Introduction to People

Renuka was excited. Shrikant Uncle was home after a gap of nearly four months. He was a wildlife photographer and travelled widely. Renuka's interest in wildlife and forests began at an early age, when her uncle introduced her to books on nature. Pictures of distant lands and people, who lived there, always fascinated her.

Fig. 6.1: People from various parts of the world

This image shows a diverse group of people coming from various parts of the world, each dressed in traditional or culturally distinctive attire. It highlights the vast cultural diversity globally, shaped by geography, climate, history, and social development. Traditional clothing symbolizes cultural identity and heritage, connecting people to their ancestry and history. Despite differences, the image conveys unity in diversity, encouraging respect and appreciation for different cultures.

Exam Questions

Q1: Why is traditional clothing important for cultural identity?
A1: Traditional clothing connects people to their ancestry and history and helps maintain cultural heritage during festivals and ceremonies.

Q2: What does the image of diverse people in traditional attire teach us?
A2: It teaches us about cultural diversity and unity in diversity, encouraging respect and understanding of different cultures.

Life in the Amazon Basin

The Amazon Basin lies close to the equator, between 10°N and 10°S, and is drained by the Amazon River and its numerous tributaries. It covers parts of Brazil, Peru, Bolivia, Ecuador, Colombia, and Venezuela. The basin is characterized by a hot and wet equatorial climate with heavy rainfall throughout the year.

Fig.6.2:The Amazon Basin in South America

The Amazon Basin is the largest river basin in the world, with the Amazon River flowing from the Andes Mountains to the Atlantic Ocean. The basin supports dense tropical rainforests with thick vegetation that forms a canopy, allowing only shade-tolerant plants to grow beneath. The region is rich in biodiversity, including unique plants like orchids and bromeliads, and animals such as toucans, monkeys, sloths, tapirs, crocodiles, and the flesh-eating piranha fish.

Fig.6.3:The Amazon Forest

The rainforest plays a crucial role in oxygen production and carbon dioxide absorption, helping regulate the global climate. People living in the rainforest practice slash and burn agriculture, growing crops like tapioca, pineapple, and sweet potato. They live in thatched houses or large communal houses called Maloca. Development activities like the Trans Amazon highway have increased accessibility but also led to deforestation and displacement of indigenous populations.

