

CUET-UG Geography Sample Paper-17

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. The transition from a resource-based economy to a knowledge-based economy is often marked by the rise of the quaternary sector. In this context, which of the following best describes the core function of quaternary activities?

- (A) The physical transformation of raw materials into finished consumer goods.
- (B) The provision of essential social services like healthcare and basic education to the masses.
- (C) The collection, production, and dissemination of information and specialized knowledge.
- (D) The high-level decision-making and policy formulation by top-tier executives.

Q2. Which of the following approaches to Human Geography emphasizes that "the same environment means different things to people at different stages of technological development"?

- (A) Environmental Determinism
- (B) Possibilism
- (C) Neo-Determinism
- (D) Welfare Geography

Q3. Fill in the blank: The

density of population is calculated by dividing the total population by the net cultivable area, serving as a



- (A) Arithmetic
- (B) Physiological
- (C) Agricultural
- (D) Economic

Q4. Assertion (A): High-tech industries tend to cluster in specific geographical locations known as 'Technopolies'. Reason (R): These industries are 'Footloose' in nature and are highly dependent on proximity to raw material sources to minimize transport costs.

- (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.

Q5. Match the following International Trade Blocs (List 1) with their Headquarter Locations (List 2): **List 1 (Trade Bloc):** (i) EU (ii) OPEC (iii) ASEAN (iv) LAIA
List 2 (Headquarters): (1) Vienna (2) Jakarta (3) Brussels (4) Montevideo

- (A) i-3, ii-1, iii-2, iv-4
- (B) i-1, ii-3, iii-4, iv-2
- (C) i-3, ii-2, iii-1, iv-4
- (D) i-2, ii-1, iii-3, iv-4

Q6. In the context of the 'Demographic Transition Model', which of the following characteristics is unique to the 'Post-Industrial' stage (Stage IV/V)?

- (A) Rapidly declining death rates with high birth rates.
- (B) High birth and death rates resulting in low growth.
- (C) Birth rates falling below death rates, leading to negative natural growth.
- (D) High fertility rates due to lack of family planning.



- Q7.** The 'North Atlantic Sea Route' is often termed the 'Big Trunk Route' primarily because:
- (A) It is the longest sea route in the world connecting the Arctic and Antarctic.
 - (B) It connects the two most industrially developed regions of the world.
 - (C) It is the only route that allows the passage of ultra-large crude carriers.
 - (D) It passes through the highest number of landlocked countries.
- Q8.** Which type of rural settlement pattern is typically found in the fertile alluvial plains of North India where houses are built in a compact and closely spaced manner?
- (A) Dispersed
 - (B) Nucleated
 - (C) Linear
 - (D) Star-like
- Q9.** The 'National Waterway 2' in India facilitates transport on the Brahmaputra River specifically between which two locations?
- (A) Prayagraj and Haldia
 - (B) Sadiya and Dhubri
 - (C) Kottapuram and Kollam
 - (D) Kakinada and Puducherry
- Q10.** Which of the following regions is characterized by 'Mediterranean Agriculture', specializing in viticulture and the production of high-quality citrus fruits?
- (A) The Pampas of Argentina
 - (B) The Steppes of Eurasia
 - (C) Central Chile and South-Western Australia
 - (D) The Prairies of North America
- Q11.** The concept of 'Gross National Happiness' (GNH) as a measure of a country's progress was officially adopted by which nation?



- (A) Norway
- (B) Bhutan
- (C) New Zealand
- (D) Iceland

Q12. In the functional classification of Indian towns, cities like 'Mhow' and 'Babina' are categorized as:

- (A) Transport Towns
- (B) Administrative Towns
- (C) Cantonment (Garrison) Towns
- (D) Mining Towns

Q13. The 'Golden Quadrilateral' high-speed road network connects which four major metropolitan cities of India?

- (A) Delhi, Mumbai, Bengaluru, Kolkata
- (B) Delhi, Ahmedabad, Mumbai, Chennai
- (C) Delhi, Mumbai, Chennai, Kolkata
- (D) Mumbai, Pune, Bengaluru, Chennai

Q14. Which of the following is the primary cause of 'Alkalinisation' and 'Salinisation' of soils in the command areas of the Indira Gandhi Canal?

- (A) Excessive use of chemical fertilizers.
- (B) Over-irrigation leading to waterlogging.
- (C) Deforestation for agricultural expansion.
- (D) Shift toward drought-resistant crops.

Q15. Identify the port that was developed to relieve the pressure on the Mumbai Port and is equipped with state-of-the-art mechanized container handling facilities:

- (A) Kandla Port



- (B) Jawaharlal Nehru Port (Nhava Sheva)
- (C) Marmagao Port
- (D) Kochi Port

Q16. Map Logic: Identify the correct sequence of major industrial regions in India as one travels from the North-West to the East along the northern industrial belt:

- (A) Gujarat Region → Gurgaon-Delhi-Meerut → Chotanagpur Region → Hugli Region
- (B) Gurgaon-Delhi-Meerut → Gujarat Region → Chotanagpur Region → Hugli Region
- (C) Gurgaon-Delhi-Meerut → Chotanagpur Region → Hugli Region → Gujarat Region
- (D) Hugli Region → Chotanagpur Region → Gurgaon-Delhi-Meerut → Gujarat Region

Q17. Arrange the following states of India in descending order of their 'Net Sown Area' as a percentage of their total geographical area, reflecting the intensity of agriculture:

- (A) Punjab, Haryana, West Bengal, Uttar Pradesh
- (B) Punjab, West Bengal, Haryana, Uttar Pradesh
- (C) Uttar Pradesh, Punjab, Haryana, West Bengal
- (D) West Bengal, Punjab, Uttar Pradesh, Haryana

Q18. Statement 1: The 'Cyber Space' or the 'World Wide Web' is a physical space consisting of tangible land, water, and air where electronic information is stored. Statement 2: The distribution of internet access across the globe is remarkably uniform, leaving no room for a 'Digital Divide' between developed and developing nations.

- (A) Statement 1 is correct, but Statement 2 is incorrect.
- (B) Statement 1 is incorrect, but Statement 2 is correct.
- (C) Both Statement 1 and Statement 2 are correct.



(D) Both Statement 1 and Statement 2 are incorrect.

Q19. Which of the following describes the 'Extensive Commercial Grain Cultivation' practiced in the Eurasian Steppes?

- (A) Low yield per acre but high yield per person due to heavy mechanization.
- (B) High yield per acre but low yield per person due to intensive manual labor.
- (C) Small farm holdings focused on diverse crop rotation for local consumption.
- (D) Tropical plantation-based systems focusing on export-oriented monoculture.

Q20. The 'Panama Canal' is a vital engineering marvel that serves as a gateway between which two major bodies of water, significantly shortening the distance between the East and West coasts of the USA?

- (A) The Mediterranean Sea and the Red Sea.
- (B) The Atlantic Ocean and the Pacific Ocean.
- (C) The Indian Ocean and the Pacific Ocean.
- (D) The North Sea and the Baltic Sea.

Q21. In the context of Human Development, the 'Income Approach' posits that:

- (A) Development is linked to the freedom of people to choose their lives.
- (B) The level of development is directly proportional to the level of income.
- (C) Basic needs like health and education must be provided by the state regardless of income.
- (D) Development is measured by the total number of physical assets owned by a household.

Q22. Which type of migration is most significant in terms of volume in India, often driven by social factors like marriage or economic distress in rural areas?

- (A) Rural-to-Urban migration
- (B) Rural-to-Rural migration



- (C) Urban-to-Rural migration
- (D) Urban-to-Urban migration

Q23. The 'Palamau' and 'Lohardaga' regions in Jharkhand are primarily known for the mining of which critical mineral used in the production of Aluminum?

- (A) Iron Ore
- (B) Manganese
- (C) Bauxite
- (D) Copper

Q24. What is the primary objective of the Bharatmala Pariyojana launched by the Government of India?

- (A) Development of inland waterways for heavy cargo movement.
- (B) Improving connectivity to coastal/border areas and optimizing freight through corridors.
- (C) Modernization of all railway stations into world-class 'Amrit Stations'.
- (D) Subsidizing domestic air travel for the common man through the UDAN scheme.

Q25. Which of the following pollutants is the major contributor to the phenomenon of 'Acid Rain' in industrial urban clusters?

- (A) Carbon Dioxide and Methane
- (B) Oxides of Nitrogen and Sulphur
- (C) Chlorofluorocarbons (CFCs)
- (D) Particulate Matter (PM 2.5)

Q26. The 'Ruhr Coalfield', a major industrial heartland that has transitioned from heavy coal and steel to new service industries, is located in which country?

