CUET UG Geography Sample Paper -13

Duration: 1 Hour **Maximum Marks: 250**

Instructions

- This paper contains a total of 50 Multiple Choice Questions.
- Each correct answer carries **+5 marks**.
- Each incorrect answer carries **-1 mark**.
- No negative marking for unattempted questions.

Q1. Consider the following statements regarding the 'Humanization of Nature' and select the correct option:
(i) It is a stage where people begin to understand their environment and the forces of nature over time.
(ii) It leads to the creation of cultural landscapes through the use of technology.
(iii) It is synonymous with Environmental Determinism.

(A) Only (i)
(B) Both (i) and (ii)
(C) Both (ii) and (iii)
(D) (i), (ii) and (iii)

Q2. Which sub-field of Social Geography is correctly matched with its interface with sister disciplines of Social Sciences?

(A) Gender Geography – Anthropology
(B) Historical Geography – History
(C) Leisure Geography – Sociology
(D) Cultural Geography – Psychology

Q3. Who among the following geographers is associated with the concept of 'Possibilism'?

(A) Friedrich Ratzel

(B) Lucian Febvre

(C) Ellen Churchill Semple

(D) Carl Ritter

Q4. Arrange the following countries in descending order of their population density (as per World Bank/UN trends):

1. Bangladesh
2. Russia
3. Japan
4. Brazil

(A) 1, 3, 4, 2

(B) 3, 1, 2, 4

(C) 1, 4, 3, 2

(D) 4, 1, 3, 2

Q5. Which of the following is an example of a 'Social Push Factor' for migration?

(A) Crop failure due to drought

(B) Persecution based on religious beliefs

(C) Promise of high-paying jobs in cities

(D) Better educational opportunities abroad

Q6. Identify the correct statement about the 'Age-Sex Pyramid' of a developing country like Nigeria:

(A) It has a narrow base and a wide top.

(B) It is bell-shaped and tapers towards the top.

(C) It has a wide base and a rapidly tapering top.

(D) It is rectangular in shape, showing stable growth.

Q7. The 'Human Development Index' (HDI) was introduced in 1990 by which organization?

(A) UNESCO

(B) UNDP

(C) World Bank

(D) WHO

Q8. Assertion (A): High Human Development index scores are not always dependent on the size of the economy.
Reason (R): Small countries like Sri Lanka and Trinidad and Tobago have often ranked higher than larger neighboring economies in HDI.

(A) Both (A) and (R) are true and (R) is the correct explanation of (A).

(B) Both (A) and (R) are true but (R) is NOT the correct explanation of (A).

(C) (A) is true but (R) is false.

(D) (A) is false but (R) is true.

Q9. The transition from Stage II to Stage III of the Demographic Transition Model is marked by:

(A) Rising birth rates and falling death rates.

(B) Falling birth rates and low, stable death rates.

(C) High birth rates and high death rates.

(D) Negative population growth.

Q10. Match List I (Agriculture) with List II (Characteristic):

List I (Type)	**List II (Feature)**
I. Mediterranean	1. Specialized in Viticulture
II. Market Gardening	2. Located near urban centers (Truck farming)
III. Factory Farming	3. Livestock rearing in stalls (poultry/cattle)
IV. Extensive Grain	4. Low yield per hectare, high yield per person

(A) I-1, II-2, III-3, IV-4

(B) I-2, II-1, III-4, IV-3

(C) I-1, II-3, III-2, IV-4

(D) I-4, II-2, III-3, IV-1

Q11. Which of the following is a characteristic of 'Quinary' activities?

(A) Extracting iron ore from mines.

(B) Teaching in a primary school.

(C) High-level decision making and policy formulation.

(D) Manufacturing automobiles in a factory.

Q12. The 'Ruhr Coalfield' is located in which country?

(A) France

(B) Germany

(C) USA

(D) United Kingdom

Q13. Which of the following is an example of an 'Agro-based' industry?

(A) Petrochemicals

(B) Iron and Steel

(C) Cotton Textiles

(D) Aluminum Smelting

Q14. In 'Plantation Agriculture', which of the following is a single-crop specialization?

(A) Mixed Farming

(B) Coffee

(C) Dairy Farming

(D) Nomadic Herding

Q15. What is the primary motive behind 'Cooperative Farming'?

(A) Forcible state control of all land.

(B) Voluntary pooling of resources for more efficient farming.

(C) Large scale migration of farmers to urban areas.

(D) Eliminating all use of machinery in agriculture.

Q16. Which of the following describes the 'Truck Farming' specialization found near urban centers?

(A) The cultivation of flowers for aesthetic purposes.

(B) The intensive cultivation of vegetables for distant markets, linked by fast transport.

(C) The rearing of livestock specifically for wool and hide.

(D) A form of shifting cultivation practiced in the tropics.

Q17. Identify the 'Secondary Activity' from the following options:

(A) Deep sea fishing

(B) Harvesting of timber

(C) Smelting of iron ore into steel

(D) Banking and Insurance services

Q18. Assertion (A): The Panama Canal has significantly reduced the distance between the East and West coasts of the United States.
Reason (R): It connects the Atlantic Ocean with the Indian Ocean via a series of six locks.

(A) Both (A) and (R) are true and (R) is the correct explanation of (A).

(B) Both (A) and (R) are true but (R) is NOT the correct explanation of (A).

(C) (A) is true but (R) is false.

(D) (A) is false but (R) is true.

Q19. Which of the following is the headquarters of the World Trade Organization (WTO)?

(A) Paris, France

(B) Washington D.C., USA

(C) Geneva, Switzerland

(D) Brussels, Belgium

Q20. Identify the 'Cyber Space' or the World Wide Web (WWW) as a form of communication:

(A) Personal Communication

(B) Public/Mass Communication

(C) Non-electrical Communication

(D) Traditional Folk Communication

Q21. Which trans-continental railway connects St. Petersburg to Vladivostok?

(A) Canadian Pacific Railway

(B) Union and Central Pacific Railway

(C) Trans-Siberian Railway

(D) Australian Trans-continental Railway

Q22. **Map Logic:** If a vessel is traveling from London to Mumbai via the shortest possible sea route, which specific man-made structure must it pass through?

(A) Panama Canal

(B) Suez Canal

(C) Kiel Canal

(D) Strait of Magellan

Q23. Which of the following regions is a major producer of 'Spring Wheat' in the world?

(A) The Prairies of Canada

(B) The Pampas of Argentina

(C) The Velds of South Africa

(D) The Downs of Australia

Q24. Identify the 'Nodal Point' where the North-South and East-West corridors of India intersect:

(A) Nagpur

(B) Jhansi

(C) Delhi

(D) Hyderabad

Q25. The 'Great Lakes' waterway is shared by which two countries?

(A) USA and Mexico

(B) USA and Canada

(C) Brazil and Argentina

(D) Germany and France

Q26. Which of the following is a 'Terminal Port' of the Trans-Australian Railway on the West Coast?

(A) Sydney

(B) Melbourne

(C) Perth

(D) Adelaide

Q27. As per the 2011 Census of India, which state has the highest 'Growth Rate' of population during 2001-2011?

(A) Bihar

(B) Meghalaya

(C) Uttar Pradesh

(D) Rajasthan

Q28. The 'Physiological Density' of population is calculated as:

(A) Total Population / Total Area

(B) Total Population / Net Cultivated Area

(C) Total Rural Population / Net Sown Area

(D) Total Population / Total Urban Area

Q29. Match the following 'Linguistic Groups' with their respective regions in India:

Linguistic Group	**Region/State**
I. Dravidian	1. North-East India
II. Sino-Tibetan	2. South India
III. Austric	3. Central India (Tribal belts)

(A) I-2, II-1, III-3

(B) I-1, II-2, III-3

(C) I-3, II-2, III-1

(D) I-2, II-3, III-1

Q30. Which of the following is the most significant 'Pull Factor' for rural to urban migration in India?

