CBSE EXAMINATION PAPER-2023

GEOGRAPHY

(Solved)

Time allowed : 3 hours | Maximum Marks : 70

General Instructions :

Read the following instructions carefully and follow them :

i. This question paper contains **34 questions.** All questions are **compulsory.**

ii. This question paper is divided into **4 sections.**

iii. **Section A** – questions number **1 to 4** are case based questions

iv. **Section B** – questions number **5 to 21** are multiple choice questions

v. **Section C** – questions number **22 to 27** are short answer

vi. **Section D** – questions number **28 to 34** are long answer

vii. There is no overall choice given in the question paper. However, an internal choice has been provided in few questions.

viii. Use of calculator is NOT allowed.

Section A

Question 1.

Read the given source and answer the questions that follow :

The main sources of noise pollution are various factories, mechanized construction and demolition works, automobiles and aircraft, etc. There may be added periodical but polluting noise from sirens, loudspeakers

used in various festivals, programmes associated with community activities. The level of steady noise is measured by sound level expressed in terms of decibels (dB). Of all these sources, the biggest

nuisance is the noise produced by traffic, because its intensity and nature depend upon factors, such as the

type of aircraft, vehicle, train and the condition of road, as well as, that of vehicle (in case of automobiles). In sea traffic, the noise pollution is confined to the harbour due to loading and unloading activities being

carried. Industries cause noise pollution but with varying intensity depending upon the type of industry.

Noise pollution is location specific and its intensity declines with increase in distance from the source of pollution, i.e. industrial areas, arteries of transportation, airport, etc. Noise pollution is hazardous in

many metropolitan and big cities in India.

(1) Explain the meaning of noise pollution.

[1 Marks]

Answer: Noise pollution refers to the excessive and disturbing levels of sound that can have harmful effects on human beings and the environment. It is generated from various sources such as factories, construction sites, automobiles, and aircraft. This type of pollution is measured in decibels (dB) and is considered a significant concern as it can lead to health issues and discomfort for individuals, particularly in densely populated areas.

Key Points: Definition of noise pollution; Sources include factories, vehicles, and aircraft; Measured in decibels (dB); Impact on human health and well-being.

(2) Why is noise pollution hazardous in metropolitan cities in India?

[1 Marks]

Answer: Noise pollution is hazardous in metropolitan cities in India primarily due to its high intensity resulting from traffic, industrial activities, and construction works. The concentration of vehicles and heavy machinery generates excessive noise that can exceed tolerance levels, leading to health issues such as stress, hearing loss, and sleep disturbances among the urban population.

Key Points: High traffic noise; Industrial activities; Health impacts

(3) “Noise pollution is location specific.” Explain with argument.

[1 Marks]

Answer: Noise pollution is indeed location specific as its intensity varies depending on the proximity to the source of the noise. For example, areas near industrial sites, airports, and busy roadways experience higher levels of noise pollution due to constant activity from machinery, vehicles, and aircraft. Conversely, as the distance from these sources increases, the noise levels decrease, demonstrating that different locations are affected by noise pollution to varying extents.

Key Points: Noise pollution varies by location-noise intensity decreases with distance-industrial areas experience higher noise levels

Question 2. Study the given picture and answer the questions that follow.



(1) Name the waterway given in the picture.

[1 Marks]

Answer: The waterway given in the picture is the Rhine Waterway.

Key Points: Rhine Waterway

(2) Name the ports marked as ‘A’ & ‘B’ in this picture.

[1 Marks]

Answer: The ports marked as ‘A’ and ‘B’ are identified based on their functions and locations in the given picture. Port ‘A’ is Maracaibo, Venezuela, known for its oil shipments, while Port ‘B’ is a commercial port serving general cargo and passenger traffic.

Key Points: Port 'A' - Maracaibo, oil port; Port 'B' - commercial port, handles general cargo

(3) Name the two seas connected by this waterway.

[1 Marks]

Answer: The two seas connected by the Rhine Waterway are the North Sea and the Black Sea.

Key Points: Rhine Waterway-North Sea-Black Sea

(4)

Name the terminal ports of ‘Panama Canal’.

[1 Marks]

Answer: The terminal ports of the Panama Canal are Colon on the Atlantic side and Balboa on the Pacific side.

Key Points: Colon-Balboa-Atlantic-Pacific

(5)

Which country has constructed 'Panama Canal' ?

[1 Marks]

Answer: The Panama Canal was constructed by the United States government.

Key Points: Panama Canal-U.S. government-construction

(6)

Which two oceans are connected by Panama Canal ?

