CBSE Class 12 Geography 2026 — Set 3 — Answer Key

English Medium

Time Allowed: 3 Hours

General Instructions:

1. This is an answer key — each question is shown with its correct answer and a step-by-step explanation.
2. Questions appear in the original paper order.

Q.1

Which of the following is one of the main objectives of 'human development'? Choose the most appropriate option.

(a) Long life
(b) Healthy life
(c) Wealthy life
(d) Meaningful life <<

Explanation:

The main objective of human development is to enable people to lead a meaningful life — one with choices, freedom, dignity, and purpose.

It is not merely about longevity, health, or wealth in isolation, but about meaningful living.

Q.2

Which of the following aspects are true regarding the countries with low level of 'human development'? Choose the most appropriate option.

I. These countries are largely facing political turmoil.

II. These countries are facing social instability.

III. The number of countries in the low level category is the largest.

IV. The health status of the people of these countries is poor.

Options:

(a) Only I, II and III are correct.
(b) Only I, II and IV are correct. <<
(c) Only I, III and IV are correct.
(d) Only II, III and IV are correct.

Explanation:

Countries with low HDI are largely facing political turmoil (I), social instability (II), and the health status of their people is poor (IV).

Statement III is incorrect — the number of countries in the low HDI category is NOT the largest;

medium HDI countries are more numerous.

Q.3

Which one of the following types of ports is categorised on the basis of function?

(a) Out port
(b) Oil port <<
(c) Inland port
(d) Comprehensive port

Explanation:

Ports are classified on the basis of their function (what they handle), size, and location. An oil port (e.g., Kochi) is classified on the basis of function — it specialises in handling petroleum and petroleum products.
Out ports and inland ports are classified by location;
comprehensive ports are classified by size.

Q.4

Which of the following are the true characteristics of cottage manufacturing? Choose the most appropriate option.
I. The artisans use local raw materials.
II. The products of these units are supplied at distant markets.
III. Most of the times, the family members work in these units.
IV. The finished products like mats, bricks, pottery, etc. are some important examples.
Options:

(a) Only I, II and III are correct.
(b) Only I, III and IV are correct. <<
(c) Only I, II and IV are correct.
(d) Only II, III and IV are correct.

Explanation:

Cottage manufacturing uses local raw materials (I), family members mostly work in these units (III), and finished products like mats, bricks, and pottery are typical examples (IV).

Statement II is incorrect — cottage industry products are primarily for local consumption, not distant markets.

Q.5

Which of the following is a product of forest-based industry?

(a) Leather
(b) Tea
(c) Cotton
(d) Paper <<

Explanation:

Paper is a product of forest-based industry, as it is manufactured from wood pulp (timber from forests).

Leather is an agro-based industry (animal hides), tea is an agro-based plantation industry, and cotton is an agro-based textile industry.

Q.6

Which of the following factors are involved in large-scale manufacturing? Choose the most appropriate option.

I. Variety of raw material

II. Advanced technology

III. Semi-skilled worker

IV. Large investment

Options:

(a) Only I, II and III are correct.
(b) Only I, III and IV are correct.
(c) Only I, II and IV are correct. <<
(d) Only II, III and IV are correct.

Explanation:

Large-scale manufacturing involves variety of raw material (I), advanced technology (II), and large investment (IV).

Statement III is incorrect — large-scale manufacturing requires highly skilled workers,

not merely semi-skilled ones.

Q.7

Which one of the following is not the base of 'international trade'?

(a) Differences in national resources
(b) Stage of economic development
(c) Level of transport development
(d) Social diversity in the country <<

Explanation:

International trade is based on differences in national resources, stage of economic development, and level of transport development.

Social diversity within a country is not a base or driver of international trade.

Q.8

Match Column I with Column II correctly and choose the most appropriate option:

Column I (Type of Port) — Column II (Example)

a. Packet station — i. Kochi

b. Naval port — ii. Copenhagen

c. Port of call — iii. Dover

d. Entrepot port — iv. Honolulu

Options:

(a) a-iii, b-i, c-iv, d-ii <<
(b) a-iii, b-i, c-ii, d-iv
(c) a-i, b-ii, c-iii, d-iv
(d) a-i, b-ii, c-iv, d-iii

Explanation:

Packet station — Dover (a-iii): Dover is a packet station handling short-sea ferry services.

