Class 9th Social Science

Chapter : 4

Geography of Assam

GEOGRAPHY

Textual questions and answers Exercise

Q.1: What are the physiographic divisions of Assam ?

Ans: The four main physiographic divisions of Assam are :

(i) The Brahmaputra Valley

(ii) The Barak Valley

(iii) The Karbi Plateau

(iv) The Barail and Southern hills.

Q.2: What are the physiographic regions of the Brahmaputra Valley ?

Ans: The Brahmaputra Valley extends over 72 % of the total area of Assam . It is 720 km long and 80 km wide. It is surrounded by the Eastern Himalayas on its north,the Naga hills in the east and Karbi and Meghalaya plateaus in the south. In the West,it is open and merges with the plains of west Bengal and

Bangladesh. The valley is drained by the 64 km long Brahmaputra river and its tributaries. The valley slopes from north-east to the south-west with an average gradient of 13 cm per km. The main physiographic units of the Brahmaputra valley are :

(i) Northern foothills : The northern foothills is confined to the sub-Himalayan ranges and are composed of tertiary sandstones. The average height of the foothills is 150 m to 600 m. On the western side it is broad,where as on the eastern side it is narrower in Sonitpur,Lakhimpur and Dhemaji districts. The foothills slope southward and consist of a series of cone - like alluvial land features,composed of a mixture of sand and stones. The area has water flow in the stream beds flowing down to the plains. It has damp soils suitable for tall grasses like reeds,etc.and provide a suitable ecological condition for reserved forests and wildlife sanctuaries.

(ii) North and South bank plains: Refer to answer of question no. 4 [Textual question and answer]

(iii) Floodplain and charlands : Refer to answer of question no.5 [Textual question and answer]

(iv) Southern foothills : The southern foothills of the Brahmaputra Valley include :

(a) Foothills of Meghalaya plateau: Lies along the low ranges of the Garo,Khasi and Jaintia hills.

(b) Foothills of Karbi Plateau : Lies along the lower ranges of the northern,eastern and western boundary of the Karbi Plateau.

(c) Foothills of Barail Range: Lies along the northern part boundary of the North Cachar Hill district.

(d) Foothills of Patkai-Naga Hills : Lies along the borders.

Q.3: Write four names each of the north-bank and south-bank tributaries of the Brahmaputra river.

Ans: (i) North-bank tributaries : Subansiri,Ranganadi,Buroi and Borgong.

(ii) South-bank tributaries : Burhi Dihing,Dikhow and Jhanzi.

Q.4: Give a brief description of the Brahmaputra plain region.

Ans: The Brahmaputra plain region was formed due to the deposition of alluvial sediments carried by the Brahmaputra and its tributaries from the northern and southern hills and highlands. The region is composed of alluvial soil which are suitable for agriculture. The region is highly populated and has a well-developed transport system. The Brahmaputra plain region is divided into two parts,viz.

(i) North bank plain: (a) Extends from the northern foothills to the Brahmaputra river in the south.

(b) Major tributaries of the Brahmaputra flowing here are Subansiri,Ranganadi,Buroi, Borgong,Jia Bharali,Gabharu,Belsiri,Dhansiri, Noa Nodi,Nanoi,Barnadi,Puthimari,Pagladia,Manas-Aie-Beki, Champamati,Gaurang,Tipkai and Godadhar,

(c) Average width is 30 km in the lower part and 10 km its upper part.

(ii) South bank plain:

(a) Extends from the southern foothills to the Brahmaputra river in the north.

(b) Major tributaries of the Brahmaputra flowing here are Burhi Dihing,Disang,Dikhow,Jhanzi, Bhogdoi,Dhansiri,Kopili,Kulsi, Krishnai and Jinari.

(c) Has a narrow width of 5 km in Kamrup, Goalpara and Dhubri due to the extension of Meghalaya Plateau. However, intermittently becomes wider and narrower as it extends to Dibrugarh because of presence of river valleys and plateaus respectively.

Q.5: Give a brief description of the floodplain region of the Brahmaputra.

Ans: The flood plain region of the Brahmaputra is characterised by the following features :

(i) Location : Lies between the north bank and south bank plains.

(ii) Composed of : Charlands developed on the bed of the Brahmaputra.