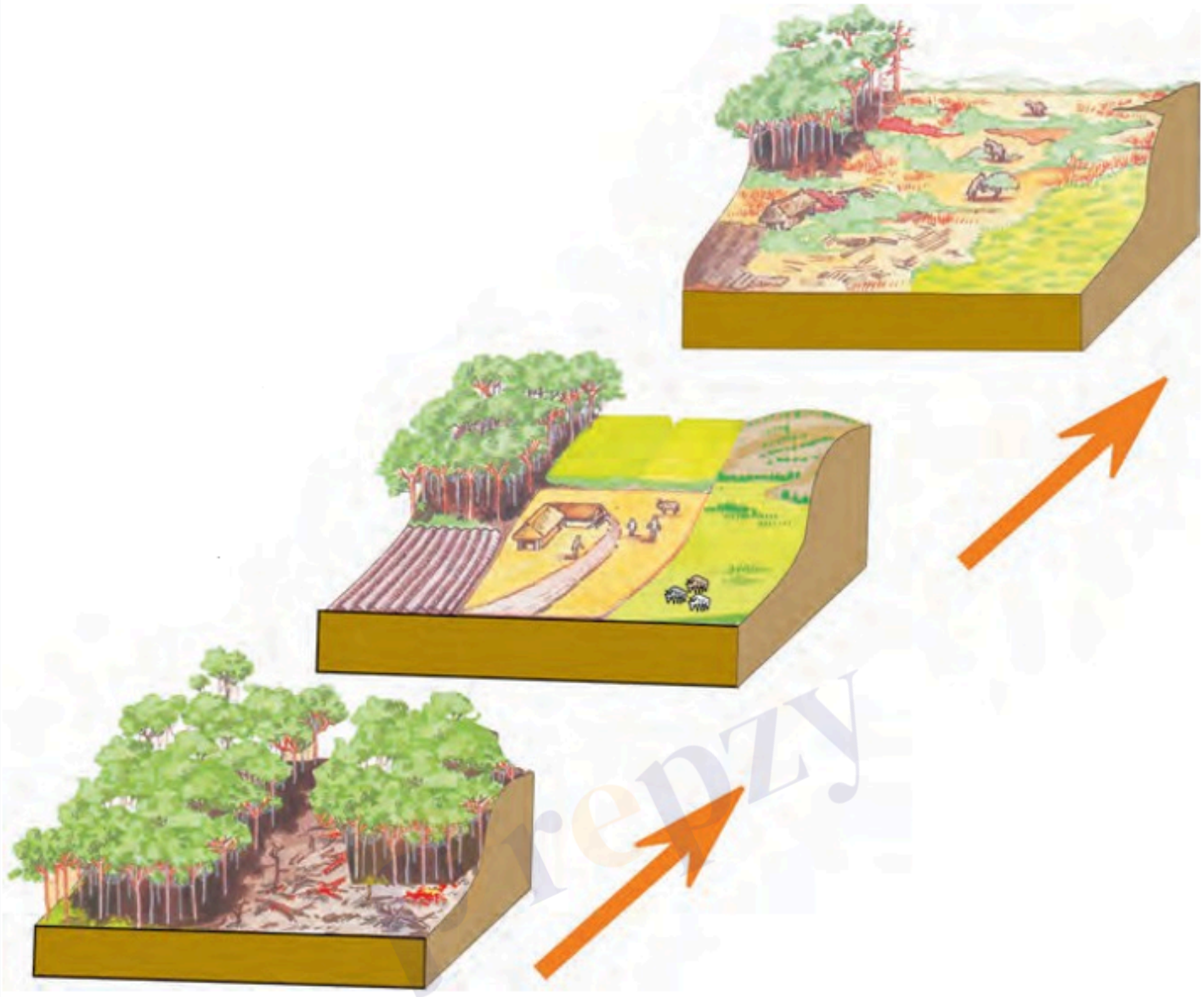

Fig. 6.6: Gradual Destruction of Forests

Exam Questions

Q1: What is slash and burn agriculture?
A1: It is a method where farmers clear land by cutting and burning trees and bushes, grow crops for a few years, then abandon the land to restore soil fertility before repeating the process.

Q2: Why is the Amazon rainforest important for the global environment?
A2: It produces oxygen, absorbs carbon dioxide, regulates climate, and supports vast biodiversity.

Life in the Ganga-Brahmaputra Basin

The Ganga-Brahmaputra basin lies in the subtropical region between 10°N and 30°N latitudes. It is drained by the Ganga and Brahmaputra rivers and their tributaries, covering parts of India, Nepal, Bhutan, Bangladesh, and China (Tibet). The basin features plains, mountains, foothills of the Himalayas, and the Sundarbans delta. The climate is dominated by the monsoon, with hot summers, cool winters, and heavy rains from mid-June to mid-September.

Fig. 6.7 Brahmaputra river

The fertile plains support dense populations engaged mainly in agriculture. Paddy is the main crop, grown in flooded fields requiring abundant water. Other crops include wheat, maize, sorghum, gram, millets, sugarcane, jute, tea, and silk production. Vegetation varies with landforms, including tropical deciduous trees, bamboo groves, mangroves in the delta, and coniferous trees in the hills.

Fig.6.9:Paddy Cultivation

The basin is rich in wildlife such as elephants, tigers, deer, monkeys, one-horned rhinoceros, Bengal tiger, crocodiles, and various fish species like rohu, catla, and hilsa. The rivers and lakes support aquatic life and provide livelihoods.

Fig.6.11: One hornedrhinoceros

Major cities like Allahabad, Kanpur, Varanasi, Lucknow, Patna, and Kolkata lie along the Ganga. These urban centers contribute to river pollution through wastewater discharge. Transport infrastructure includes roads, railways, waterways, and airports. Tourism is significant, with sites like the Taj Mahal, Buddhist stupas, Kaziranga and Manas wildlife sanctuaries, and distinct tribal cultures.

