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UNDER THE AGIS OF S. S. SITARAMSINGH EDUCATIONAL AND CHARITABLE
TRUST

MOHANPUR, SITAMARHI- 843302

3 Major Landforms and Life

भू-आकृतियाँ और भूगोल (Landforms & Geography)

- **Major Landform:** मुख्य भू-आकृति (जैसे- पहाड़, मैदान आदि)
- **Physical Feature:** भौतिक विशेषता / प्राकृतिक लक्षण
- **Landscape:** परिदृश्य / प्राकृतिक दृश्य
- **Mountain:** पर्वत / पहाड़
- **Mountain Range:** पर्वत श्रृंखला / पर्वतमाला
- **Hill:** पहाड़ी
- **Plateau:** पठार (ऊँचा और ऊपर से समतल भाग)
- **Plain:** मैदान (समतल भूमि)
- **Surrounding Land:** आस-पास की भूमि
- **Montane Environment:** पर्वतीय पर्यावरण / पहाड़ी वातावरण

भूगर्भीय प्रक्रियाएँ और विशेषताएँ (Geological Processes & Features)

- **Structure:** संरचना / बनावट
- **Geological age:** भूवैज्ञानिक युग / भूगर्भीय काल
- **Weathering:** अपक्षय (चट्टानों का अपने स्थान पर टूटना-फूटना)
- **Erosion:** अपरदन / कटाव (मिट्टी या चट्टान का हवा-पानी से बहना)

- **Rugged / Rugged terrain:** ऊबड़-खाबड़ / पथरीला और दुर्गम इलाका
- **Steep Slope:** तीव्र ढलान / खड़ी ढाल
- **Uneven:** असमान / जो समतल न हो

पर्यावरण और वनस्पति (Environment & Vegetation)

- **Vegetation:** वनस्पति (पेड़-पौधे)
- **Shrub:** झाड़ी
- **Mosses:** काई / मॉस
- **Lichen:** लाइकेन / शैवाक
- **Fragile:** नाजुक / संवेदनशील (आसानी से नष्ट होने वाला)

मानवीय गतिविधियाँ और कृषि (Human Activities & Agriculture)

- **Essential activity:** आवश्यक गतिविधि / जरूरी काम
- **Transportation:** परिवहन / यातायात
- **Development:** विकास
- **Conservation:** संरक्षण (बचाव या सुरक्षित रखना)
- **Cattle ranching:** पशुपालन / मवेशी पालन
- **Hay:** सूखी घास (चारे के लिए)
- **Millet:** बाजरा / मोटा अनाज

सामान्य और प्रभाव सूचक शब्द (General & Impact Words)

- **Provide:** प्रदान करना / देना
- **Encounter:** सामना करना / अचानक मिलना
- **Significant Impact:** महत्वपूर्ण प्रभाव / बड़ा असर
- **Significantly:** काफी हद तक / महत्वपूर्ण रूप से

- **Comparatively:** तुलनात्मक रूप से / अपेक्षाकृत
- **Characterised:** विशेषता बताना / लक्षण होना
- **Unique:** अनूठा / अद्वितीय
- **Integral Part:** अभिन्न अंग / मुख्य हिस्सा
- **Majestic:** आलीशान / वैभवशाली / राजसी
- **Aspect:** पहलू / दृष्टिकोण
- **Climate:** जलवायु
- **Harding** (यहाँ शायद 'Hardening' या 'Hardship' से मतलब है): सख्त होना / कठिनाई

EXERCISE

Part A: Choose and tick the correct option

- Which is the world's highest mountain range?
 - **b. Himalayas**
- Which mountain peak is the highest in North America?
 - **b. Denali**
- Mt. Kilimanjaro is located on which of the following continents?
 - **c. Africa**
- Which of these landforms is often called the 'storehouse of minerals'?
 - **c. Plateaus**
- The Grand Canyon is located on which plateau?
 - **c. Colorado Plateau**
- Which plateau is famous for safaris and wildlife in Africa?
 - **a. Serengeti Plateau**
- Which of these landforms is found over 45% of the Earth's land surface?

