NATURAL RESOURCES AND THEIR USE

Class 08 - Social Science (Exploring Society)

Time Allowed: 1 hour and 30 minutes **Maximum Marks: 139**

1. Which of the following is a resource for materials used in crafting furniture? **[1]**

   a) Petroleum b) Wood

   c) Natural gas d) Coal

2. Which of the following processes results in the generation of electricity? **[1]**

   a) Burning gold b) Hydroelectric power from water

   c) Harvesting forests d) Mining coal

3. Which energy source is considered renewable? **[1]**

   a) Wind energy b) Natural gas

   c) Petroleum d) Coal

4. Which of the following is an example of a non-obvious natural resource? **[1]**

   a) Air b) Coal

   c) Soil d) Water

5. Which of the following is an example of a natural resource? **[1]**

   a) Timber b) Cars

   c) Roads d) Computers

6. What process allows forests to recover naturally after a wildfire? **[1]**

   a) Industrialisation b) Deforestation

   c) Regeneration d) Mining

7. What is one major environmental problem caused by cement production? **[1]**

   a) Desertification b) Deforestation

   c) Water conservation d) Air and soil pollution

8. Which natural source provides energy for lighting buildings? **[1]**

   a) Marble b) Gold

   c) Water d) Soil

9. Which of the following is a characteristic of renewable resources? **[1]**

   a) Can be replenished naturally b) Finite and exhaustible

   c) Includes metals like iron d) Rarely found on Earth

10. Which material is transformed into a chair? **[1]**

    a) Petroleum b) Wood

c) Gold
d) Coal

11. What is a key requirement for renewable resources to remain renewable? **[1]**

a) Maintaining the rhythm of natural restoration processes
b) Injecting artificial fertilizers
c) Consuming resources faster than replenishment
d) Constant human intervention

12. Which type of air is critical for the survival of living beings? **[1]**

a) Hot air
b) Pure Air
c) Polluted air
d) Compressed air

13. Which of these is a natural resource used for energy? **[1]**

a) Marble
b) Copper
c) Gold
d) Coal

14. Which of the following is considered a natural resource when used for human benefit? **[1]**

a) Fresh water from a river
b) Electricity generated by a solar panel
c) A park made by people
d) Plastic manufactured in factories

15. What is the source of natural resources like coal and petroleum? **[1]**

a) Formed over millions of years in Nature
b) Created in factories
c) Human-made processes
d) Through scientific research

16. Why is solar energy considered renewable? **[1]**

a) It is abundant and naturally replenished by the sun
b) It is found underground like coal
c) It can be harvested with machinery
d) It is stored in batteries

17. What resource can be renewable if forests and glaciers are preserved? **[1]**

a) River Water
b) Natural gas
c) Coal
d) Gold

18. What is a primary use of natural resources for materials? **[1]**

a) Harnessing wind energy
b) Generating electricity
c) Creating objects for practical or aesthetic purposes
d) Producing food

19. Which of the following is NOT a condition for an entity to be considered a resource? **[1]**

a) being part of sacred groves
b) economic feasibility
c) technological accessibility
d) cultural acceptability

20. What is the focus of Vṛikṣhāyurveda? **[1]**

a) Ancient temple architecture
b) Features of celestial constellations

c) Study and care of trees and plants

d) Astrology and its effects on plants

21. Match the following: **[1]**

Column A	Column B
a. Trees converted into furniture	i. May be inaccessible due to lack of technology
b. Petroleum under the seabed	ii. Materials valuable to humans and found in Nature
c. Sacred groves	iii. Example of Nature becoming a resource
d. Natural resources	iv. Example of cultural restrictions on resource use

a) a-i, b-ii, c-iii, d-iv

b) a-iii, b-i, c-iv, d-ii

c) a-ii, b-iii, c-iv, d-i

d) a-iv, b-iii, c-ii, d-i

22. **Match the Columns** **[1]**

Column A	Column B
A. Over-extraction of groundwater	(i) Degradation of soil from improper use of chemicals
B. Water-harvesting and traditional practices	(ii) Use of natural fertilisers like cow dung
C. Sustainable use of natural resources	(iii) Resources don't guarantee prosperity
D. Improper use of chemical fertilisers and pesticides	(iv) Leads to groundwater becoming unavailable
E. Paradox of plenty groundwater levels	(v) Initiatives to raise

a) A-(i), B-(iv), C-(ii), D-(i), E-(iii)

b) A-(iv), B-(v), C-(iii), D-(i), E-(ii)

c) A-(iv), B-(v), C-(ii), D-(i), E-(iii)

d) A-(v), B-(iv), C-(i), D-(iii), E-(ii)