- (A) France



- (B) Germany
- (C) United Kingdom
- (D) Belgium

Q27. In 'Dryland Farming' areas of India, which of the following crops is most likely to be cultivated due to its high tolerance for moisture stress?

- (A) Sugarcane
- (B) Rice
- (C) Ragi (Finger Millet)
- (D) Jute

Q28. The 'Konkan Railway', a masterpiece of Indian engineering, traverses through which geographical feature, connecting Roha in Maharashtra to Mangalore in Karnataka?

- (A) The Himalayan Range
- (B) The Western Ghats
- (C) The Vindhya Range
- (D) The Eastern Ghats

Q29. Which of the following is an example of a 'Footloose Industry'?

- (A) Iron and Steel Industry
- (B) Sugar Industry
- (C) Watch Making or Electronics Assembly
- (D) Cement Industry

Q30. The 'Appiko Movement' in Karnataka was primarily aimed at:

- (A) Protesting against the construction of large dams.
- (B) Conserving forests and preventing the commercial felling of trees.
- (C) Promoting organic farming among local tribal communities.
- (D) Advocating for the rights of mining workers in the Kolar Gold Fields.



- Q31.** Which of the following describes the 'Trans-Siberian Railway', the longest railway line in the world?
- (A) It connects Halifax to Vancouver across the Canadian Prairies.
 - (B) It connects St. Petersburg in the west to Vladivostok on the Pacific Coast.
 - (C) It runs from Perth to Sydney across the Nullarbor Plain.
 - (D) It connects Paris to Istanbul, traversing the heart of Europe.
- Q32.** The 'Great Lakes-St. Lawrence Seaway' is unique among inland waterways because:
- (A) It is the only waterway that remains frozen throughout the year.
 - (B) It uses a series of locks to overcome a drop of over 180 meters from Lake Superior to the Atlantic.
 - (C) It is entirely used for passenger hovercraft services rather than industrial cargo.
 - (D) It connects the Amazon basin to the Atlantic Ocean.
- Q33.** In the context of Indian agriculture, 'Gher' or 'Zaid' refers to the short cropping season that falls between:
- (A) July and October (Monsoon)
 - (B) November and February (Winter)
 - (C) March and June (Summer)
 - (D) October and December (Post-monsoon)
- Q34.** Which of the following is a 'Polymetallic Nodule' resource found on the ocean floor, for which India has been granted mining rights in the Indian Ocean?
- (A) Gold and Silver
 - (B) Manganese and Nickel
 - (C) Uranium and Thorium
 - (D) Coal and Petroleum



- Q35.** The 'Neeranchal' National Watershed Project is an initiative aimed at:
- (A) Providing piped drinking water to every rural household (Har Ghar Jal).
 - (B) Technical assistance to the Watershed Development component of Pradhan Mantri Krishi Sinchayee Yojana.
 - (C) Cleaning the major rivers of India through bio-remediation.
 - (D) Interlinking the southern rivers with the Himalayan rivers.
- Q36.** Which of the following cities is considered an 'Educational Town' in India due to its historical and contemporary institutional significance?
- (A) Roorkee
 - (B) Vishakhapatnam
 - (C) Jamshedpur
 - (D) Kochi
- Q37.** The 'Age-Sex Pyramid' of a population with a very wide base and a narrow top indicates:
- (A) High birth rates and high death rates (Expanding Population).
 - (B) Low birth rates and low death rates (Stable Population).
 - (C) Declining birth rates and high life expectancy (Ageing Population).
 - (D) High birth rates and very low infant mortality.
- Q38.** Which of the following is the leading producer of 'Mica' in India, particularly known for its 'Ruby Mica' quality?
- (A) Rajasthan
 - (B) Andhra Pradesh (Nellore)
 - (C) Jharkhand (Koderma)
 - (D) Bihar (Gaya)
- Q39.** The concept of 'Satellite Towns' is primarily designed to:



- (A) Act as centers for space research and satellite launching.
- (B) De-congest the main metropolitan city by absorbing urban overspill.
- (C) House only the industrial labor of a specific mining region.
- (D) Serve as temporary settlements for migratory populations.

Q40. In 'Quinary' activities, the focus is primarily on:

- (A) Manual extraction of minerals.
- (B) High-level decision making and interpretation of ideas (Gold Collar workers).
- (C) Financial services and insurance for the general public.
- (D) Physical transportation of goods via railways.



Passage Based Questions (Q41–Q45): *Read the following passage carefully and answer the questions:* "The world's iron and steel industry is undergoing a significant locational shift. Traditionally, it was a 'resource-tied' industry located near coalfields or iron ore mines. However, with the depletion of local ores and the rise of scrap metal as a raw material, many new plants are being established near 'Market-based' coastal locations. These 'Mini-steel mills' use electric arc furnaces and are less dependent on bulky raw materials compared to integrated steel plants. This shift allows countries with no domestic coal or iron ore to become major steel producers using imported inputs and scrap."

- Q41.** According to the passage, what is the primary reason for the shift of steel plants to coastal locations?
- (A) Availability of cheap freshwater for cooling.
 - (B) Proximity to imported raw materials and ease of exporting finished products.
 - (C) To avoid land acquisition issues in the interior regions.
 - (D) To utilize tidal energy for plant operations.
- Q42.** How do 'Mini-steel mills' differ from traditional 'Integrated steel plants'?
- (A) They only produce raw iron (pig iron) and not finished steel.
 - (B) they are larger in scale and use more coal.
 - (C) They use electric arc furnaces and scrap metal as the primary input.
 - (D) They must be located specifically in the heart of coalfields.
- Q43.** The term 'Resource-tied' in the passage implies that the industry's location is determined by:
- (A) The availability of high-skilled labor.
 - (B) Proximity to the source of bulky and weight-losing raw materials.
 - (C) The presence of a large consumer market nearby.
 - (D) Government subsidies and tax incentives.



- Q44.** Which of the following countries would benefit most from the 'Market-based coastal' trend mentioned in the passage?
- (A) A landlocked country with massive coal reserves.
 - (B) A coastal nation with high scrap generation but no iron ore mines.
 - (C) A desert nation with no access to international shipping routes.
 - (D) A region with abundant iron ore but no electricity grid.
- Q45.** What is the significance of 'scrap metal' in the modern steel industry according to the text?
- (A) It has made the industry more dependent on deep-pit coal mining.
 - (B) It serves as a substitute for raw iron ore, allowing for locational flexibility.
 - (C) It has forced all steel mills to relocate to rural areas.
 - (D) It has increased the weight of raw materials needed for production.



Case Study Based Questions (Q46–Q50): Read the case study on 'Sustainable Development in the Indira Gandhi Canal Command Area': "The introduction of the Indira Gandhi Canal has transformed the Thar desert into a lush agricultural zone. However, this ecological transformation has come at a price. In Stage I of the canal, intensive irrigation led to widespread waterlogging and soil salinity. Learning from this, Stage II emphasizes 'Sustained Development' through mandatory plantation of shelterbelts, land leveling, and the promotion of water-conserving crops like citrus fruits and dates instead of water-intensive wheat and cotton. The goal is to balance economic gain with the fragile desert ecology."

Q46. Which of the following was a negative environmental consequence of irrigation in Stage I of the project?

- (A) Decrease in the groundwater level.
- (B) Soil salinisation and waterlogging.
- (C) Loss of soil moisture due to over-ploughing.
- (D) Increased frequency of dust storms.

Q47. What is a 'Shelterbelt' as mentioned in the case study strategy?

- (A) A type of concrete wall to stop canal water seepage.
- (B) Rows of trees planted to reduce wind velocity and check sand dune movement.
- (C) A system of underground pipes to drain excess salt.
- (D) A storage facility for food grains in the desert.

Q48. The transition from Stage I to Stage II reflects a shift in focus toward:

- (A) Maximum exploitation of water for cash crops.
- (B) Sustainable development and ecological conservation.
- (C) Industrialization of the Thar desert.
- (D) Converting the entire region into a wildlife sanctuary.

Q49. Which of the following crops is encouraged in Stage II to conserve water?



- (A) Wheat and Rice
- (B) Cotton and Sugarcane
- (C) Citrus fruits and Dates
- (D) Jute and Coffee

Q50. The long-term success of the Indira Gandhi Canal project depends primarily on:

- (A) Doubling the amount of water released into the canal.
- (B) Maintaining the ecological balance through social and environmental management.
- (C) Stopping all agricultural activities to prevent soil damage.
- (D) Increasing the use of chemical fertilizers to combat salt.



Detailed Solutions**Q1.****Solution****Concept:**

The Quaternary sector represents the "Knowledge Economy." It is a specialized segment of the service sector that focuses on intellectual activities rather than physical labor or basic services.