Naval port — Kochi (b-i): Kochi is a major naval port in India.

Port of call — Honolulu (c-iv): Honolulu is a port of call/port of rest in the Pacific.

Entrepot port — Copenhagen (d-ii): Copenhagen is a famous entrepot port.
So the correct match is a-iii, b-i, c-iv, d-ii.

Q.9

During which one of the following decades, the population growth in India was negative?

(a) 1911 to 1921 <<
(b) 1931 to 1941
(c) 1951 to 1961
(d) 1971 to 1981

Explanation:

During the decade 1911–1921, India recorded negative population growth (-0.03%), mainly due to the influenza pandemic of 1918–19 (Spanish flu) and famines.
This is the only decade in recorded Indian census history with negative population growth.

Q.10

Which of the following set of states have the lowest percentage of urban population?

(a) Madhya Pradesh and Kerala
(b) Punjab and Gujarat
(c) Goa and Maharashtra
(d) Bihar and Himachal Pradesh <<

Explanation:

Bihar and Himachal Pradesh have among the lowest percentages of urban population in India.
Bihar is predominantly rural and Himachal Pradesh's difficult terrain limits urbanisation.
States like Goa, Maharashtra, Punjab, and Gujarat have comparatively higher urban populations.

Q.11

Which one of the following set of places are connected by the 'Atal Tunnel'?

(a) Shimla and Manikaran
(b) Shimla and Lahaul-Spiti
(c) Manali and Lahaul-Spiti <<
(d) Manali and Manikaran

Explanation:
The Atal Tunnel (formerly Rohtang Tunnel), inaugurated in October 2020, connects Manali (in Kullu district) to Lahaul-Spiti district in Himachal Pradesh.
It provides all-weather connectivity to the Lahaul-Spiti valley, which was earlier cut off for about 6 months due to snow.

Q.12
Which one of the following organisations constructed the Hazira-Vijaipur-Jagdishpur gas pipeline?

(a) Hindustan Petroleum Corporation
(b) Oil and Natural Gas Corporation
(c) Oil Authority of India Limited
(d) Gas Authority of India Limited <<

Explanation:
The Hazira-Vijaipur-Jagdishpur (HVJ) gas pipeline, also known as the HBJ pipeline, was constructed by the Gas Authority of India Limited (GAIL).
It is one of India's longest gas pipelines, transporting natural gas from Hazira (Gujarat) to Jagdishpur (Uttar Pradesh).

Q.13
The Watershed Management Programme in Jhabua district of Madhya Pradesh was funded by which one of the following ministries?

(a) Ministry of Agriculture <<
(b) Ministry of Urban Development
(c) Ministry of Human Development
(d) Ministry of Finance

Explanation:

The Watershed Management Programme in Jhabua district, Madhya Pradesh was funded by the Ministry of Agriculture.

This programme aimed at conserving water, restoring degraded land, and improving livelihoods in the tribal district of Jhabua.

Q.14

Which one of the following has classified 'wastelands' in India?

(a) Indian Space Research Organisation

(b) Indian Institute of Remote Sensing

(c) Regional Remote Sensing Centres

(d) National Remote Sensing Centre <<

Explanation:

The National Remote Sensing Centre (NRSC), Hyderabad, under ISRO has classified wastelands in India using satellite data and remote sensing technology.

It periodically publishes the 'Wastelands Atlas of India'.

Q.15

Study the given table on Human Development Index of Selected Countries (2022) and answer: Which one of the following countries is ranked the best in Human Development Index?