23. Match the following: **[1]**

Column A	Column B
a. Air and water	i. Resources used for making materials
b. Wood and marble	ii. Source of food production
c. Coal and petroleum	iii. Resources essential for life
d. Soil cultivation	iv. Sources of energy

a) a-iii, b-i, c-iv, d-ii

b) a-i, b-ii, c-iii, d-iv

c) a-ii, b-iii, c-iv, d-i

d) a-iv, b-iii, c-ii, d-i

24. **Assertion (A):** The production of cement is considered one of the most polluting industries. **[1]**
Reason (R): Cement production releases dust that causes respiratory damage.

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.

25. **Assertion (A):** Solar energy is a nonrenewable resource. **[1]**

Reason (R): Solar energy is available only during the daytime.

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.

26. **Assertion (A):** Wars have been fought over the control of natural resources. **[1]**
Reason (R): Natural resources can significantly alter trade patterns and international relations.

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.

27. What is the role of natural resources in shaping trade patterns between nations? **[1]**
28. What role do forests play in ecosystem functions and ecosystem services? **[1]**
29. How do natural resource locations affect human settlement patterns? **[1]**
30. State two natural resources used as energy sources in modern living. **[1]**
31. Explain the impact of chemical fertilisers and pesticides on soil health. **[1]**
32. What criteria must an entity fulfill to be considered a resource? **[1]**
33. Identify two natural resources essential for human life. **[1]**
34. Why is it important to manage renewable resources sustainably? **[1]**
35. Identify two negative effects of cement production on the environment. **[1]**
36. Name a renewable resource that relies on the existence of glaciers and forests. **[1]**
37. **Assertion (A):** Renewable resources such as river water remain sustainable as long as supportive ecosystems are maintained. **[2]**
Reason (R): The sustainability of a resource is not affected by environmental factors and human usage.

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.

38. **State whether the given statement is True or False:** **[2]**
(a) Industries near natural resources do not help local employment. **[1]**
(b) Chemical pesticides improve public health by making groundwater safer to drink. **[1]**
39. Describe the significance of resources essential for life in human survival. **[2]**
40. How does disrupting the replenishment cycle of glaciers affect the environment? **[2]**
41. Explain the classification of natural resources by their use categories. **[2]**
42. Explain the significance of understanding the difference between renewable and non-renewable resources in resource management. **[2]**
43. How does nature transform into resources based on human needs? **[2]**
44. What role does human governance and strategic planning play in offsetting the 'natural resource curse'? **[2]**
45. What are the implications of transforming natural resources into physical objects? **[2]**
46. Identify three categories of natural resources and give an example of each. **[2]**
47. What types of natural resources are used for energy production, and how do they contribute to **[3]**

modern living?

48. Name five ecosystem functions that serve humans. **[3]**

49. Discuss how human activities have contributed to the depletion of renewable resources. **[3]**

50. What measures can be taken to raise groundwater levels in regions facing depletion? **[3]**

51. What role does water conservation play in the responsible use of natural resources? **[3]**

52. Identify and describe the three broad categories of natural resources based on their uses. **[3]**

53. **Read the following text carefully and answer the questions that follow:** **[4]**

Natural resources can be categorized based on their uses: essential for life, materials, and energy. Air, water, and soil are vital for survival, while wood, marble, coal, and gold serve as materials for utility and beauty. Energy resources like coal, petroleum, sunlight, wind, and water are fundamental for electricity, transportation, and production processes. Thus, natural resources sustain life, provide materials, and supply energy crucial for modern living.

Questions:

a. What are resources essential for life? **(1)**

b. How do humans use natural resources for materials? **(1)**

c. Explain how natural resources are categorized based on their uses. **(2)**

54. **Read the following text carefully and answer the questions that follow:** **[4]**

Sustaining life on Earth requires responsible and judicious use of natural resources. Renewable resources must be used in a way that allows restoration and regeneration, while non-renewables should be conserved for future alternatives. Traditional practices, like Vṛikṣhāyurveda, organic farming in Sikkim, and the use of mud or stone in construction, demonstrate sustainable resource management. India's leadership in solar energy through initiatives like the International Solar Alliance shows how renewable resources can support both ecological and economic goals.