- **b. Plains**
8. Which of these is referred to as the 'roof of the world'?
- **b. Tibetan Plateau**
9. In which of these landforms would we find the least amount of flora and fauna?
- **a. Deserts**
10. Which word is used for coastal plains in the ancient Tamil Sangam poetry?
- **c. Neydal**

Part B: Fill in the blanks

1. Mountains, plateaus, and plains are different types of **landforms** on the Earth.
2. The Mount Everest has a height of **8,848** metres (*Note: 8,848.86m is also widely accepted officially*).
3. The highest peak in the Andes mountain range is called **Mount Aconcagua**.
4. Old mountains are worn down by **wind** and **water** over millions of years.
5. **Tibetan Plateau** is referred to as the 'roof of the world'.
6. Permanent snow is a feature of **high** altitudes of mountains.
7. The **Ganga** is the largest river originating from the Himalayas and is sacred in India.
8. **Alluvial** plains are formed by rivers and have very fertile soil.
9. The **Sahara** Desert is the largest hot desert in the world, located in northern Africa.
10. In ancient Tamil poetry, the word **Kurinji** is used for mountainous regions.

Part C: State True or False

1. Coniferous trees are found in the montane forests.
 - **True**
2. The Ganga is a tributary of Yamuna.
 - **False** (*Explanation: Yamuna is a tributary of the Ganga*)

3. Mountains are shorter in height compared to hills and have less steep slopes.
 - **False** (*Explanation: Mountains are taller and steeper than hills*)
4. Old mountains tend to have sharper peaks than young mountains.
 - **False** (*Explanation: Young mountains have sharp peaks; old ones are rounded due to erosion*)
5. Snow leopards and black bears are found in the Ganga Plains.
 - **False** (*Explanation: They are found in high-altitude mountain ecosystems*)
6. The Rocky Mountains primarily support agriculture due to their flat terrain.
 - **False** (*Explanation: Mountains have rugged terrain, not flat*)
7. Plateau regions are rich in mineral resources.
 - **True**
8. Alluvial plains are formed by sediments deposited by rivers.
 - **True**
9. Farming is the primary economic activity in all plateau regions due to their fertile soil.
 - **False** (*Explanation: Mining is more prominent; plains are better suited for farming*)
10. All deserts are hot.
 - **False** (*Explanation: There are also cold deserts like Ladakh and Antarctica*)

Part D: Give reasons

1. **The landforms that exist today may not exist millions of years later.**
 - **Reason:** Continuous internal geological forces (like earthquakes and volcanic activity) and external processes (like weathering and erosion by wind and water) constantly reshape, wear down, and build up the Earth's surface over time.
2. **Only small shrubs and grasses are found on the higher altitudes of the mountains.**

- **Reason:** As altitude increases, the temperature drops significantly, the soil layer becomes thin and nutrient-poor, and severe winds occur. These harsh conditions prevent the growth of large trees.

3. Plains are more suitable for farming compared to plateaus.

- **Reason:** Plains have flat terrain and are built by river deposits making them exceptionally rich in fertile alluvial soil, whereas plateaus are elevated, rocky, and have limited water access.

4. People in mountainous regions practise terrace farming.

- **Reason:** Step-like terraces are carved into steep hillsides to create flat land surfaces for crop cultivation and to prevent rapid soil erosion during rainfall.

5. Factories are set up in the plateau regions.

- **Reason:** Plateau regions contain rich deposits of diverse minerals and raw materials, making them ideal hubs for extraction and heavy industrial manufacturing.

Part E: Very short answer questions

1. What are hills?

- A hill is a naturally raised area of land, lower and less steep than a mountain, usually rising less than 600 metres above the surrounding terrain.

2. Which mountain range contains the highest peak in the world?

- The Himalayas (containing Mount Everest).

3. Chotanagpur Plateau is rich in which mineral resources?

- Coal, iron ore, bauxite, manganese, and mica.

4. Name two tributaries of the River Ganga.

- Yamuna and Son (or Ghaghara/Gandak).

5. What is an archipelago?

- An archipelago is a cluster, chain, or collection of closely spaced islands surrounded by a body of water.