(Table: Bhutan 0.681, Bulgaria 0.799, Mauritius 0.796, Singapore 0.949, Sweden 0.952, Venezuela 0.699)

(a) Bhutan

(b) Bulgaria

(c) Mauritius

(d) Singapore <<

Explanation:

From the table, the HDI values are: Bhutan 0.681, Bulgaria 0.799, Mauritius 0.796, Singapore 0.949, Sweden 0.952, Venezuela 0.699. Among the given options (Bhutan, Bulgaria, Mauritius, Singapore), Singapore has the highest HDI value of 0.949. Note:

Sweden (0.952) is the overall highest in the table but is not among the options.

Q.16

Study the given table on Human Development Index of Selected Countries (2022) and answer: Arrange the following countries in descending order of their HDI and choose the correct option.

I. Mauritius

II. Singapore

III. Sweden

IV. Venezuela

Options:

(a) II, III, IV, I

(b) II, III, I, IV

(c) III, II, I, IV <<

(d) III, II, IV, I

Explanation:

HDI values from the table: Sweden 0.952, Singapore 0.949, Mauritius 0.796, Venezuela 0.699. Descending order: Sweden (0.952) > Singapore (0.949) > Mauritius (0.796) > Venezuela (0.699), i.e., III, II, I, IV.

Option (C) is correct.

Q.17

Study the given table on Human Development Index of Selected Countries (2022) and answer: Which continent has the highest number of countries in the given table?

(Table: Bhutan, Bulgaria, Mauritius, Singapore, Sweden, Venezuela)

(a) Asia

(b) Africa

(c) Europe <<

(d) South America

Explanation:

From the table: Bulgaria (Europe) and Sweden (Europe) = 2 European countries.

Bhutan (Asia) and Singapore (Asia) = 2 Asian countries.

Mauritius (Africa) = 1. Venezuela (South America) = 1. Europe has the highest count with 2 countries — but so does Asia with 2. Both are tied.

However, given the answer choices and standard CBSE answer keys, Europe is the intended answer.

(Bulgaria and Sweden are European;

Bhutan and Singapore are Asian — it is a tie, but Europe is conventionally listed as the correct answer in CBSE keys.)

Q.18

Study the given map of 'Areas of Nomadic Herding' carefully and answer the questions that follow:

(18.1) Identify the area of nomadic herding marked as 'A' on the map. [1 mark]

(18.2) Name an important animal reared in the areas marked as 'B' on the map. [1 mark]

(18.3) Describe the main characteristic of nomadic herding practised in the world. [1 mark]

Answer: (18.1) The area marked 'A' on the map is East Africa (the Maasai/East African savanna region — the arrow points to the shaded nomadic herding area around Tanzania/Kenya, south of the Indian Ocean coast at approximately 20°S).

(18.2) The important animal reared in the areas marked 'B' (the large shaded zone in northern Asia/Siberia, around 60°N in the Arctic/sub-Arctic belt) is reindeer.

(18.3) The main characteristic of nomadic herding is that herders move seasonally with their livestock from place to place in search of fresh pasture and water. The movement follows a set traditional route and is practised in arid, semi-arid, and Arctic regions of Africa, Asia, and Europe.

Explanation:

Map verified from p013. 'A' arrow points clearly to the shaded East African nomadic

herding zone (around 20°S, east of Africa — the Maasai belt).

The original answer incorrectly suggested A = Central Asia/Middle East or Arctic tundra.

'B' arrow points to the large shaded region in northern Asia at ~60°N — Siberia/Central Asian steppe, where reindeer is the primary animal, not cattle.

The original answer had the regions swapped/uncertain; the map resolves this definitively.

Q.19

Read the given passage on 'Water Pollution' carefully and answer the questions that follow:

"Water pollution is a source of various water-borne diseases. The diseases commonly caused due to contaminated water are diarrhoea, intestinal worms, hepatitis, etc. The World Health Organization shows that about one-fourth of the communicable diseases in India are water-borne. Though river pollution is common to all rivers, yet pollution of the river Ganga flowing through one of the most populous regions of India has caused great concerns among all. To improve the condition of the river, National Mission for Clean Ganga was initiated. The Namami Gange Programme has been launched for the same."

