) Arunachal Pradesh
(B) Rajasthan
(C) Punjab
(D) Madhya Pradesh

A Less than 10% of the total area
B About 50% of the total area
C Over 80% of the total area
D Exactly equal to the gross cropped area

◆ Resources and Development

Generated by claude-sonnet-4-6 · 2026-06-26 13:27 · grounding rag

Model Answer

(C) Over 80% of the total area

Net Sown Area is over 80% of the total area in Punjab (and Haryana), while it is less than 10% in Arunachal Pradesh.

Source: Resources and Development, Land Use Pattern in India

Explanation

The textbook explicitly states: *"It is over 80 per cent of the total area in Punjab and Haryana and less than 10 per cent in Arunachal Pradesh, Mizoram, Manipur and Andaman Nicobar Islands."* So the correct option is **(C)** — the question asks about Punjab, and the matching option is "Over 80% of the total area." Note: Option D (exactly equal to gross cropped area) is factually incorrect as gross cropped area = NSA + area sown more than once.

Q9. medium exam-ready **[1]**

Which of the following anti-erosion methods involves dividing large fields into strips with grass grown between crops to break the force of wind?
(A) Contour ploughing
(B) Terrace cultivation
(C) Strip cropping
(D) Shelter belt planting

A Contour ploughing
B Terrace cultivation
C Strip cropping
D Shelter belt planting

◆ Resources and Development

Generated by claude-sonnet-4-6 · 2026-06-26 13:27 · grounding rag

Model Answer

(C) Strip cropping — Large fields are divided into strips with grass grown between crops to break the force of wind.

Source: Resources and Development, Soil Erosion and Soil Conservation

Explanation

The textbook explicitly states: "Large fields can be divided into strips. Strips of grass are left to grow between the crops. This breaks up the force of the wind. This method is known as strip cropping." Don't confuse it with shelter belt planting, which involves planting rows of *trees* (not grass strips between crops) to reduce wind force.

Q10. straightforward exam-ready **[1]**

Red soil gets its characteristic colour due to:
(A) High content of magnesium
(B) Diffusion of iron in crystalline and metamorphic rocks
(C) Leaching by heavy rainfall
(D) Deposition of volcanic lava flows

A High content of magnesium
B Diffusion of iron in crystalline and metamorphic rocks
C Leaching by heavy rainfall
D Deposition of volcanic lava flows

◆ Resources and Development

Generated by claude-sonnet-4-6 · 2026-06-26 13:27 · grounding rag

Model Answer

(B) Diffusion of iron in crystalline and metamorphic rocks

Explanation

The textbook explicitly states: "These soils develop a reddish colour due to diffusion of iron in crystalline and metamorphic rocks." Option C (leaching) is the cause of **laterite** soil formation, not red soil — a common confusion to avoid.

Q11. medium exam-ready **[1]**

Assertion (A): Resources are not free gifts of nature; they are a function of human activities.
Reason (R): Human beings transform materials available in the environment into resources using technology and institutions.
(A) Both A and R are true, and R is the correct explanation of A.
(B) Both A and R are true, but R is not the correct explanation of A.
(C) A is true, but R is false.
(D) A is false, but R is true.

A Both A and R are true, and R is the correct explanation of A.
B Both A and R are true, but R is not the correct explanation of A.
C A is true, but R is false.
D A is false, but R is true.

◆ Resources and Development

Generated by claude-sonnet-4-6 · 2026-06-26 13:27 · grounding rag

Model Answer

(A) Both A and R are true, and R is the correct explanation of A.

Resources are not free gifts of nature; they are a function of human activities. Human beings transform materials in the environment into resources using technology and institutions, which directly explains why resources depend on human activities.

Explanation

The textbook explicitly states: "Resources are a function of human activities. Human beings themselves are essential components of resources. They transform material available in our environment into resources." The Reason (R) directly explains the Assertion (A) — it tells us *why* resources are not free gifts of nature. So both statements are true and R correctly explains A. Option (A) is the answer.