Part F: Short answer questions

1. What is the importance of land for human beings?

- Land provides the foundational surface for building houses, expanding transport networks, establishing industries, and cultivating crops to secure food resources.
2. **Which landform is called the 'table land' and why?**
 - A plateau is called 'table land' because it features a flat, relatively level top surface that stands prominently elevated above the surrounding lower areas.
 3. **Describe the fauna in the Himalayan montane forests.**
 - These forests host specialized animals adapted to freezing habitats, including snow leopards, Himalayan black bears, musk deer, wild yaks, and red pandas.
 4. **Tourism plays an important role in the Himalayan economy, yet excessive tourism is an environmental threat. Elaborate.**
 - Tourism creates substantial livelihood opportunities through hospitality, trekking, and local business. However, heavy overcrowding leads to deforestation, severe plastic pollution, landscape degradation, and increased landslide risks.
 5. **What is the harmful impact of tourism on mountain environments?**
 - It causes high amounts of waste generation, pollution of natural water streams, destruction of native wildlife habitats, and rapid commercialization that damages fragile mountain ecosystems.
 6. **Name the different tribes living in the Rocky Mountains.**
 - Historical native indigenous tribes include the Shoshone, Ute, Cheyenne, Arapaho, Blackfoot, and Crow tribes.

Part G: Long answer questions

1. **What are landforms? How is the environment and life of people affected by the different landforms? Give examples.**
 - **Definition:** Landforms are natural structural physical features found across the Earth's surface.
 - **Impact on Life:** Landforms dictate human habitation, climate, occupations, and communication channels.
 - **Examples:** * In flat **plains** (e.g., Ganga Plains), soil fertility supports agriculture, causing high population densities.

- In rugged **mountains** (e.g., Alps), cold weather and steep terrains limit farming, leading people to embrace terrace cultivation, cattle herding, or tourism.

2. **'Human beings have learnt to adapt to all the major landforms on the Earth.' Justify.**

- Humans demonstrate incredible resilience by adapting to geographic limitations. In steep mountain terrains, communities utilize terrace farming and build winding roads or ropeways. In dry desert regions, populations adapt by living close to oases, building clay houses to repel extreme heat, and using camels for transport. In river basins, sophisticated irrigation systems are developed to maximize farming potential.

3. **What are some of the major challenges faced by people living in the Ganga Plains?**

- Due to high population densities, residents face heavy resource stress and overcrowding. The flat river terrain makes the plains intensely vulnerable to severe seasonal flooding during monsoons, damaging crop fields and property. Additionally, rapid urbanization has generated severe water and air pollution across the basin.

4. **Write a short note on:**

- **(i) Desert:** Deserts are extremely dry areas receiving minimal annual rainfall, characterized by vast temperature extremes. Hot deserts like the Sahara have expansive sand dunes, while cold deserts like Ladakh are frozen. Vegetation is limited to drought-resistant cacti and shrubs with deep roots.
- **(ii) Islands:** An island is a sub-continental land mass completely surrounded by water. They can be volcanic or coral-based. Islands boast distinct marine biodiversity and rely heavily on fishing, maritime commerce, and tourism, though they remain vulnerable to sea-level rises.

HOTS (Higher Order Thinking Skills)

India is blessed with different types of landforms. How do you think this contributes to its overall diversity?

- **Answer:** India's distinct landforms create a rich tapestry of biodiversity, culture, and economic activities. The northern Himalayan barrier gives India a unique climate, acts as a source for perennial rivers, and nurtures

montane ecosystems. The vast northern plains form the agricultural backbone of the country, ensuring food security. The Deccan Plateau provides the essential minerals required for industrial growth, while the extensive coastline supports marine trade, fishing, and ports. This geographic variety directly shapes diverse regional cuisines, clothing styles, languages, and cultural traditions across the country.

Case Study

Q1. What challenges do you notice in the picture that might affect the people living in the Ganga Plains?

- **Answer:** The image depicts extreme overcrowding, high population density, severe traffic congestion, and unmanaged urban growth. These issues lead to poor sanitation, rapid spread of disease, stressful living conditions, and heavy strain on civic infrastructure like water, sewage, and electricity.

Q2. How can communities and governments work together to address the issues seen in the picture?

- **Answer:** * **Governments** can design better town-planning frameworks, build wider roads, implement organized public transport systems, and create efficient waste-management channels.
 - **Communities** can actively participate by maintaining public cleanliness, adhering to traffic regulations, reducing waste, and supporting municipal civic initiatives.

Q3. How can we ensure that a country's population is distributed across different regions, rather than being concentrated only in fertile plains?

- **Answer:** The concentration can be decentralized by developing smart infrastructure and economic opportunities outside major plain cities. Establishing industries, educational hubs, tech parks, and quality hospitals in plateau or semi-hilly regions encourages migration away from overcrowded plains. Improving connectivity via advanced highways and railways helps balance population distribution across the country.