Fig. 6.13: Varanasi along the River Ganga

Exam Questions

Q1: What are the main crops grown in the Ganga-Brahmaputra basin?
A1: Paddy, wheat, maize, sorghum, gram, millets, sugarcane, jute, tea, and silk.

Q2: Why is the Ganga-Brahmaputra basin densely populated?
A2: Because of fertile soil, suitable climate, and availability of water for agriculture and human settlement.

Lake: A Source of Livelihood (A Case Study)

The case study of Binod, a fisherman from Matwali Maun village in Bihar, illustrates the importance of lakes for livelihood. The community cleaned an ox-bow lake to cultivate fish varieties supported by local aquatic plants like vallisneria and hydrilla. The fertile land around the lake supports crops such as paddy, maize, and pulses. The community uses buffaloes for ploughing and lives in harmony with nature. Pollution from nearby towns poses a threat to fish cultivation.

A clean lake

Clean lakes are vital for biodiversity, supporting fish, plants, birds, and other wildlife. Vegetation around lakes prevents soil erosion and absorbs excess nutrients, maintaining water quality. Pollution leads to eutrophication, reducing oxygen levels and harming aquatic life.

A Polluted Lake

Exam Questions

Q1: What is eutrophication?
A1: It is the excessive growth of algae caused by nutrient pollution, which reduces oxygen in water and harms aquatic life.

Q2: How do plants around lakes help maintain water quality?
A2: They prevent soil erosion and absorb excess nutrients, reducing pollution and supporting aquatic ecosystems.

Glossary

- **Tributaries:** Small rivers that join a main river, forming a river basin or catchment area.
- **Population Density:** The number of persons living per square kilometer of area.
- **Slash and Burn Agriculture:** A farming method where land is cleared by cutting and burning vegetation, used for a few years before being abandoned to restore soil fertility.

- **Eutrophication:** Excessive nutrient enrichment in water bodies causing rapid algae growth and oxygen depletion.

Practice Set

Easy

- What is the main crop grown in the Ganga-Brahmaputra basin?
- Define tributaries.

Moderate

- Explain the importance of the Amazon rainforest for the global environment.
- Describe the impact of pollution on lakes.

Challenging

- Discuss the effects of developmental activities on the Amazon rainforest and its indigenous population.
- Explain how the monsoon climate affects agriculture in the Ganga-Brahmaputra basin.

Answer Key

- **Easy 1:** Paddy is the main crop grown in the Ganga-Brahmaputra basin.
- **Easy 2:** Tributaries are small rivers that join a main river.
- **Moderate 1:** The Amazon rainforest produces oxygen, absorbs carbon dioxide, regulates climate, and supports vast biodiversity.
- **Moderate 2:** Pollution causes eutrophication, reduces oxygen levels, harms aquatic life, and degrades water quality.
- **Challenging 1:** Developmental activities like highways and deforestation have increased accessibility but caused deforestation and displacement of indigenous people.
- **Challenging 2:** The monsoon brings heavy rains essential for crops like paddy but can also cause floods affecting agriculture.

Quick Reference

- Amazon Basin: Largest river basin, tropical rainforest, rich biodiversity.
- Ganga-Brahmaputra Basin: Subtropical region, fertile plains, monsoon climate, diverse agriculture.
- Slash and Burn Agriculture: Traditional farming method in rainforests.
- Pollution: Major threat to lakes and rivers, causes eutrophication.
- Wildlife: Includes toucans, tapirs, one-horned rhinoceros, Bengal tiger, crocodiles.

Solved Examples

Example 1:

Question: Why is the Amazon rainforest called the "lungs of the Earth"?
Answer: Because it produces a large amount of oxygen through photosynthesis and absorbs carbon dioxide, helping regulate the Earth's atmosphere.

Example 2:

Question: What are the effects of deforestation in the Amazon Basin?
Answer: Deforestation leads to loss of biodiversity, soil erosion, disruption of water cycles, and contributes to climate change.