



the region. However, due to environmental concerns, poor transportation, and limited industrialization, the full exploitation of these resources has not been achieved.

2. Water Resources

Water is one of the most valuable resources of the North East. The region is crisscrossed by major rivers like the Brahmaputra, Barak, and their numerous tributaries, which provide vast surface water resources. These rivers not only support agriculture through irrigation but also offer immense hydroelectric potential, which remains largely untapped. The North East has been identified as India's "powerhouse" due to its hydroelectric capacity, particularly in Arunachal Pradesh and Sikkim. However, issues like seasonal flooding, riverbank erosion, and inadequate water management have limited the benefits derived from this resource.

3. Land Resources

The North Eastern Region is predominantly hilly, with the exception of the Brahmaputra and Barak valleys. The fertile plains of Assam and parts of Tripura and Manipur are suitable for agriculture, while the hilly areas are mostly covered with forests. Land use in the region is characterized by the traditional practice of shifting cultivation (jhum), especially among tribal communities. While this method supports the livelihood of many, it leads to deforestation, soil erosion, and declining agricultural productivity. Moreover, the fragmented land holdings and limited use of modern farming techniques further reduce the efficient utilization of land resources.

4. Food Resources

Agriculture is the main source of food production in the North East. Rice is the staple food and the dominant crop, cultivated widely in the plains. Other important crops include maize, pulses, oilseeds, sugarcane, tea, and jute. The region is also rich in horticultural products like oranges, pineapples, bananas, ginger, and spices, which hold potential for commercial development. Despite the agricultural diversity, food production is largely for subsistence, and the productivity levels are generally low due to traditional farming practices and limited irrigation. Additionally, the fisheries and livestock sectors offer potential for food security and income generation but remain underdeveloped.

Conclusion

The North Eastern Region possesses significant natural resource wealth, including minerals, water, fertile land, and diverse food crops. However, challenges like poor infrastructure, environmental degradation, and limited technological intervention have restricted their full utilization. Sustainable development strategies focusing on modern agricultural practices, efficient water management, responsible mining, and infrastructure improvement can transform the North East into a thriving economic region.

(7) Explain the status of Human Development in North-East India.

Answer: **Status of Human Development in North-East India**

The status of human development in North-East India reflects a complex picture of progress and challenges. While



the region shows improvement in some social indicators, it continues to lag behind the national average in many key areas. The following points highlight the status of human development in the North Eastern Region (NER):

- **High Literacy Rates:**

Several North Eastern states like Mizoram, Tripura, and Sikkim have achieved high literacy rates, often exceeding the national average. The region has made significant progress in expanding educational access.

- **Gender Equality in Education:**

States like Meghalaya and Mizoram have relatively higher female literacy rates, indicating progress toward gender equity in educational opportunities.

- **Limited Higher Education Facilities:**

Despite high literacy, access to quality higher education and professional courses is limited in the region, forcing many students to migrate to other states.

- **Health Infrastructure Challenges:**

The health care system in the North East faces shortages of hospitals, doctors, and medical equipment, especially in remote areas, affecting overall health outcomes.

- **Improvement in Life Expectancy:**

Some North Eastern states have shown a steady improvement in life expectancy, but they still lag behind more developed Indian states.

- **High Infant Mortality Rates in Some Areas:**

While states like Sikkim and Mizoram perform well, several rural and remote pockets in the region continue to record higher infant and maternal mortality rates.

- **Poverty and Unemployment:**

Despite central government support, many North Eastern states face high levels of poverty and unemployment, particularly among the educated youth.

- **Low Per Capita Income:**

The per capita income in most North Eastern states remains below the national average, reflecting limited economic opportunities.

- **Poor Infrastructure:**

Inadequate roads, electricity, and communication networks negatively impact access to education, health, and employment services.

- **Dependency on Government Employment:**

A large portion of the population relies on government jobs, with limited development of private sector employment and entrepreneurship.

In conclusion, while the North Eastern Region has made commendable progress in literacy and gender inclusion, substantial efforts are still required to improve health services, infrastructure, employment, and income levels to achieve balanced human development.