Questions:

a. What is meant by responsible and judicious use of resources? **(1)**

b. How did Sikkim achieve success in sustainable farming? **(1)**

c. Explain how traditional practices and modern initiatives contribute to sustainable resource management. **(2)**

55. **Read the following text carefully and answer the questions that follow:** **[4]**

Natural resources are unevenly distributed across the Earth, influencing settlements, trade, and conflicts. Industries near resources create jobs and improve local infrastructure, but can also displace communities and threaten sacred places. Resource distribution affects national and international trade, enabling unique products like Wootz steel. Shared resources, like the Kaveri River, require careful negotiations between states or countries to ensure fair use and maintain peace.

Questions:

a. How does uneven distribution of natural resources influence human settlements? **(1)**

b. Why are shared natural resources a source of conflict? **(1)**

c. Explain the economic and social implications of resource-rich areas. **(2)**

56. **Read the following text carefully and answer the questions that follow:** **[4]**

Natural resources can be renewable or non-renewable. Renewable resources, like sunlight, rivers, forests, and soil, follow Nature's principle of restoration and regeneration if managed

sustainably. Disturbing these cycles through deforestation, industrialisation, or overfishing leads to depletion. Non-renewable resources, such as coal, petroleum, and minerals, take millions of years to form and cannot be replenished quickly. India has large coal reserves, but they may last only about 50 years, highlighting the need for judicious use.

Questions:

a. What makes a resource renewable? **(1)**

b. Why are fossil fuels called non-renewable resources? **(1)**

c. Explain how human actions disturb the renewable cycle of Nature. **(2)**

57. **Read the following text carefully and answer the questions that follow:** **[4]**

Nature refers to all life and non-life forms that exist independently of humans. When humans use them for sustenance or to create new products, they become resources. For example, trees become resources when converted into furniture. However, resources must be technologically accessible, economically feasible, and culturally acceptable. The Earth's treasures include water, soil, coal, petroleum, timber, and precious stones. Thus, natural resources are valuable materials and substances occurring in Nature.

Questions:

a. When does Nature become a resource? **(1)**

b. Why is accessibility important for something to be called a resource? **(1)**

c. Explain the conditions required for an entity to be considered a resource. **(2)**

58. Explain how India has managed to avoid the 'natural resource curse' and why this is significant for its development. **[5]**

59. Explain why some elements of nature, despite their intrinsic worth, might not be considered resources. Include examples to support your explanation. **[5]**

60. What is the 'natural resource curse,' and how does it impact regions rich in natural resources? **[5]**

61. List and discuss the three criteria that must be met for natural entities to be classified as resources. Provide relevant examples. **[5]**

62. Name two examples of renewable resources and discuss their characteristics in terms of restoration and regeneration. **[5]**

63. **[5]**

I. Two places A and B have been marked on the given outline map of India. Identify them and write their correct names on the lines drawn near them.

A. A state that became India's first fully organic farming state.

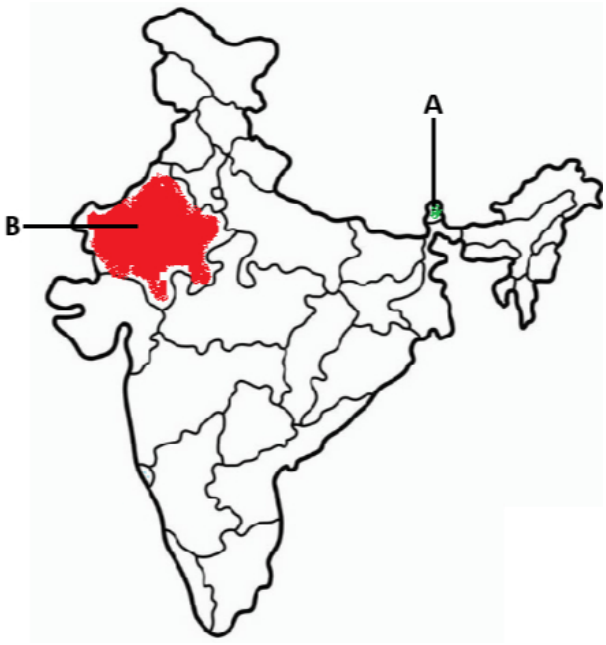
B. A state where solar parks help transition to renewable energy.