(A) Lack of healthcare in villages

(B) High cost of living in cities

(C) Better employment opportunities and higher wages

(D) Social discrimination in rural areas

Q31. Which of the following is an example of an 'Industrial Town' in India?

(A) Chandigarh

(B) Jamshedpur

(C) Varanasi

(D) Shimla

Q32. The 'Amnon' and 'Sali' crops in West Bengal are types of:

(A) Wheat

(B) Rice

(C) Jute

(D) Cotton

Q33. Identify the 'Clustered' settlement pattern most commonly found in:

(A) Alluvial plains of North India

(B) Rugged terrain of Himalayas

(C) Arid regions of Rajasthan

(D) Forested tracts of Central India

Q34. Assertion (A): Watershed management is vital for sustainable development in India.

Reason (R): It helps in surface water harvesting and groundwater recharge to prevent water scarcity.

(A) Both (A) and (R) are true and (R) is the correct explanation of (A).
(B) Both (A) and (R) are true but (R) is NOT the correct explanation of (A).
(C) (A) is true but (R) is false.
(D) (A) is false but (R) is true.

Q35. Which state is the leading producer of 'Manganese' in India?

(A) Odisha
(B) Karnataka
(C) Maharashtra
(D) Madhya Pradesh

Q36. The 'Golden Quadrilateral' project is managed by which authority?

(A) Border Roads Organization
(B) National Highways Authority of India (NHAI)
(C) State Public Works Department
(D) Indian Railways

Q37. The first 24-hour dedicated news channel of India (Doordarshan News) was launched in:

(A) 1991
(B) 2003
(C) 1982
(D) 2014

Q38. Which type of coal is found in Neyveli, Tamil Nadu?

(A) Anthracite

(B) Bituminous

(C) Lignite

(D) Peat

Passage I

Read the following passage and answer the questions 39 to 43:

The Indira Gandhi Canal, originally known as the Rajasthan Canal, is one of the largest canal systems in India. Conceived by Kanwar Sain in 1948, the canal project was launched in 1958. The canal originates at Harike barrage in Punjab and runs parallel to the Pakistan border. It has transformed the desert ecology of Rajasthan. While it has brought prosperity through the 'Green Revolution' in the desert, it has also led to environmental issues like waterlogging and soil salinity. The project is implemented in two stages: Stage I (Ganganagar, Hanumangarh) and Stage II (Bikaner, Jaisalmer, Barmer).

Q39. Who conceived the idea of the Rajasthan Canal?

(A) M.S. Swaminathan

(B) Kanwar Sain

(C) Amartya Sen

(D) Jawaharlal Nehru

Q40. The canal originates from which barrage?

(A) Bhakra

(B) Nangal

(C) Harike

(D) Pong

Q41. Which environmental problem is NOT associated with the canal as per the passage?

(A) Waterlogging

(B) Soil Salinity

(C) Deforestation

(D) Desert Ecology Transformation

Q42. Which district is covered under Stage II of the project?

(A) Ganganagar

(B) Hanumangarh

(C) Jaisalmer

(D) Ludhiana

Q43. The canal runs parallel to the border of which country?

(A) China

(B) Pakistan

(C) Nepal

(D) Bangladesh

Q44. Which of the following is a 'Point Source' of water pollution?

(A) Agricultural runoff

(B) Industrial wastewater pipe

(C) Urban street runoff

(D) Atmospheric deposition

Q45. The accumulation of which gas is primarily responsible for Global Warming?

(A) Nitrogen

(B) Oxygen

(C) Carbon Dioxide

(D) Argon

Passage 2

Energy Resources - Solar and Wind

Read the following passage and answer the questions 46 to 50:

Non-conventional energy sources like solar and wind are renewable and environment-friendly. India is endowed with abundant sunshine, making solar energy a viable option. The Western part of India, particularly Rajasthan and Gujarat, has high potential for solar energy. Similarly, wind energy is harnessed using wind turbines. The largest wind farm cluster is located in Tamil Nadu from Nagarcoil to Madurai. Unlike fossil fuels, these sources do not emit greenhouse gases and are essential for sustainable development.

Q46. Why are solar and wind energy called 'non-conventional'?

(A) Because they are based on fossil fuels.

(B) Because they are renewable and environment-friendly.

(C) Because they are very expensive to use.

(D) Because they are only used in rural areas.

Q47. Which state has the largest wind farm cluster in India?

(A) Rajasthan

(B) Gujarat

(C) Tamil Nadu

(D) Maharashtra

Q48. Which region is specifically mentioned for its high solar energy potential?

(A) Eastern India

(B) Western India (Rajasthan/Gujarat)

(C) Northern Himalayas

(D) Coastal Odisha

Q49. A major advantage of renewable energy over fossil fuels is:

(A) It emits more carbon dioxide.

(B) It does not emit greenhouse gases.

(C) It is found deep inside the earth.

(D) It is a finite resource.

Q50. Sustainable development requires the use of:

(A) Only coal and petroleum.

(B) Non-renewable resources.

(C) Environment-friendly renewable sources.

(D) High-cost imported fuels.

Detailed Solutions

Q1.

Solution

Concept:

The relationship between humans and nature is central to Human Geography. It evolves from a stage where nature dictates human life (Naturalization of Humans) to a stage where humans modify nature to suit their needs (Humanization of Nature).

Solution:

1. Statement (i) is correct: As humans interact with their environment over time, they begin to understand the laws of nature and the possibilities it offers. 2. Statement (ii) is correct: This understanding allows humans to use technology to create cultural landscapes, such as health resorts on highlands, orchards in plains, and large urban sprawls. 3. Statement (iii) is incorrect: 'Humanization of Nature' is synonymous with **Possibilism**, not Environmental Determinism. Environmental Determinism refers to the 'Naturalization of Humans' where humans are passive and nature is the active agent. 4. Therefore, only statements (i) and (ii) are accurate descriptions of this process. It represents a shift from necessity to freedom.

Final Answer: Both (i) and (ii)

Answer: (B)

Q2.

Solution

Concept:

Human Geography is an interdisciplinary field. Each sub-field focuses on a specific aspect of human life and draws data, theories, and methodologies from a corresponding social science discipline.

Solution:

1. Historical Geography (Option B) is correctly matched with History. It involves the study of how geographical features and human activities have changed over time in a specific area. 2. Gender Geography's interface is primarily with **Sociology and Anthropology** (focusing on social constructs of gender), while Anthropology is usually linked to the Geography of Social Well-being or Cultural Geography. 3. Leisure Geography's interface is with **Sociology**, but Option B is a more direct and standard academic pairing. 4. Cultural Geography is primarily linked with **Anthropology**, while Behavioral Geography is linked with **Psychology**. 5. Understanding these interfaces is crucial for geographers to apply multi-dimensional perspectives to spatial problems.

Final Answer: Historical Geography – History

Answer: (B)

Q3.

Solution

Concept:

Possibilism is a philosophy that emerged as a reaction to Environmental Determinism. It emphasizes that the physical environment is passive and that humans, through their culture and technology, are the active agents of change.

Solution:

1. **Lucian Febvre** (Option B) was a French historian and geographer who coined the term 'Possibilism'. He famously argued that there are no necessities, but everywhere possibilities, and man as the master of these possibilities is the judge of their use. 2. Friedrich Ratzel and Ellen Churchill Semple were key proponents of **Environmental Determinism**. 3. Carl Ritter was a contemporary of Alexander von Humboldt and was associated with a more teleological view of geography, though his work laid the groundwork for modern regional analysis. 4. Possibilism allowed for a more human-centric view of geography, acknowledging that while nature sets limits, humans have the power to overcome them.

Final Answer: Lucian Febvre

Answer: (B)

Q4.

Solution

Concept:

Population density is influenced by physical factors (climate, soil, water) and socio-economic factors (industrialization, urbanization). Understanding global density patterns helps identify regions of high resource pressure.