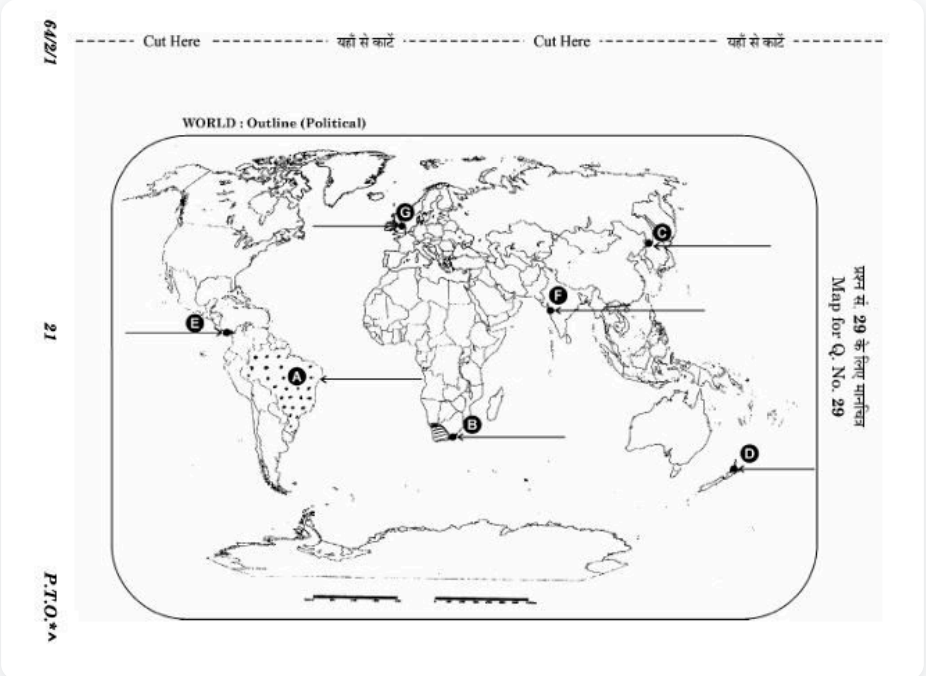
[1 Marks]

Answer: The Panama Canal connects the Atlantic Ocean in the east to the Pacific Ocean in the west.

Key Points: Atlantic Ocean-Pacific Ocean

Question 3.

On the given political outline map of the world seven geographical features have been marked as A, B, C, D, E, F and G. Identify any five of them with the help of the following information and write their correct names on the lines drawn near them :



(1)

The largest country of South America

[1 Marks]

Answer: The largest country of South America is Brazil. It covers an area of approximately 8.5 million square kilometers, making it not only the largest country in South America but also the fifth-largest country in the world.

Key Points: Brazil is the largest country in South America; it covers about 8.5 million sq. km; it is the fifth-largest country in the world.

(2)

An area of extensive commercial farming

[1 Marks]

Answer: The area marked on the map corresponding to extensive commercial farming is the 'American Corn Belt.' This region is known for its large-scale agricultural production, particularly of corn and soybeans, leveraging favorable climatic conditions.

Key Points: American Corn Belt-agricultural production-large scale farming-climatic advantage

(3)

Easternmost station of “Trans-Siberian Railway’.

[1 Marks]

Answer: The easternmost station of the Trans-Siberian Railway is Vladivostok.

Key Points: Vladivostok-Trans-Siberian Railway-easternmost station

(4)

A major sea-port

[1 Marks]

Answer: One of the major sea ports is the Port of New York, which is a significant commercial port located on the East Coast of the USA.

Key Points: Port of New York - Major sea port - Important for commerce and trade

(5)

The shipping canal

[1 Marks]

Answer: The shipping canal referred to in this context is the Suez Canal, which is a vital man-made waterway that connects the Mediterranean Sea to the Red Sea and facilitates international maritime trade.

Key Points: Suez Canal-Constructed in 1869-Connects Mediterranean and Red Sea-Gateway for Eastern and Western commerce

(6)

An international airport of Asia

[1 Marks]

Answer: An international airport of Asia is 'New Delhi International Airport'.

Key Points: New Delhi International Airport-Major international hub-Serves flights to numerous countries-Recognized as Indira Gandhi International Airport

(7)

An international airport of Europe

[1 Marks]

Answer: An example of an international airport in Europe is Frankfurt Airport, which is located in Germany. It serves as a major hub for international flights and connects many global destinations.

Key Points: Frankfurt Airport- located in Germany-international hub-major global connections

(8)

Name the largest country of South America in terms of area.

[1 Marks]

Answer: The largest country of South America in terms of area is Brazil.

Key Points: Largest country in South America-Brazil-area

(9)

Name an area of extensive commercial grain farming in Africa.

[1 Marks]

Answer: The area of extensive commercial grain farming in Africa is the 'Transvaal region' in South Africa.

Key Points: Commercial grain farming-Extensive agriculture-Africa-Transvaal region

(10)

Name major sea port of New Zealand.

[1 Marks]

Answer: The major sea port of New Zealand is Auckland.

Key Points: Auckland is the largest city in New Zealand-port for international trade-important economic center

(11)

Which country the Mississippi waterways is mainly related ?