II. On the same outline map of India, locate and label the following with suitable symbols:

i. Goa – Dudhsagar Waterfall State

ii. Mettur Dam – On the Kaveri River, western Tamil Nadu

iii. Tamil Nadu – Southern India



64. I. Two places A and B have been marked on the given outline map of India. Identify them and write their correct names on the lines drawn near them. **[5]**

A. A famous waterfall in Goa.

B. A state where the Green Revolution caused excess pumping of groundwater leading to water scarcity.

II. On the same outline map of India, locate and label the following with suitable symbols:

i. Mumbai

ii. Raichur – Northern Karnataka

iii. Tamil Nadu – State with Mettur Dam on River Kaveri

65. **Fill in the blanks:** **[10]**

(a) The Earth's treasures include water, air, soil, coal, petroleum, and _____ stones. **[1]**

(b) The phenomenon where resource-rich regions experience slower economic growth is called the _____. **[1]**

(c) Natural resources are not _____ distributed across the Earth or within countries. **[1]**

(d) Shared waters, like the _____ River, require careful negotiation between states to **[1]**

maintain fair use.

(e) Energy is a cornerstone of modern living, coming from diverse sources like coal, petroleum, natural gas, sunlight, wind, and _____. **[1]**

(f) India's leadership in solar energy is demonstrated through the _____ Alliance. **[1]**

(g) Good governance, strategic planning, and human _____ are crucial for sustainable resource management. **[1]**

(h) Natural resources can influence trade and _____ relations. **[1]**

(i) For an entity to be called a resource, it should be technologically _____. **[1]**

(j) Not-so-obvious treasures include coal _____ and precious stones. **[1]**

Solution
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1. **(b)** Wood
Explanation:
Wood is used in creating furniture and other physical objects.

2. **(b)** Hydroelectric power from water
Explanation:
Electricity is generated using water in hydroelectric plants.

3. **(a)** Wind energy
Explanation:
Wind energy is naturally replenished and considered renewable.

4. **(b)** Coal
Explanation:
Coal is a not-so-obvious natural resource extracted from deposits in the earth.

5. **(a)** Timber
Explanation:
Natural resources are materials obtained directly from nature. Timber comes from trees, which are natural sources. Computers, cars, and roads are man-made and not natural resources.

6. **(c)** Regeneration
Explanation:
Regeneration is the natural renewal and recovery of ecosystems.

7. **(d)** Air and soil pollution
Explanation:
Cement production releases large amounts of dust, carbon dioxide, and harmful gases. It also produces waste that can contaminate soil. These activities lead to air pollution and degradation of soil quality, making it an environmental concern.

8. **(c)** Water
Explanation:
Water can be used for hydropower to generate electricity.

9. **(a)** Can be replenished naturally
Explanation:
Renewable resources can be replenished through natural processes.

10. **(b)** Wood
Explanation:
Wood can be crafted into furniture like chairs.

11. **(a)** Maintaining the rhythm of natural restoration processes
Explanation:
Natural cycles must remain undisturbed for resources to stay renewable.

12. **(b)** Pure Air
Explanation:
Only clean, breathable air supports life.

13. **(d)** Coal
Explanation:
Coal is a fossil fuel used as a natural source of energy. It is burned to produce heat and electricity. Copper, marble, and gold are natural materials but are not primarily used as energy sources.

14. **(a)** Fresh water from a river
Explanation:
Freshwater is derived from nature and is used by humans, making it a natural resource.

15. **(a)** Formed over millions of years in Nature
Explanation:
Coal and petroleum are fossil fuels formed from the remains of plants and animals that were buried under the Earth millions of years ago. Over long periods of heat and pressure, they transformed into these fuels. They are non-renewable because they take millions of years to form and cannot be replaced quickly.

16. **(a)** It is abundant and naturally replenished by the sun
Explanation:
Solar energy is constantly available and renewable.

17. **(a)** River Water
Explanation:
River water remains renewable when sources like glaciers are conserved.

18. **(c)** Creating objects for practical or aesthetic purposes
Explanation:
Natural resources like wood, metals, clay, and stone are often used as raw materials. These materials are used to make useful objects (like furniture, tools) or decorative items. This highlights the material use of natural resources for human needs and creativity.