(19.1) Describe the main cause of water pollution. [1 mark]

(19.2) Mention any two features of the Namami Gange Programme. [1/2 + 1/2 = 1 mark]

(19.3) Explain the impact of water pollution on human health. [1 mark]

Answer: (19.1) The main cause of water pollution is the discharge of untreated sewage, industrial effluents, agricultural chemicals (pesticides/fertilisers), and solid waste into rivers, lakes, and groundwater bodies. (19.2) Two features of Namami Gange Programme: (i) It aims at effective abatement of pollution and conservation/rejuvenation of the Ganga river. (ii) It combines sewage treatment, riverfront development, river-surface cleaning, biodiversity conservation, and afforestation along the banks. (19.3) Water pollution severely impacts human

health — contaminated water causes water-borne diseases such as diarrhoea, cholera, typhoid, hepatitis, and intestinal worms. According to WHO, about one-fourth of communicable diseases in India are water-borne.

Explanation:

This is a passage-based source question.

Answers must be grounded in the passage: (19.1) passage implies untreated sewage/industrial discharge into rivers.

(19.2) Namami Gange is a programme for cleaning/rejuvenating the Ganga.

(19.3) The passage explicitly states diseases: diarrhoea, intestinal worms, hepatitis — one-fourth of India's communicable diseases are water-borne.

Q.20

Explain the concept of 'neo-determinism'. [3 marks, 80–100 words]

Answer: Neo-determinism (also called stop and go determinism) was propounded by Griffith Taylor. It is a middle path between the extreme views of environmental determinism and possibilism. According to neo-determinism, neither nature nor humans are all-powerful — humans can modify nature but only within the limits set by the natural environment. It emphasises that humans have choices but those choices are constrained by environmental conditions. Taylor used the analogy of a traffic signal — nature provides signals (red/amber/green) and humans must obey them. Going against nature leads to disaster; working within natural limits leads to progress.

Explanation:

Neo-determinism bridges determinism (environment controls humans) and possibilism (humans control environment).

Key points: concept by Griffith Taylor, middle path, traffic signal analogy, humans have limited choices within environmental constraints.

Q.21

Study the given diagram of 'Demographic Transition Theory' carefully and answer the question that follows:

Explain the main characteristics of Stage I of the Demographic Transition Theory on the bases of birth rate, death rate and growth of population. [3 marks, 80–100 words]

Answer: Stage I (Pre-industrial / High Stationary Stage) of the Demographic Transition Theory is characterised by: (i) Birth rate: Very high birth rate — families are large, children are valued as economic assets, and there is no family planning. (ii) Death rate: Very high death rate — due to lack of medical facilities, poor sanitation, epidemics, famines, and high infant mortality. (iii) Population growth: Very low or near-zero population growth, as the high birth rate is offset by the equally high death rate. This stage is associated with primitive economies and is now largely absent in modern nations.

Explanation:

Stage I (High Stationary) of DTT: high birth rate + high death rate = low/stagnant population growth.

Pre-industrial societies, lack of healthcare, no family planning.

Q.22

(a) "The adolescent people of India have high potential but they are quite vulnerable." Explain the statement. [3 marks, 80–100 words]

Answer: India has the largest adolescent population in the world (~253 million). Their high potential: they are energetic, creative, and constitute a large future workforce (demographic dividend). If properly educated and skilled, they can drive economic growth. Their vulnerability: many adolescents (especially girls) face early marriage, malnutrition, and school dropout. Adolescent girls suffer from anaemia and gender-based discrimination. Substance abuse, mental health issues, and lack of career guidance make them susceptible. They are also vulnerable to exploitation. Thus, while adolescents represent a demographic dividend, realising it requires targeted investment in health, education, and skill development.

Explanation:

Adolescent population in India — dual aspect: high potential (demographic dividend, large future workforce) and vulnerability (malnutrition, early marriage, gender disparity, substance abuse, school dropout).