(iii) Characterised by : Bank erosion and frequent floods.

(iv) Uneven at all places. The width of the flood plain reduces due to the presence of hillocks and formation of levees on the banks of the river Brahmaputra.

(v) The North bank floodplain consists of wetlands and swamps especially in Dhemaji and Barpeta.

(vi) The south bank floodplain is wide in the confluence areas of Burhi Dihing,Disang,Dhansiri, Kolang-Kopili and Kulshi rivers,but is comparatively narrower than the north bank floodplain.

(vii) There are over 600 sandbars of various sizes on the bed of the Brahmaputra. They can be permanent,semi-permanent or temporary.

Q.6: Write about the geographic location and origin of Majuli.

Ans: Majuli is one the biggest river islands of the world. The island extends over a land area of 422 sq. Km.(approximately) and has a population of 1.68 lakh(2011 census). It is formed within the Brahmaputra river under Jorhat district of Assam .

Majuli is shaped by the continuous erosional, transportation and depositional work of the Brahmaputra. Bank erosion and floods have affected the people adversely and also reduced the land area of the island . Majuli is a permanent sandbar accumulated over a long period of time.

Q.7: Write briefly about the boundaries and characteristics of the Barak valley.

Ans: Barak valley is one of the major physiographic regions situated at the southern end of Assam. Boundaries: On the north,it is surrounded by the Meghalaya Plateau and the Barail ranges of the North Cachar hills,on the east lie the Manipur hills,on the south lie the Mizo hills and on the west lies the Kushiyara-Surma plain of the Sylhet district of Bangladesh.Characteristics:

(i) Extension : Barak valley consists of the Barak plain and its adjacent northern and southern foothills.

(ii)Formation: Barak plain is also known as Cachar plain. It has been formed due to the deposition of alluvial sediments carried by the river Barak and its tributaries from the hills in the north and the south.

(iii) Barak river : Barak river flows over a distance of 225 km from east to west through Cachar district towards the northern boundary districts of Hailakandi and Karimganj. Its major tributaries are :

(a) North bank tributaries: Chiri,Diksa,Digli,Jiri,Madhura, Jutinga,Larang,etc.

(b) South bank tributaries: Sonai,Dhakeshwari-Katakhal, Singla,Langai,etc.

Q.8: Write briefly about the boundaries and characteristics of the Karbi plateau.

Ans: The northern part of the hill tracts of Assam is known as the Karbi plateau.The boundaries and characteristics of the Karbi plateau are :

(i) Karbi plateau is considered to be a part of Meghalaya plateau on the basis of its origin and geological formation.

(ii) Two divisions : Kopili valley divides the Karbi plateau into two parts,viz.

(a) Eastern part : The eastern part extends over the Diphu and Bokajan sub-divisions of Karbi Anglong district and is covered by the Rengma hills. Its size is double than that of the western part.

(b) Western part : The western part spans over the Hamren sub-division of the district. It has an average height of 900 m and slopes from south-west to north-east. The physiography of this part has developed due to the works of the river Kopili and Barapani and their tributaries.

Q.9: Write briefly about the characteristics of the Barail range and southern hills.

Ans: The characteristics of the Barail range and southern hills are :

(i) Extension : The Barail range spans westward from Thensang stretching over the North Cachar Hills district of Assam .

(ii) Connection: The Barail range links the Naga hills in the east and the Meghalaya plateau in the West.

(iii) Two divisions : The Barail range divisions the North Cachar Hills into two parts,viz.

(a) North-sloping part : The north-sloping part comes under the Brahmaputra valley and is comparatively lower than the south-sloping part.

(b) South-sloping part: The south-sloping part comes under the Barak valley.

Q.10: What is the type of Assam's climate ? Write briefly about its characteristics.

Ans: Assam has a sub-tropical monsoon climate.

(i) Heavy rainfall in summer.

(ii) Dry condition in winter.

(iii) Extreme humidity and relatively low temperature throughout the year.

Q.11: What is the main reason behind the occurrence of rainfall in Assam during summer season ?

Ans: The main reason behind the occurrence of rainfall in Assam during summer season is the orographic and cyclonic processes of the moist south-west monsoon wind.

Q.12: Discuss briefly about the geographical factors influencing the climate of Assam .