19. **(a)** being part of sacred groves
Explanation:
For something to be considered a resource, it must be technologically accessible (can be used with available technology), economically feasible (worth using in terms of cost and benefit), and culturally acceptable (accepted by society). Being part of sacred groves is related to cultural protection and conservation, not a condition for something to become a resource.

20. **(c)** Study and care of trees and plants
Explanation:
Vṛikṣhāyurveda emphasizes botanical science for plant care.

21. **(b)** a-iii, b-i, c-iv, d-ii
Explanation:
- Trees converted into furniture are an example of Nature becoming a resource → iii

- Petroleum under the seabed may not be accessible because of technological limitations → i
- Sacred groves show cultural restrictions on exploiting resources → iv
- Natural resources are materials found in Nature that are valuable to humans → ii

22. **(c)** A-(iv), B-(v), C-(ii), D-(i), E-(iii)
Explanation:

Column A	Column B
A. Over-extraction of groundwater	(iv) Leads to groundwater becoming unavailable
B. Water-harvesting and traditional practices	(v) Initiatives to raise
C. Sustainable use of natural resources	(ii) Use of natural fertilisers like cow dung
D. Improper use of chemical fertilisers and pesticides	(i) Degradation of soil from improper use of chemicals
E. Paradox of plenty groundwater levels	(iii) Resources don't guarantee prosperity

23. **(a)** a-iii, b-i, c-iv, d-ii
Explanation:
- Air and water are essential for sustaining life → iii
- Wood and marble are natural resources used to create materials and objects → i
- Coal and petroleum are important sources of energy → iv
- Soil cultivation helps in food production → ii

24. **(a)** Both A and R are true and R is the correct explanation of A.
Explanation:
Cement production is indeed polluting due to dust emissions that harm respiratory health.

25. **(d)** A is false but R is true.
Explanation:
Solar energy is a renewable resource, as it is naturally replenished daily. While it is true that sunlight is only available during the day.

26. **(b)** Both A and R are true but R is not the correct explanation of A.
Explanation:
Both A and R are true but R is not the correct explanation of A.

27. Natural resources influence trade patterns by determining what nations import or export, based on their availability, dictating international trade routes and economic interactions between countries.
28. Forests filter water, prevent soil erosion, provide habitat, and benefit humans by offering clean water, food, and pollination, illustrating their ecosystem functions and services.
29. The availability of natural resources attracts people to settle near them, leading to the development of communities and townships that utilize these resources for economic and social purposes.
30. Coal and petroleum are natural resources used as energy sources for electricity and transportation.
31. Chemical fertilisers and pesticides degrade soil health over time. They deplete essential nutrients, disrupt soil ecosystems, and reduce its natural fertility, requiring sustainable management for restoration.
32. To be a resource, an entity should be technologically accessible, economically feasible to extract, and culturally acceptable.
33. Air and water are essential natural resources for human life. They are necessary for breathing and hydration.

34. Sustainably managing renewable resources ensures their long-term availability, preventing depletion, and protecting the natural cycle of restoration and regeneration.
35. Sure! Here are the two points:
    1. Releases large amounts of CO_2, contributing to global warming.
    2. Causes dust pollution, degrading air quality and harming health.
36. River water is a renewable resource that relies on the continued existence of glaciers and forests.
37. **(c)** A is true but R is false.
    Explanation:
    Environmental factors greatly impact the sustainability of renewable resources.