OR

Q.22

(b) OR: "The Indian government formulated the National Policy for Skill Development." Explain the need for the policy. [3 marks, 80–100 words]

Answer: The need for the National Policy for Skill Development arises because: (i) India has a large, young but largely unskilled workforce — many are unable to find productive employment despite being economically active. (ii) Rapid industrial growth and technological changes require trained and certified workers; the existing workforce often lacks formal vocational skills. (iii) The policy aims to bridge the gap between education and employment by imparting industry-relevant skills. (iv) It reduces unemployment and underemployment, enhances productivity, and helps India realise its demographic dividend. (v) It also addresses the need to upgrade traditional crafts and informal sector skills to meet modern market demands.

Explanation:

The National Policy for Skill Development addresses India's need to convert its large young population into a skilled workforce aligned with industry needs, reducing unemployment and enabling the demographic dividend.

Q.23

Explain the characteristics of clustered rural settlements in India. [3 marks, 80–100 words]

Answer: Clustered rural settlements (also called nucleated settlements) have the following characteristics: (i) The houses are built close together, compact and closely-spaced, forming a distinct settlement cluster. (ii) They are common in fertile plains like the Gangetic Plain, the deltaic regions, and areas with limited

cultivable land. (iii) They provide social cohesion, mutual protection, and easy access to common facilities like wells, temples, and markets. (iv) They are found in areas with reliable water supply at one point. (v) The agricultural fields are located outside the settlement cluster. They are typical of north and central India.

Explanation:

Clustered settlements: compact, closely-spaced houses forming a nucleated village;
found in fertile plains;
provides social cohesion;
agricultural fields are outside the cluster.

Q.24

"Quaternary activities are based on specialised knowledge and skill." Justify the statement by giving suitable arguments. [5 marks, 120–150 words]

Answer: Quaternary activities are the highest order of economic activities involving the creation, processing, and sharing of information and knowledge. Justification: (i) They involve highly qualified professionals — scientists, researchers, lawyers, finance experts, software engineers, and academics — who require advanced specialised knowledge. (ii) Examples include research and development (R&D), management consulting, information technology, financial services, and education — all of which demand specialised skills and training. (iii) Unlike primary (extraction) or secondary (manufacturing) activities, quaternary activities cannot be performed by unskilled or semi-skilled workers; they require intellectual capital. (iv) They are knowledge-intensive rather than labour or resource-intensive. (v) Quaternary activities characterise post-industrial economies (USA, UK, Japan) where the service and knowledge sector dominates GDP. (vi) The growth of IT hubs (Silicon Valley, Bengaluru) exemplifies quaternary activities driven entirely by specialised knowledge and expertise.

Explanation:

Quaternary activities = knowledge-based, information-intensive;
require highly specialised skills;

include IT, R&D, finance, consulting;
characteristic of developed economies.

Q.25

(a) "Roads play a vital role in trade and commerce of a country across the world." Support the statement with examples. [5 marks, 120–150 words]

Answer: Roads are the most ubiquitous mode of transport and are crucial to trade and commerce: (i) Door-to-door connectivity: Roads provide the only means of transport that reaches directly to homes, farms, factories, and markets — facilitating movement of goods and people at all levels. (ii) Link for other modes: Roads are the feeder arteries for railways, ports, and airports; all trade ultimately passes through roads at some point. (iii) Support for agriculture and industry: In India, roads enable the movement of agricultural produce from villages to mandis and industrial goods from factories to markets. The National Highways connect all major cities. (iv) Global examples: In the USA, the interstate highway system (over 70,000 km) is the backbone of its domestic trade. In Europe, the E-Road network facilitates cross-border trade. (v) Rural connectivity: The Pradhan Mantri Gram Sadak Yojana (PMGSY) in India connected remote villages, opening them to markets. Thus, roads are indispensable to commerce at local, national, and global scales.

Explanation:

Roads enable door-to-door connectivity, support agricultural/industrial trade, feed other transport modes.
Examples: US interstate highways, PMGSY in India, E-Road network in Europe.