Q12. medium exam-ready **[1]**

Assertion (A): The forest area in India is far lower than the desired 33 per cent of the geographical area.
Reason (R): Large-scale conversion of forest land for agriculture, settlements and developmental projects has reduced the forest cover significantly.
(A) Both A and R are true, and R is the correct explanation of A.
(B) Both A and R are true, but R is not the correct explanation of A.
(C) A is true, but R is false.
(D) A is false, but R is true.

A Both A and R are true, and R is the correct explanation of A.
B Both A and R are true, but R is not the correct explanation of A.
C A is true, but R is false.
D A is false, but R is true.

◆ Resources and Development

Generated by claude-sonnet-4-6 · 2026-06-26 13:27 · grounding rag

Model Answer

(A) Both A and R are true, and R is the correct explanation of A.

The forest area in India is indeed far lower than the desired 33% (National Forest Policy, 1952), and large-scale conversion of forest land for agriculture, settlements, and other uses is the correct explanation for this decline.

Source: Resources and Development, Land Use Pattern in India

Explanation

The textbook directly states that "forest area in the country is far lower than the desired 33 per cent of geographical area as outlined in the National Forest Policy (1952)." The Reason correctly explains the cause — conversion of forest land for settlements, roads, industries, and agriculture. Since both statements are true and R directly explains A, option (A) is correct.

Q13. medium exam-ready **[1]**

Assertion (A): Ploughing along the contour lines of a slope helps in soil conservation.
Reason (R): Contour ploughing accelerates the flow of rainwater down the slope, washing away the topsoil quickly.
(A) Both A and R are true, and R is the correct explanation of A.
(B) Both A and R are true, but R is not the correct explanation of A.
(C) A is true, but R is false.
(D) A is false, but R is true.

A Both A and R are true, and R is the correct explanation of A.
B Both A and R are true, but R is not the correct explanation of A.
C A is true, but R is false.
D A is false, but R is true.

◆ Resources and Development

Generated by claude-sonnet-4-6 · 2026-06-26 13:27 · grounding rag

Model Answer

(C) A is true, but R is false.

Assertion is correct — contour ploughing *decelerates* the flow of rainwater down the slope, preventing topsoil loss. The Reason is false as it states the opposite.

Explanation

The textbook clearly states: *"Ploughing along the contour lines can **decelerate** the flow of water down the slopes."* So A is a valid soil conservation method, but R incorrectly claims it **accelerates** water flow — making R false. Always check whether the Reason contradicts the textbook explanation of the Assertion.

Q14. medium exam-ready **[1]**

Assertion (A): Black soil is the ideal soil for growing cotton.
Reason (R): Black soil is made up of extremely fine clayey material with a high capacity to retain moisture.
(A) Both A and R are true, and R is the correct explanation of A.
(B) Both A and R are true, but R is not the correct explanation of A.
(C) A is true, but R is false.
(D) A is false, but R is true.

A Both A and R are true, and R is the correct explanation of A.
B Both A and R are true, but R is not the correct explanation of A.
C A is true, but R is false.
D A is false, but R is true.

◆ Resources and Development

Generated by claude-sonnet-4-6 · 2026-06-26 13:27 · grounding rag

Model Answer

(A) Both A and R are true, and R is the correct explanation of A.

Black soil is ideal for growing cotton. It is made up of extremely fine clayey material with high moisture-retaining capacity, which makes it suitable for cotton cultivation.

Source: Resources and Development, Classification of Soils – Black Soil

Explanation

The textbook explicitly states: *"Black soil is ideal for growing cotton"* and *"The black soils are made up of extremely fine i.e. clayey material. They are well-known for their capacity to hold moisture."* Both the Assertion and Reason are factually correct, and the moisture-retaining property of black soil directly explains why it suits cotton, making R the correct explanation of A. Choose option (A).

Q15. deep exam-ready **[1]**

Assertion (A): Regions rich in natural resources are not always economically developed.
Reason (R): Development requires not just the availability of resources but also appropriate technology, quality of human resources and institutional support.
(A) Both A and R are true, and R is the correct explanation of A.
(B) Both A and R are true, but R is not the correct explanation of A.
(C) A is true, but R is false.
(D) A is false, but R is true.