(8) Explain the state of infrastructure in North-East Region namely Transportation, Communication and Power.

Answer: **State of Infrastructure in North-East Region: Transportation, Communication, and Power**

The infrastructure in the North Eastern Region (NER) of India is still developing and remains one of the major constraints to the region's economic growth and social integration.



Despite various government initiatives, the states in this region face significant challenges in transportation, communication, and power infrastructure.

1. Transportation Infrastructure

The transportation system in the North East is relatively underdeveloped compared to other parts of India. The region is connected to the mainland through the narrow Siliguri Corridor, which limits the free flow of goods and people. Road connectivity is the primary mode of transportation in the region, but the hilly terrain, heavy rainfall, frequent landslides, and poor maintenance make road travel difficult and time-consuming.

The rail network is limited, with major railway lines concentrated in Assam. States like Arunachal Pradesh, Meghalaya, Mizoram, and Nagaland have minimal rail connectivity, although recent projects like broad gauge conversion and the extension of railway lines are improving the situation.

Air connectivity has improved in the last few years with new airports and regional flights under the UDAN (Ude Desh ka Aam Nagrik) scheme. However, many areas still lack efficient air services, and the cost of air travel remains high for the local population.

2. Communication Infrastructure

The communication infrastructure in the North East has made noticeable progress, particularly in mobile connectivity and internet services. Major towns and cities now have access to mobile networks and broadband services. However, the communication infrastructure in rural and



remote hill areas is still poor, with many villages lacking reliable phone and internet connectivity.

The difficult terrain, low population density in remote areas, and high installation costs have slowed the expansion of telecom services. Although 4G services have been introduced in most urban centers, the quality of connectivity is still inconsistent in many parts.

3. Power Infrastructure

The North East has significant hydroelectric potential, particularly in Arunachal Pradesh and Sikkim, but much of this potential remains untapped. Power generation in the region is not sufficient to meet the demand, leading to frequent power shortages and outages.

Transmission and distribution losses are high due to outdated infrastructure. Many remote villages still lack reliable electricity. Despite various central and state government projects aimed at rural electrification and renewable energy development, the power sector in the North East remains weak.

Conclusion

The transportation, communication, and power infrastructure in the North Eastern Region is gradually improving but still lags behind national standards. Focused investment, modern technology, and better maintenance are essential to strengthen the region's connectivity and support its long-term economic development.

2 Marks Section

1. Question: What is the geographical significance of the



North Eastern Region of India?

Answer:

The North Eastern Region is strategically important as it shares international borders with China, Myanmar, Bhutan, Bangladesh, and Nepal. It is connected to mainland India through the narrow Siliguri Corridor, making it geographically isolated and unique.

2. Question: Name two major rivers of the North East and their importance.

Answer:

The Brahmaputra and Barak rivers are the lifelines of the North East, providing fertile plains for agriculture, supporting transportation, and offering vast hydroelectric potential, though frequent flooding poses significant challenges.

3. Question: What is shifting cultivation and where is it practiced?

Answer:

Shifting cultivation, locally known as jhum cultivation, is a traditional farming method where land is cleared by burning and used temporarily. It is widely practiced in the hill areas of Nagaland, Mizoram, and Manipur.

4. Question: What is the main occupation in the North Eastern Region?

Answer:

Agriculture is the primary occupation in the North Eastern Region, employing over 60% of the population. Rice is the staple crop, along with tea, maize, and various horticultural products.

5. Question: Why is the North East known as India's power-house?

Answer:

The North East is known as India's power-house because of its vast hydroelectric potential, especially in Arunachal Pradesh and Sikkim. However, most of this potential remains underutilized due to infrastructural challenges.

6. Question: What is the status of literacy in the North Eastern Region?**Answer:**

The North East has relatively high literacy rates, with states like Mizoram and Tripura exceeding national averages. Female literacy is also notably high in several states, reflecting positive social development.

7. Question: Mention two mineral resources found in the North East.**Answer:**

Crude oil and natural gas are abundant in Assam, while Meghalaya has rich limestone and coal deposits. These minerals are key to the region's industrial potential but remain underutilized.