Solution:

1. **Bangladesh** (1) is one of the most densely populated countries in the world due to its fertile alluvial delta and high agricultural productivity, with over 1,100 persons/sq km. 2. **Japan** (3) follows with a high density (approx. 340 persons/sq km) concentrated in narrow coastal plains like the Kanto Plain. 3. **Brazil** (4) has a relatively low average density (approx. 25 persons/sq km) as large parts of the Amazon basin are sparsely populated. 4. **Russia** (2) has the lowest density (approx. 8.5 persons/sq km) among these four due to its massive land area, much of which is uninhabitable tundra or taiga. 5. Correct order: 1, 3, 4, 2.

Final Answer: 1, 3, 4, 2

Answer: (A)

Q5.

Solution

Concept:

Migration is caused by Push factors (unfavorable conditions at the origin) and Pull factors (attractive conditions at the destination). These can be economic, environmental, or social.

Solution:

1. A **Social Push Factor** is a condition in the home society that forces people to leave due to a lack of social safety, freedom, or rights. 2. **Persecution based on religious beliefs** (Option B) is a classic social/political push factor. It creates an environment of fear and exclusion, compelling individuals to seek refuge. 3. Crop failure (Option A) is an **Environmental/Economic Push Factor**. 4. Promise of jobs (Option C) and educational opportunities (Option D) are **Pull Factors** because they attract people toward a new destination rather than forcing them out of their current one. 5. Differentiating these factors is essential for migration policy and humanitarian aid planning.

Final Answer: Persecution based on religious beliefs

Answer: (B)

Q6.

Solution

Concept:

Population pyramids (Age-Sex pyramids) are graphical representations of the age and sex composition of a population. The shape of the pyramid directly reflects the birth and death rates, and consequently, the stage of demographic development of a country.

Solution:

1. Nigeria is a classic example of a developing country in the early stages of the Demographic Transition. 2. A pyramid with a **wide base and a rapidly tapering top** (Option C) indicates high fertility and high mortality rates. 3. The wide base shows that there is a large proportion of young people in the population due to high birth rates. The rapid tapering towards the top indicates that many people die at younger ages, and few reach old age, signifying a lower life expectancy. 4. This shape is characteristic of an "Expanding Population." In such societies, the dependency ratio is high because of the large number of children who are not yet in the workforce. 5. For a geographer, this shape signals the need for heavy investment in schools, pediatric healthcare, and job creation for the upcoming youth bulge. This contrasts sharply with the "Constrictive" pyramids of developed nations like Japan, which have narrow bases and wider tops.

Final Answer: It has a wide base and a rapidly tapering top.

Answer: (C)

Q7.

Solution

Concept:

The Human Development Index (HDI) was created to emphasize that people and their capabilities should be the ultimate criteria for assessing the development of a country, rather than economic growth alone.

Solution:

1. The HDI was introduced in 1990 by the **United Nations Development Programme (UNDP)** (Option B). 2. It was formulated by a team of economists, most notably **Dr. Mahbub-ul-Haq** and **Amartya Sen**. 3. The index ranks countries on a scale of 0 to 1 based on three key dimensions: **Long and healthy life** (measured by life expectancy), **Knowledge** (measured by mean and expected years of schooling), and **A decent standard of living** (measured by GNI per capita). 4. By shifting the focus away from pure GDP, the UNDP provided a tool that forced governments to look at social outcomes. 5. Every year, the UNDP publishes the Human Development Report, which categorizes countries into 'Very High', 'High', 'Medium', and 'Low' human development groups. 6. This index is a cornerstone of human geography as it allows for a spatial comparison of "well-being" and helps identify regions where economic wealth is not translating into human progress.

Final Answer: UNDP

Answer: (B)

Q8.

Solution

Concept:

The relationship between wealth and human development is not linear. A country's choice of policy and distribution of resources can lead to high human development outcomes even with relatively modest economic resources.

Solution:

1. The **Assertion (A) is true**: A large economy (high GDP) does not automatically guarantee high human development. Wealth can be concentrated in the hands of a few, or a government may choose to spend more on defense than on education or health. 2. The **Reason (R) is true**: Smaller nations like **Sri Lanka** and **Trinidad and Tobago** have historically achieved higher HDI ranks than their much larger neighbors (like India or Brazil) because they made early, sustained investments in literacy and public health. 3. The Reason provides a concrete geographical example that proves the Assertion. It shows that "Social Investment" is often more critical for HDI than "Economic Scale." 4. Therefore, both statements are correct, and the reason accurately explains the principle that human development is about the *quality* of life provided to the average citizen, not the total size of the national treasury. 5. This is a vital lesson in developmental geography: resources must be managed with a focus on "Equity" to achieve high HDI scores.

Final Answer: Both (A) and (R) are true and (R) is the correct explanation of (A).

Answer: (A)

Q9.

Solution

Concept:

The Demographic Transition Model (DTM) maps out five stages of population change. The transition from Stage II to Stage III is a critical turning point where population growth begins to slow down.

Solution:

1. **Stage II** is the stage of "Population Explosion," where birth rates remain high but death rates fall sharply. 2. The **transition to Stage III** (Option B) occurs when the **birth rate begins to fall** significantly. 3. This decline in birth rates is usually caused by urbanization, better access to contraception, and an increase in female literacy. As societies modernize, the economic value of children changes—they are no longer needed as farm labor but require investment in education. 4. In Stage III, the death rate remains low and stable. While the total population continues to grow because the birth rate is still higher than the death rate, the *rate* of growth decelerates. 5. Most developing countries like India are currently in this transitional phase. Understanding this shift is essential for government planners to prepare for a "demographic dividend" as the number of dependents decreases relative to the working-age population.

Final Answer: Falling birth rates and low, stable death rates.

Answer: (B)

Q10.

Solution

Concept:

Primary activities like agriculture are highly diverse. Matching their specific characteristics to their technical names is a key requirement for mastering world agricultural geography.

Solution:

1. **Mediterranean Agriculture** (I) is highly specialized in **Viticulture** (1). The unique climate of the Mediterranean—mild, wet winters and hot, dry summers—is perfectly suited for growing high-quality grapes for the wine industry. 2. **Market Gardening** (II) is located **near urban centers** (2). It is often called 'Truck Farming' because the produce (vegetables, fruits, flowers) must be transported quickly to the city before it spoils. 3. **Factory Farming** (III) involves **livestock rearing in stalls** (3). This is an industrial approach where poultry and cattle are kept in confined spaces and fed on manufactured feed to maximize output. 4. **Extensive Commercial Grain Cultivation** (IV) is characterized by **low yield per hectare but high yield per person** (4). This is because the farms are massive and fully mechanized, meaning very few workers produce a huge total surplus of grain. 5. The correct sequence I-1, II-2, III-3, IV-4 illustrates the spectrum from climate-dependent specialty farming to modern, capital-intensive industrial farming.

Final Answer: I-1, II-2, III-3, IV-4

Answer: (A)

Q11.

Solution

Concept:

The "Quinary" sector represents the most advanced level of the economic hierarchy. It is often referred to as the "Gold Collar" sector because it involves people who are responsible for the highest level of decision-making that affects global and national economies.

Solution:

1. **High-level decision making and policy formulation** (Option C) is the defining characteristic of Quinary activities. 2. This sector is a specialized sub-division of the tertiary/quaternary sectors, but it is distinguished by the level of authority and influence. It includes top-tier government officials, senior corporate executives, and world-class research scientists. 3. Extracting ore (A) is a **Primary** activity; Teaching (B) is generally **Quaternary**; and manufacturing (D) is **Secondary**. 4. The Quinary sector is unique because its "product" is not information or goods, but rather the creation and interpretation of ideas and the setting of strategic directions. 5. In modern geography, this sector is studied to understand the "Command and Control" functions of global cities like New York, London, and Tokyo. Even though these workers represent less than 1

Final Answer: High-level decision making and policy formulation.

Answer: (C)

Q12.

Solution

Concept:

Industrial geography explores how the presence of specific natural resources leads to the development of massive industrial complexes. The Ruhr region is perhaps the most famous example of a resource-driven industrial landscape in history.