Ans: The geographical factors influencing the climate of Assam are :

(i) Variations in geographic location.

(ii) Topography.

(iii) Water surface area of Arabian sea, Bay of Bengal and Indian Ocean.

(iv) South-west monsoon wind.

(v) Variations in changing air pressure of north-west India due to change in seasons.

(vi) Impact of local winds like mountain wind,valley wind and rivers including wetlands.

Q.13: What are the main seasons of Assam ? Write in brief about the seasonal variation in the distribution of temperature and rainfall in Assam.

Ans: The main seasons of Assam along with the variation in temperature and rainfall are :

(i) Pre- monsoon season : The pre-monsoon season starts in early March and ends by the month of May. The season is characterised by pleasant mornings,scorching mid-day,tiring afternoons,sudden rainfall with lightning and thunder. In this season, atmospheric condition remains unstable and dust stroms occur. Spring season is experienced during this season.

Temperature : Atmospheric temperature increase slowly as this season occurs immediately after winter.
Rainfall : High and frequent rainfall occurs that helps in the cultivation of paddy,tea and jute in Assam .

(ii) Monsoon season : The monsoon season starts in early June and ends in September. In this season,Sali paddy is transplanted.Temperature : Temperature remains calm but humid.Rainfall: Moderate to heavy rainfall occurs during June,July and August due to the influence of south-west monsoon. The average total annual rainfall is 200 cm which is 70 % of the total rainfall that occurs in Assam throughout the year. Due to heavy rainfall,flood often occurs in the rivers Brahmaputra and Barak and their tributaries.

(iii) Retreating monsoon season : Retreating monsoon season prevails during October and November. Temperature : Temperature decreases which leads to formation of fog at night and in the morning and the air pressure increases. The high air pressure deflects the south-west monsoon wind and starts blowing from north-east to south-west. This wind is called north-east monsoon or retreating monsoon.Rainfall: Rainfall decrease in this season.

(iv) Dry winter season : Dry winter season starts in the end of November or beginning of December and ends in February.In this season,Sali paddy is harvested. Temperature: Low temperature prevails,i.e. below 10°C which leads to thick clouds in the morning and makes the weather cold.

Rainfall : Lack of rainfall leads to dry condition in the season.

Q.14 : Write the names of places in Assam witnessing the highest and lowest rainfall along with the amount of rainfall.

Ans: The place in Assam that witnesses the highest and lowest annual rainfall are :

	Place	Amount of Annual Rainfall (cm)
Highest	North Lakhimpur	335
Lowest	Lumding	129

Q.15: Why is the amount of rainfall not uniform in all places of Assam ?

Ans: The amount of rainfall is not uniform in all places of Assam due to :

(i) Topographic condition.

(ii) Location .

(iii) Presence of hills in the neighbouring areas.

Q.16: Write in brief about the spatial distribution of rainfall in Assam ?

Ans: The spatial distribution of rainfall in Assam is as follows:

(i) Heavy rainfall : In the hills and foothill areas.

(ii) Moderate rainfall : Annual rainfall above 250cm occurs in the districts of Tinsukia,Dibrugarh,Dhemaj,. Lakhimpur and Sivsagar (Upper Assam); Kokrajhar and Dhubri(lower Assam); Cachar,Karimganj and Hailakandi(Southern Assam).

(iii) Low rainfall: In the districts of Nagaon and Karbi Anglong(Central Assam).

Q.17: Give a short account of different types of soil found in Assam.

Ans: The different types of soil found in Assam are :

(i) Alluvial soil : Alluvial soils are found in the Brahmaputra plains and Barak Valley. These have formed due to deposition of sit and clay transported by the rivers and their tributaries. These soils are fertile and are suitable for agriculture.
There are two types of alluvial soil:

(a) New alluvial soil: Found in active floodplains of the Brahmaputra and Barak rivers and their tributaries and in the river side plains.
Characteristics :

- Moderately deep
- Grey in colour
- Composed of sandy to silty loams.
- Slightly
- Sometimes neutral or slightly alkaline on river banks.
- Deficient in phosphoric acid,nitrogen and humus.

(b) Old alluvial soil : Found in the following regions :

(i) Between regions of the northern Piedmont zone of the
Kokrajhar,Barpeta,Nalbari,Kamrup,Darrang,Sonitpur, Lakhimpur,Dhemaji districts and the new alluvial soil region of the south bank of the Brahmaputra.