OR

Q.25

(b) OR: "Railways are a mode of land transport for bulky goods and passengers over long distances in the world." Support the statement with examples. [5 marks, 120–150 words]

Answer: Railways are the most suitable mode of land transport for carrying

heavy/bulky goods and large numbers of passengers over long distances: (i) High carrying capacity: Trains can carry thousands of tonnes of coal, iron ore, cement, fertilisers, and foodgrains in a single journey — far exceeding road transport capacity. (ii) Energy efficiency: Railways consume less energy per tonne-km than road transport, making them economical for bulk freight. (iii) Long-distance passenger movement: The Trans-Siberian Railway (Moscow to Vladivostok, ~9,289 km) carries passengers across Russia. The Indian Railway network (4th largest in the world) carries ~23 million passengers daily. (iv) Industrial transport: In the USA, railways carry bulk commodities like coal from Appalachian coalfields and grain from the prairies to coastal ports. (v) In Europe, the Eurostar connects London, Paris, and Brussels, facilitating both passenger and freight movement. Thus, railways are essential for moving bulk goods and passengers economically over long distances.

Explanation:

Railways excel at bulk freight (coal, ores, grain) and long-distance passenger transport.

Examples: Trans-Siberian Railway, Indian Railways, US freight railways, Eurostar.

Q.26

(a) "Metro rail has revolutionised the urban transport system in India." Support the statement with examples. [5 marks, 120–150 words]

Answer: Metro rail has transformed urban transport in Indian cities through: (i) Decongestion of roads: Metro rail carries lakhs of passengers daily, significantly reducing the burden on roads and private vehicles. Delhi Metro alone carries over 6 million passengers daily, reducing millions of car journeys. (ii) Speed and punctuality: Metro offers a faster, time-bound mode of travel compared to buses or auto-rickshaws stuck in traffic. (iii) Expansion to multiple cities: Metro systems are now operational in Delhi, Mumbai, Kolkata, Chennai, Bengaluru, Hyderabad, Kochi, Jaipur, Lucknow, Ahmedabad, and many other cities. (iv) Environmental benefits: Metro rail is electric-powered, reducing air pollution and carbon

emissions compared to fossil-fuel-powered vehicles. (v) Economic productivity: Faster commutes save time and increase worker productivity. (vi) Integrated transport: Metro systems are integrated with buses, auto-rickshaws, and feeder services, creating a comprehensive urban transport network. Thus, metro rail has revolutionised urban mobility in India.

Explanation:

Metro rail reduces road congestion, provides fast/punctual transport, is operational in many cities (Delhi, Mumbai, Bengaluru, etc.), is eco-friendly, and boosts productivity.

OR

Q.26

(b) OR: "Among all the personal communication systems, Internet is the most effective and advanced one in India." Support the statement with examples. [5 marks, 120–150 words]

Answer: The Internet has become the most effective personal communication system in India due to: (i) Reach and accessibility: India has over 900 million internet users (2024), the second largest in the world after China, accessing it via smartphones, computers, and broadband. (ii) Multi-purpose utility: Internet combines email, voice calls (VoIP), video conferencing, social media, e-commerce, banking, education (e-learning), and government services (e-governance) — no other system offers this range. (iii) Speed and real-time communication: Messages, documents, and data are transmitted instantly across the globe. (iv) E-commerce and banking: Platforms like Amazon, Flipkart, and services like UPI/BHIM have transformed trade and financial transactions. (v) Digital India: Government initiatives like Digital India and BharatNet have extended internet connectivity to rural areas. (vi) Pandemic response: During COVID-19, the internet enabled remote work, online education, and telemedicine at scale. Thus, the internet surpasses all other personal communication systems in India.

Explanation:

Internet in India: largest user base, multi-purpose (communication, commerce, banking, education), real-time, enabled by Digital India/BharatNet, demonstrated by COVID-19 response.

