



TEST -18 (Geography+Environment & Eco.) Answers Key

1. Answer: (a) 1-2-3-4
Explanation: GWP measures how much heat a gas traps compared to carbon dioxide. The value of carbon dioxide is considered '1'. The effect of methane is approximately 28 times, nitrous oxide 265 times, and sulfur hexafluoride more than 23,000 times that of carbon dioxide.
2. Answer: (a) Only 1
Explanation: Polar clouds provide a surface for activating chlorine compounds, leading to rapid thinning of the ozone layer. The Montreal Protocol is not limited only to CFCs; it also includes HCFCs and, after the Kigali Amendment, HFCs as well.
3. Answer: (a) Only 1 and 3
Explanation: When the ocean absorbs carbon dioxide, the water becomes acidic. This leads to a decrease in carbonate ions, due to which marine organisms (**such as corals and some plankton**) are unable to build their protective shells or skeletons. This has no direct connection with cloud seeding.
4. Answer: (a)
Explanation: Albedo is the capacity for reflection. Snow has a high albedo because it sends solar rays back into space, thereby keeping the Earth cool. Global warming melts ice, which reduces the albedo and increases heat.
5. Answer: (b) Only two pairs
Explanation: Pairs 1 and 3 are correct. The Vienna Convention is related to the protection of the ozone layer, not biodiversity. CBD (**Convention on Biological Diversity**) is responsible for biodiversity.
6. Answer: (c) 1, 2, 3 and 4
Explanation: Methane is produced in anaerobic conditions. There is heavy emission of methane from paddy fields, wetlands, the digestive systems of animals, and the extraction of fossil fuels (**coal mining**).
7. Answer: (c) All three pairs
Explanation: Bhitarkanika (**Odisha**) is famous for saltwater crocodiles. Keibul Lamjao (**Manipur**) is the world's only floating national park, which is the home of the Sangai deer (**the dancing deer on Phumdis**). Desert National Park (**Rajasthan**) is important for the conservation of the '**Great Indian Bustard**'.
8. Answer: (c) 1, 2 and 3
Explanation: According to the standards of '**Conservation International**', 1500 endemic plant species and the loss of 70% of natural habitat are mandatory for a hotspot. In India, the Himalayas, Western Ghats, Indo-Burma region, and Sundaland (**Nicobar Islands**) are included in this list.
9. Answer: (c) The current high rate of species extinction due to human activities.
Explanation: 5 mass extinctions have occurred so far in Earth's history. Currently, we are in the era of the sixth extinction, the main cause of which is not natural disasters but human intervention (**such as deforestation, pollution, and poaching**).
10. Answer: (d) 1, 2 and 3
Explanation: It is a statutory advisory body. Its primary function is to advise the government on animal welfare laws. In 2018, its headquarters was shifted from Chennai to Ballabhgarh (**Faridabad**) in Haryana.
11. Answer: (b) Only 3
Explanation: Statement 3 is incorrect. Sacred Groves are part of '**In-situ**' conservation because here species are protected by the community within their natural environment itself. Whereas, gene banks and zoos keep species outside of their natural habitat (**Ex-situ**).
12. Answer: (b) Only 2
Explanation:
 - **Statement 1 is incorrect:** TEEB was started in 2007 by Germany and the European Commission. Although it is supported by UNEP, it is not operated solely by UNEP.
 - **Statement 2 is correct:** Its main objective is to demonstrate the economic values of nature so that policy makers can make better decisions.
 - **Statement 3 is incorrect:** Natural capital accounting does not mean only subtracting value from GDP, but it also involves adding the positive contributions of services provided by the ecosystem (**such as clean air, water harvesting**) to the economy.
13. Answer: (c) Only 1 and 3
Explanation:
 - **Statement 1 is correct:** Zooxanthellae algae provide color and food to the coral. Corals expel them under stressful conditions.
 - **Statement 2 is incorrect:** Corals are very sensitive organisms. They can be bleached not only due to extreme heat (**Heat stress**) but also due to extreme cold (**Cold stress**) and changes in water salinity.
 - **Statement 3 is correct:** Bleaching is a stressful condition, not death. If environmental conditions return to normal, corals can survive again.
14. Answer: (b) Only two
Explanation: Statements 1 and 2 are correct. The 2022 amendment has reduced the schedules from 6 to 4 (**e.g., Schedule I: highly protected animals, Schedule II: less protection, Schedule IV: CITES species**). Statement 3 is incorrect because the separate schedule for '**Vermin**' has now been abolished; now the government can declare any species as vermin through a notification.
15. Answer: (d) 1, 2 and 3
Explanation: This has been a controversial amendment. Under this, strategic security projects (**within 100 km of the border**) have been exempted from forest clearance. Also, while limiting the scope of the Supreme Court's 1996 '**Godavarman**' judgment, it has been restricted only to recorded forest areas. Zoos are now considered a part of '**forest conservation**' activities.
16. Answer: (b) Only two pairs
Explanation: Pairs 1 and 2 are correct. Pair 3 is incorrect because the Stockholm Convention is for '**Persistent Organic Pollutants**' (**POPs**). For mercury, there is the '**Minamata Convention**'.
17. Answer: (b) Only 2 and 3
Explanation: Statement 1 is incorrect because NGT is a statutory body, not constitutional. Statement 2 is correct because it works on the principles of '**Natural Justice**'. Statement 3 is important: 7 laws come under the jurisdiction of NGT, but