(ii) In the south bank districts lying between the southern hill soil zone and the new alluvial soil zone along the Brahmaputra river.

(iii) In the plains of the Kopili river in Nowgang district.
(iv) In a narrow zone of the Barak plain between the active floodplain of Barak and the hill soils of the Assam-Mizoram border.
Characteristics :
● Layers are deep
● Brown in colour
● Composed of fine to coarse loams.
● More or less acidic.

(iii) Piedmont soils : Piedmont soils are found in the northern narrow zone along the Piedmont zone comprising Bhabar and Tarai belts of the Himalayan foothills.

(a) Bhabar belt : The Bhabar belt spans in east-west direction along the Assam-Arunachal Pradesh border and is composed of a series of alluvial cones. These are composed of unassorted materials of Boulders,pebbles,sands and silts. These soils have deep to very deep.

(b) Tarai belt : Tarai belt is found to the south of the Bhabar belt. These soils are saturated with water and support tall grasses.

(iii) Hill soils : Hill soils are confined to the southern hill areas of Assam . These soils contain nitrogen and organic materials in abundant quantity. On the basis of physical structure and chemical properties. These soils are of two types :

(a) Red sandy soils : Found in the Assam-Meghalaya border region,Karbi Plateau,southern part of the Barail range in the North Cachar Hills district,some parts of the foothills along the eastern boundary of the Cachar district. These soils are formed as a result of erosion of rocks and have deep layers. These soils are highly organic,moderately to strongly acidic in nature.

(b) Red loamy soils : Found to the narrow belt to the south of Assam-Arunachal border,Karbi Plateau,southern parts of the Barail range in the North Cachar Hills district and along the Assam-Mizoram border. These soils are deep and made of fine to coarse sand,silt and clay. These soils are slightly to moderately acidic in nature and contain nitrogen,phosphoric acid,humus and little amount of lime.

(iv) Laterite soils : Laterite soils are seen almost over the entire North Cachar Hills and south Karbi Plateau. They are also seen in the eastern border of the Hamren sub-division of Karbi Anglong district,southern border of Golaghat district and the Barail range foothills in the northern Barak plain. These soils are sandy-black and contain less amount of nitrogen,potash,phosphoric acid and lime.

Q.18: What are the reasons behind soil erosion in Assam ?

Ans: The main reasons behind soil erosion in Assam are:

[I] Physical factors :(i) Natural factors : Soil erosion occurs in the hill slopes mainly due to natural causes like heavy rain leading to landslides.

(ii) Water logging : Water logging on the plains and low-lying areas causes soil erosion.

[II] Human factors :Soil degradation caused by human beings contributes greatly to soil erosion through :

(a) Surface soil erosion caused by increase surface waterflow due to cutting of trees.

(b)Land cultivation on hill slopes in an unscientific manner.

(c) Jhum (shifting) cultivation in the hill areas.

(d) Water logging caused by human settlements and other activities.

(e) Increased use of chemical production to enhance crop production.

Q.19: What are the different types of forests in Assam ?

Ans: The different types of forests in assam are :

(i) Tropical evergreen forest : Tropical evergreen forests or rainforest are found in the areas of yearly rainfall of 300cm or more. These forests are found in the foothills near Arunachal Pradesh,southern part of Tinsukia and

Dibrugarh and hilly areas of the Barak valley. These forests are found in three layers,viz.

(a) Tall trees : Includes Holong and Mekai.

(b) Shorter trees : Includes Nahar,ChiyaNahar,Amari,etc.

(c) Short trees and grasses This forest also includes climbers,bamboos,canes and orchids.

(ii) Tropical semi-evergreen forest : The tropical semi-evergreen forests are found in the northern Bhabar zone of Brahmaputra valley,parts of hilly Karbi Anglong,Dima Hasao district and southern Barak valley. These forests include Nahar,Bonchom,Cham,Sirish,Ou,Gandhsoroi,Agaru,Poma,bamboos,canes,ferms,etc. These forests has been reduced in size due to expansion of settlements and roads to the foothill zones.