A Both A and R are true, and R is the correct explanation of A.
B Both A and R are true, but R is not the correct explanation of A.
C A is true, but R is false.
D A is false, but R is true.

◆ Resources and Development

Generated by claude-sonnet-4-6 · 2026-06-26 13:27 · grounding rag

Model Answer

(A) Both A and R are true, and R is the correct explanation of A.

Resources contribute to development only when accompanied by appropriate technology, quality of human resources and institutional changes — which directly explains why resource-rich regions may still be economically backward.

Explanation

The textbook explicitly states: *"There are many regions in our country that are rich in resources but these are included in economically backward regions... resources can contribute to development only when they are accompanied by appropriate technological development and institutional changes."* This means R directly and correctly explains A. Always check if the Reason logically causes/explains the Assertion — if yes, option (A) is correct.

Q16. straightforward exam-ready **[2]**

What is meant by 'Gross Cropped Area'? How is it different from 'Net Sown Area'?

◆ Resources and Development

Generated by claude-sonnet-4-6 · 2026-06-26 13:27 · grounding rag

Model Answer

Gross Cropped Area: Area sown more than once in an agricultural year, added to the Net Sown Area, is called Gross Cropped Area.

Difference: Net Sown Area (NSA) is the physical extent of land on which crops are sown and harvested (counted once). Gross Cropped Area counts land sown multiple times in a year, so it is always **equal to or greater than** NSA.

Source: Resources and Development, Land Utilisation

Explanation

- The key formula to remember: **GCA = NSA + area sown more than once**.
- Examiners expect a clear definition of both terms and a stated difference (the "counted more than once" aspect).
- Do not confuse NSA with total geographical area — NSA is only the actually cultivated physical land.

Q17. medium exam-ready **[2]**

Gandhiji said, 'There is enough for everybody's need and not for anybody's greed.' What idea about resource use does this statement reflect?

◆ Resources and Development

Generated by claude-sonnet-4-6 · 2026-06-26 13:27 · grounding rag

Model Answer

Gandhiji's statement reflects the idea of **resource conservation** and **equitable distribution**. It means that nature provides enough resources to fulfil the basic needs of all people, but resources are being depleted due to greed and over-exploitation by a few. He identified selfish individuals and exploitative modern technology as the root cause of resource depletion at the global level.

Source: Resources and Development, Conservation of Resources

Explanation

- The examiner expects you to link the quote directly to **resource conservation** — that's the key term.
- Mention **two sides**: sufficiency for need vs. depletion due to greed.
- Bonus: Gandhiji blamed **greedy individuals and exploitative technology** for resource depletion — including this shows deeper reading of the passage.
- Avoid writing a long paragraph; two focused sentences are enough for 2 marks.

Q18. medium exam-ready **[2]**

State any two reasons why the soil is considered a living system rather than just an inert material.

◆ Resources and Development

Generated by claude-sonnet-4-6 · 2026-06-26 13:27 · grounding rag

Model Answer

1. **Supports living organisms**: Soil is home to various living organisms such as decomposers, bacteria, and other life forms that carry out biological activities within it.
2. **Contains organic matter (humus)**: Soil contains humus formed by the decomposition of organic matter, making it biologically active rather than a mere inert material.

Source: Contemporary India – II, Chapter 1 – Resources and Development

---

Explanation

The question targets one specific line from the chapter: *"The soil is a living system."* Examiners expect you to justify this statement using points directly from the text — the presence of living organisms (decomposers, etc.) and the presence of organic/humus content are the two clearest reasons given. Avoid vague answers like "soil has nutrients"; link it explicitly to why soil is *living*, not just fertile.

Q19. medium exam-ready **[2]**

How does the mineral processing industry contribute to land degradation?