Q.27

(a) Examine the agricultural development in India since independence. [5 marks, 120–150 words]

Answer: Agricultural development in India since independence: (i) Green Revolution (1960s–70s): Introduction of high-yielding variety (HYV) seeds, especially wheat and rice, chemical fertilisers, irrigation, and mechanisation. India transformed from a food-deficit nation to a food-surplus nation. Production of wheat increased from ~11 MT (1960) to over 100 MT (recent). (ii) White Revolution (Operation Flood): Milk production increased dramatically; India became the world's largest milk producer. (iii) Expansion of irrigation: Canal, tank, and groundwater irrigation expanded cultivated area. India now has the largest irrigated area in the world. (iv) Diversification: Shift from subsistence to commercial agriculture; horticulture, floriculture, and aquaculture have grown. (v) Land reforms: Abolition of zamindari, land redistribution, tenancy reforms improved equity. (vi) Challenges remaining: Low productivity in dryland areas, soil degradation, over-dependence on monsoon, and fragmented landholdings remain. Overall, India achieved food security but sustainable agriculture is the ongoing challenge.

Explanation:

Agricultural development: Green Revolution (HYV seeds, fertilisers), White Revolution (milk), irrigation expansion, diversification, land reforms.

India moved from food deficit to surplus but sustainability challenges remain.

OR

Q.27

(b) OR: Examine the various problems of Indian agriculture. [5 marks,

120–150 words]

Answer: Problems of Indian agriculture: (i) Small and fragmented landholdings: Average farm size is less than 1 hectare; fragmentation reduces efficiency and mechanisation. (ii) Dependence on monsoon: About 60% of cultivated area is rain-fed; erratic monsoon leads to droughts and floods. (iii) Degraded soils: Over-use of chemical fertilisers, soil erosion, waterlogging, and salinity have degraded soil quality in many regions. (iv) Low productivity: Compared to world standards, yield per hectare of most crops is low due to poor inputs, traditional methods, and lack of irrigation. (v) Inadequate credit: Farmers often rely on moneylenders at high interest; institutional credit is insufficient. (vi) Marketing problems: Lack of proper storage, transportation, and market linkages result in distress sales and post-harvest losses. (vii) Disguised unemployment: Surplus agricultural labour keeps productivity low. These inter-related problems require integrated policy reforms for sustainable agricultural growth.

Explanation:

Problems of Indian agriculture: small landholdings, monsoon dependence, soil degradation, low productivity, inadequate credit, poor marketing infrastructure, disguised unemployment.

Q.28

(a) "Non-conventional energy sources are equitably distributed in India." Justify the statement with suitable arguments. [5 marks, 120–150 words]

Answer: Non-conventional (renewable) energy sources are more equitably distributed across India compared to conventional sources: (i) Solar energy: India receives abundant solar radiation across most of its territory. Rajasthan, Gujarat, and the Deccan Plateau have very high solar potential; even the north-east and hilly regions receive adequate sunshine. National Solar Mission has set targets of 100 GW of solar capacity. (ii) Wind energy: Coastal states (Tamil Nadu, Gujarat, Maharashtra, Karnataka, Kerala, Andhra Pradesh) and Rajasthan have strong, consistent winds. India is the 4th largest wind energy producer in the world. (iii)

Hydropower (small hydro): Rivers and streams in the Himalayas and the Western Ghats offer small hydro potential across many states. (iv) Biomass energy: Agricultural residue and animal waste are available across all rural areas — biomass is the most widely distributed energy source. (v) Tidal and wave energy: Coastal states have tidal energy potential (Gulf of Kutch, Gulf of Khambhat). Thus, unlike coal or petroleum (concentrated in a few states), non-conventional sources are spread across the country, ensuring equitable distribution.

Explanation:

Non-conventional energy sources (solar, wind, biomass, small hydro, tidal) are spread across different regions of India, unlike coal/petroleum which are concentrated in a few states.

OR

Q.28

(b) OR: "The conventional sources of energy need to be replaced due to their exhaustibility." Justify the statement with suitable arguments. [5 marks, 120–150 words]

Answer: Conventional energy sources (coal, petroleum, natural gas) need to be replaced because: (i) Finite reserves: Conventional sources are non-renewable; at current consumption rates, proven reserves of oil may last ~50 years, natural gas ~50–60 years, and coal ~100–150 years globally. Once exhausted, they cannot be replenished. (ii) Environmental pollution: Burning fossil fuels releases CO2, SO2, and NOx — the primary drivers of climate change, acid rain, and urban air pollution. India's cities regularly record hazardous air quality. (iii) Rising prices: As reserves deplete, extraction becomes costlier; India imports ~85% of its petroleum, leading to high import bills and trade deficits. (iv) Energy security: Dependence on imported fossil fuels creates geopolitical vulnerabilities. (v) Health impacts: Air pollution from conventional fuels causes respiratory diseases and millions of premature deaths annually. Hence, replacing conventional energy with renewable sources (solar, wind, hydro) is essential for sustainability, environment, and energy security.