Solution:

1. The **Ruhr Coalfield** is located in **Germany** (Option B). It is situated in the western part of the country, primarily in the state of North Rhine-Westphalia. 2. For over a century, the high-quality bituminous coal found here fueled the industrial might of Europe. It led to the development of a dense cluster of cities like Essen and Dortmund, specializing in heavy iron and steel production. 3. Geographically, the region is interesting because it has transitioned into a "Post-Industrial" phase. As coal mining became less profitable and environmental concerns rose, the "Smoke-stack" landscape was transformed into a hub for technology and services. 4. However, the legacy of the coalfield remains in the region's dense transport network and urban structure. 5. In NTA Geography papers, the Ruhr is frequently used to illustrate the life cycle of an industrial region—from the "Old Industrial" era dominated by coal to the modern "New Economy" phase.

Final Answer: Germany

Answer: (B)

Q13.

Solution

Concept:

Industries are categorized based on their raw material source. Agro-based industries create a critical economic bridge between the rural agricultural sector and urban manufacturing centers.

Solution:

1. **Cotton Textiles** (Option C) is the most prominent **Agro-based** industry. It depends entirely on raw cotton, which is a fiber crop produced by the primary sector. 2. Petrochemicals (A) is **Chemical-based**; Iron and Steel (B) and Aluminum (D) are **Mineral-based**. 3. The geography of the cotton textile industry was historically tied to "Raw Material Localization" (being near cotton-growing regions like Gujarat and Maharashtra) but later shifted toward markets and ports due to the "non-weight-losing" nature of cotton. 4. This industry is a major employer in developing nations and demonstrates the concept of "Forward Linkage," where agricultural success leads to industrial prosperity. 5. In the context of India, it is the oldest and one of the most significant sectors for export earnings, illustrating the synergy between favorable soil (Black Soil/Regur) and industrial capital.

Final Answer: Cotton Textiles

Answer: (C)

Q14.

Solution

Concept:

Plantation agriculture was introduced by European colonial powers in the tropics. It is a highly commercialized form of farming that focuses on a single crop for export to global markets.

Solution:

1. **Coffee** (Option B) is a classic example of a single-crop specialization in plantation agriculture. 2. Unlike mixed farming or subsistence farming, a plantation focuses on one crop over thousands of hectares to achieve "economies of scale." 3. This system requires massive capital investment, scientific methods of cultivation, and a large, cheap labor force. 4. Geographically, plantations are usually located in the tropics where temperature and rainfall are high (e.g., Brazil for coffee, Malaysia for rubber, India/Sri Lanka for tea). 5. The "Fazendas" of Brazil are famous coffee plantations. This type of farming has often been criticized for creating "monocultures" that are susceptible to pests and international price fluctuations, but it remains a pillar of the export economy for many tropical nations.

Final Answer: Coffee

Answer: (B)

Q15.

Solution

Concept:

Cooperative farming represents a middle path between capitalist individual farming and socialist state-controlled farming. It is based on the principle of mutual benefit and democratic management.

Solution:

1. The primary motive behind **Cooperative Farming** is the **voluntary pooling of resources** (Option B). 2. In this system, individual farmers retain the ownership of their land but join together to buy expensive machinery, access credit, and market their produce more effectively. 3. This allows small-scale farmers to compete with large commercial farms. It has been most successful in Northern European countries like Denmark, the Netherlands, and Belgium. 4. Unlike "Collective Farming" (Kolkhoz), which involved state coercion, cooperative farming is entirely democratic. 5. In India, the cooperative movement played a huge role in the "White Revolution" (Milk), and it is studied in geography as a tool for rural empowerment and overcoming the disadvantage of small landholdings.

Final Answer: Voluntary pooling of resources for more efficient farming.

Answer: (B)

Q16.

Solution

Concept:

Market Gardening and Truck Farming are intensive forms of urban-linked agriculture. They are a spatial response to the high demand for fresh produce in densely populated cities.

Solution:

1. **Truck Farming** refers to the **intensive cultivation of vegetables** (Option B). 2. The term "Truck" comes from the fact that the distance between the farm and the urban market is typically what a truck can cover in a single night. 3. This ensures that the vegetables reach the city while they are still fresh. This type of farming is highly scientific and uses high-quality seeds, fertilizers, and often greenhouses. 4. It is prominent in regions like the Atlantic coast of the USA and highly urbanized parts of Western Europe. 5. In geography, this is used to explain "Urban-Periphery land use," where high land values near cities require high-value, high-yield crops to be profitable.

Final Answer: The intensive cultivation of vegetables for distant markets, linked by fast transport.

Answer: (B)

Q17.

Solution

Concept:

Economic sectors are defined by the level of transformation applied to resources. Secondary activities add value to natural resources by changing their form through manufacturing or construction.

Solution:

1. **Smelting of iron ore into steel** (Option C) is a secondary activity because it takes a raw mineral and transforms it into a versatile industrial metal. 2. Fishing (A) and Timber harvesting (B) are **Primary** activities because they involve the direct extraction of natural resources. 3. Banking (D) is a **Tertiary** activity because it is a service. 4. Secondary activities are the engine of industrialization. They are often concentrated in specific "Industrial Belts" where there is easy access to power, labor, and transport. 5. The transition from a primary-dominant economy to a secondary-dominant one is a hallmark of the "Take-off" stage in economic development models.

Final Answer: Smelting of iron ore into steel

Answer: (C)

Q18.

Solution

Concept:

Canals are vital "geographical shortcuts" that reshape global trade patterns by reducing the distance and time of maritime transport.

Solution:

1. The **Assertion (A) is true**: The Panama Canal connects the Atlantic and Pacific oceans, drastically shortening the voyage between the East Coast (e.g., New York) and the West Coast (e.g., San Francisco) of the USA. 2. The **Reason (R) is false**: The Panama Canal connects the **Atlantic with the Pacific**, not the Indian Ocean. 3. Furthermore, while it does use a system of six locks to lift ships over the continental divide, the geographical connection described in the reason is incorrect. 4. The canal is a "lock-based" canal, unlike the sea-level Suez Canal. 5. Because the assertion is factually correct but the reason provides an incorrect geographical link, the final evaluation must reflect this discrepancy.

Final Answer: (A) is true but (R) is false.

Answer: (C)

Q19.

Solution

Concept:

International trade requires a regulatory framework and a dispute-resolution body to function smoothly in a globalized world.

Solution:

1. The **World Trade Organization (WTO)** is headquartered in **Geneva, Switzerland** (Option C). 2. Established on January 1, 1995, as the successor to GATT (General Agreement on Tariffs and Trade), the WTO is the only international organization dealing with the global rules of trade between nations. 3. Geneva is a major hub for international diplomacy and houses many UN organizations, making it a neutral and strategic location for trade negotiations. 4. The WTO aims to ensure that trade flows as smoothly, predictably, and freely as possible. 5. Geographers study the WTO to understand how global trade policies affect the "Spatial Division of Labour" and the economic development of the Global South.

Final Answer: Geneva, Switzerland

Answer: (C)

Q20.

Solution

Concept:

Communication geography explores how information moves across space. The digital revolution has introduced "Cyberspace," which has redefined the concept of distance and accessibility.

Solution:

1. Cyberspace or the WWW is a form of **Public/Mass Communication** (Option B). 2. It is an electronic, computer-mediated space that allows for the instantaneous exchange of information across the globe, regardless of physical barriers. 3. While it can be used for personal messages, its primary characteristic in geographical terms is its "Mass" reach and the way it connects millions of people to a shared information network. 4. Cyberspace is often called the "Electronic Frontier." It has led to the "Death of Distance," where the physical location of a person matters less than their digital connectivity. 5. This has significant implications for "Tele-working," "E-commerce," and the growth of the Quaternary sector, illustrating how technology creates a new type of "virtual geography."

Final Answer: Public/Mass Communication

Answer: (B)

Q21.

Solution

Concept:

Trans-continental railways are massive engineering projects that cross an entire continent, connecting its opposite ends. They were built to facilitate economic integration, political control, and the movement of bulky resources across vast landmasses.