◆ Resources and Development

Generated by claude-sonnet-4-6 · 2026-06-26 13:27 · grounding rag

Model Answer

The mineral processing industry contributes to land degradation in the following ways:

1. Processing activities like **grinding of limestone** for cement industry and **calcite and soapstone** for ceramic industry generate huge quantities of dust in the atmosphere.
2. When this dust **settles on the land**, it retards the process of **infiltration of water into the soil**, degrading its quality.

Source: Land Degradation and Conservation Measures, Chapter 1

Explanation

The question specifically asks about the **mineral processing industry**, not mining. Students often confuse the two. The key points examiners look for are: (1) dust generation from grinding activities with specific examples, and (2) how that dust retards water infiltration. Both points together earn the 2 marks. Quote the exact examples (limestone/cement, calcite & soapstone/ceramics) to show textbook accuracy.

Q20. medium exam-ready **[2]**

Distinguish between 'current fallow land' and 'culturable waste land'.

◆ Resources and Development

Generated by claude-sonnet-4-6 · 2026-06-26 13:27 · grounding rag

Model Answer

Current fallow land is land left without cultivation for **one or less than one agricultural year**. It is a temporary rest given to the soil to regain fertility.

Culturable waste land is land left uncultivated for **more than 5 agricultural years**. Though capable of being cultivated, it remains unused due to poor quality or high cost of cultivation.

Source: Resources and Development, Chapter 1 — Land Utilisation

---

Explanation

The key distinction examiners look for is the **time period**: current fallow = ≤1 year; culturable waste = >5 years. Both types *can* be cultivated, which is what separates them from barren/waste land. Always mention this potential for cultivation for culturable waste land. Use the exact textbook terms — "agricultural year" — for full marks.

Q21. medium exam-ready **[3]**

Describe the characteristics of arid soils. Why do the lower horizons of arid soil restrict infiltration of water?

◆ Resources and Development

Generated by claude-sonnet-4-6 · 2026-06-26 13:27 · grounding rag

Model Answer

Characteristics of Arid Soils:

- Colour ranges from **red to brown**.
- Texture is generally **sandy** and nature is **saline**.
- Salt content is very high in some areas; common salt is obtained by evaporating water.
- Lacks **humus and moisture** due to dry climate and high temperature.
- Evaporation is faster than moisture retention.

Why lower horizons restrict infiltration:

The lower horizons of arid soil are occupied by **Kankar** (calcium carbonate nodules) due to increasing calcium content downwards. This hard Kankar layer restricts the infiltration of water into the soil.

Source: Resources and Development, Chapter 1 — Arid Soils

Explanation

- The question has two parts — characteristics (likely 2 marks) and reason for restricted infiltration (1 mark). Answer both clearly.
- The keyword examiner looks for is **Kankar** to explain restricted infiltration — never skip it.
- Mention sandy texture, saline nature, lack of humus/moisture, and red-to-brown colour for full credit on characteristics.

Q22. medium exam-ready **[3]**

Explain how deforestation, overgrazing and mining each contribute to land degradation in India, citing specific regions where applicable.

◆ Resources and Development

Generated by claude-sonnet-4-6 · 2026-06-26 13:27 · grounding rag

Model Answer

Deforestation: Clearing of forests removes protective cover, exposing soil to erosion and reducing its fertility. In states like Jharkhand, Chhattisgarh, Madhya Pradesh and Odisha, deforestation due to mining has caused severe land degradation.

Overgrazing: Excessive grazing strips vegetation, leaving soil bare and vulnerable to erosion. In Gujarat, Rajasthan, Madhya Pradesh and Maharashtra, overgrazing is one of the main reasons for land degradation.

Mining: Mining and quarrying leave deep scars and over-burdening on abandoned sites. Mineral processing generates large quantities of dust, which settles on land and retards infiltration of water into the soil.

Source: Resources and Development, Chapter 1 — Land Degradation and Conservation Measures

---

Explanation

- The examiner expects all **three causes** named and briefly explained — one-two lines each.
- **Specific states** are important; not mentioning them loses marks.
- Keep explanations crisp; this is 3 marks (~60–90 words total).
- Do not confuse over-irrigation (Punjab/Haryana) with overgrazing — a common error.