8. Question: Why is the industrial sector underdeveloped in the North East?**Answer:**

The industrial sector is underdeveloped due to poor infrastructure, geographical isolation, political instability, and limited private investment, which discourage large-scale industrial growth in the region.

9. Question: Name two constraints to the development of the North Eastern Region.**Answer:**

Geographical isolation and inadequate transportation



infrastructure are major constraints that limit market access, increase costs, and hinder the overall development of the North Eastern Region.

10. Question: What is the main source of transportation in the North East?

Answer:

Road transportation is the primary mode in the North East. However, poor road conditions, frequent landslides, and hilly terrain make connectivity difficult, especially in remote areas.

11. Question: How is the communication infrastructure in the North East?

Answer:

Communication infrastructure has improved in urban areas, but rural and remote regions still suffer from weak mobile networks and limited internet connectivity due to challenging terrain and high installation costs.

12. Question: What is the employment situation in the North Eastern Region?

Answer:

The North East faces high unemployment and underemployment, particularly among educated youth, due to limited job opportunities outside agriculture and government services.

13. Question: How dependent is the North East on Central Government funds?

Answer:

The North Eastern states are heavily dependent on Central Government assistance for administrative costs and development projects, as internal revenue generation is relatively low.



14. Question: Mention one major advantage of the North East's location.

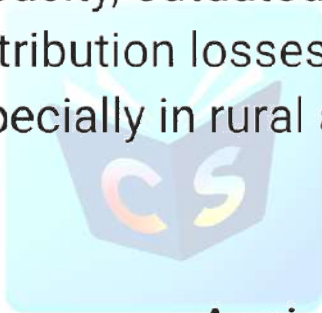
Answer:

The North East's proximity to Southeast Asian countries provides significant potential for border trade and international connectivity, making it a crucial gateway for India's Act East Policy.

15. Question: Why is the power infrastructure weak in the North East?

Answer:

The power infrastructure is weak due to low generation capacity, outdated transmission systems, and high distribution losses, which result in frequent power shortages, especially in rural areas.



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Unit 3

Agriculture in Assam Economy.

(1) Explain the role of agriculture in Assam .

Answer: Agriculture plays a vital role in the economy and livelihood of the people of Assam. It is the backbone of the state's economy, contributing significantly to income, employment, and food security.

- **Major Source of Livelihood:**

Agriculture is the primary occupation in Assam, with over 70% of the population directly or indirectly dependent on it for their livelihood.

- **Contribution to State Income:**

Agriculture contributes a substantial share to the Gross State Domestic Product (GSDP) of Assam, making it a crucial



sector for the state's economic growth.

- **Rice as the Staple Crop:**

Assam is known for rice cultivation, which is the staple food of the region. The fertile Brahmaputra Valley supports multiple cropping seasons for rice.

- **Tea Cultivation:**

Assam is globally famous for its tea industry. The state is one of the largest producers and exporters of tea, which significantly contributes to state revenue and employment.

- **Diverse Crop Production:**

Apart from rice and tea, Assam produces a variety of crops like jute, sugarcane, pulses, oilseeds, and vegetables, ensuring crop diversity and food availability.

- **Employment Generation:**

Agriculture provides direct employment to farmers and indirect employment to people engaged in allied sectors like transport, marketing, and agro-processing.

- **Horticulture and Sericulture:**

Assam has favorable conditions for horticultural crops such as bananas, pineapples, and citrus fruits. It also has a rich tradition of sericulture (silk production), especially Muga and Eri silk.

- **Fishery and Livestock:**

The state's agriculture is complemented by fishery and livestock farming, contributing to nutritional security and income diversification.

- **Cultural Significance:**

Agriculture is deeply linked with the cultural and traditional practices of Assam, reflected in festivals like Bihu which celebrates the agricultural cycle.



- **Challenges and Development:**

Although agriculture is crucial, the sector faces challenges like floods, inadequate irrigation, and traditional farming methods. Modernization and government support are essential for sustainable agricultural growth in Assam.