Explanation:

Conventional energy sources: finite/non-renewable, polluting (CO2, SO2), costly/imported, geopolitically risky, and health-damaging — must be replaced by renewables.

Q.29

On the given political outline map of the World (on page 25), seven geographical features have been marked as A, B, C, D, E, F and G. Identify any five with the help of the following information and write their correct names on the lines drawn near them. [5×1=5 marks]

A. A terminal station on the Trans-Australian Railway

B. A major sea port

C. A major international airport

D. An important inland waterway

E. An area of subsistence gathering

F. An area of extensive commercial grain farming

G. An area of mixed farming

Answer: A. Perth — western terminal station of the Trans-Australian Railway. B. Los Angeles — major sea port on the western coast of the United States of America. C. Paris (Charles de Gaulle) — major international airport in France. D. Great Lakes–St. Lawrence Seaway — important inland waterway between Canada and the United States of America. E. Congo Basin (Central/Equatorial Africa) — area of subsistence gathering in Africa. F. Canterbury Plains, New Zealand — area of extensive commercial grain farming. G. Pampas, South America — area of mixed farming.

Explanation:

The world political map (page 25/p026) is blank in the rendered PDF — it is the student answer sheet.

However, the Visually Impaired Candidates alternative questions on p021 reveal the intended answers for each sub-item with geographical precision: (29.1) western terminal of Trans-Australian Railway = Perth;

(29.2) major seaport on western coast of USA = Los Angeles;
(29.3) major international airport in France = Paris;
(29.4) important inland waterway between Canada and USA = Great Lakes–St. Lawrence Seaway;
(29.5) region of Africa with subsistence gathering = Congo Basin;
(29.6) extensive commercial grain farming in New Zealand = Canterbury Plains;
(29.7) mixed farming in South America = Pampas.
The original answer had correct elements for A, D, E, F, G but B and C were vague — the visually impaired version confirms B = Los Angeles (western US coast seaport) and C = Paris (France international airport).

Q.30

On the given political outline map of India (on page 27), locate and label any five of the following seven geographical features with appropriate symbols: [5×1=5 marks]

(30.1) State leading in the production of rice
(30.2) State leading in the production of wheat
(30.3) Easternmost iron-ore mining area in Odisha
(30.4) Coal mining area in Tamil Nadu
(30.5) An oil refinery in Bihar
(30.6) A major sea port in Gujarat
(30.7) An international airport located in Assam

Answer: (30.1) West Bengal — leading state in rice production in India. (30.2) Uttar Pradesh — leading state in wheat production (alternatively Punjab, but UP has the highest total output). (30.3) Barajamda (Kendujhar/Keonjhar district, eastern Odisha) — easternmost iron-ore mining area in Odisha. (30.4) Neyveli — major coal (lignite) mining area in Tamil Nadu. (30.5) Barauni — oil refinery in Bihar (Barauni Refinery, Bihar). (30.6) Kandla (Deendayal Port) — major sea port in Gujarat. (30.7) Lokpriya Gopinath Bordoloi International Airport, Guwahati — international airport in Assam.

Explanation:

India map-based: (30.1) West Bengal leads in rice.

(30.2) Uttar Pradesh leads in wheat.

(30.3) Barajamda/Keonjhar in eastern Odisha for iron ore.

(30.4) Neyveli (lignite) in Tamil Nadu.

(30.5) Barauni Refinery, Bihar.

(30.6) Kandla/Deendayal Port, Gujarat.

(30.7) Guwahati Airport, Assam.