Solution:

- (a) Primary activities involve extraction, and secondary involve manufacturing.
- (b) Tertiary activities cover general services like retail or transport.
- (c) The Quaternary sector specifically involves the collection, processing, and distribution of information.
- (d) This includes Research, financial consulting, and information technology.
- (e) Therefore, Option C accurately describes the core function.

Final Answer: The collection, production, and dissemination of information and specialized knowledge.

Answer: (C)

Q2.**Solution****Concept:**

Human Geography schools of thought define the relationship between humans and their environment. Possibilism is a key concept in this discourse.

Solution:

- (a) Environmental Determinism suggests nature dictates human action.
- (b) Possibilism, championed by the French school (Vidal de la Blache), argues that humans have choices.
- (c) It states that while nature provides opportunities, humans use technology to transform the environment.
- (d) As technology advances, the "possibilities" for human use of the same environment expand.
- (e) This makes Possibilism the correct philosophical approach for the statement.

Final Answer: Possibilism

Answer: (B)



Q3.

Solution**Concept:**

Population density measures help geographers understand the pressure of the population on land resources. Different metrics use different denominators.

Solution:

- (a) Arithmetic density uses total land area, which includes mountains and deserts.
- (b) Physiological density is more refined as it only considers "cultivable" or "arable" land.
- (c) This provides a realistic view of how many people are supported by the land that can actually produce food.
- (d) In agrarian societies, this is a crucial measure for food security and land pressure.
- (e) Thus, the missing term is Physiological density.

Final Answer: Physiological

Answer: (B)

Q4.

Solution**Concept:**

Industrial location factors vary by industry type. High-tech industries follow different logic compared to traditional heavy industries.

Solution:

- (a) High-tech industries do cluster in Technopolies (e.g., Silicon Valley) to share specialized labor and research (Assertion is True).
- (b) Footloose industries are not tied to raw materials because their inputs/outputs are lightweight (e.g., microchips).
- (c) Therefore, they do NOT depend on raw material proximity to minimize transport costs (Reason is False).
- (d) They instead depend on highly skilled labor and advanced communication infrastructure.

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

Answer: (C)



Q5.

Solution**Concept:**

International trade organizations are established to facilitate economic cooperation, and their secretariats are located in major geopolitical hubs.

Solution:

- (a) The European Union (EU) is headquartered in Brussels, Belgium.
- (b) The Organization of the Petroleum Exporting Countries (OPEC) is based in Vienna, Austria.
- (c) The Association of Southeast Asian Nations (ASEAN) has its secretariat in Jakarta, Indonesia.
- (d) The Latin American Integration Association (LAIA) is based in Montevideo, Uruguay.
- (e) Matching these gives the sequence: i-3, ii-1, iii-2, iv-4.

Final Answer: i-3, ii-1, iii-2, iv-4

Answer: (A)



Q6.

Solution**Concept:**

The Demographic Transition Model (DTM) is a conceptual framework that describes the historical shift of societies from high birth and death rates to low birth and death rates as they undergo economic development and industrialization. Stage IV (Low Stationary) and the emerging Stage V (Declining) represent the most advanced demographic phases found in post-industrialized nations like Japan, Germany, and Italy.

Solution:

- (a) In the early stages of the DTM, high fertility is a response to high mortality to ensure family survival.
- (b) As a country reaches the post-industrial stage (Stage IV), both birth and death rates become very low, leading to a stable or slowly growing population.
- (c) However, in the highly advanced "Post-Industrial" phase (often classified as Stage V), a unique phenomenon occurs where the crude birth rate (CBR) falls significantly below the crude death rate (CDR).
- (d) This specific imbalance results in a "negative natural growth rate," meaning the population begins to shrink in size unless supplemented by massive immigration.
- (e) This is driven by high urbanization, delayed marriages, and a shift in social values where the cost of raising children is high.
- (f) Other options like "rapidly declining death rates" describe Stage II (the population explosion phase), which is not unique to post-industrial societies.

Final Answer: Birth rates falling below death rates, leading to negative natural growth.

Answer: (C)



Q7.

Solution**Concept:**

Oceanic routes are the lifelines of international trade, carrying heavy and bulky goods across continents. The North Atlantic Sea Route is the most significant among these, acting as the primary maritime corridor between two of the world's most productive and technologically advanced regions.

Solution:

- (a) The North Atlantic Route connects Western Europe with North America (specifically the Eastern Seaboard of the USA and Canada).
- (b) These two regions are the world's industrial powerhouses, accounting for a massive share of global GDP and international trade volume.
- (c) Because of the sheer intensity of traffic—with thousands of ships transporting machinery, vehicles, and manufactured goods—it is colloquially known as the 'Big Trunk Route.'
- (d) While other routes like the Suez Canal or the Pacific route are vital, none match the sustained density of high-value industrial trade found in the North Atlantic.
- (e) It is not the "longest" route nor defined by landlocked countries; its status is purely based on the economic "weight" of the regions it links.

Final Answer: It connects the two most industrially developed regions of the world.

Answer: (B)



Q8.

Solution**Concept:**

Rural settlement patterns are determined by the physical environment (terrain, water availability, soil fertility) and social factors (defense, kinship, land tenure). In India, the alluvial plains of the North present a unique environment for specific settlement morphologies.

Solution:

- (a) The Indo-Gangetic plains are characterized by high soil fertility and abundant water, which can support high population densities.
- (b) In such areas, 'Nucleated' or 'Clustered' settlements are the norm. In these settlements, the houses are built very close to each other, often with narrow, winding lanes.
- (c) The living area is distinct and separated from the surrounding agricultural farms and pastures.
- (d) People prefer living together for social security, cooperation in agricultural activities, and optimization of the limited high-quality land available for building.
- (e) 'Dispersed' patterns are found in hills, 'Linear' patterns along roads/rivers, and 'Star-like' at junctions, making 'Nucleated' the correct choice for fertile plains.

Final Answer: Nucleated**Answer: (B)**

Q9.

Solution**Concept:**

Inland waterways in India are managed by the Inland Waterways Authority of India (IWAI). They are categorized as National Waterways (NW) to promote fuel-efficient and environment-friendly transport for heavy cargo.

Solution:

- (a) National Waterway 1 (NW-1) is the longest, running along the Ganga-Bhagirathi-Hooghly river system from Prayagraj to Haldia.
- (b) National Waterway 2 (NW-2) is located in the Northeast, utilizing the Brahmaputra River.
- (c) It covers a total distance of 891 km specifically between the towns of Sadiya and Dhubri in Assam.
- (d) This waterway is vital for the connectivity of the North-Eastern states, allowing for the movement of goods like coal, food grains, and fertilizers.
- (e) Locations like Kottapuram-Kollam belong to NW-3 in Kerala, and Kakinada-Puducherry relates to NW-4.

Final Answer: Sadiya and Dhubri

Answer: (B)



Q10.

Solution**Concept:**

Mediterranean Agriculture is a highly specialized and commercialized form of farming. It is not confined strictly to the Mediterranean Sea borders but occurs in regions across the globe that share the 'Cs' (Mediterranean) climate—hot, dry summers and mild, wet winters.

Solution:

- (a) This type of agriculture is famous for 'Viticulture' (grape cultivation), producing the world's finest wines.
- (b) High-value crops like olives, figs, and citrus fruits (lemons, oranges) are the hallmarks of this region.
- (c) Apart from the Mediterranean basin (Southern Europe and North Africa), this climate and agricultural style are found in the California coast, Central Chile, the South-Western tip of South Africa, and parts of Southern and South-Western Australia.
- (d) The Pampas, Steppes, and Prairies are associated with 'Extensive Commercial Grain Cultivation' (wheat), which is a different agricultural system entirely.

Final Answer: Central Chile and South-Western Australia

Answer: (C)



Q11.

Solution**Concept:**

The concept of Gross National Happiness (GNH) represents a paradigm shift in measuring a nation's progress, moving away from purely economic indicators like Gross Domestic Product (GDP) to a more holistic, human-centric approach. Introduced in the 1970s, it posits that true development occurs when material progress and spiritual-emotional well-being grow hand-in-hand, rather than one at the expense of the other.

Solution:

- (a) While most of the world uses GDP to measure success based on production and consumption, the Kingdom of Bhutan officially adopted GNH as its primary yardstick for development.
- (b) GNH is built upon four pillars: Sustainable and Equitable Socio-economic Development, Environmental Conservation, Preservation and Promotion of Culture, and Good Governance.
- (c) This approach recognizes that high income does not necessarily equate to high quality of life if the environment is degraded or cultural identity is lost.
- (d) In the context of Geography, Bhutan's model is a prime example of sustainable development and the importance of "non-material" aspects of human development.
- (e) Other countries like Norway or Iceland consistently rank high on the Human Development Index (HDI) or World Happiness Report, but Bhutan is the only nation where "Happiness" is the constitutional and official state metric for measuring progress.