[1 Marks]

Answer: The Mississippi waterways are mainly related to the United States of America.

Key Points: Mississippi Waterways-United States of America-Connects interior U.S.A with Gulf of Mexico

(12)

In which country Johannesburg international airport is located ?

[1 Marks]

Answer: Johannesburg International Airport is located in South Africa.

Key Points: Johannesburg International Airport-South Africa

(13)

Name the western most station of Trans-Siberian railway.

[1 Marks]

Answer: The western most station of the Trans-Siberian Railway is St. Petersburg.

Key Points: Trans-Siberian Railway-St. Petersburg-westernmost station

(14)

Name the western most station of Trans-Australian Railways.

[1 Marks]

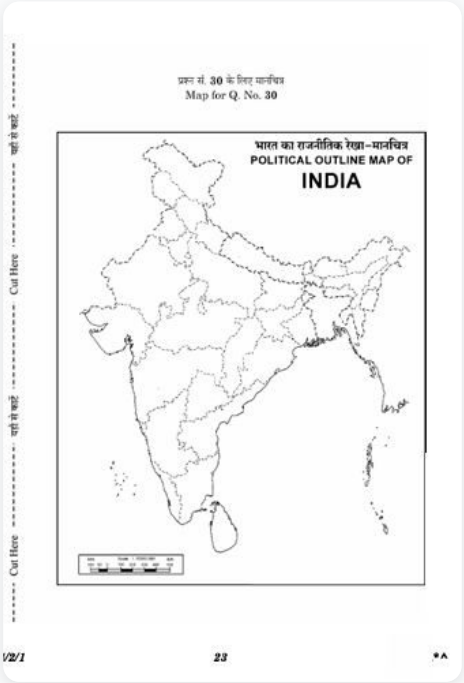
Answer: The western most station of the Trans-Australian Railways is Perth.

Key Points: Perth-Trans-Australian Railways-western terminus

Question 4.

On the given political outline Map of India, locate and label any five of

the following geographical features with appropriate symbols :



(1)

State with the highest level of urbanization

[1 Marks]

Answer: The state with the highest level of urbanization in India is Maharashtra. It is home to Mumbai, which is a major urban center.

Key Points: Maharashtra-Highest urbanization-Mumbai as urban center

(2)

State with the lowest level of density of population

[1 Marks]

Answer: The state with the lowest level of density of population is Arunachal Pradesh, which has a density of 0.11%.

Key Points: Arunachal Pradesh-0.11%-lowest density-hill state-north eastern state

(3)

The leading coffee producing state

[1 Marks]

Answer: The leading coffee producing state in India is Karnataka. It is primarily located in the Western Ghats region, which provides the ideal climate and topography for coffee cultivation. Coffee estates are prominent in districts like Chikmagalur, Kodagu (Coorg), and Hassan.

Key Points: Karnataka-Top coffee producer-Western Ghats-Climate and topography-Important districts (Chikmagalur, Kodagu, Hassan)

(4)

Jamnagar — Oil refinery

[1 Marks]

Answer: Jamnagar is located in the state of Gujarat. It is marked as an oil refinery on the map by using a symbol representing an oil refinery, typically a drop of oil or a factory icon.

Key Points: Location: Gujarat- Symbol: Oil refinery- Importance: Major oil production center

(5)

Khetri— copper mines

[1 Marks]

Answer: Khetri, located in Rajasthan, can be marked on the map at approximately 28.53° N latitude and 75.28° E longitude. It represents one of the significant copper mining areas in India.

Key Points: Khetri location, Rajasthan, copper mines, approximate coordinates

(6)

The Northern terminal station of North-South Corridor.

[1 Marks]

Answer: The Northern terminal station of the North-South Corridor is located in Srinagar, Jammu and Kashmir. It can be marked on the map with an appropriate symbol like a star or a dot.

Key Points: Location: Srinagar - Northern terminal - North-South Corridor - Symbol: star/dot

(7)

Tuticorin — major sea-port

[1 Marks]

Answer: Tuticorin, also known as Thoothukudi, is a major sea-port located on the southeastern coast of India in Tamil Nadu. It primarily deals with various types of cargo including coal, salt, food grains, and petroleum products. When marking it on the map, label it with the appropriate symbol for sea-ports.

Key Points: Tuticorin location; Major sea-port; Tamil Nadu; Cargo types; Label with port symbol

(8)

Name the state with the highest level of urbanisation.

[1 Marks]

Answer: The state with the highest level of urbanisation in India is Maharashtra.

Key Points: Maharashtra is known for its major urban centers; it has a high percentage of urban population; urbanization is driven by economic factors.

(9)

In which state is Jamnagar oil refinery located ?

[1 Marks]

Answer: The Jamnagar oil refinery is located in the state of Gujarat.

Key Points: Jamnagar oil refinery-Gujarat-oil refineries map

(10)

Name the northern terminal station of North-South Corridor.