Q23. medium exam-ready **[3]**

Describe the geographical distribution of alluvial soils in India. Why are alluvial soil regions agriculturally the most productive, and what are the limitations of this soil type?

◆ Resources and Development

Generated by claude-sonnet-4-6 · 2026-06-26 13:28 · grounding rag

Model Answer

Geographical Distribution: Alluvial soils are the most widely spread soils in India. They cover the entire northern plains, deposited by three Himalayan river systems — the Indus, the Ganga, and the Brahmaputra. They also extend through a narrow corridor in Rajasthan and Gujarat, and are found in the eastern coastal plains in the deltas of the Mahanadi, Godavari, Krishna, and Kaveri rivers.

Why Agriculturally Most Productive: These soils contain adequate proportions of potash, phosphoric acid, and lime, making them ideal for growing sugarcane, paddy, wheat, and pulses. Their high fertility supports intensive cultivation and dense populations.

Limitations: Soils in drier areas tend to be alkaline and require proper treatment and irrigation before cultivation.

Source: Resources and Development, Classification of Soils — Alluvial Soils

---

Explanation

- **Distribution** earns ~1 mark: name the northern plains + rivers + Rajasthan/Gujarat corridor + eastern coastal deltas.
- **Productivity** earns ~1 mark: mention specific nutrients (potash, phosphoric acid, lime) and the crops.
- **Limitation** earns ~1 mark: alkalinity in drier areas is the key point from the passage. Don't invent limitations not in the text (e.g., flooding — not stated here).
- Keep answers tightly linked to the passage; examiners check for textbook terminology.

Q24. medium exam-ready **[3]**

What is sheet erosion? How is it different from gully erosion? Mention one measure to control each.

◆ Resources and Development

Generated by claude-sonnet-4-6 · 2026-06-26 13:28 · grounding rag

Model Answer

Sheet erosion occurs when water flows as a sheet over large areas down a slope, washing away the top layer of soil uniformly.

Gully erosion occurs when running water cuts through clayey soil, forming deep channels called gullies, making land unfit for cultivation (called ravines in the Chambal basin).

Difference: Sheet erosion removes topsoil over a wide, flat surface, while gully erosion cuts deep channels into the soil.

Control measures:

- Sheet erosion: **Contour ploughing** (ploughing along contour lines slows water flow down slopes).
- Gully erosion: **Terrace cultivation** (cutting steps on slopes restricts water flow and erosion).

Source: Resources and Development, Soil Erosion and Soil Conservation

---

Explanation

- Examiners expect a clear **definition of both types**, a **stated difference**, and **one distinct measure for each** — all three elements carry marks.
- The definitions and measures are taken directly from the textbook passage; use the exact terms (*contour ploughing*, *terrace cultivation*, *ravines*, *bad land*) as they are likely to be in the answer key.
- Do not confuse sheet and gully erosion — sheet is *surface/horizontal*, gully is *deep/vertical cutting*.

Q25. deep exam-ready **[3]**

Why is the availability of resources alone not sufficient for the economic development of a region? Illustrate with examples from India.

◆ Resources and Development

Generated by claude-sonnet-4-6 · 2026-06-26 13:28 · grounding rag

Model Answer

Availability of resources alone is not sufficient for development because **technology and strong institutions** are also essential. Without these, resources cannot be effectively utilised.

Examples from India:

- Jharkhand, Chhattisgarh and Madhya Pradesh are rich in minerals and coal, yet remain economically backward due to lack of technology and infrastructure.
- Arunachal Pradesh has abundant water resources but lacks infrastructural development.
- Rajasthan is rich in solar and wind energy but lacks water resources.

On the contrary, some resource-poor regions are economically developed because of better technology and institutions.

Source: Resources and Development, Chapter 1 — Resource Planning in India

---

Explanation

The examiner expects three key points: (1) a clear statement that resources alone are insufficient — technology and institutions are also needed; (2) at least two relevant Indian examples from the textbook; (3) ideally a contrast (resource-rich but backward vs. resource-poor but developed). Avoid generic statements; always name specific states. This answer hits all three within the word limit.