Final Answer: Bhutan**Answer: (B)**

Q12.

Solution**Concept:**

Towns and cities are often classified based on their dominant economic activity or the primary service they provide to the surrounding region. This is known as the functional classification of towns. In the Indian context, historical, political, and strategic factors have led to the development of various specialized urban centers.

Solution:

- (a) Cantonment or Garrison towns are specifically established for military purposes. They house military barracks, training facilities, and defense personnel.
- (b) Towns like Mhow (Military Headquarters of War) in Madhya Pradesh, Babina in Uttar Pradesh, and others like Ambala, Jalandhar, and Udhampur were originally developed as British military stations.
- (c) These towns are characterized by a distinct urban morphology, usually featuring a well-planned layout, low-density housing, and extensive open spaces for parades and drills.
- (d) Unlike 'Administrative Towns' (like Chandigarh) which focus on governance, or 'Transport Towns' (like Itarsi) which focus on logistics, the primary lifeblood of a Garrison town is the defense establishment.
- (e) Therefore, based on the presence of large military cantonments, Mhow and Babina are classified as Cantonment (Garrison) Towns.

Final Answer: Cantonment (Garrison) Towns

Answer: (C)



Q13.

Solution**Concept:**

The Golden Quadrilateral (GQ) is the largest highway project in India and the fifth-longest in the world. Launched under the National Highways Development Project (NHDP), it aims to reduce the time and distance between the major industrial, agricultural, and cultural hubs of the country through high-quality 4 to 6-lane expressways.

Solution:

- (a) The project is named 'Golden Quadrilateral' because it forms a rough four-sided figure connecting the four major corners of India.
- (b) The vertices of this quadrilateral are the four largest metropolitan cities: Delhi in the North, Mumbai in the West, Chennai in the South, and Kolkata in the East.
- (c) The total length of the GQ is approximately 5,846 kilometers. It passes through 13 states and several other important cities like Ahmedabad, Bengaluru, and Pune, but its primary "cornerstones" remain the four metros mentioned.
- (d) The primary objective of the GQ was to create a "faster" transport network to boost the national economy and integrate the domestic market.
- (e) Option C is the only one that correctly lists all four primary metropolitan terminals of the project.

Final Answer: Delhi, Mumbai, Chennai, Kolkata

Answer: (C)



Q14.

Solution**Concept:**

The Indira Gandhi Canal (IGNP) transformed the arid landscape of Rajasthan into a productive agricultural zone. However, the introduction of intensive irrigation in a desert ecosystem without proper drainage management has led to severe ecological consequences, primarily soil degradation.

Solution:

- (a) In arid regions, the soil naturally contains a high amount of salts. When excessive water is applied through canal irrigation (over-irrigation), the water table rises.
- (b) When this water reaches the root zone or the surface and evaporates due to the high desert heat, it leaves behind a crust of salts.
- (c) This process is called 'Salinisation'. Similarly, 'Alkalinisation' occurs when the soil becomes excessively basic due to the accumulation of sodium salts.
- (d) Waterlogging acts as a catalyst for this, as the stagnant water prevents the leaching of salts and suffocates plant roots.
- (e) While fertilizers (Option A) and deforestation (Option C) contribute to other types of degradation, the specific issues of salt accumulation in the IGNP command area are a direct byproduct of unmanaged over-irrigation.

Final Answer: Over-irrigation leading to waterlogging.

Answer: (B)



Q15.

Solution**Concept:**

The Mumbai Port is India's largest and busiest natural port, handling a vast portion of the country's petroleum and dry cargo. Over time, the increasing volume of trade led to heavy congestion, slow turnaround times, and logistical bottlenecks at the old Mumbai docks.

Solution:

- (a) To alleviate this pressure, a satellite port was planned and constructed on the mainland across from Mumbai.
- (b) This port, originally known as Nhava Sheva, was renamed the Jawaharlal Nehru Port (JNPT).
- (c) Unlike the older ports, JNPT was designed from the ground up as a modern, premier container-handling facility, utilizing high-level automation and mechanization.
- (d) It is currently the largest container port in India, handling more than half of the country's total containerized cargo.
- (e) While Kandla (Gujarat) was developed to serve the North-Western hinterland after the loss of Karachi port, JNPT was specifically built as a "relief port" for Mumbai's existing traffic.

Final Answer: Jawaharlal Nehru Port (Nhava Sheva)

Answer: (B)



Q16.

Solution**Concept:**

Industrial regions in India are clusters of factories and supporting infrastructure that develop based on the availability of raw materials, power, and transport. Mapping these requires an understanding of their spatial distribution across the country's northern and western belts.

Solution:

- (a) Traveling from North-West to East involves moving from the National Capital Region toward the coastal areas of West Bengal.
- (b) The Gurgaon-Delhi-Meerut region is the most north-western cluster in this sequence, characterized by market-based industries and electronics.
- (c) Moving East, the Gujarat region (Ahmedabad-Vadodara) is technically further west/south-west of Delhi, but in the context of the Northern belt's progression toward the mineral heartland, the sequence moves from the plains to the plateau.
- (d) The Chotanagpur region (Jharkhand/Odisha) comes next, serving as the "Mineral Heartland" with heavy iron and steel industries.
- (e) Finally, the easternmost major region in this belt is the Hugli region in West Bengal, established along the river for jute and export-oriented trade.
- (f) Therefore, starting from the North-West (NCR) and moving toward the East, the correct logical progression of these specific hubs is Gurgaon-Delhi-Meerut → Chotanagpur → Hugli.

Final Answer: Gurgaon-Delhi-Meerut → Chotanagpur Region → Hugli Region

Answer: (C)



Q17.

Solution**Concept:**

The 'Net Sown Area' represents the total area on which crops are sown and harvested. When expressed as a percentage of the total geographical area, it indicates the intensity of agricultural land use. This is influenced by topography, irrigation availability, and soil fertility.

Solution:

- (a) In India, the states in the Indo-Gangetic plains have the highest percentage of net sown area because they are flat, fertile, and well-irrigated.
- (b) Punjab and Haryana lead the nation; in these states, more than 80
- (c) Between the two, Punjab usually has a slightly higher percentage than Haryana.
- (d) West Bengal follows closely, as the deltaic region is extremely fertile and used for multiple rice croppings, though its total geographical area is smaller.
- (e) Uttar Pradesh has a massive net sown area in absolute terms, but because it also includes significant forest tracts and diverse terrains (like the Bundelkhand plateau), its percentage of total geographical area is slightly lower than the intensive agricultural heartlands of Punjab and Haryana.
- (f) Thus, the descending order of intensity is Punjab, Haryana, West Bengal, and then Uttar Pradesh.

Final Answer: Punjab, Haryana, West Bengal, Uttar Pradesh

Answer: (A)



Q18.

Solution**Concept:**

Cyber space is the world of electronic computer networks. It is a conceptual environment where communication over computer networks occurs. Unlike traditional geographical spaces, it is not defined by physical land boundaries, although it relies on physical hardware.

Solution:

- (a) Statement 1 is incorrect because 'Cyber Space' is a "virtual" or "electronic" space. While the hardware (servers, cables) is physical, the space itself is the digital environment of the World Wide Web. It is defined as the "non-physical" terrain of interconnected computers.
- (b) Statement 2 is incorrect because the distribution of internet access is one of the most unequal resources in the world today.
- (c) The 'Digital Divide' is a major geographical and socio-economic reality where developed countries and urban areas have high-speed, affordable access, while developing nations and rural areas face a lack of infrastructure and connectivity.
- (d) This gap affects education, economic opportunities, and social mobility.
- (e) Since both statements provide false definitions and claims about the nature and distribution of digital resources, both are incorrect.

Final Answer: Both Statement 1 and Statement 2 are incorrect.

Answer: (D)



Q19.

Solution**Concept:**

Extensive Commercial Grain Cultivation is practiced in the interior parts of semi-arid lands in the mid-latitudes. These regions include the Steppes (Eurasia), Prairies (North America), Pampas (Argentina), Velds (South Africa), Downs (Australia), and Canterbury Plains (New Zealand).

Solution:

- (a) This type of farming is characterized by enormous farm sizes, often covering thousands of hectares.
- (b) Due to the massive scale and low population density in these regions, almost all operations—from sowing to harvesting—are highly mechanized using tractors and combine harvesters.
- (c) Wheat is the principal crop, though corn, barley, and oats are also grown.
- (d) Because the land area is so vast, the "yield per acre" (productivity of the land) is relatively low compared to intensive farming in places like India or China.
- (e) However, because very few people are employed to manage these huge farms, the "yield per person" (productivity of labor) is exceptionally high.
- (f) This distinguishes it from 'Intensive Subsistence' agriculture where the reverse is true (high yield per acre, low per person).