38. State whether the given statement is True or False:
    (a) **(b)** False
    Explanation:
    They generate employment and strengthen local economies.
    (b) **(b)** False
    Explanation:
    Pesticides have polluted groundwater, causing health risks.
39. Resources essential for life include air, water, and food. They are fundamental as they provide the fundamental elements necessary for living organisms to survive. Air is crucial for respiration, water is vital for hydration and various biological processes, and food provides the nutrients and energy needed for growth, repair, and everyday functioning of the body.
40. Disruption of the glacier replenishment cycle reduces water supply to areas dependent on glacial melt, harming agriculture, drinking water availability, and hydroelectric power generation. Rapid melting also raises sea levels, increasing the risk of floods and threatening coastal communities, ecosystems, and landscapes, highlighting the critical importance of balanced glacier cycles for sustaining life and environmental stability.
41. Natural resources can be categorized based on their uses into:
    1. Essential for life: Includes air, water, and food derived from the environment.
    2. Resources for materials: Involves using natural resources like wood, marble, and gold to make utility or beautiful objects.
    3. Resources for energy: Comprises resources like coal, water, and sunlight for energy production.
42. Understanding these differences helps in planning sustainable use of resources, ensuring long-term availability. It facilitates decisions on conservation and the transition to alternative resources, mitigating resource depletion and environmental harm.
43. Nature provides many entities existing independently, but they become resources when humans use them for survival or production. For example, trees turn into resources when processed into furniture. This transformation depends on technology for access, economic feasibility of extraction, and cultural acceptance of use, showing how human needs convert natural elements into valuable resources.
44. Human governance and strategic planning are pivotal in offsetting the 'natural resource curse' by ensuring that natural resources are effectively managed and converted into long-term economic benefits. They help in balancing resource extraction with sustainability, promoting industries, and ensuring that resource wealth translates into broader societal gains.
45. Transforming natural resources into physical objects implies the utilization of nature's gifts to create utility items or objects of beauty. It reflects human innovation in enhancing life quality by making essential furniture or decorative items. However, it highlights the importance of sustainability practices to ensure these resources are not depleted but regenerated responsibly.
46.
    - Resources essential for life: Example - Water, which is crucial for hydration and agriculture.
    - Resources for materials: Example - Wood, transformed into furniture or art.
    - Resources for energy: Example - Coal, used in generating electricity.

These categories show how natural resources support survival, provide materials, and generate energy for human needs.

47. Natural resources used for energy production include coal, water, petroleum, natural gas, sunlight, and wind. These resources are pivotal in producing electricity, powering transportation, and supporting various production processes. Their contribution to modern living lies in enabling technological advancements, enhancing comfort, and improving overall quality of life by providing essential energy for diverse human activities and infrastructure developments.
48. Ecosystem functions are natural processes that help humans by providing essential benefits, known as ecosystem services. Based on the chapter, here are five ecosystem functions that serve humans:
    - **Oxygen Production**: Trees and plants produce oxygen, like a mature tree giving ∼275 liters daily, helping us breathe.
    - **Water Purification**: Forests and wetlands filter water, providing clean water for drinking and farming.
    - **Soil Fertility**: Decomposing plants and animals enrich soil, helping grow food crops.
    - **Pollination**: Bees and insects pollinate crops, ensuring food production, like fruits and vegetables.
    - **Climate Regulation**: Forests absorb carbon dioxide, reducing rising temperatures and helping control climate change.
49. Human activities cause renewable resource depletion due to unsustainable exploitation. Deforestation at rates faster than forests can regrow leads to loss of timber resources, habitat destruction, and climate change impacts. Overfishing disrupts marine life balances, endangering species like tuna. Industrialization and pollution interrupt natural restoration cycles, causing environmental degradation. Agriculture, energy demands, and irresponsible waste disposal disturb natural renewal processes, threatening ecosystem services. Sustainable management and conservation efforts are vital for preserving renewable resources and maintaining ecological balance.
50. To address groundwater depletion, several measures can be implemented: promoting traditional water harvesting techniques such as rejuvenating ponds and tanks to capture rainwater; implementing efficient irrigation systems like drip or sprinkler irrigation to reduce water waste; practicing crop diversification to match water availability; constructing check dams and recharge wells to facilitate groundwater recharge; encouraging the use of drought-resistant crop varieties; educating communities on water conservation methods; and monitoring water usage through regulations and incentives to ensure sustainable resource management. Collectively, these approaches will enhance groundwater rejuvenation.
51. Water conservation is integral to the responsible use of natural resources as it ensures sustainable water availability for various needs without depleting resources. Conserving water helps maintain ecological balance, supporting aquatic ecosystems and wildlife. It mitigates issues like groundwater depletion, reducing dependency on unsustainable extraction. Conserving water through efficient irrigation, reduced wastage, and rainwater harvesting enhances agricultural productivity and resilience. Overall, water conservation is crucial for securing water resources for future generations, supporting socio-economic development, and adapting to climate variability, fostering a harmonious relationship with nature.
52. The three broad categories of natural resources based on their uses are:
    1. Resources essential for life: This includes air, water, and food necessary to maintain life on Earth.
    2. Resources for materials: These are natural materials like wood and marble, used for crafting objects of utility and beauty.
    3. Resources for energy: Encompassing coal, petroleum, sunlight, etc., these resources provide the energy required for modern living and technological advancement.
53. a. Resources essential for life include air, water, and soil, which provide us with the air we breathe, the water we drink, and the soil that gives us food. Without them, life cannot exist.
    b. Humans transform Nature's gifts into useful objects or items of beauty. For example, wood can be made into a chair or carved into a statuette, while India's diversity provides materials like marble, coal, and gold.
    c. Natural resources are categorized into three groups: essential for life, such as air, water, and soil; resources for materials, like wood, marble, coal, and gold, which create utility and beauty; and