(2) Explain the importance of agriculture in Economic Development of Assam .

Answer: **Importance of Agriculture in the Economic Development of Assam**

(10 Points / 300 Words)

Agriculture plays a pivotal role in the economic development of Assam. It not only supports the livelihood of the majority but also drives several economic activities that contribute to the overall growth of the state.

- **Primary Economic Activity:**

Agriculture is the backbone of Assam's economy, with a large portion of the population engaged in farming. It directly contributes to the state's Gross State Domestic Product (GSDP) and is essential for economic stability.

- **Employment Generation:**

Agriculture is the largest employment provider in Assam, offering jobs to farmers, laborers, traders, and people involved in agro-based industries.

- **Food Security:**

Agricultural production ensures food security for the state. Crops like rice, pulses, and vegetables help meet the nutritional needs of the population.

- **Source of Raw Materials:**

Assam's agricultural sector provides raw materials for key industries such as tea processing, sugar mills, rice mills, and oil extraction units, promoting industrial growth.

- **Contribution to Exports:**

Assam is a leading exporter of tea, contributing significantly to the state's foreign exchange earnings and enhancing its global trade presence.

- **Rural Development:**

Agriculture promotes rural development by improving income levels, creating infrastructure, and supporting rural markets, which contribute to balanced regional growth.

- **Allied Sectors' Growth:**

Agriculture supports the growth of allied sectors such as animal husbandry, fisheries, sericulture, and horticulture, diversifying the rural economy.

- **Market Expansion:**

Agricultural activities lead to the development of markets, transport, and storage facilities, enhancing trade within and outside the state.

- **Cultural Linkage:**

Agriculture is closely linked to Assam's traditions and festivals, fostering social unity and cultural development.

- **Scope for Modernization:**

The sector holds immense potential for modernization through the adoption of technology, improved irrigation, and scientific farming, which can boost Assam's economic growth.

(3) Explain the cause of Low Agricultural Productivity in Assam.



Answer: Agricultural productivity in Assam remains low despite the sector's importance. Several factors contribute to this situation, affecting both production levels and farmers' incomes.

- **Traditional Farming Methods:**

A large number of farmers still use outdated and traditional tools and techniques. Limited adoption of modern machinery and scientific farming leads to low yields.

- **Small and Fragmented Land Holdings:**

Most farmers in Assam have small and scattered plots, which make it difficult to adopt advanced agricultural practices and achieve economies of scale.

- **Inadequate Irrigation Facilities:**

Agriculture in Assam is heavily dependent on rainfall. Irrigation coverage is minimal, making crop production highly vulnerable to weather changes and seasonal fluctuations.

- **Frequent Floods:**

Annual floods in Assam destroy standing crops, damage fertile land, and result in heavy losses for farmers, which directly reduces agricultural productivity.

- **Lack of Quality Seeds and Inputs:**

Farmers often do not have access to high-yielding variety (HYV) seeds, fertilizers, pesticides, and other essential inputs, leading to poor crop performance.

- **Limited Agricultural Credit:**

Small farmers face difficulties in accessing affordable credit from banks. As a result, they cannot invest in better seeds, fertilizers, machinery, or modern techniques.

- **Low Level of Mechanization:**

The use of modern machinery such as tractors, power tillers,



and harvesters is still limited in Assam, leading to low efficiency in farming operations.

- **Poor Market Infrastructure:**

Inadequate storage, transportation, and marketing facilities force farmers to sell their produce at low prices, reducing their incentive to increase production.

- **Lack of Awareness:**

Many farmers are unaware of scientific farming practices, government schemes, and new technologies that can improve productivity.

- **Soil Erosion and Land Degradation:**

Continuous flooding, overuse of land, and deforestation have led to soil erosion and declining soil fertility, further reducing agricultural output in Assam.

(4) Write a note on agricultural marketing in Assam.

Answer: **Agricultural Marketing in Assam**

(300 Words)

Agricultural marketing in Assam plays a crucial role in connecting farmers with consumers and traders. It involves all the activities related to the movement of agricultural produce from the farm to the final consumer. However, agricultural marketing in Assam faces several challenges that limit the income of farmers and hinder the growth of the agricultural sector.