Final Answer: Low yield per acre but high yield per person due to heavy mechanization.

Answer: (A)



Q20.

Solution**Concept:**

The Panama Canal is a man-made waterway that cuts through the Isthmus of Panama in Central America. It is one of the most significant strategic maritime routes in the world, having revolutionized global trade patterns upon its completion in 1914.

Solution:

- (a) The canal connects the Atlantic Ocean in the East to the Pacific Ocean in the West.
- (b) Before its construction, ships traveling from New York (East Coast USA) to San Francisco (West Coast USA) had to sail all the way around the southern tip of South America (Cape Horn), a journey of about 13,000 miles.
- (c) The canal shortened this journey to approximately 5,000 miles, saving time, fuel, and costs.
- (d) Unlike the Suez Canal, which uses a sea-level system to connect the Mediterranean and Red Seas, the Panama Canal uses a complex system of "locks" to lift and lower ships to the level of Gatun Lake (85 feet above sea level).
- (e) This makes it a crucial link for trade between the Americas, Europe, and Asia.

Final Answer: The Atlantic Ocean and the Pacific Ocean.

Answer: (B)



Q21.

Solution**Concept:**

Human Development Approach, as pioneered by Mahbub ul Haq and Amartya Sen, has evolved through several historical perspectives. The 'Income Approach' is one of the oldest and most traditional ways of looking at human development. It operates on the fundamental economic assumption that the level of freedom and capability an individual enjoys is directly linked to their purchasing power and resource access.

Solution:

- (a) The Income Approach is based on the idea that income reflects the level of freedom an individual enjoys.
- (b) According to this perspective, as the level of income increases, the level of human development also increases.
- (c) It assumes that higher income allows people to access better food, healthcare, and education, thereby improving their quality of life.
- (d) However, modern geographers criticize this approach because it ignores the distribution of wealth and non-material aspects like political freedom or social equality.
- (e) While the 'Basic Needs' approach focuses on specific requirements like sanitation, and the 'Capability' approach focuses on human choices, the Income Approach remains purely tied to monetary metrics.
- (f) Therefore, it posits a direct proportionality between the quantitative level of income and the qualitative level of development.

Final Answer: The level of development is directly proportional to the level of income.

Answer: (B)



Q22.

Solution**Concept:**

Migration in India is a complex socio-spatial phenomenon categorized into four main streams: Rural-to-Rural (R-R), Rural-to-Urban (R-U), Urban-to-Urban (U-U), and Urban-to-Rural (U-R). Each stream is driven by distinct "Push" and "Pull" factors ranging from economic necessity to social customs. Analyzing the volume of these streams is essential for understanding demographic shifts.

Solution:

- (a) In terms of sheer numerical volume, Rural-to-Rural (R-R) migration is the most significant stream in India, particularly for internal migration.
- (b) This is overwhelmingly dominated by female migrants due to the social custom of patrilocal marriage (marriage-linked migration).
- (c) Additionally, for males, R-R migration is common among landless laborers who move between villages in search of seasonal agricultural work.
- (d) While Rural-to-Urban migration (R-U) is the most discussed due to its impact on urbanization and the "Push" of rural poverty, it still ranks lower in total volume compared to the movement within rural areas.
- (e) Social factors like marriage remain the single largest cause of migration in India, which primarily occurs within the rural-to-rural context.
- (f) Consequently, for a hard-level analysis of Indian census data, R-R migration is identified as the stream with the highest volume.

Final Answer: Rural-to-Rural migration

Answer: (B)



Q23.

Solution**Concept:**

Mineral resources in India are concentrated in specific geological belts. Bauxite is the primary ore used to produce alumina, which is then smelted into aluminum. India possesses rich reserves of high-grade bauxite, particularly in the plateau regions of Jharkhand, Odisha, and Chhattisgarh, where ancient rock formations have undergone extensive weathering.

Solution:

- (a) The state of Jharkhand is a major producer of bauxite in India, with significant deposits located in the western part of the state.
- (b) Specifically, the Palamau and Lohardaga districts are renowned for their extensive bauxite mines.
- (c) These regions are part of the Pat lands (lateritic plateaus) which provide the ideal geological conditions for bauxite formation.
- (d) Aluminum produced from this bauxite is vital for industries like aerospace, electrical equipment, and construction due to its lightweight and conductive properties.
- (e) While Jharkhand also produces Iron Ore (Singhbhum) and Copper (Ghatshila), Palamau and Lohardaga are specifically famous for Bauxite.
- (f) Manganese and Iron Ore are more prominently found in the southern belts or the eastern Singhbhum region, making Bauxite the correct mineral for the specified districts.

Final Answer: Bauxite**Answer:** (C)

Q24.

Solution**Concept:**

Infrastructure development is a cornerstone of India's economic growth strategy. The Bharatmala Pariyojana is a centrally sponsored and funded umbrella program for the highways sector. It represents a shift from the previous "connectivity-based" model to a more sophisticated "corridor-based" approach to logistics and transportation.

Solution:

- (a) The primary objective of Bharatmala is to optimize the efficiency of freight and passenger movement across the country.
- (b) It focuses on bridging critical infrastructure gaps through the development of Economic Corridors, Inter-corridors, and Feeder Routes.
- (c) A key pillar of the project is improving connectivity to coastal areas and border regions (including the 'SagarMala' integration) to boost international trade.
- (d) It also emphasizes the construction of ring roads around major cities to bypass heavy traffic and the development of multi-modal logistics parks.
- (e) Unlike the 'Amrit Bharat' scheme (railways) or 'UDAN' (aviation), Bharatmala is strictly focused on the road and highway network.
- (f) Therefore, the program aims at holistic improvement of road connectivity and freight optimization across the Indian landscape.

Final Answer: Improving connectivity to coastal/border areas and optimizing freight through corridors.

Answer: (B)



Q25.

Solution**Concept:**

Acid rain is a complex environmental phenomenon where precipitation (rain, snow, or fog) becomes unusually acidic. This is primarily caused by the emission of specific chemical compounds during the combustion of fossil fuels in power plants, industrial boilers, and internal combustion engines in vehicles.

Solution:

- (a) When fossil fuels are burned, they release Sulfur Dioxide (SO_2) and Nitrogen Oxides (NO_x) into the atmosphere.
- (b) These gases react with water vapor, oxygen, and other chemicals in the atmosphere to form sulfuric acid and nitric acid.
- (c) These acids then mix with precipitation and fall to the ground, significantly lowering the pH of the rainwater.
- (d) Acid rain has devastating effects: it leaches nutrients from the soil, kills aquatic life in lakes, and corrodes monuments made of limestone or marble (e.g., the 'Stone Leprosy' of the Taj Mahal).
- (e) Carbon Dioxide and Methane are primarily Greenhouse Gases (causing global warming), while CFCs deplete the ozone layer.
- (f) Thus, the oxides of Nitrogen and Sulphur are the specific pollutants responsible for the acidification of rainfall in industrial regions.

Final Answer: Oxides of Nitrogen and Sulphur

Answer: (B)



Q26.

Solution**Concept:**

The Ruhr Coalfield in Germany is a classic example of an industrial region that has undergone a profound transformation. Historically, it was the powerhouse of Europe's industrial revolution, centered entirely on coal mining and heavy steel production. However, as coal reserves became deeper and more expensive to extract, and as global demand shifted toward cleaner energy and high-tech services, the region faced a period of "Rust Belt" decline. The subsequent "Ruhr Regional Innovation Strategy" transformed it into a modern service-oriented hub.

Solution:

- (a) The Ruhr region is located in the North Rhine-Westphalia state of Germany.
- (b) For over a century, it was defined by "smokestack industries," where the landscape was dominated by coal mines, iron and steel plants, and heavy chemical factories.
- (c) As the "old" industrial base became uncompetitive, Germany implemented a strategic transition. Instead of letting the region collapse, they repurposed industrial sites into technology parks, universities, and cultural centers (like the Zollverein Coal Mine Industrial Complex).
- (d) Today, while it still produces some steel, its economy is driven by specialized chemicals, biotechnology, environmental technology, and extensive tertiary and quaternary services.
- (e) This process of 'industrial succession' or 're-industrialization' is a key study area in Human Geography to understand how developed nations manage the decline of traditional manufacturing.
- (f) In the context of the question, France (Nord-Pas-de-Calais) and the UK (South Wales) have similar regions, but the 'Ruhr' specifically belongs to the German industrial heartland.

Final Answer: Germany**Answer: (B)**

Q27.

Solution**Concept:**

Dryland farming is an agricultural technique used in regions where the annual rainfall is less than 75 cm and irrigation facilities are either minimal or non-existent. In India, this covers a vast portion of the Deccan Plateau and North-Western India. The primary challenge in dryland farming is 'Moisture Stress'. Therefore, the selection of crops is limited to those that are drought-resistant, have deep root systems, or have short growing cycles that can be completed within the brief window of soil moisture availability.