Solution:

1. The **Trans-Siberian Railway** (Option C) is the most famous and longest railway line in the world. It runs from **St. Petersburg** in the West (European Russia) to **Vladivostok** on the Pacific Coast in the East. 2. Constructed between 1891 and 1916, this railway spans approximately $9,332$ km. It was vital for the Russian Empire and later the USSR to open up the vast resources of Siberia, including timber, minerals, and coal. 3. The railway passes through important industrial centers such as Moscow, Yekaterinburg, and Novosibirsk. It also crosses the Ural Mountains, which act as the traditional boundary between Europe and Asia. 4. The Canadian Pacific Railway (A) connects Halifax to Vancouver, while the Union Pacific (B) is in the USA. The Trans-Australian (D) connects Perth to Sydney. 5. In modern geography, the Trans-Siberian remains a critical logistics link between Europe and East Asia, forming the backbone of the "Eurasian Land Bridge." It demonstrates how rail infrastructure can overcome the "friction of distance" in the world's largest country.

Final Answer: Trans-Siberian Railway

Answer: (C)

Q22.

Solution

Concept:

Map logic in transport geography focuses on identifying "choke points" and man-made shortcuts that have revolutionized global shipping by reducing the time and distance between major global ports.

Solution:

1. For a vessel traveling from London (Europe) to Mumbai (Asia), the shortest possible sea route is via the Mediterranean Sea and the Red Sea. 2. The man-made structure that connects these two bodies of water is the **Suez Canal** (Option B). 3. Opened in 1869, the Suez Canal in Egypt eliminated the need for ships to navigate around the entire continent of Africa via the Cape of Good Hope. This reduced the distance between London and Mumbai by roughly $7,000$ km. 4. The Panama Canal (A) connects the Atlantic and Pacific; the Kiel Canal (C) connects the North Sea and the Baltic; the Strait of Magellan (D) is a natural passage at the tip of South America. 5. The Suez Canal is a sea-level canal, meaning it does not require locks (unlike the Panama Canal). It handles about 12% of global trade and is particularly vital for the transport of crude oil from the Persian Gulf to European markets. Understanding this route is essential for analyzing the "Nodality" of the Mediterranean region in world trade.

Final Answer: Suez Canal

Answer: (B)

Q23.

Solution

Concept:

Wheat is a temperate crop grown extensively in the mid-latitude grasslands. Depending on the climate (specifically the severity of winter), it is classified as either "Winter Wheat" or "Spring Wheat."

Solution:

1. **Spring Wheat** is sown in the spring and harvested in late summer. It is grown in regions where the winter is too harsh and the ground freezes, which would kill winter wheat seeds. 2. The **Prairies of Canada** (Option A) and the northern parts of the US (like North Dakota) are the primary regions for spring wheat. The extremely cold temperatures of the Canadian winter make it impossible to grow wheat during that season. 3. In contrast, the Pampas (Argentina), Velds (South Africa), and Downs (Australia) generally have milder winters, allowing for the cultivation of winter wheat. 4. The Canadian Prairies are known as the "Granary of the World." The cultivation here is highly mechanized and extensive, with very large farm sizes and low labor intensity. 5. Geographically, spring wheat cultivation is a classic example of human adaptation to climatic constraints. The development of fast-maturing wheat varieties has allowed this agricultural belt to push further north into sub-arctic regions, illustrating the concept of "Possibilism."

Final Answer: The Prairies of Canada

Answer: (A)

Q24.

Solution

Concept:

Nodal points are locations where major transport routes intersect, creating high-accessibility hubs. In India, the National Highways Development Project (NHDP) created a cross-country grid of corridors.

Solution:

1. The **North-South Corridor** (Srinagar to Kanyakumari) and the **East-West Corridor** (Silchar to Porbandar) are the two longest highway projects in India. 2. These two corridors intersect at **Jhansi** (Option B) in Uttar Pradesh. 3. This intersection makes Jhansi a vital logistical and strategic hub. The point of intersection acts as a "gateway" between the four cardinal directions of the country. 4. While Nagpur (A) is often called the "Zero Mile" center of India and is a major node for railways and the Golden Quadrilateral, it is not the specific intersection point for these two corridors. 5. The development of Jhansi as a nodal point has triggered the growth of warehousing, transport services, and secondary industries in the Bundelkhand region. 6. In Geography, such intersections are studied to understand "Spatial Interaction" and how infrastructure can promote regional development in previously backward areas by integrating them into the national trade network.

Final Answer: Jhansi

Answer: (B)

Q25.

Solution

Concept:

Inland waterways are an energy-efficient mode of transport for bulky goods. The Great Lakes system is one of the world's most significant inland maritime networks.

Solution:

1. The **Great Lakes** (Superior, Michigan, Huron, Erie, and Ontario) form a massive freshwater system shared by the **USA and Canada** (Option B). 2. Together with the St. Lawrence River, they form the St. Lawrence Seaway, which allows ocean-going vessels to travel nearly 3,700 km from the Atlantic Ocean into the heart of the North American continent. 3. This waterway is shared along the international boundary, with the exception of Lake Michigan, which lies entirely within the USA. 4. The system is crucial for the transport of iron ore from the Mesabi Range to the steel mills of the "Rust Belt" (like Pittsburgh and Gary) and for exporting grain from the Canadian and American Prairies. 5. To overcome the height difference between the lakes (specifically Niagara Falls), a system of locks like the Welland Canal was constructed. 6. This shared resource is a prime example of international cooperation in resource management and transport geography, turning the interior of North America into a "fourth seacoast."

Final Answer: USA and Canada

Answer: (B)

Q26.

Solution

Concept:

The Trans-Australian Railway is the primary east-west link in the Australian rail network, connecting the Indian Ocean coast with the Pacific Ocean coast across the vast Nullarbor Plain.

Solution:

1. The terminal port of the Trans-Australian Railway on the **West Coast** is **Perth** (Option C). 2. The railway connects Perth in the west to **Sydney** in the east. 3. This railway is famous for having the longest straight stretch of railway track in the world (nearly 478 km across the Nullarbor Plain). 4. Perth is a major port city on the Indian Ocean. Its connection via rail to the industrial and population centers of the east (like Sydney and Melbourne) was a critical political and economic goal for the Australian Federation. 5. The railway is used primarily for freight, including the transport of minerals, livestock, and manufactured goods. 6. In Geography, this line is studied as an example of "Overcoming the Desert Barrier," as the construction required significant engineering to provide water and supplies to steam engines and workers in an area with no surface water.

Final Answer: Perth

Answer: (C)

Q27.

Solution

Concept:

Population growth rate is the change in the number of people living in a territory during a specific period. In India, growth rates vary significantly due to differences in fertility, mortality, and migration.

Solution:

1. During the decade **2001-2011**, the state with the highest growth rate of population was **Meghalaya** (Option B). 2. Meghalaya recorded a decadal growth rate of approximately **27.95%**. 3. While Bihar (A) has a very high total population and high fertility, its decadal growth rate during this period (25.4%) was lower than Meghalaya's. 4. The high growth rate in Meghalaya and other North-Eastern states is often attributed to a combination of high birth rates among tribal populations and migration from neighboring regions/countries. 5. In contrast, the national average growth rate was 17.64%, and southern states like Kerala recorded the lowest rates (around 4.9%). 6. Analyzing decadal growth is crucial for Indian geographers to understand the "Demographic Dividend" and the pressure on regional resources. It helps in identifying states that are still in the early Stage III of demographic transition compared to those moving toward Stage IV.

Final Answer: Meghalaya

Answer: (B)

Q28.

Solution

Concept:

Population density measures the pressure of population on land. While Arithmetic Density is the most common measure, geographers use more specific ratios to understand the relationship between people and food-producing land.