[1 Marks]

Answer: The northern terminal station of the North-South Corridor is Srinagar.

Key Points: North-South Corridor-northern terminal station-Srinagar

(11)

Name the leading coffee producer state.

[1 Marks]

Answer: The leading coffee producer state in India is Karnataka.

Key Points: Karnataka-most coffee production-state of India

(12)

Name the state having the lowest level of population density.

[1 Marks]

Answer: The state having the lowest level of population density in India is Arunachal Pradesh.

Key Points: Arunachal Pradesh - low density - northeastern states - Himalayan region

(13)

In which state are the Khetri copper mines located ?

[1 Marks]

Answer: The Khetri copper mines are located in the state of Rajasthan.

Key Points: Khetri copper mines - Rajasthan

(14)

In which state is Tuticorin major sea port located ?

[1 Marks]

Answer: Tuticorin major sea port is located in the state of Tamil Nadu.

Key Points: Tuticorin port-Tamil Nadu-location

Section B

Question 5.

“Human Geography is the synthetic study of relationship between human societies and earth's surface.” Who among the following geographers has given this definition?

[1 Marks]

(A) Ellen C. Semple

(B) Ratzel

(C) George B. Cressey

(D) Paul Vidal de la Blache

Explanation:

The correct answer is Ratzel, as the provided context explicitly states that he defined human geography as 'the synthetic study of relationship between human societies and earth’s surface', emphasizing the importance of synthesis in understanding this relationship.

Question 6.

Read the following approaches of human geography and choose the correct option of the chronological order:

I. Exploration and description

II. Spatial organisation

III. Areal differentiation

IV. Regional analysis

[1 Marks]

(A) I, II, III, IV

(B) I, II, IV, III

(C) II, III, I, IV

(D) IV, III, II, I

Explanation:

The correct chronological order of approaches in human geography is I, II, III, IV. This sequence follows the development of geographical thought: first, exploration and description provided foundational knowledge; then spatial organization examined how various elements are arranged in space; areal differentiation focused on the differences between regions, and finally, regional analysis synthesized these ideas to examine specific regions in depth.

Question 7.

Which one of the following is the sub-field of ‘social geography’?

[1 Marks]

(A) Geography of Tourism

(B) Electoral Geography

(C) Geography of Resources

(D) Behavioural Geography

Explanation:

The correct answer is 'Behavioural Geography' as it is mentioned in the context as one of the sub-fields of social geography. The context provides a list of sub-fields under social geography, which

includes Behavioral Geography, thus confirming its affiliation with social geography.

Question 8. Which among the following is NOT the mineral based industry?

[1 Marks]

(A) Iron and steel

(B) Aluminium

(C) Cement

(D) Salt

Explanation: The correct answer is 'Salt' because while salt is derived from natural minerals and is used in chemical based industries, it does not fall under the category of mineral based industries which primarily use minerals as a raw material for production. Iron and steel, Aluminium, and Cement are all industries that utilize minerals directly in their manufacturing processes.

Question 9.

Read the following statements regarding open-cast mining and choose the correct option:

I This is the cheapest way of mining.

II The output is in large quantity.

III It requires specially designed lifts, drills

IV. It requires special ventilation system.

[1 Marks]

(A) Only III and IV are correct

(B) Only I and II are correct

(C) Only II and IV are correct

(D) Only I and III are correct

Explanation:

The correct option is 'Only I and II are correct'. Statement I is accurate because open-cast mining is described as the cheapest method of mining minerals that are near the surface. Statement II is also correct as the output is both large and rapid according to the context. However, statements III and IV are incorrect; those requirements pertain to underground mining, not open-cast mining.

Question 10.

Under which one of the following sectors, collection of information comes?

[1 Marks]

(A) Quaternary

(B) Secondary

(C) Primary

(D) Tertiary

Explanation:

The correct answer is 'Quaternary'. Quaternary activities involve the collection, production, and dissemination of information, as mentioned in the context. This sector focuses on knowledge-based services, including research and development.

Question 11. When will be the growth of population positive in any place and in which one of the following conditions?

[1 Marks]

(A) High birth rate, low death rate and high immigration

(B) High birth rate, high death rate and low immigration

(C) Low birth rate, low death rate and low immigration

(D) Low birth rate, high death rate and low immigration

Explanation: The correct option is 'High birth rate, low death rate and high immigration.' This is because positive growth of population occurs when the birth rate exceeds the death rate, resulting in a net increase. Additionally, high immigration contributes to population growth, as people moving into an area adds to the population count.

Question 12.

Study the following two statements and choose the correct option:

Statement I: In the last stage of demographic transition, both fertility and mortality decline considerably. Statement II: Resultant population is either stable or grows slowly.

[1 Marks]

(A) Statements I and II are correct, but Statement II is not the correct result of Statement I

(B) Statements I and II are correct, and Statement II is the correct result of Statement I.