Solution:

- (a) Crops like Sugarcane, Rice, and Jute are "water-intensive." They require standing water or frequent irrigation (150-250 cm of water) to thrive. Cultivating them in dryland areas is impossible without extensive canal or groundwater support.
- (b) Ragi (Finger Millet) is a hardy cereal that belongs to the 'Millets' or 'Nutri-cereals' category.
- (c) It is exceptionally resilient to moisture stress and can grow in poor, shallow soils where other crops would fail.
- (d) Other crops suitable for this environment include Bajra (Pearl Millet), Jowar (Sorghum), and pulses like Gram and Tur.
- (e) These crops not only provide food security to the rural poor in arid regions but also provide essential nutrients and fodder for livestock.
- (f) Since Ragi is the only crop in the options that is naturally evolved to survive in water-scarce environments, it is the correct choice for dryland farming.

Final Answer: Ragi (Finger Millet)

Answer: (C)



Q28.

Solution**Concept:**

The Konkan Railway is often cited as a triumph of civil engineering in India. It was constructed to provide a direct link along the western coast, connecting the commercial capital (Mumbai) to the southern peninsula. Before this project, the rugged terrain of the Western Ghats (Sahyadris) forced trains to take long, circuitous routes through the interior plateau. The project involved constructing 2,000 bridges and 91 tunnels, including the Karbude tunnel, which was one of the longest in Asia.

Solution:

- (a) The Konkan Railway runs parallel to the Arabian Sea coast, traversing the narrow strip of land between the sea and the Western Ghats.
- (b) It starts from Roha in Maharashtra and ends at Thokur near Mangalore in Karnataka, passing through Goa.
- (c) The "hard" part of this project was navigating the Western Ghats' geography, which is characterized by steep escarpments, heavy monsoon rainfall, and numerous fast-flowing rivers.
- (d) The railway passes through ecologically sensitive evergreen forests and crosses massive viaducts over deep valleys.
- (e) It significantly reduced the travel time between Mumbai and Mangalore from 40 hours to roughly 12 hours.
- (f) Since the Konkan region is synonymous with the coastal foothills of the Western Ghats, Option B is the correct geographical feature.

Final Answer: The Western Ghats

Answer: (B)



Q29.

Solution**Concept:**

The term 'Footloose Industry' refers to industries that are not tied to any specific location based on raw material proximity or energy sources. Unlike the Iron and Steel industry, which must be near coal and iron ore mines to reduce transport costs of bulky "weight-losing" materials, footloose industries deal with lightweight components and have a "weight-neutral" production process. Their primary requirements are high-level skills, accessibility to markets, and efficient communication networks.

Solution:

- (a) Iron and Steel, Cement, and Sugar are 'Resource-based' or 'Weight-losing' industries. For example, 2 tons of iron ore and 1 ton of coal might produce only 1 ton of steel; hence, locating far from mines is economically disastrous.
- (b) In contrast, a watch-making or electronics assembly factory uses pre-manufactured small components (chips, gears, screens). The weight of the final product is almost the same as the total weight of the inputs.
- (c) These industries produce very little pollution and can be located in diverse environments—from high-tech urban parks to suburban residential zones.
- (d) They depend heavily on a "technologically skilled labor force" rather than proximity to a quarry or a farm.
- (e) Because they can "step" or move easily from one location to another without a significant increase in transport costs, they are called footloose.
- (f) Therefore, Watch Making or Electronics Assembly represents the classic definition of a footloose industry.

Final Answer: Watch Making or Electronics Assembly

Answer: (C)



Q30.

Solution**Concept:**

The Appiko Movement is an important chapter in India's environmental history, particularly in the context of grassroots conservation. It is the southern version of the famous 'Chipko Movement' of the Himalayas. The word 'Appiko' in the Kannada language literally means "to hug." The movement began in 1983 in the Uttara Kannada district of Karnataka, led by villagers who were alarmed by the rapid disappearance of their local forests due to commercial exploitation.

Solution:

- (a) The movement was triggered when the state government allowed commercial contractors to fell trees in the Kalase forest for industrial purposes.
- (b) Local youth and women, inspired by Sunderlal Bahuguna's Chipko movement, rushed into the forests and hugged the trees to prevent the loggers from using their axes.
- (c) The movement had three primary objectives: 'Ulisu' (to save the existing forests), 'Belesu' (to grow new trees/afforestation), and 'Balasu' (to use forest resources rationally and sustainably).
- (d) It was not a protest against dams or for mining rights; it was a pure "forest conservation" movement aimed at protecting the biodiversity of the Western Ghats from industrial greed.
- (e) The movement successfully forced the government to ban the felling of green trees in certain areas and promoted the use of alternative energy like biogas to reduce dependence on firewood.
- (f) Thus, Option B accurately identifies the movement's focus on forest conservation and prevention of commercial felling.

Final Answer: Conserving forests and preventing the commercial felling of trees.

Answer: (B)



Q31.

Solution**Concept:**

The Trans-Siberian Railway is a monumental piece of infrastructure in the geography of transport. It is the longest double-track electrified railway in the world, stretching across the vast expanse of the Russian Federation. It serves as the primary land-based link between Europe and the Pacific, facilitating the movement of minerals, timber, and manufactured goods across the Eurasian continent.

Solution:

- (a) The Trans-Siberian Railway connects the western port city of St. Petersburg (formerly Leningrad) on the Baltic Sea to the eastern port of Vladivostok on the Sea of Japan (Pacific Coast).
- (b) It spans over 9,289 kilometers and crosses seven time zones, traversing the Ural Mountains and the vast Siberian Taiga.
- (c) It is crucial for the development of Russia's interior, providing access to rich resource basins that would otherwise be inaccessible.
- (d) Option A describes the Trans-Canadian Railway, while Option C describes the Trans-Australian Railway. Option B correctly identifies the terminals and the geographic context of the Trans-Siberian line.

Final Answer: It connects St. Petersburg in the west to Vladivostok on the Pacific Coast.

Answer: (B)



Q32.

Solution**Concept:**

The Great Lakes-St. Lawrence Seaway is a system of canals, locks, and channels in Canada and the United States that permits ocean-going vessels to travel from the Atlantic Ocean to the Great Lakes. This is a prime example of human engineering modifying a natural drainage system to overcome significant elevation differences, effectively making the interior of the North American continent accessible to world trade.

Solution:

- (a) The waterway connects the five Great Lakes (Superior, Michigan, Huron, Erie, and Ontario) to the Atlantic Ocean via the St. Lawrence River.
- (b) The major geographical challenge was the difference in water levels; for example, Lake Superior is about 183 meters (600 feet) above sea level.
- (c) To solve this, a massive system of 15 locks (including the Welland Canal which bypasses Niagara Falls) was built to "lift" or "lower" ships between the lakes and the river.
- (d) This enables Duluth (USA) and Thunder Bay (Canada), located deep in the interior, to function as international seaports.
- (e) While it does freeze in winter (requiring icebreakers), its defining "unique" characteristic in industrial geography is the lock system that manages the drastic drop in elevation.

Final Answer: It uses a series of locks to overcome a drop of over 180 meters from Lake Superior to the Atlantic.

Answer: (B)



Q33.

Solution**Concept:**

In the Indian agricultural calendar, there are three distinct cropping seasons: Kharif, Rabi, and Zaid. This classification is based on the arrival and withdrawal of the monsoon and the temperature requirements of different crops. Understanding these seasons is vital for analyzing food security and agricultural productivity in the subcontinent.

Solution:

- (a) Kharif (Monsoon season) starts in June/July with the onset of rains and ends in September/October.
- (b) Rabi (Winter season) begins in October/November and is harvested in March/April.
- (c) Zaid is the "gap" season—a short summer cropping period that falls between the harvesting of Rabi crops and the sowing of Kharif crops.
- (d) This typically occurs from March to June. During this time, farmers grow quick-maturing crops like watermelon, cucumber, muskmelon, and some vegetables.
- (e) This season allows for land to be used productively during the hot summer months, provided there is some access to irrigation.

Final Answer: March and June (Summer)

Answer: (C)



Q34.

Solution**Concept:**

Polymetallic nodules, also known as manganese nodules, are potato-shaped mineral concentrations found on the deep ocean floor. They are rich in various metals and are considered a future frontier for mineral security. Due to the high technical difficulty and environmental sensitivity of deep-sea mining, the 'International Seabed Authority' (ISA) regulates these resources under the UN Convention on the Law of the Sea (UNCLOS).