(iii) Tropical moist deciduous forest : Deciduous forest comprises of trees that shed their leaves in the winter season. These forests are found in the areas having an annual rainfall of 200-250cm such as in parts of lower Brahmaputra valley,Karbi Anglong,Dima Hasao districts and the Barak valley. The species found here include Sal,Makori Sal,Gomari, Amlokhi,Bhomaro,Gohara, Khokun,Simul,etc.

(iv) Riverine forest : Forests found in the wet peripheries of the rivers and wetlands are called riverine forests. These forests include :
(a) Tall trees : Chom,Showalu,Uriam,Moz,Ou, Ajar,etc.

(b) Grasses and bushes :Nal,Khagori,Tora,Koupat,cane, Jao,Kohua,etc.Dibru-Saikhowa and Orang national parks and Pabitora wildlife sanctuary are located in the riverine tracts. These forests have been rapidly reduced in size due to increase in human settlements in the riverine areas.

(v) Tropical dry deciduous forest : Tropical dry deciduous forests are found in dry floodplains and sandy areas close to the wet riverine forest areas. These forests include :

(a) Tall trees : Sisoo,Bhelkor,Simul,Khair,Bogori,etc.

(b) Grasses : Birina,Khagori,Ulu,Khush,etc.These forests are getting degraded due to expansion of settlements in the riverine tracts. Apart from the forests mentioned above,pine forests are found in the high hills of Karbi Anglong and Dima Hasao districts. Besides short bushy vegetations known as degraded forest are commonly seen in most of the districts of Assam.

Q.20: What is rain forest ? Describe the characteristics of rain forest in Assam .

Ans: Do Your Self.

Q.21: Write in brief about the importance and characteristics of riverine vegetation.

Ans: Do Your Self.

Q.22: State the location and land area of Kaziranga national park.

Ans: Kaziranga national park is located in the districts of Golaghat,Nagaon and Sonitpur having a land area of around 858.98 sq.km.

Q.23 : Write the names and location of the national parks of Assam .

Ans: The names and location of the national parks of Assam are :

Sl. No.	Name of National Park	Location
1.	Kaziranga national park	Golaghat, Nagaon and Sonitpur
2.	Manas national park	Chirang and Baksa
3.	Orang national park	Udalguri and Sonitpur
4.	Nameri national park	Sonitpur
5.	Dibru-Saikhowa national park	Dibrugarh and Tinsukia

Q.24: Write how the wildlife sanctuaries maintain the ecological balance.

Ans: The contribution of wildlife sanctuaries in maintaining ecological balance are :

(i) Provide homes to wild elephants,tigers, rhinoceros,buffaloes,deer, monkeys,etc.

(ii) Protect the animals from the destructive impact of human beings.

(iii) Attract tourists through variety of grasslands,trees and wetlands.

(iv) Conserve biodiversity through protecting these areas.

Q.25: Write about the changes in administrative boundaries in Assam during the post-independance period.

Ans: The changes in administrative boundaries in Assam during the post-independence period are :

(i) In 1947,Sylhet was separated from Assam and joined East Pakistan (present Bangladesh).

(ii) Three independence states,i.e Nagaland (1963), Meghalaya (1970) and Mizoram(1971) were separated from Assam .

(iii) In 1947,Shillong was the capital of Assam which was changed to Dispur (Guwahati) in 1973.

(iv) There were 11 districts in Assam at the time of independence which has now increased to 27 districts.

(v) Since 1971,there has been no significant change in the area of Assam including its geographical boundary and spatial extent.

Q.26: Write the names of the present districts of Assam and their headquarters.

Ans: The names of the present districts of Assam and their headquarters are :

Name of Districts	Headquarters
Baksa	Masalpur
Barpeta	Barpeta
Bongaigaon	Bongaigaon
Cachar	Silchar
Chirang	Kajalgaon
Darrang	Mangaldoi
Dhemaji	Dhemaji
Dhubri	Dhubri
Dibrugarh	Dibrugarh
Dima-Hasao	Haflong
Goalpara	Goalpara
Golaghat	Golaghat
Hailakandi	Hailakandi
Jorhat	Jorhat
Kamrup	Amingaon
Kamrup Metro	Guwahati
Karbi Anglong	Diphu
Karimganj	Karimganj
Kokrajhar	Kokrajhar
Lakhimpur	North Lakhimpur
Morigaon	Morigaon
Nagaon	Nagaon
Nalbari	Nalbari
Sivasagar	Sivasagar
Sonitpur	Tezpur
Tinsukia	Tinsukia
Udalguri	Udalguri

Q.27: What is the land area of Assam ? Where is the state's capital located ? Write the names of the largest and smallest districts of Assam in respect of land area.