(C) Only statement II is correct.

(D) Only statement I is correct.

Explanation:

Both statements are correct. Statement I describes the demographic characteristics in the last stage of demographic transition, where both birth rates (fertility) and death rates (mortality) decrease. Statement II accurately reflects the outcome of this situation, where the population becomes stable or grows slowly. Thus, Statement II is indeed the correct result of Statement I.

Question 13. Which one of the following railways is the longest in the world?

[1 Marks]

(A) Trans-Canadian Railway

(B) Trans-Siberian Railway

(C) The Orient Express Railway

(D) The Australian Trans-Continental Railway

Explanation: The correct answer is the Trans-Siberian Railway, which runs from St. Petersburg to Vladivostok across Russia, covering a distance of 9,332 km. This is explicitly stated in the context provided, highlighting it as the longest double-tracked and electrified trans-continental railway in the world.

Question 14.

Study the given statement I and II and choose the correct option:

Statement I: A society which fails to acknowledge and take effective measures to remove such discriminations cannot be treated as a civilised one.

Statement II: Duly acknowledging the adverse impacts of these discriminations, launched a campaign called ‘Beti Bachao - Beti Padhao’ in India.

[1 Marks]

(A) Statement I & II are incorrect.

(B) Statement I and II are correct, and Statement I is the correct explanation of II.

(C) Statement I and II are correct, but Statement I is not the correct explanation of II.

(D) Statement I & II are correct.

Explanation:

Both Statement I and II are correct. Statement I asserts that a society that does not address discrimination is uncivilized, which is supported by the context stating that the Government of India has recognized the adverse impacts of discrimination. Statement II describes the government initiative 'Beti Bachao - Beti Padhao', highlighting its acknowledgment of these issues. Thus, while both statements are true, Statement II is an example that illustrates the truth of Statement I, but is not a direct explanation of it.

Question 15.

Which among the following is NOT the correct feature of rural settlements?

[1 Marks]

(A) In rural areas, way of life is complex and fast.

(B) The sparsely located small settlements.

(C) In rural settlement, social relations among them are intimate.

(D) The rural settlements derive their basic needs from land based primary activities.

Explanation:

In rural areas, the way of life is generally simpler and not complex or fast. This statement is incorrect as rural settlements are characterized by slower, more stable lifestyles compared to urban areas where life is more complex and fast-paced.

Question 16. Choose the correct pair of the following types of towns

[1 Marks]

(A) Industrial - Mansi

(B) Administrative - Ankleshwar

(C) Garrison - Satna

(D) Mining - Singrauli

Explanation: The correct option is 'Mining - Singrauli'. Singrauli is an area rich in minerals, specifically coal, making it a mining town, which aligns with the context that states mining towns have developed in mineral-rich areas such as Singrauli.

Question 17. Which one of the following is garrison cantonment town?

[1 Marks]

(A) Jharia

(B) Kandala

(C) Saharanpur

(D) Mhow

Explanation: The correct option is Mhow, as it is explicitly mentioned in the context as one of the garrison cantonment towns that emerged alongside others like Ambala and Jalandhar.

Question 18.

Read the following statements regarding Border Roads and choose the correct option:

I. Border roads are strategically important.

II. They strengthen defence preparedness.

III. “National Highways Authority of India’ construct these roads.

IV. They are helpful in accelerating economic development.

[1 Marks]

(A) Only I, III and IV are correct.

(B) Only II, III and IV are correct.

(C) Only I and IV are correct.

(D) Only I, II and IV are correct.

Explanation:

The correct option is 'Only I, II and IV are correct.' as statements I, II, and IV accurately reflect the purpose and importance of Border Roads according to the context, which states that these roads are strategically important, enhance defence preparedness, and assist in economic development. Statement III is incorrect; it is the Border Road Organisation (BRO) that constructs these roads, not the National Highways Authority of India.

Question 19.

A Case Study

Jhabua district is located in the westernmost agro-climatic zone in Madhya Pradesh. It is, in fact, one of the five most backward districts of the country. It is characterized by high concentration of tribal population

(mostly Bhils). The people suffer due to poverty which has been accentuated by the high rate of resource degradation, both forest and land. The watershed management programmes funded by both the

ministries of “Rural Development” and “Agriculture”, Government of India, have been successfully implemented in Jhabua district which has gone a long way in preventing land degradation and improving soil quality. Watershed Management Programmes acknowledge the linkage between land, water and vegetation and attempts to improve livelihoods of people through natural resource management and community participation. In the past five years, the programmes funded by the Ministry of Rural Development alone (implemented by Rajiv Gandhi Mission for Watershed Management) has treated 20 percent of the total area under Jhabua district.

Q 15. Which among the following is correct meaning of ‘land degradation’ ?