Solution:

- (a) India has been granted a large area in the Central Indian Ocean Basin (CIOB) for the exploration and eventual mining of these nodules.
- (b) These nodules contain high percentages of Manganese (the dominant metal), along with significant amounts of Iron, Nickel, Copper, and Cobalt.
- (c) These minerals are critical for modern technology, including batteries for electric vehicles and high-tech electronics.
- (d) India's "Deep Ocean Mission" is currently developing the 'Samudrayaan' and other underwater vehicles to harvest these resources.
- (e) They do not contain energy resources like coal/petroleum or fissile materials like uranium/thorium, making Manganese and Nickel the correct identifying minerals.

Final Answer: Manganese and Nickel

Answer: (B)



Q35.

Solution**Concept:**

Watershed development is the holistic management of land, water, and biomass resources within a specific drainage area. In India, where agriculture is heavily dependent on rainfall, watershed management is key to drought-proofing and rural prosperity. The 'Neeranchal' project is a significant policy intervention in this domain.

Solution:

- (a) Neeranchal is a National Watershed Project supported by the World Bank.
- (b) Its primary objective is to provide technical and managerial support to the 'Pradhan Mantri Krishi Sinchayee Yojana' (PMKSY), specifically its 'Watershed Development' component (formerly Integrated Watershed Management Programme).
- (c) It focuses on bringing scientific rigor to watershed activities through better data, monitoring, and capacity building for local communities.
- (d) Unlike 'Jal Jeevan Mission' which focuses on tap water, or 'Namami Gange' which focuses on river cleaning, Neeranchal is focused on the 'process' and 'technology' of managing the entire watershed ecosystem for sustainable agriculture.

Final Answer: Technical assistance to the Watershed Development component of Pradhan Mantri Krishi Sinchayee Yojana.

Answer: (B)



Q36.

Solution**Concept:**

Educational towns serve as centers of academic excellence and training. Their growth is tied to the establishment of major universities, research institutes, or specialized coaching hubs. While most Indian cities have schools and colleges, an 'Educational Town' is one where the economy and urban identity are predominantly defined by its academic institutions.

Solution:

- (a) Roorkee is a classic example of an educational town. Its identity is inseparable from the Indian Institute of Technology (IIT) Roorkee, which was established as the Thomason College of Civil Engineering in 1847 (the first engineering college in the British Empire).
- (b) The city serves as a hub for scientific research, civil engineering, and hydrology, attracting students and scholars from across the nation.
- (c) Other examples of educational towns in India include Pilani, Aligarh, Varanasi, and Shantiniketan.
- (d) Jamshedpur is an industrial town, Kochi is a transport/port town, and Vishakhapatnam is a port-cum-industrial center.
- (e) In an educational town, the ancillary services—such as hostels, bookstores, and student-run cafes—form the core of the local economy.

Final Answer: Roorkee**Answer:** (A)

Q37.

Solution**Concept:**

The Age-Sex Pyramid (Population Pyramid) is a graphical representation of the age and gender structure of a population. The shape of the pyramid tells a story about the demographic history and future trajectory of a nation, specifically its birth and death trends.

Solution:

- (a) A pyramid with a very wide base indicates a high proportion of children in the population, which is a direct result of high birth rates.
- (b) A narrow top indicates that very few people reach old age, which is characteristic of high death rates and low life expectancy.
- (c) This "triangular" shape is typical of less developed countries (LDCs) or nations in the early stages of the Demographic Transition (Stage II).
- (d) Such a population is described as an "Expanding Population" because each successive generation is larger than the one before it.
- (e) Examples include Nigeria, Bangladesh, or Mexico in their earlier demographic phases.
- (f) In contrast, a "bell-shaped" pyramid indicates a stable population, and a "tapered base" indicates a declining population.

Final Answer: High birth rates and high death rates (Expanding Population).

Answer: (A)



Q38.

Solution**Concept:**

Mica is a non-metallic mineral valued for its excellent insulating properties and resistance to high voltage, making it indispensable in the electrical and electronics industry. India was once the world's near-monopoly producer of sheet mica. It is found in the form of thin sheets or flakes within pegmatite veins.

Solution:

- (a) The state of Andhra Pradesh, specifically the Nellore district, is currently the leading producer of mica in India.
- (b) However, historically and qualitatively, Jharkhand's Koderma district (part of the Hazaribagh plateau) is the most famous hub.
- (c) Koderma is renowned for producing 'Ruby Mica' (Muscovite), which is the highest quality mica in the world due to its transparency and heat resistance.
- (d) While Rajasthan is also a major producer (near Ajmer and Bhilwara), the "Ruby" variety specifically marks the Bihar-Jharkhand mica belt.
- (e) Due to the decline in natural mica demand (replaced by synthetic materials), many of these mines are now less active, but they remain a key focus of geological study.

Final Answer: Jharkhand (Koderma)

Answer: (C)



Q39.

Solution**Concept:**

Urbanization leads to the overgrowth of central cities, causing issues like pollution, housing shortages, and traffic congestion. To manage this "urban sprawl," urban planners develop Satellite Towns. These are planned urban settlements located near a major metropolis but possessing their own local government and economic base.

Solution:

- (a) The primary function of a satellite town is to act as a "counter-magnet" to the main city.
- (b) It helps in de-congesting the metropolitan core by offering planned residential and commercial spaces for the urban overspill.
- (c) While they are connected to the parent city by high-speed transport (commuter rails or expressways), they are not just "dormitory towns"; they ideally provide local employment.
- (d) Examples in India include Gurugram and Noida (satellites of Delhi), or Navi Mumbai (satellite of Mumbai).
- (e) This strategy prevents the main city from collapsing under the weight of its own population while promoting regional development.

Final Answer: De-congest the main metropolitan city by absorbing urban overspill.

Answer: (B)



Q40.

Solution**Concept:**

Economic activities are classified into levels. Quinary activities represent the highest level of the hierarchy, involving the creation, rearrangement, and interpretation of new and existing ideas. These are often referred to as "Gold Collar" professions because of the immense value and influence their decisions have on the global economy.

Solution:

- (a) Quinary activities go beyond the "service" aspect of Tertiary and the "information" aspect of Quaternary activities.
- (b) They focus on high-level decision-making and policy formulation.
- (c) Professionals in this category include top government officials, research scientists, financial consultants, and legal advisors who shape the direction of nations and corporations.
- (d) Unlike manual labor (Primary/Secondary) or data processing (Quaternary), the quinary sector is about "judgment" and "leadership."
- (e) In a post-industrial society, this small group of people has a disproportionately large impact on geographic and economic patterns.

Final Answer: High-level decision making and interpretation of ideas (Gold Collar workers).

Answer: (B)



Q41.

Solution**Concept:**

The global steel industry is transitioning from a "Supply-oriented" (resource-tied) to a "Demand-oriented" (market-tied) locational pattern. This is a result of changing technology and the exhaustion of traditional raw material sources. Coastal locations offer a "Dual Advantage": they facilitate the easy import of high-grade foreign ores and the export of finished steel, while also providing access to large coastal urban markets and scrap metal sources.

Solution:

- (a) Traditionally, steel plants were located near coal mines (like the Ruhr in Germany) or iron mines (like Jamshedpur) to minimize the transport cost of bulky raw materials.
- (b) As mentioned in the passage, the rise of "market-based coastal locations" is driven by the need for logistical efficiency.
- (c) Coastal sites allow for "Break-of-bulk" points where ships can directly unload raw materials and load finished goods, reducing inland freight costs.
- (d) Countries like Japan and South Korea, which lack domestic iron ore and coal, have used this strategy to become world leaders in steel production.
- (e) Therefore, proximity to imported inputs and the global market through maritime routes is the primary reason for this geographic shift.

Final Answer: Proximity to imported raw materials and ease of exporting finished products.

Answer: (B)



Q42.

Solution**Concept:**

The steel industry is no longer dominated solely by massive, integrated plants. 'Mini-steel mills' represent a decentralized, flexible, and technologically modern alternative. Unlike integrated plants that perform all processes from smelting iron ore to rolling steel in one location, mini-mills focus on specific stages of the production cycle and utilize different energy sources and raw materials.

Solution:

- (a) Traditional integrated plants are "resource-hungry," requiring massive amounts of coking coal and iron ore to run Blast Furnaces.
- (b) Mini-steel mills, as highlighted in the passage, utilize 'Electric Arc Furnaces' (EAF).
- (c) Instead of using raw iron ore, their primary raw material is "Scrap Metal" (recycled steel from old cars, buildings, etc.).
- (d) This makes them more environmentally friendly and allows them to be located near urban centers (the source of scrap) rather than remote mining regions.
- (e) They are called "mini" because they operate on a smaller scale and are specialized in producing specific steel products rather than the entire range of steel items.

Final Answer: They use electric arc furnaces and scrap metal as the primary input.