The marketing system in Assam is largely unorganized and traditional. Most farmers sell their produce in village markets or to local traders immediately after harvest due to a lack of proper storage facilities and urgent financial needs. As a



result, they often receive low prices for their crops. The absence of regulated markets and competitive pricing further disadvantages the farmers.

Middlemen dominate the agricultural marketing chain in Assam. They purchase crops at low prices and sell them at higher rates in urban or outside markets, which reduces the share of profit for the actual producers. This system discourages farmers from increasing their production or improving crop quality.

The state lacks adequate marketing infrastructure, including cold storage, warehouses, proper roads, and transportation facilities. Due to poor connectivity, farmers in remote areas face difficulties in reaching profitable markets, and perishable items often get damaged before they can be sold. The Assam government and the Agricultural Produce Market Committees (APMCs) have made efforts to improve the situation by establishing regulated markets and Krishi Vigyan Kendras to educate farmers. However, the reach and effectiveness of these initiatives remain limited.

There is a growing need to modernize agricultural marketing in Assam through the establishment of more regulated markets, better storage facilities, improved transportation, and wider access to market information. Promoting digital platforms and cooperative societies can also help farmers receive fair prices and reduce their dependence on middlemen. An efficient marketing system is essential for improving farmers' incomes and strengthening Assam's agricultural economy.

(5) Write a note on Permanent Cultivation in Assam.



Answer: Permanent cultivation, also known as settled cultivation, is the dominant form of agricultural practice in the plains of Assam. Unlike shifting cultivation (commonly practiced in hilly regions), permanent cultivation involves the continuous use of the same land for growing crops over successive years without relocating.

In Assam, permanent cultivation is mainly practiced in the fertile river valleys, especially along the Brahmaputra and Barak rivers. The alluvial soil in these areas is highly suitable for growing a variety of crops. Rice is the principal crop cultivated under this system, followed by pulses, oilseeds, sugarcane, jute, and vegetables. Farmers often practice multiple cropping, where more than one crop is grown on the same piece of land in a year, depending on the availability of irrigation and rainfall.

Permanent cultivation in Assam is generally supported by traditional knowledge and family labor. However, the level of mechanization remains low, and most farmers still rely on basic tools like ploughs and hand-held equipment. While some regions have access to irrigation, many still depend heavily on monsoon rains for water.

One of the advantages of permanent cultivation is that it allows farmers to build better farming systems over time, such as bunds, irrigation channels, and soil management practices. It also helps in developing long-term agricultural infrastructure like storage facilities and homesteads.

However, permanent cultivation in Assam faces challenges such as soil fertility loss due to continuous use, improper use of chemical fertilizers, and frequent flooding that damages



crops and erodes soil. Limited access to modern techniques and financial resources further affects productivity.

Government interventions such as providing quality seeds, promoting scientific farming, and developing irrigation and flood control measures are essential to make permanent cultivation more productive and sustainable in Assam.

Improved support can significantly contribute to enhancing food security and farmer incomes in the state.

(6) Write a note on shifting/ jhum cultivation and its effect in Assam.

Answer:

Shifting cultivation, locally known as **Jhum cultivation**, is a traditional method of farming practiced primarily by the tribal communities in the hilly regions of Assam, especially in the districts of Karbi Anglong, Dima Hasao, and parts of the North Cachar Hills. In this system, farmers clear patches of forest land by cutting and burning vegetation, cultivate the land for a few years, and then abandon it once the soil fertility decreases. They then move to a new area, allowing the previous land to regenerate naturally.

Jhum cultivation is closely linked to the culture and livelihood of indigenous communities. It typically involves the cultivation of rice, maize, millets, vegetables, and pulses using simple tools and family labor. The crops are mainly grown for subsistence rather than for commercial purposes.

Effects of Jhum Cultivation in Assam

- **Deforestation:**

Continuous shifting to new areas leads to large-scale



deforestation, reducing forest cover and biodiversity.