Solution:

1. **Physiological Density** (Option B) is calculated as the **Total Population / Net Cultivated Area**. 2. Unlike Arithmetic Density (Total Pop / Total Area), Physiological Density only considers the land that is actually capable of producing food. 3. This is a much more accurate measure of "Population Pressure" in agricultural societies like India. For example, a mountainous state might have a low arithmetic density but a very high physiological density because only a small fraction of the land (the valleys) is arable. 4. Another related measure is **Agricultural Density**, which is the Total Agricultural Population / Net Cultivated Area. 5. High physiological density indicates that each hectare of farmland must support a large number of people, which can lead to land degradation, intensive chemical use, and food security challenges. 6. This metric is vital for land-use planning and evaluating the sustainability of a region's primary sector.

Final Answer: Total Population / Net Cultivated Area

Answer: (B)

Q29.

Solution

Concept:

The linguistic map of India is complex, with hundreds of languages belonging to four major language families. These families correspond to different historical migration patterns and geographical regions.

Solution:

1. **Dravidian** (I) languages are primarily spoken in **South India** (2). This group includes major languages like Tamil, Telugu, Kannada, and Malayalam. 2. **Sino-Tibetan** (II) (also known as Kirata) languages are concentrated in **North-East India** (1) and the Himalayan belt. This includes languages like Manipuri and Bodo. 3. **Austric** (III) (also known as Nishada) languages are spoken mainly in the **Tribal belts of Central India** (3), such as Jharkhand and Chhattisgarh (e.g., Santhali and Ho). 4. The largest group, not in this specific match but essential to know, is **Indo-Aryan**, spoken by about 74% of the population in North and Central India. 5. Mapping these: I-2, II-1, III-3. 6. Linguistic geography is a key part of "Social Geography" in India, as it influenced the linguistic reorganization of states in 1956 and continues to be a defining factor in regional identity and cultural landscapes.

Final Answer: I-2, II-1, III-3

Answer: (A)

Q30.

Solution

Concept:

Migration in India is dominated by the rural-to-urban stream. This movement is a response to the "Push" of rural distress and the "Pull" of urban opportunity.

Solution:

1. The most significant **Pull Factor** for rural-to-urban migration in India is **Better employment opportunities and higher wages** (Option C). 2. Cities act as "engines of growth," offering diverse jobs in the informal sector, manufacturing, and services that are not available in villages. The wage gap between rural agricultural labor and urban jobs is a primary driver. 3. While health and education (A) are also pull factors, economic survival is the dominant motivation for the majority of Indian migrants. 4. "Social discrimination" (D) and "Lack of healthcare" are **Push Factors**—they are negative conditions in the village that drive people out. 5. "High cost of living" (B) is actually an **Urban Push/Resistance Factor** that often prevents migrants from settling permanently, leading to circular migration. 6. This migration pattern leads to the rapid growth of "Mega Cities" and the expansion of slums, as the urban infrastructure often cannot keep up with the influx of labor, making it a critical topic for urban planning and social geography.

Final Answer: Better employment opportunities and higher wages

Answer: (C)

Q31.

Solution

Concept:

Functional classification of towns is based on the dominant economic activity that dictates the city's growth and land use. While most cities are multi-functional, industrial towns are specifically developed around manufacturing hubs.

Solution:

1. **Jamshedpur** (Option B) is the primary example of an **Industrial Town** in India. It was the first planned industrial city in the country, established by Jamshedji Tata in 1907. 2. The city was built specifically to support the Tata Iron and Steel Company (TISCO). Its entire infrastructure, from the railway sidings to the residential colonies, was designed to serve the needs of the steel plant and its workers. 3. In contrast, **Chandigarh** is an Administrative Town (planned capital); **Varanasi** is a Religious and Cultural Town (one of the oldest living cities); and **Shimla** is a Tourist/Resort Town (formerly the summer capital of British India). 4. Geographically, Jamshedpur is located in the Subarnarekha river valley, close to iron ore mines (Noamundi) and coal fields (Jharia), illustrating the "least-cost location" theory for heavy industries. 5. Studying industrial towns helps geographers understand "Growth Pole" theory, where a single large industry transforms a sparsely populated region into a major urban-industrial complex.

Final Answer: Jamshedpur

Answer: (B)

Q32.

Solution

Concept:

Rice is a tropical crop that requires high heat and humidity. In regions with abundant water and fertile soil, like the deltaic plains of West Bengal, the climatic conditions allow for multiple cropping cycles within a single year.

Solution:

1. **Aman**, **Sali**, and **Boro** are different seasonal varieties of **Rice** (Option B) grown in West Bengal. 2. Because of the tropical monsoon climate and the availability of water from the Ganga-Brahmaputra river system, West Bengal can sustain up to three rice harvests annually. 3. **Aman** (or Sali) is the winter rice, sown during the rainy season and harvested in winter. **Aus** is the autumn rice, and **Boro** is the summer rice. 4. This intensive cropping is a significant geographical feature of the "Lower Ganga Plains," making West Bengal the leading producer of rice in India. 5. These local names reflect the farmers' adaptation to the seasonal flood and rainfall patterns. While Jute is also a major crop in this region, it is a fiber crop and does not share these specific food-grain nomenclature systems. 6. Understanding these varieties is crucial for analyzing India's "Cropping Intensity," which is essential for feeding the high population density found in eastern India.

Final Answer: Rice

Answer: (B)

Q33.

Solution

Concept:

Rural settlement patterns are determined by the arrangement of houses in relation to the environment. Clustered (or nucleated) settlements are those where houses are built in a compact, concentrated manner.

Solution:

1. **Clustered settlements** (Option A) are most commonly found in the **Alluvial plains of North India**. 2. The high fertility of the soil in the Ganga-Yamuna Doab supports a very high population density. Because the land is flat and productive, people live in compact villages to maximize the area available for cultivation while sharing communal resources like wells and temples. 3. Social security and defense were historical reasons for this pattern, as living in a tight cluster provided protection against invaders. 4. In contrast, **Rugged terrains** (B) lead to dispersed settlements; **Arid regions** (C) often have settlements clustered only around water sources (Oases); and **Forested tracts** (D) usually have small, hamleted settlements. 5. Geographically, clustered settlements in North India facilitate a "communal lifestyle" and are often found at the center of a radial network of agricultural paths. This pattern is a key indicator of the "carrying capacity" of the land being effectively utilized.

Final Answer: Alluvial plains of North India

Answer: (A)

Q34.

Solution

Concept:

Watershed management is the sustainable distribution of resources within a geographic area that drains into a single water body. It involves a holistic approach to managing land, water, and biomass.

Solution:

1. The **Assertion (A) is true**: Watershed management is indeed vital for India's sustainable development, particularly in rain-fed and drought-prone regions where water is the most limiting factor for growth. 2. The **Reason (R) is true**: The core technical objective of watershed management is to catch rainwater where it falls. This is done through check dams, percolation tanks, and afforestation, which slow down water runoff. 3. By slowing down the runoff, the water has more time to seep into the ground, thereby recharging the groundwater table and providing surface water for lean seasons. 4. This recharge prevents "Land Degradation" and "Desertification," ensuring that the ecosystem remains productive. 5. Since the harvesting and recharge (Reason) are the exact mechanisms that lead to sustainability and water security (Assertion), the Reason is the correct explanation. 6. Programs like *Haryali* and *Neeru-Meeru* are successful Indian examples of this geographical principle in action.

Final Answer: Both (A) and (R) are true and (R) is the correct explanation of (A).

Answer: (A)

Q35.

Solution

Concept:

Manganese is a vital mineral for the metallurgical industry, used primarily for the smelting of iron ore and the manufacture of ferro-alloys. Its production is a key indicator of a state's industrial resource base.

Solution:

1. **Madhya Pradesh** (Option D) is currently the leading producer of Manganese in India. 2. The state contributes nearly 30% – 33% of the total production in the country. The most significant deposits are found in the **Balaghat** and **Chhindwara** districts. 3. The manganese from this belt is of very high grade and is essential for the steel plants located in the central and eastern parts of India. 4. Historically, Odisha (A) was the top producer, and it still holds the largest reserves, but in terms of annual output in recent years, Madhya Pradesh has taken the lead. 5. Maharashtra (C) also has significant production in the Nagpur and Bhandara districts, which are geologically continuous with the Balaghat belt. 6. For a geography student, knowing the distinction between "Reserves" (Odisha) and "Production" (Madhya Pradesh) is essential for answering hard-level MCQs accurately.