[1 Marks]

(A) Increasing of agricultural land

(B) Declining productivity of the land

(C) Waterlogging in degraded land

(D) Increasing of degraded forests

Explanation:

The correct answer is 'Declining productivity of the land.' Land degradation refers to the deterioration of land quality which leads to a decline in its productivity, as highlighted in the context provided where it mentions 'if land is consistently used without managing its fertility? Land is degraded and productivity declines.'

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Q 16. Which one of the following is the main cause of land degradation ?

[1 Marks]

(A) Soil erosion

(B) Low productivity

(C) High productivity

(D) Increasing wastelands

Explanation:

The main cause of land degradation highlighted in the context is 'Soil erosion,' as it directly affects land resources and is a significant factor contributing to the depletion of soil fertility, especially in irrigated areas.

Question 21.

A Case Study

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Q 17. Which statement is NOT correct regarding Jhabua ?

[1 Marks]

(A) Poverty has increased in the people due to land degradation.

(B) Jhabua is tribal concentrated district.

(C) Watershed management programme has outstanding contribution in land treatment.

(D) State government has provided money to implement watershed management programme.

Explanation:

The statement 'State government has provided money to implement watershed management programme.' is NOT correct as the context specifies that the watershed management programmes were funded by the Government of India, specifically mentioning the ministries of 'Rural Development' and 'Agriculture', without attributing it to the state government.

Section C

Question 22. “Broadly 90 percent of the world population lives in about 10 percent of its land area.” Examine the statement in context of patterns of population distribution in the world.

[3 Marks]

Answer: The statement highlights the significant disparity in population distribution across the globe. Approximately 90% of the global population resides within merely 10% of the land area, indicating a concentrated settlement pattern. Major urban areas like Tokyo, Delhi, and New York exemplify this concentration, driven by factors such as economic opportunities, better infrastructure, and availability of resources. Despite vast expanses of unpopulated regions, particularly in deserts, mountains, and arctic zones, most people are clustered in fertile, temperate regions. Consequently, the demographic characteristics of areas vary significantly, with some regions like South Asia and East Asia being densely populated, while others, such as central Australia or northern Canada, remain sparsely inhabited. This uneven distribution impacts resource allocation, urban planning, and social dynamics.

Key Points: Concentration of population in urban areas; drivers like economy and resources; contrast between densely and sparsely populated regions; impact on demographics and urban planning

Question 23. “Migration may be interpreted as a spontaneous effort to achieve a better balance between population and resources.” Examine the statement in context of pull and push factors that influence migration.

[3 Marks]

Answer: Migration is often driven by the quest for improved living conditions and opportunities, highlighting the balance between population and available resources. Push factors, such as unemployment, poor standards of living, political instability, and natural disasters, compel individuals to leave their place of origin. Conversely, pull factors attract migrants to new areas, including better job prospects, security, and favorable climates. This movement can be permanent, temporary, or seasonal, with ramifications on the demographics of both origin and destination areas. This organic response to socio-economic conditions illustrates migration as a natural phenomenon in pursuit of a balanced life.

Key Points: Push factors: unemployment, poor living conditions, political turmoil; Pull factors: better job opportunities, stability, pleasant climate; Types of migration:

permanent, temporary, seasonal.

Question 24. Analyse any three causes for uneven spatial distribution of population in India.

[3 Marks]

Answer: India's uneven spatial distribution of population can be attributed to several factors. First, physical geography plays a crucial role; regions with fertile soil and favorable climate, such as the Gangetic plain, support denser populations, whereas arid or mountainous areas, like Rajasthan or the Himalayas, are less populated. Second, economic opportunities significantly influence population distribution; urban areas and states with industrial development, such as Maharashtra and Gujarat, attract migrants seeking jobs, contrasting with less developed regions. Lastly, historical factors, including migration patterns and colonial influence, have shaped population dynamics, leading to concentrated populations in certain states like Uttar Pradesh, while remote areas remain sparsely populated.

Key Points: Physical geography and resources; Economic opportunities and migration; Historical migration patterns

Question 25. “Dependence on erratic monsoon is still a big problem of Indian agriculture.” Support the statement.

[3 Marks]

Answer: Indian agriculture heavily relies on the monsoon, with only 33% of cultivated land being irrigated. This means that crop production for the majority of the country hinges on the timely arrival and adequate distribution of monsoon rains. Erratic rainfall leads to drought in drought-prone areas like Rajasthan, where it is insufficient and unpredictable. Additionally, sudden bursts of rain can result in soil erosion, further threatening agricultural stability. Such variability creates challenges like droughts or floods that affect crop yield, making agricultural prosperity highly dependent on consistent monsoon patterns.

Key Points: Dependence on monsoon for 67% of cultivated area - only 33% irrigated; Drought conditions in areas like Rajasthan; Sudden monsoon bursts causing soil erosion; Variability leads to crop loss due to droughts and floods; Agricultural livelihood for 64% of population relies on stable monsoon.