Q26. medium exam-ready **[5]**

Explain in detail the characteristics, geographical distribution and agricultural importance of black soil in India.

◆ Resources and Development

Generated by claude-sonnet-4-6 · 2026-06-26 13:28 · grounding rag

Model Answer

Black Soil — Characteristics, Distribution and Agricultural Importance

Characteristics:

- Black in colour; also called **regur soil** or **black cotton soil**.
- Made up of extremely fine, **clayey material** with high moisture-retaining capacity.
- Rich in **calcium carbonate, magnesium, potash and lime**; generally poor in phosphoric content.
- Develops **deep cracks** in hot weather, aiding proper aeration of the soil.
- **Sticky when wet**; best tilled immediately after the first shower or during pre-monsoon period.

Geographical Distribution:

- Typical of the **Deccan Trap (Basalt) region** formed by lava flows.
- Covers plateaus of **Maharashtra, Saurashtra, Malwa, Madhya Pradesh and Chhattisgarh**.
- Extends south-eastward along the **Godavari and Krishna valleys**.

Agricultural Importance:

- Ideal for growing **cotton** — hence called black cotton soil.
- High moisture retention supports crops even during dry spells, reducing need for frequent irrigation.

Source: Chapter 1 — Resources and Development, Classification of Soils (Black Soil)

Explanation

Examiners expect three clear parts: characteristics, distribution, and agricultural importance — all labelled. Use bullet points or short paragraphs for speed. Key terms to include: *regur*, *Deccan Trap*, *moisture retention*, *deep cracks*, *calcium carbonate*, and *cotton*. Do not mix up black soil properties with alluvial or laterite soil. Poor phosphoric content is a frequently tested detail.

Q27. medium exam-ready **[5]**

Explain the different methods of soil conservation. Why is it important to adopt these measures for India's agricultural future?

◆ Resources and Development

Generated by claude-sonnet-4-6 · 2026-06-26 13:28 · grounding rag

Model Answer

Methods of Soil Conservation:

1. **Contour Ploughing** – Ploughing along contour lines decelerates the flow of water down slopes, reducing erosion.
1. **Terrace Cultivation** – Steps cut on slopes form terraces that restrict erosion. It is well-developed in the western and central Himalayas.
1. **Strip Cropping** – Large fields are divided into strips with grass grown between crops, breaking the force of wind.
1. **Shelter Belts** – Rows of trees planted to check wind erosion; they have helped stabilise sand dunes in western India.
1. **Afforestation and Controlled Grazing** – Planting trees and managing grazing prevents land degradation.

Importance for India's Agricultural Future:

India's 95% basic needs come from land. Soil takes millions of years to form, and erosion caused by deforestation, overgrazing, and faulty farming methods threatens agricultural productivity. Without conservation, fertile land turns into ravines and bad lands, endangering food security for India's vast population.

Source: Resources and Development, Chapter 1 — Soil Erosion and Soil Conservation; Land Degradation and Conservation Measures

---

Explanation

- Examiners expect **at least 4 named methods** with a one-line explanation each — these fetch the bulk of marks (3–4 marks).
- The "importance" part should link to facts from the chapter: soil formation time, land degradation causes, food security — 1–2 sentences suffice for the remaining mark.
- Avoid generic statements; always tie back to the textbook content (e.g., Chambal ravines, western India sand dunes).
- Underline/bold method names in the exam to make them stand out for the examiner.

Q28. medium exam-ready **[4]**

Read the following passage and answer the questions that follow:

A soil scientist surveys a region in the Deccan plateau of Maharashtra. She observes that the soil is deep black in colour with an extremely fine texture and becomes very sticky after the first monsoon rains, making it hard to plough. During the long dry summer, the soil develops wide, deep cracks. Local farmers traditionally cultivate this soil just after the first shower or during the pre-monsoon period. She also notes the soil is rich in calcium carbonate, magnesium, potash and lime, but tests reveal it is deficient in one key nutrient. The region is famous for a particular commercial crop.