Final Answer: Madhya Pradesh

Answer: (D)

Q36.

Solution

Concept:

Transport infrastructure in India is managed by different statutory bodies based on the strategic importance and location of the roads. The National Highways Development Project (NHDP) required a centralized authority to oversee the modernization of India's primary economic arteries.

Solution:

1. The **National Highways Authority of India (NHAI)** (Option B) is the apex body responsible for the management of the **Golden Quadrilateral** (GQ). 2. The GQ is a massive highway network connecting the four major metropolitan cities: Delhi, Mumbai, Chennai, and Kolkata. It was the first phase of the NHDP, launched to reduce the time and distance between India's mega-cities. 3. While the **Border Roads Organization (BRO)** manages roads in sensitive international border areas and high-altitude terrains, and the **PWD** manages state-level roads, the NHAI was specifically created by an Act of Parliament (1988) to develop and maintain National Highways. 4. The management by NHAI ensures a uniform standard of road quality, specialized toll collection systems, and integrated safety features across the 5,846 km of the GQ. 5. In Geography, this is studied to understand how centralized institutional frameworks can accelerate the "spatial integration" of a national economy, making the movement of freight and labor more efficient.

Final Answer: National Highways Authority of India (NHAI)

Answer: (B)

Q37.

Solution

Concept:

Communication geography tracks the evolution of information dissemination. In India, the state-run broadcaster, Doordarshan, transitioned from experimental educational programs to 24-hour information cycles to bridge the digital divide.

Solution:

1. The first 24-hour dedicated news channel of India, **Doordarshan News** (DD News), was launched in **2003** (Option B). 2. Before this milestone, news was delivered in specific "bulletin" formats. The launch of a 24-hour cycle was a response to the growing demand for real-time information and competition from the burgeoning private satellite television sector that emerged after the 1991 liberalization. 3. For context, other dates in the options represent different milestones: **1982** (Option C) was the year color television was introduced in India during the Asian Games; **1991** was the beginning of the satellite revolution; and **2014** saw the expansion of digital terrestrial services. 4. The launch of DD News was significant for Geography as it ensured that even the most remote parts of the country, connected via **INSAT** satellites, had access to continuous news and emergency information in multiple regional languages. 5. This development highlights the role of "Mass Communication" in promoting national integration and awareness, effectively reducing the "information lag" between urban centers and rural hinterlands.

Final Answer: 2003

Answer: (B)

Q38.

Solution

Concept:

Coal is classified based on its carbon content and age. While 98% of India's coal is of the Gondwana variety (Bituminous), tertiary coal deposits like Lignite are found in specific coastal and desert pockets, serving as vital regional energy hubs.

Solution:

1. **Lignite** (Option C), often known as "Brown Coal," is the specific variety found in **Neyveli, Tamil Nadu**. 2. Lignite is an intermediate stage between peat and bituminous coal. It has a relatively high moisture content (35% to 50%) and a lower carbon content (25% to 35%), making it less efficient but still highly valuable for localized power generation. [Image showing the four stages of coal formation: Peat, Lignite, Bituminous, and Anthracite] 3. The Neyveli Lignite Corporation (NLC) manages these mines. Because Tamil Nadu is far from the primary coal belts of Jharkhand and Odisha, these local Lignite deposits are the backbone of the southern grid's thermal power supply. 4. For comparison: **Anthracite** (A) is the highest quality and is found only in Jammu and Kashmir; **Bituminous** (B) is found in the Damodar Valley; and **Peat** (D) is the first stage of coal formation with very low heating value. 5. In Geography, Neyveli is a classic case study of how "Resource Location" dictates the industrial energy policy of a region, allowing a state to overcome the geographical disadvantage of being distant from the country's main mineral heartland.

Final Answer: Lignite

Answer: (C)

Q39.

Solution

Concept:

The origin of mega-projects in India often lies in the vision of experts who recognized the spatial inequalities of natural resources. The Indira Gandhi Canal is a testament to 'Target Area Planning' designed to reclaim the Thar Desert.

Solution:

1. According to the passage, the idea of the Rajasthan Canal was conceived by **Kanwar Sain** (Option B) in 1948. 2. Kanwar Sain was a prominent hydraulic engineer who presented a report titled "Production of Food and Customization of Canal Colonization in Bikaner State." He envisioned utilizing the surplus water of the Punjab rivers to transform the parched lands of Rajasthan into a productive agricultural zone. 3. While M.S. Swaminathan is known as the father of the Green Revolution in India and Jawaharlal Nehru was the Prime Minister who launched many such projects, the specific conceptualization of this canal is credited solely to Sain's technical foresight. 4. His vision was not merely to provide drinking water but to change the entire socio-economic fabric of the region by enabling sedentary agriculture and livestock rearing. 5. In Geography, this is studied as a classic example of **Possibilism**, where human ingenuity and engineering (represented by Sain) overcome the severe constraints imposed by an arid environment.

Final Answer: Kanwar Sain

Answer: (B)

Q40.

Solution

Concept:

A barrage is a type of low-head diversion dam used to divert water into a canal for irrigation. The site of a barrage is strategically chosen at the confluence of major rivers to ensure a perennial supply of water.

Solution:

1. The passage explicitly states that the canal originates at the **Harike barrage** (Option C) in Punjab. 2. The Harike barrage is situated at the confluence of the **Sutlej and Beas** rivers. This is a critical point in the Indus River system where the snow-melt waters from the Himalayas are captured and diverted southwards. 3. The water travels through a feeder canal from Punjab before entering Rajasthan. This diversion is the lifeline of the entire canal system, ensuring that even during the peak of summer, the desert regions receive a steady flow. 4. Bhakra and Nangal are related to the Satluj river but are part of a separate dam complex further upstream used primarily for power and local irrigation. Pong is a dam on the Beas river. 5. Understanding the specific 'Headworks' (Harike) is essential for students to visualize the trans-basin water transfer that characterizes India's largest irrigation projects.

Final Answer: Harike

Answer: (C)

Q41.

Solution

Concept:

Large-scale irrigation in arid regions often leads to 'Ecological Backlash.' While it brings economic benefits, it can alter the soil chemistry and groundwater table in ways that are detrimental to long-term sustainability.

Solution:

1. The passage identifies several environmental impacts: it has "transformed the desert ecology," and brought "waterlogging" and "soil salinity." 2. **Deforestation** (Option C) is **NOT** mentioned as an environmental problem associated with the canal in this passage. In fact, geographers often note that the canal has actually promoted 'Afforestation' and 'Shelterbelt' development to check the spread of sand dunes. 3. **Waterlogging** happens because the canal water seeps into the ground in areas with poor drainage, raising the water table. 4. **Soil Salinity** occurs in arid climates when the high rate of evaporation leaves behind salt crusts on the topsoil as the water evaporates. 5. **Desert Ecology Transformation** is mentioned as a major outcome; while this has economic benefits (Green Revolution), it represents a fundamental change in the natural ecosystem of the Thar. 6. In CUET, these 'negative' questions test your ability to differentiate between general knowledge and the specific facts provided in the text.

Final Answer: Deforestation

Answer: (C)

Q42.

Solution

Concept:

The Indira Gandhi Canal project was implemented in phases to manage the massive financial and logistical challenges of building through the deep desert. Each stage covers specific geographical districts.