Question 26. Describe coal as a source of conventional energy in India.

[3 Marks]

Answer: Coal is a crucial source of conventional energy in India, primarily used for the generation of thermal power and the smelting of iron ore. It is classified as an exhaustible resource and is found mainly in the Gondwana and Tertiary geological deposits. Approximately 80% of India's coal reserves comprise bituminous coal, predominantly non-coking. The most significant coal fields are located in the Damodar Valley, with notable regions including Jharkhand and West Bengal. Utilizing this mineral

fuel is vital for supporting various sectors such as agriculture, transportation, and industry, making it indispensable for India's energy security.

Key Points: Coal is an exhaustible resource;Used for thermal power and iron ore smelting;Mainly found in Gondwana and Tertiary deposits;80% of coal is bituminous and non-coking;Key coal fields in Damodar Valley: Jharkhand and West Bengal;Essential for agriculture, industry, and transportation.

Question 27. Describe the importance of solar energy as a source of non-conventional energy in India.

[3 Marks]

Answer: Solar energy is of significant importance as a non-conventional energy source in India due to its abundant availability and environmental benefits. With solar energy being 7% more effective than coal-based plants and 10% more effective than nuclear plants, it presents an efficient alternative for meeting India’s energy demands. The potential for solar power is particularly high in states like Gujarat and Rajasthan, which receive ample sunlight. Additionally, solar energy is used in various applications such as heaters, cookers, and crop dryers, contributing to energy security. As a renewable resource, it helps reduce dependence on fossil fuels, offering a sustainable and eco-friendly solution to India's energy challenges. Furthermore, the initial investments in solar energy infrastructure promise long-term savings and environmental protection, making it a viable choice for the future.

Key Points: Abundant availability of solar energy - 7% more effective than coal, 10% more than nuclear - Key states: Gujarat, Rajasthan - Uses: heaters, cookers, crop dryers - Reduces dependence on fossil fuels - Sustainable and eco-friendly - Long-term savings despite initial investment

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Section D

Question 28. “High technology is the latest generation of manufacturing activities”. Explain the statement.

[5 Marks]

Answer: High technology, often referred to as high-tech, represents a significant evolution in manufacturing processes, heavily relying on intensive research and development (R&D). This innovation-driven manufacturing supports the creation of advanced scientific and engineering products, transforming traditional production methods. High-tech industries, such as pharmaceuticals and chemical manufacturing, exemplify the integration of technological advancements. Key characteristics include the specialization of skills, mechanization, and automation, leading to increased efficiency and quality control. Furthermore, modern industries utilize automated factories

equipped with feedback systems that enhance productivity and minimize waste. These advancements not only optimize operations but also facilitate the emergence of new products, driving economic growth. The reliance on a professional workforce underscores the importance of skilled labor in high-tech manufacturing, ensuring that the processes align with contemporary demands. This shift towards high technology signifies a broader economic transformation, emphasizing the need for innovation to stay competitive in a global market.

> **Key Points: Application of R&D in manufacturing,Characteristics of high-tech industries,Role of mechanization and automation,Evolution of production methods,Importance of skilled workforce**

Question 29. "Services occur at different levels throughout the world." Support the statement with examples.

[5 Marks]

Answer: Services are vital to the global economy and exist at various levels tailored to different needs. Low-order services, such as grocery stores and laundries, are widespread and accessible, catering to everyday demands. In contrast, high-order services like specialized medical care, legal advice, and consultancy are less common but crucial for specific professional needs. Additionally, transport services such as buses and trains connect industries and individuals, reinforcing the notion that services play a multifaceted role in both personal and economic realms. Countries with developed economies typically have a larger proportion of their workforce engaged in service industries, showcasing the diverse service landscape, from individual service providers to large-scale corporate services, which include health care, education, and hospitality.

> **Key Points: 1. Definition of services and their importance 2. Examples of low-order services (grocery, laundry) 3. Examples of high-order services (medical, legal) 4. Role of transport services in connecting industries and individuals 5. Comparison of workforce engagement in developed vs. developing countries**

Question 30. "Integrated tribal development project laid the highest priority on development of transport and communications, agriculture and allied activities & social and community services." Examine the statement in the context of Bharmaur region.

[5 Marks]

Answer: The Integrated Tribal Development Project (ITDP) in the Bharmaur region of Himachal Pradesh has significantly impacted the development of transport, agriculture, and community services. Launched in the 1970s, this initiative aimed to improve the living standards of the Gaddi tribes by addressing infrastructural deficits. Transport and communication enhancements allowed better access to markets and health services, particularly for remote villages in Tundah and Kugti. The development of roads connected these areas to broader economic opportunities, facilitating agricultural growth by enabling farmers to transport goods efficiently. Additionally, social services, such as healthcare and education, have been prioritized under this plan, directly influencing the

quality of life. Villages along the river Ravi, especially in Holi and Khani, have become key beneficiaries of these infrastructural developments, leading to improved living conditions. Overall, the ITDP has played a vital role in narrowing the socio-economic gap and fostering sustainable development among the tribal communities of Bharmaur.