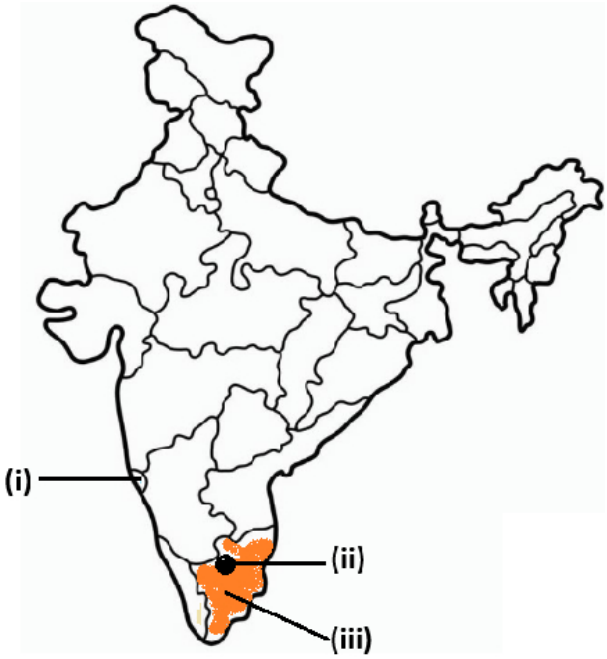
resources for energy, such as coal, petroleum, wind, sunlight, and water, which are the foundation of electricity, transportation, and production processes.

54. a. Responsible and judicious use of resources means using renewable resources without depleting them and conserving non-renewables so they last longer, while applying sustainable practices to maintain ecological balance and support future generations.
    b. Sikkim transitioned to 100% organic farming using compost, natural pest repellents, and multiple cropping, restoring soil health, increasing biodiversity, improving farmers' incomes, and creating a globally recognized model for sustainable agriculture.
    c. Traditional practices, like Vṛikṣhāyurveda and organic farming, promote soil health, crop rotation, and biodiversity. Modern initiatives, such as solar parks and eco-friendly building materials, reduce pollution and reliance on non-renewables. Combining traditional knowledge with technology ensures sustainable use of resources, ecological protection, and economic growth.
55. a. Uneven distribution of resources shapes settlements because industries and townships develop near resource-rich areas, providing employment and economic opportunities, while sometimes displacing communities or affecting sacred places.
    b. Shared resources, like rivers, cross political boundaries. Conflicts arise when multiple states or countries compete for access, requiring negotiations to ensure fair distribution and maintain peace.
    c. Resource-rich areas attract industries, creating employment and expanding townships. Improved infrastructure and modern facilities enhance quality of life. However, local communities may be displaced, and sacred or ecological sites may be threatened. Trade and economic benefits depend on careful management to balance development with social and environmental concerns.
56. a. A resource is renewable if it follows Nature's principle of restoration and regeneration, like forests, rivers, or soil. They remain renewable only when managed sustainably, without disturbing their natural cycles of replenishment.
    b. Fossil fuels are called non-renewable because they are formed over millions of years and cannot be replenished at the rate humans consume them. Once exhausted, they cannot be naturally replaced quickly.
    c. Renewable resources depend on restoration and regeneration. However, human actions like deforestation, fossil fuel-driven industrialisation, over-fishing, and untreated industrial waste disrupt these cycles. For example, overharvesting timber reduces forests, and industrial waste poisons rivers, preventing natural renewal. Such disturbances convert potentially renewable resources into depleted ones, creating long-term ecological imbalance.
57. a. Nature becomes a resource when humans use elements like water, soil, coal, or trees for sustenance or create new things from them, provided they are technologically accessible, economically feasible, and culturally acceptable.
    b. Accessibility is important because many natural entities, like petroleum deep under the ocean, may not be usable without proper technology or if costs are too high, making them unavailable as resources until feasible.
    c. For an entity to be called a resource, three conditions must be met: it should be technologically accessible, so that humans can reach or use it; economically feasible, meaning its extraction is affordable; and culturally acceptable, since some practices like cutting trees in sacred groves may not be permitted. Only then can Nature become a resource.
58. India has managed to avoid the 'natural resource curse' predominantly by investing in industries that are capable of converting natural resources into higher-value products. This strategic approach has facilitated better economic growth and development, shielding the country from the negative impacts that often accompany resource abundance. India's focus on industrialization has helped meet its growing needs, creating employment opportunities and boosting the economy. The country's success in avoiding the natural resource curse is significant because it demonstrates the importance of good governance, strategic planning, and understanding the dynamics of resource management to ensure that natural wealth translates into long-term prosperity.
59. While many elements of nature possess intrinsic worth, they might not be regarded as resources due to limited technological, economic, or cultural compatibility:
    1. Technologically inaccessible: Resources like certain deep-sea minerals remain untapped due to