(i) Identify the type of soil described and name the parent rock responsible for its formation. (1)
(ii) Which nutrient is this soil generally deficient in? (1)
(iii) Name the commercial crop for which this soil is most suitable and give one reason why. (1)
(iv) How do the deep cracks that form in summer benefit the soil? (1)

◆ Resources and Development

Generated by claude-sonnet-4-6 · 2026-06-26 13:28 · grounding rag

Model Answer

(i) The soil described is **Black Soil (Regur soil)**. It is formed from the **Deccan Trap Basalt** (lava flows), which is the parent rock responsible for its formation.

(ii) Black soil is generally deficient in **phosphoric content (phosphorus)**.

(iii) Black soil is most suitable for growing **cotton** (hence called *black cotton soil*). It is suitable because it has high moisture-retaining capacity, which is ideal for the long growing period of cotton.

(iv) The deep cracks that develop during hot, dry summer help in the **proper aeration of the soil**, allowing air to circulate through the lower layers and improving soil health.

Source: Resources and Development, Classification of Soils — Black Soil

---

Explanation

- **(i)** Always name both — the soil type AND its parent rock. Examiners award separate marks for each part in a 1-mark question only if it has one clear answer; here both names together form the complete answer.
- **(ii)** The textbook specifically states black soil is "generally poor in phosphoric contents." Write "phosphoric content" or "phosphorus" — both are accepted.
- **(iii)** Mention *both* the crop name and the reason. Cotton + moisture retention = full mark.
- **(iv)** The textbook directly states cracks "help in the proper aeration of the soil." Use this exact language; do not invent additional benefits.

Q29. medium exam-ready **[4]**

Read the following passage and answer the questions that follow:

A group of students visits two neighbouring districts in India. In District A, they find that the land has been rendered unfit for cultivation because water flows as a thin sheet over large areas down a slope, washing away the fertile topsoil. In District B, they observe deep channels cut into the land by running water, creating a rugged landscape that cannot be farmed. The local administration has been advised to adopt farming and land management methods that follow the natural shape of the landscape, cut steps into hill slopes to reduce runoff, and plant rows of trees along field boundaries.

(i) What type of erosion is occurring in District A? (1)
(ii) What type of erosion is occurring in District B, and what are such lands called in the Chambal basin? (1)
(iii) Identify the soil conservation technique that involves following the natural shape (contours) of the landscape while ploughing. (1)
(iv) How do rows of trees planted along field boundaries help in soil conservation? (1)

♦ Resources and Development

Generated by claude-sonnet-4-6 · 2026-06-26 13:28 · grounding rag

Model Answer

(i) In District A, **sheet erosion** is occurring, where water flows as a thin sheet over large areas down a slope and washes away the fertile topsoil.

(ii) In District B, **gully erosion** is occurring. Running water cuts deep channels into the land. In the Chambal basin, such lands are called **bad lands** (ravines).

(iii) The soil conservation technique of ploughing along the natural contours of the land is called **contour ploughing**. It slows down the flow of water down the slope, reducing erosion.

(iv) Rows of trees planted along field boundaries act as **shelter belts**. They break the force of wind, bind the soil, and reduce surface runoff, thereby preventing soil erosion.

Source: Resources and Development (Chapter 1), Land Degradation and Conservation Measures

---

Explanation

- Sub-question (i) tests recall of **sheet erosion** — the keyword from the passage is "thin sheet over large areas."
- Sub-question (ii) needs **two** pieces of information: the type (gully erosion) and the local name (bad lands/ravines in the Chambal basin). Don't miss either.
- Sub-question (iii): The technique is **contour ploughing** (also called contour bunding). "Natural shape of the landscape" = contours.
- Sub-question (iv): Trees along boundaries = **shelter belts**. The textbook explicitly names this as a conservation method. Use that exact term for full marks.

Available for free from:
https://cbsegrade10studyguide.com
https://github.com/orgs/cbse-free-resources/repositories