Answer: (C)



Q43.

Solution**Concept:**

In Industrial Geography, industries are categorized based on their locational pull. A 'Resource-tied' industry is one where the cost of transporting the raw materials is significantly higher than the cost of transporting the finished product. This is typical of "Weight-losing" industries where the raw material is bulky, heavy, and loses mass during the manufacturing process.

Solution:

- (a) The steel industry is historically resource-tied because it takes nearly 2 tons of iron ore and 1 ton of coal to produce just 1 ton of steel.
- (b) Locating the factory far from the source would lead to astronomical transportation costs for the raw materials.
- (c) Therefore, the "tie" refers to the geographical necessity of being near the source of these bulky and heavy inputs.
- (d) The passage contrasts this traditional "tie" with modern flexibility provided by scrap metal and coastal accessibility.
- (e) Options A, C, and D refer to other locational factors (labor, market, and policy) which do not define a "resource-tied" industry in the technical sense.

Final Answer: Proximity to the source of bulky and weight-losing raw materials.

Answer: (B)



Q44.

Solution**Concept:**

The locational shift in the steel industry has democratized steel production. It has allowed nations that were once considered "resource-poor" to leverage their geographic location and industrial consumption to become major players in the global steel market. This is a crucial concept in understanding the economic rise of East Asian and European coastal economies.

Solution:

- (a) A coastal nation with high scrap generation but no iron ore mines perfectly fits the profile described in the passage.
- (b) Such a nation can use its coastal status to import cheap iron ore from countries like Brazil or Australia.
- (c) Simultaneously, its high urban population generates large amounts of scrap metal, which can be recycled in mini-mills using electric furnaces.
- (d) Landlocked nations (Option A) or desert nations without shipping access (Option C) cannot easily import the bulky inputs required to benefit from this specific coastal trend.
- (e) This model allows for industrialization based on "trade and technology" rather than just "natural endowment."

Final Answer: A coastal nation with high scrap generation but no iron ore mines.

Answer: (B)



Q45.

Solution**Concept:**

The use of scrap metal represents a shift toward a "Circular Economy" in heavy industry. In the context of geography, the importance of scrap metal lies in its ability to break the traditional geographic link between the factory and the mine. Scrap is an "Urban Resource," found wherever people consume and dispose of steel products.

Solution:

- (a) Scrap metal acts as a substitute for primary iron ore.
- (b) Since scrap is collected in large cities and industrial hubs, its use allows steel mills to move away from remote coal and iron belts and relocate closer to the "Market" (cities).
- (c) This provides "Locational Flexibility," as the industry is no longer "tied" to a fixed geological point.
- (d) It also significantly reduces the energy required for production compared to smelting raw ore in a blast furnace.
- (e) As the passage suggests, this has led to the proliferation of mini-steel mills in regions that were previously not considered industrial heartlands.

Final Answer: It serves as a substitute for raw iron ore, allowing for locational flexibility.

Answer: (B)



Q46.

Solution**Concept:**

The Indira Gandhi Canal project (originally Rajasthan Canal) represents a monumental effort to reclaim desert land for human use. However, Stage I of the project serves as a cautionary tale in environmental geography regarding the limits of "intensive irrigation" in arid ecosystems. When vast amounts of water are introduced into a desert with high evaporation rates and poor natural drainage, it disrupts the existing geochemical balance.

Solution:

- (a) The primary environmental crisis in Stage I was the twin menace of waterlogging and soil salinity.
- (b) Because the desert soil is often underlain by impermeable layers of calcium (kankar) or gypsum, excess irrigation water cannot seep deep into the ground. Instead, the water table rises, leading to waterlogging.
- (c) As this water reaches the surface, the intense desert heat causes it to evaporate rapidly, leaving behind dissolved salts. Over time, this creates a white crust of salt on the fields, a process known as salinisation.
- (d) This "white leprosy" of the soil renders the land infertile and unsuitable for further cultivation.
- (e) The groundwater level actually rose (Option A is incorrect) and dust storms decreased due to vegetation (Option D is incorrect).
- (f) Therefore, the degradation of soil health through salt accumulation was the most severe negative consequence of the early phase.

Final Answer: Soil salinisation and waterlogging.

Answer: (B)



Q47.

Solution**Concept:**

Desertification is the process by which fertile land becomes desert, typically as a result of drought, deforestation, or inappropriate agriculture. In the Thar Desert, the primary agent of desertification is wind erosion and the migration of sand dunes. Shelterbelts are a biological engineering solution used in Stage II of the canal project to stabilize the moving landscape.

Solution:

- (a) A shelterbelt consists of multiple rows of trees or shrubs planted at right angles to the prevailing wind direction.
- (b) The primary function of these tree lines is to act as a physical barrier that reduces wind velocity at the ground level.
- (c) By slowing the wind, shelterbelts prevent the lifting of topsoil and check the "marching" of sand dunes into agricultural fields or canal channels.
- (d) They also create a micro-climate that reduces evaporation from the soil, helping to conserve moisture.
- (e) In the Indira Gandhi Canal area, species like **Acacia tortilis** and **Prosopis cineraria** (Khejri) are commonly used for this purpose.
- (f) Unlike concrete walls, shelterbelts are a sustainable, living infrastructure that also provides fodder and fuel to the local community.

Final Answer: Rows of trees planted to reduce wind velocity and check sand dune movement.

Answer: (B)



Q48.

Solution**Concept:**

The evolution of the Indira Gandhi Canal project illustrates the "Learning Curve" in developmental geography. Stage I was characterized by an 'Ecological Colonization' mindset, where the goal was maximum agricultural output regardless of environmental cost. Stage II, however, represents a shift toward 'Ecological Wisdom'—recognizing that the desert cannot be treated like the fertile Punjab plains.

Solution:

- (a) Stage I focused on settling as many people as possible and growing "cash crops" like wheat and cotton which required heavy watering. This led to the environmental disasters discussed in Q46.
- (b) Stage II was designed with a more cautious approach, prioritizing the "Sustainability" of the land over short-term yield.
- (c) This involves integrated land-water management, where the preservation of the desert's fragile ecology is seen as the only way to ensure that development lasts for future generations.
- (d) The shift includes mandatory afforestation, pasture development, and strict water budgeting.
- (e) It moves away from "Industrializing" the desert (Option C) and toward a balanced "Agro-Ecological" model.
- (f) Thus, the transition marks the adoption of Sustainable Development principles where economic growth is balanced with environmental health.

Final Answer: Sustainable development and ecological conservation.

Answer: (B)



Q49.

Solution**Concept:**

Crop selection is a vital component of sustainable water management. In arid regions, growing water-guzzling crops is an invitation to environmental collapse. Stage II of the canal project promotes "Horticulture" over traditional "Cereal" farming because certain fruit-bearing trees are naturally adapted to arid conditions and provide higher economic value per drop of water used.

Solution:

- (a) Crops like Wheat, Rice, Cotton, and Sugarcane (Options A and B) are "High-Water Requirement" crops. In a desert, these crops accelerate soil salinity because they require constant flooding of fields.
- (b) Citrus fruits (like Kinnow) and Dates are "Dryland Horticultural" crops.
- (c) Once established, these trees have deep root systems that can tap into deeper soil moisture and require significantly less frequent irrigation compared to annual field crops.
- (d) Dates, in particular, are perfectly suited for the Thar's high temperatures and sandy soils.
- (e) Shifting to these crops ensures that farmers earn a good income while the total "Water Footprint" of the command area remains within sustainable limits.
- (f) Jute and Coffee (Option D) are tropical/humid crops and are entirely unsuitable for a desert environment.

Final Answer: Citrus fruits and Dates.

Answer: (C)



Q50.

Solution**Concept:**

The "Carrying Capacity" of an ecosystem is the maximum level of use that it can sustain without undergoing permanent degradation. The Thar Desert has a very low carrying capacity. The long-term success of the canal project, therefore, is not about how much water it can deliver, but how well that water is managed within the environmental limits of the region.

Solution:

- (a) Simply increasing the water supply (Option A) would only accelerate waterlogging and salinity, leading to a faster collapse of the system.
- (b) Stopping all activity (Option C) is not feasible as it ignores the human need for development and food security.
- (c) The correct strategy is "Adaptive Management"—maintaining the ecological balance through social participation and scientific environmental monitoring.
- (d) This involves maintaining the shelterbelts, practicing crop rotation, using drip irrigation, and involving the local 'Pani Panchayats' (Water Committees) in equitable distribution.
- (e) If the soil remains healthy and the dunes remain stable, the economic prosperity of the region will be permanent. If the ecology fails, the infrastructure will eventually be buried under salt and sand.

Final Answer: Maintaining the ecological balance through social and environmental management.

Answer: (B)



Answer Key

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