insufficient technological means.
2. Economically prohibitive: High costs make some potential resources, such as oil shale, nonviable for extraction.
3. Cultural prohibitions: Culturally significant landmarks might contain resources but are protected by societal norms.
Hence, the transition from nature to resource status requires access aligned with society's technological, economic, and cultural conditions.

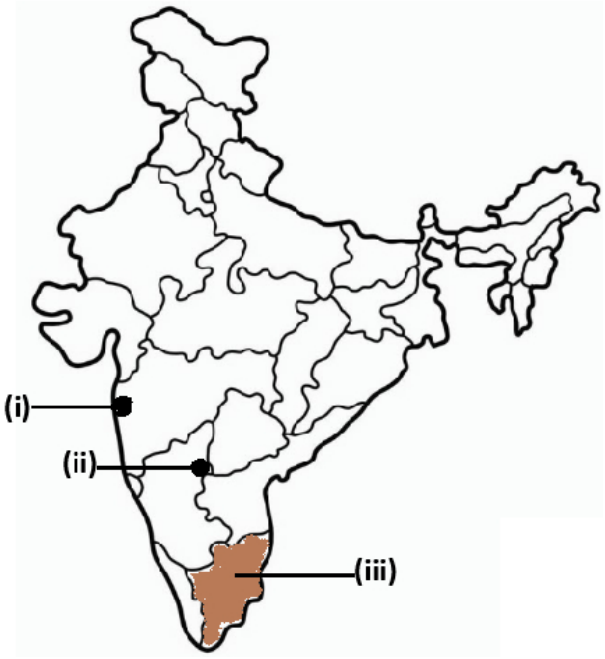
60. The 'natural resource curse' refers to a paradox where countries with abundant natural resources experience slower economic growth compared to those with fewer resources. Despite having a wealth of natural resources, these regions may struggle to stimulate economic development due to a lack of industries that can convert these resources into value-added products. This economic paradox often stems from factors like poor governance, lack of strategic planning, and the inability to balance resource extraction with sustainability. As a result, having plenty of natural resources doesn't necessarily equate to a flourishing, prosperous economy.
61. For natural entities to be classified as resources, they must meet three criteria:
1. Technological Accessibility: The entity must be reachable with existing technology. For example, petroleum beneath the ocean can only be obtained if it is technically feasible.
2. Economic Feasibility: The cost of extraction or utilization should be justifiable. High extraction costs may prevent certain elements like deep-sea oil from being viable resources.
3. Cultural Acceptance: The use or extraction should align with cultural values. For instance, cutting trees in sacred groves may be prohibited despite their potential as resources.
62. Two examples of renewable resources are solar energy and timber from forests. Renewable resources can be naturally replenished over time and often exhibit characteristics of restoration and regeneration. Solar energy is continuously available due to the Sun's consistent radiation reaching Earth, making it a sustainable energy source. Timber from forests, when harvested responsibly, showcases regeneration as new trees grow back over time, renewing the forest ecosystem. For these resources to remain renewable, human intervention should align with nature's rhythms, ensuring that neither is exploited excessively beyond its natural capacity for renewal. Proper management ensures that these resources contribute to a sustainable ecosystem.
63. I. A. Sikkim
B. Rajasthan

II.



64. I. A. Dudhsagar Waterfall (Goa)
B. Punjab

II.



65. Fill in the blanks:

(a) precious
(b) natural resource curse
(c) evenly
(d) Kaveri
(e) water
(f) International Solar
(g) knowledge
(h) international
(i) accessible
(j) petroleum