- **Soil Erosion:**

The removal of vegetation exposes soil to rainfall, causing soil erosion and the loss of valuable topsoil.

- **Decline in Soil Fertility:**

The short cycle of shifting cultivation does not give sufficient time for the land to naturally regain its fertility, resulting in declining productivity.

- **Loss of Wildlife Habitat:**

Frequent clearing of forested areas disturbs natural habitats, posing threats to wildlife.

- **Climate Change Impact:**

Burning vegetation during land preparation releases carbon dioxide and contributes to greenhouse gas emissions.

- **Water Scarcity:**

The loss of forest cover impacts the water cycle, reducing water retention in the soil and increasing the risk of water scarcity.

Although Jhum cultivation is an age-old practice, it is no longer sustainable due to population pressure and reduced fallow periods. Government initiatives like promoting settled agriculture, horticulture, and providing alternative livelihoods are essential to control its harmful effects while respecting the cultural practices of the tribal communities in Assam.

(7) Explain the problems of agricultural credit in Assam.

Answer: Agricultural credit plays a vital role in the growth and modernization of farming in Assam. However, farmers in Assam face several problems in accessing timely and adequate credit, which hampers agricultural productivity and



development.

- **Limited Access to Institutional Credit:**

Many small and marginal farmers in Assam rely on informal sources like moneylenders due to the limited reach of banks and cooperatives in rural and remote areas.

- **Lengthy Loan Procedures:**

The process of obtaining loans from banks is often complex, time-consuming, and involves excessive paperwork, discouraging poor and illiterate farmers.

- **Lack of Collateral Security:**

Farmers usually do not have proper land documents or valuable assets to offer as security, which restricts their eligibility for formal credit from banks.

- **High Dependence on Informal Sources:**

Due to difficulties in accessing bank credit, many farmers borrow from local moneylenders at very high interest rates, which increases their financial burden.

- **Small Loan Size:**

The loans provided by banks are often insufficient to meet the complete needs of farmers, especially when it comes to purchasing machinery, quality seeds, and fertilizers.

- **Irregular Repayment Capacity:**

Farmers' incomes are seasonal and dependent on crop success. Natural disasters like floods often reduce their repayment capacity, causing banks to hesitate in lending.

- **Poor Banking Infrastructure:**

Many rural areas in Assam lack adequate bank branches and financial services, making credit inaccessible to farmers living in remote villages.

- **Lack of Awareness:**

Farmers are often unaware of various government schemes, subsidized credit options, and institutional support available to them.

- **High Risk in Agriculture:**

Frequent floods, pests, and unpredictable weather make agriculture a risky activity, causing reluctance among banks to extend credit.

- **Delay in Credit Disbursement:**

Even when loans are sanctioned, there are often significant delays in disbursement, which affects the timely purchase of inputs and ultimately reduces productivity.

(8) Write a note on Land Tenure System in Assam .

Answer:

The **land tenure system in Assam** refers to the pattern of land ownership, use, and distribution that has evolved over time under different administrative and cultural influences. Assam's land tenure system is unique due to its historical development, diverse tribal and non-tribal populations, and complex geography.

Historically, the land tenure system in Assam was influenced by traditional village communities, tribal customs, and later, British colonial policies. Before British rule, land was largely under community ownership, especially among tribal groups, and land use was regulated by local customary practices. During the colonial period, the British introduced **revenue systems** that classified land as government land, private land, and community land. They imposed land taxes and established formal land records. This system led to the creation of **zamindars** and **intermediaries**, although Assam



did not have as strong a zamindari system as other parts of India.

In modern Assam, the **land tenure system** is broadly divided into two categories:

- **Tribal Land:** In the hilly regions, tribal communities continue to follow customary land tenure practices where land is owned collectively and cannot be transferred to non-tribal people. Shifting (jhum) cultivation is common in these areas.
- **Non-Tribal Land:** In the plains of Assam, permanent cultivation is widely practiced, and land is individually owned with formal land titles.

The Assam government has introduced several land reforms aimed at protecting the rights of tenants, preventing land concentration in few hands, and redistributing surplus land to landless farmers. However, problems like **landlessness, land disputes, unclear land records, and illegal encroachments** still persist.