Key Points: Infrastructural development in Bharmaur initiated from the 1970s; Focus on transport, agriculture, and community services; Improvement in healthcare and education facilities; Remote areas like Tundah and Kugti still lagging; Enhanced connectivity led to economic opportunities; ITDP aimed to uplift the Gaddi tribe's living standards.

Question 31. How are pipelines the most convenient and efficient mode of transporting liquids and gases over long distances in India? Explain with examples.

[5 Marks]

Answer: Pipelines represent the most convenient and efficient means of transporting liquids and gases over long distances in India. They facilitate continuous and uninterrupted flow, which is crucial for various sectors. For instance, Oil India Limited utilizes pipelines under the Ministry of Petroleum and Natural Gas to transport crude oil and natural gas efficiently. A notable example is the pipeline network established by GAIL, which connects the Mumbai High gas fields to several fertiliser and power plants across western and northern India, enhancing the gas market's infrastructure. Furthermore, India's pipeline network has expanded significantly from 1,700 km to approximately 18,500 km, with projections to exceed 34,000 km. This expansion not only demonstrates the effectiveness of pipelines in reducing transportation costs and minimizing environmental impact but also bolsters economic development by ensuring a reliable supply of essential resources. The Big Inch pipeline in the U.S.A. is an analogous example, which showcases the effectiveness of such systems across countries. Overall, the extensive use of pipelines in India exemplifies their pivotal role in resource management and delivery.

Key Points: Pipelines offer uninterrupted flow; example of Oil India Limited and GAIL; significant network expansion in India from 1,700 km to 18,500 km; efficient and cost-effective transportation; environmental benefits; comparative example of the Big Inch pipeline in the USA.

Question 32. Explain with examples the importance of Indian ports as gateways of international trade.

[5 Marks]

Answer: Indian ports serve as crucial gateways for international trade, leveraging India's extensive coastline of approximately 7,517 km. The twelve major ports, such as Mumbai, Chennai, and Kolkata, handle a significant portion of India’s cargo traffic. For instance, Mumbai Port is the largest and most significant, accounting for about 20% of the country's cargo throughput. These ports facilitate docking, loading, and storage of goods, enabling efficient transport of around 95% of India’s foreign trade by

volume. The role of ports became even more pronounced during British colonization, as they were developed to serve as trade hubs. Additionally, the emerging sea routes through these ports enhance connectivity with global markets, thus promoting economic growth and foreign investments. The development of infrastructures such as container terminals and special economic zones is vital for boosting trade efficiency and attracting foreign investment. Overall, Indian ports not only serve as hubs for importing and exporting goods but are also pivotal in enhancing India's position in global trade dynamics.

> **Key Points: Extensive coastline of 7,517 km; Major ports like Mumbai and Chennai; Facilitate 95% of foreign trade by volume; Developed during British colonization; Enhance global connectivity; Economic growth and foreign investments; Critical for importing and exporting goods.**

Question 33.

Explain any five factors affecting the location of industries in the world.

[5 Marks]

Answer: The location of industries is influenced by several critical factors that aim to minimize production costs and maximize profits. Firstly, access to markets is paramount; industries thrive in regions where there is a strong consumer base capable of purchasing their goods. Secondly, the availability of labor supply, particularly skilled labor, plays a crucial role in decision-making for industries, despite growing automation. Thirdly, access to sources of energy is necessary to ensure smooth operations. Fourthly, government policies can significantly influence industrial locations through incentives aimed at promoting balanced economic development in specific areas. Lastly, agglomeration economies, where industries benefit from being close to one another, foster collaboration and reduce transportation costs, making certain locations more attractive. Understanding these factors can elucidate why industries select particular regions for their operations.

> **Key Points: Access to Market-Access to Labour Supply-Access to Sources of Energy-Government Policy-Agglomeration Economies**

Question 34.

Analyse the five basis of international trade in the world.

[5 Marks]

Answer: International trade is underpinned by five primary bases: comparative advantage, specialisation, complementarity, transferability, and mutual benefit. Comparative advantage suggests that countries can produce goods efficiently due to different resource endowments, opting to trade for goods they produce less efficiently. Specialisation enhances this by allowing nations to focus on the production of specific goods, thus maximizing output. Complementarity occurs when countries' needs

align, fostering trade relationships. Moreover, transferability is crucial as it involves the ability to move goods efficiently across borders, supported by improved transportation and communication. Finally, international trade ensures mutual benefit, as it allows nations to access products they cannot produce, enhancing overall economic welfare. Each of these bases is essential for promoting global economic interactions and creating interdependence among nations.

Key Points: Comparative Advantage-Specialisation-Complementarity-Transferability-Mutual Benefit