Solution:

1. As per the passage, the project is implemented in two stages. **Stage II** covers the more arid and interior tracts of **Bikaner, Jaisalmer, and Barmer**. 2. Therefore, **Jaisalmer** (Option C) is the correct district covered under Stage II. 3. Stage I focused on the northern districts like Ganganagar and Hanumangarh, which were closer to the Punjab border and had slightly more favorable terrain for initial development. 4. Stage II represents the expansion into the 'hyper-arid' zone of the Thar Desert, where the construction of 'Lift Canals' was necessary to overcome the undulating topography of the sand dunes. 5. Ludhiana (D) is a city in Punjab and is not part of the Rajasthan canal project area. 6. This regional classification is vital for understanding 'Developmental Geography,' showing how infrastructure projects move from easier 'head-reach' areas to more challenging 'tail-end' regions.

Final Answer: Jaisalmer

Answer: (C)

Q43.

Solution

Concept:

The spatial orientation of infrastructure projects in border states is often dictated by both economic needs and national security strategy. The Indira Gandhi Canal serves as a 'Green Buffer' along India's western frontier.

Solution:

1. The passage clearly states that the canal runs parallel to the **Pakistan** border (Option B). 2. It maintains a distance of approximately 40 to 100 km from the international boundary (the Radcliffe Line) as it flows through the western districts of Rajasthan. 3. This alignment was chosen to ensure that the parched border lands, which are strategically sensitive, are populated and agriculturally productive. 4. By providing water, the canal has enabled the settlement of people in remote areas, which is essential for national security and border management. 5. The canal provides a reliable source of water for both civilian agriculture and the defense forces stationed in the Thar Desert. 6. This geographical proximity to a neighboring country makes the Indira Gandhi Canal one of the most strategically significant pieces of infrastructure in South Asia, illustrating the link between 'Water Resources' and 'Political Geography.'

Final Answer: Pakistan

Answer: (B)

Q44.

Solution

Concept: Water pollution is categorized based on its entry point into the ecosystem. 'Point Source' pollution is localized and identifiable, making it a critical focus for industrial environmental regulation.

Solution: An Industrial wastewater pipe (Option B) is a classic example of a Point Source. It is a single, confined, and discrete conveyance from which pollutants are discharged.Because the pollution enters the water body from a specific pipe or ditch, it is relatively easy to measure the volume and concentration of toxins, such as heavy metals or chemical waste.In contrast, Agricultural runoff (A) is a 'Non-point Source' because it occurs over a wide area (entire fields) and cannot be traced to a single outlet.Urban street runoff (C) and atmospheric deposition (D) are also diffuse sources.In India, the Central Pollution Control Board (CPCB) focuses on 'Point Source' management for rivers like the Ganga by monitoring the 'Grossly Polluting Industries' (GPIs) that discharge directly into the river system.

Final Answer: Industrial wastewater pipe

Answer: (B)

Q45.

Solution

Concept: The Greenhouse Effect is a natural process where certain gases trap heat in the Earth's atmosphere. However, human-induced increases in these gases lead to enhanced Global Warming.
Solution: Carbon Dioxide (Option C) is the primary greenhouse gas (GHG) responsible for human-induced global warming. While Methane is more potent, CO_2 is produced in much larger quantities through the burning of fossil fuels and cement production.CO_2 molecules absorb and re-emit infrared radiation (heat) that would otherwise escape into space, effectively warming the lower atmosphere.Nitrogen and Oxygen (A and B) make up 99% of the atmosphere but are transparent to infrared radiation and do not contribute to warming.Global concentrations of CO_2 have risen from approximately 280 ppm in the pre-industrial era to over 415 ppm today, leading to a rise in global mean temperatures.This is a core 'Geographical Perspective' topic, as it explains the link between industrialization (Secondary activity) and the resultant global climate crisis.
Final Answer: Carbon Dioxide

Answer: (C)

Q46.

Solution

Concept:
Energy sources are classified into "Conventional" and "Non-conventional" based on their historical usage and nature. Conventional sources (like coal and oil) are traditional and exhaustible, while non-conventional sources are modern alternatives.
Solution:
1. Solar and wind energy are called **non-conventional** because they have only recently gained widespread industrial and commercial use compared to coal or fire-wood. 2. They are also known as "Renewable" energy sources because they are replenished by nature and do not get exhausted with use. 3. A primary characteristic of these sources is that they are **environment-friendly**; they do not release harmful pollutants or greenhouse gases during power generation. 4. While they were historically expensive, modern technology has made them competitive. 5. They are the opposite of fossil fuels (conventional), which are finite and major contributors to global warming.
Final Answer: Because they are renewable and environment-friendly.

Answer: (B)

Q47.

Solution

Concept:

Wind energy potential is highest in regions with consistent, high-velocity winds, typically found in coastal areas and through mountain passes. India has developed several massive "wind farm clusters."

Solution:

1. **Tamil Nadu** possesses the largest wind farm cluster in India, stretching from Kanyakumari to the Tirunelveli district. 2. The Muppandal wind farm in Tamil Nadu is one of the world's largest operational onshore wind farms. 3. This region benefits from the unique geography of the Western Ghats, which creates a funneling effect for the winds. 4. While Gujarat and Rajasthan also have significant wind energy capacity, Tamil Nadu was a pioneer and currently leads in total integrated cluster output. 5. These clusters provide a significant portion of the state's green energy grid.

Final Answer: Tamil Nadu.

Answer: (C)

Q48.

Solution

Concept:

Solar energy potential depends on the number of "sunny days" and the intensity of solar radiation. Arid and semi-arid regions with low cloud cover are ideal for solar harvesting.

Solution:

1. **Western India**, particularly the states of **Rajasthan and Gujarat**, is specifically identified as having the highest solar energy potential in India. 2. Rajasthan, with its vast stretches of desert land and clear skies for most of the year, is home to projects like the Bhadla Solar Park, the largest in the world. 3. Gujarat also has high potential and was the first state in India to launch a dedicated solar policy. 4. These regions receive high insolation (solar radiation) which can be converted into electricity using Photovoltaic (PV) cells or solar thermal systems. 5. In contrast, the Himalayas have high terrain constraints, and Eastern India has higher cloud cover and humidity.

Final Answer: Western India (Rajasthan/Gujarat).

Answer: (B)

Q49.

Solution

Concept:

The global shift toward renewable energy is driven by the need to mitigate climate change. The "carbon footprint" of an energy source is its most critical environmental measure.

Solution:

1. Fossil fuels (coal, oil, gas) are carbon-based; burning them releases massive amounts of Carbon Dioxide (CO_2), a primary greenhouse gas. 2. A major advantage of renewable energy (solar, wind, hydro) is that it **does not emit greenhouse gases** during the generation of electricity. 3. This helps in slowing down the process of global warming and reducing atmospheric pollution. 4. Unlike fossil fuels, which are "finite" (will run out), renewable energy is "infinite" or inexhaustible. 5. Furthermore, renewable energy does not require deep-earth mining, which often destroys local ecosystems.

Final Answer: It does not emit greenhouse gases.

Answer: (B)

Q50.

Solution

Concept:

Sustainable Development is defined as development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It requires a balance between ecology and economy.

Solution:

1. To achieve sustainability, a society must move away from "Resource Depletion" and toward "Resource Conservation." 2. The use of non-renewable resources like coal and petroleum is unsustainable because they are limited and cause long-term environmental damage. 3. Therefore, sustainable development requires a transition to **environment-friendly renewable sources** like solar, wind, and biomass. 4. These sources ensure that we do not leave a polluted and resource-poor planet for future generations. 5. It also involves using technology to increase energy efficiency and reducing our overall "ecological footprint."

Final Answer: Environment-friendly renewable sources.

Answer: (C)

Answer Key

Q	Ans	Q	Ans	Q	Ans	Q	Ans	Q	Ans
1	B	2	B	3	B	4	A	5	B
6	C	7	B	8	A	9	B	10	A
11	C	12	B	13	C	14	B	15	B
16	B	17	C	18	C	19	C	20	B
21	C	22	B	23	A	24	B	25	B
26	C	27	B	28	B	29	A	30	C
31	B	32	B	33	A	34	A	35	D
36	B	37	B	38	C	39	B	40	C
41	C	42	C	43	B	44	B	45	C
46	B	47	C	48	B	49	B	50	C