One significant issue in Assam is the slow progress in updating land records and providing secure land tenure to all farmers, which affects access to agricultural credit and investment.

An efficient and transparent land tenure system is crucial for improving agricultural productivity, ensuring social justice, and promoting rural development in Assam.

(9) Write a note on Land use pattern and cropping pattern in Assam.

Answer:

The **land use pattern** and **cropping pattern** in Assam are

shaped by its diverse geography, climate, soil fertility, and traditional farming practices. Assam is primarily an agricultural state, and the way land is used reflects its heavy dependence on farming for livelihood and economic activities.

Land Use Pattern in Assam

The land use in Assam can be broadly categorized as follows:

- **Net Sown Area:** Agriculture occupies a significant portion of land in Assam. The net sown area is around 35% of the total geographical area.
- **Forest Area:** Assam has a rich forest cover, accounting for nearly 35% of its total land, mainly in hilly and remote regions.
- **Land Not Available for Cultivation:** This includes land used for settlements, roads, rivers, and infrastructure.
- **Fallow Land:** Some areas remain fallow either temporarily or permanently due to poor soil fertility or shifting cultivation practices.
- **Pastures and Other Lands:** Limited areas are used for grazing or non-agricultural purposes.

The dominance of agriculture in the land use pattern reflects the rural nature of the economy, but frequent floods, soil erosion, and encroachment affect productive land availability.

Cropping Pattern in Assam

The cropping pattern in Assam is mainly food crop-oriented, with **rice** being the dominant crop, grown in all three agricultural seasons — autumn, winter, and summer. Other major crops include:

- **Cereals:** Rice, maize, and wheat.



- **Commercial Crops:** Tea, jute, sugarcane, and oilseeds.
- **Horticultural Crops:** Vegetables, fruits like bananas, pineapples, and citrus fruits.
- **Pulses and Spices:** Black gram, green gram, ginger, and turmeric.

Multiple cropping is practiced in areas with better irrigation facilities, while shifting cultivation is common in the hill districts.

The cropping pattern is influenced by monsoon dependency, traditional practices, and limited irrigation. Modernization, diversification, and improved irrigation facilities can help Assam achieve higher productivity and sustainability in agriculture.

(10) Explain the need for land reforms in Assam.

Answer:

Land reforms are essential in Assam to ensure equitable distribution of land, enhance agricultural productivity, and improve the socio-economic conditions of farmers. The traditional and outdated land ownership structures in the state have created various problems that can be addressed through effective land reforms.

- **Unequal Land Distribution:**

In Assam, a significant portion of agricultural land is controlled by a small section of people, while many farmers are landless or marginal landholders. Land reforms can help in redistributing surplus land to the landless.

- **Protection of Tribal Land:**

In tribal areas, land is often transferred illegally to non-tribal people, threatening the livelihoods and cultural identity of



tribal communities. Land reforms are necessary to safeguard their land rights.

- **Increase in Agricultural Productivity:**

Secure land ownership encourages farmers to invest in their land, adopt modern techniques, and improve productivity. Land reforms can provide farmers with legal titles and confidence.

- **Tenancy Reforms:**

Many farmers cultivate land as tenants without legal protection. Land reforms can ensure security of tenure and fair rent for tenants, motivating them to increase production.

- **Prevention of Land Fragmentation:**

Continuous division of land into smaller plots reduces farm efficiency. Land reforms can introduce policies to consolidate fragmented holdings.

- **Clarity in Land Records:**

Assam's land records are often outdated and unclear, leading to disputes. Land reforms should focus on modernizing and digitizing land records for better transparency.

- **Improved Access to Credit:**

With proper land titles, farmers can use their land as collateral to access institutional credit, which is essential for farm development.

- **Reduction in Land Disputes:**

Clear ownership rights and better records can reduce frequent land disputes and social conflicts.

- **Flood Rehabilitation:**

Land reforms can help rehabilitate farmers who lose their land due to frequent floods.

- **Promote Social Justice:**