Ans: The land area of Assam is 78,438 sq km.
Assam's capital is located at Dispur(Guwahati).
In terms of land area, the largest district of Assam is Karbi Anglong with an area of 10,434 sq km and smallest is Kamrup Metro with an area of 627 sq km.

Q.28: What is the population of Assam according to 2011 census ? Write the names of the largest and smallest districts of Assam in terms of population size.

Ans: According to 2011 census,the population of Assam is 31.16 million. In terms of population size,the largest district of Assam is Nagaon with a total population of 2,826,006(2.8million) and smallest is the Dima-Hasao with a total population of 213,529(2.1 lakh).

Q.29: Write short notes :

(a) Assam and monsoon climate

Ans: Do Your Self.

(b) South-West monsoon wind

Ans: The south-west monsoon wind blows from the south-west in summer and come to Assam as moisture-laden winds. They are obstructed by the Himalayan mountain range and its branches that spread to the north and east of the Brahmaputra and Barak valleys and are forced to shed their moisture bringing heavy rainfall to the North-eastern part of the Brahmaputra valley and the Barak plains. The amount of

rainfall caused by the south-west monsoons varies across the state.Besides the above mentioned,the Himalayan foothills also receive high rainfall,while the leeward side of the hills such as east of Karbi Anglong,North and east of Dima Hasao and southern part of Nagaon district.

(c) North-east monsoon wind.

Ans: During winter a high pressure system is formed over the Brahmaputra valley and a low pressure system is formed over the Bay of Bengal. Due to such change in the pressure condition between summer and winter,the direction of wind now is opposite to that of the south-west monsoon wind. The wind that blows from the upper Brahmaputra valley to the Bay of Bengal is known as north-east monsoon wind or retreating monsoon. This wind brings a little rain to south-west Assam due after absorbing some moisture from the Brahmaputra river.

(d) Summer season of Assam .

Ans: Do Your Self.

(e) Pre-monsoon season of Assam .

Ans: Do Your Self.

(f) Spatial distribution of rainfall in Assam .

Ans:Do Your Self.

(g) Administrative divisions of Assam .

Ans: Assam's land area of 78,438 sq km is divided into 27 administrative districts. Before the separation of the states of Nagaland, Meghalaya and Mizoram,there were only 11 districts in Assam. However for better administration and to fulfil the hopes and aspirations of the different ethnic groups of Assam,new districts were created from time to time. The largest district in terms of area is the hill districts of Karbi Anglong with over 10,000 sq km,followed by Sonitpur district (just over 5000 sq km and Dima Hasao (almost 5000 sq km),districts in second and third places. There are 8 districts measuring between 3000-4000 sq km,and 1 district,i.e. Kamrup Metropolitan district (covering the capital Dispur and Guwahati)measuring 627 sq km.

(h) District level population of Assam.

Ans: As per 2011 census the population of Assam is 31.16 million. Due to the varied physiography,the population of Assam is not evenly distributed over the state. Obviously the plain areas with better agriculture, transport and other facilities are better developed and more densely populated. At the district level Nagaon is the most populous district with a population of 2.83 million,followed by Dhubri (1.95million) and Sonitpur (1.92million). Among the least populated districts are Dima Hasao (2.1 lakh),Hailakandi (6.6 lakh) and Dhemaji (6.9lakh). It may be noted that though Kamrup Metro is the smallest district with only 627 sq km area it has a population of 1.26 million.

(i) BTAD

Ans: BTAD stands for Bodoland Territorial Area Districts. Four major districts,viz. Kokrajhar,Chirang,Baksa and Udalguri comes under the BTAD. It was formed in 2003 with the intention of fulfilling the hopes and expectations of Bodo tribal groups. The total land area of BTAD is 8821 sq km and it has a population of 3.5 million. Kokrajhar is the largest district in terms of area with 3165 sq km while Baksa has the most population with 9.5 lakhs.