the Wildlife (**Protection**) Act, 1972 and the Forest Rights Act (**FRA**), 2006 are outside its scope.

18. Answer: (c) Both 1 and 2

Explanation: EPA 1986 was brought as an '**Umbrella Act**' after the Bhopal Gas Tragedy. It gives broad powers to the Center. It contains a provision for '**Citizen Suit**', under which citizens can approach the court after a notice of 60 days.

19. Answer: (c) Only 1 and 3

Explanation: In the SRI method, the distance between plants is kept larger, due to which fewer seeds are required. Statement 2 is incorrect because in this, the fields are not kept submerged in water all the time, but are rather kept in Alternate Wetting and Drying. This saves water and reduces methane emission (**which occurs in anaerobic conditions**).

20. Answer: (a) Only 1 and 2

Explanation: Statements 1 and 2 are correct. Statement 3 is incorrect because Himalayan rivers are '**Perennial**' because they receive water from both glaciers and rainfall, not just from glaciers.

21. Answer: (a) Only one

Explanation: Only statement 2 is correct. Statement 1 is incorrect because the SSI method reduces water consumption by up to 65%. Statement 3 is technically incorrect because the '**Cabinet Committee on Economic Affairs**' (**CCEA**) announces the FRP, while the CACP only recommends it.

22. Answer: (a) Jhelum - Chenab - Ravi - Satluj

Explanation: The correct order from North to South in the Indus River system is: Indus (**northernmost**), then Jhelum, Chenab, Ravi, Beas, and finally Satluj.

23. Answer: (d) All four pairs

Explanation: These are the four main pillars of ZBNF propounded by Subhash Palekar. Jivamrita increases soil fertility, Bijamrita protects seeds from diseases, Acchadana (**Mulching**) prevents evaporation, and Whapasa ensures the balance of moisture and air in the soil.

24. Answer: (a) Only 1 and 2

Explanation: Statements 1 and 2 are absolutely correct. Planetary Boundaries are the safe limits of Earth within which humanity can develop safely. Statement 3 is incorrect: According to the latest research by scientists, we have crossed six out of nine boundaries, including Biosphere Integrity, climate change, and pollution from Novel Entities (**new chemicals**).

25. Answer: (d) All four pairs

Explanation: All four pairs are correctly matched. UPSC often asks these by interchanging the goal numbers.

- **SDG 6:** Ensure availability of safe drinking water and sanitation.
- **SDG 12:** Promote sustainable consumption patterns.
- **SDG 14:** Conservation of oceans and marine resources.
- **SDG 15:** Prevent degradation of ecosystems, forests, and soil.

26. Answer: (b) Only 1 and 3

Explanation: Statement 1 is correct. The Brundtland Report gave the most famous definition of sustainable development: "**Development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs.**"

Statement 2 is incorrect: Sustainable development speaks about creating a balance between the environment and economic growth, not considering economic growth as Secondary. Statement 3 is correct: It speaks not only about responsibility towards future generations (**Inter-generational**) but also advocates for equality between rich and poor countries at present (**Intra-generational**).

27. Answer: (a) Only 1 and 2

Explanation: Ecosystem engineers are organisms that change the availability of resources for other species. Why is statement 3 incorrect? Keystone species (**like predatory lions**) control the ecosystem, but they are not always '**engineers**' (i.e., **they do not change the physical habitat**). Conversely, some engineers (**like earthworms**) are very important but are not always given '**keystone**' status.

28. Answer: (c) Only 1 and 3

Explanation: eDNA is a revolutionary technology. Organisms leave behind DNA in the form of hair, skin, feces, or mucus. Why is statement 2 incorrect? Recent research has proven that eDNA technology can also be used to identify terrestrial organisms through air and soil samples.

29. Answer: (b) Only 1 and 2

Explanation: Why is statement 3 incorrect? The return of wolves to Yellowstone is an example of '**Top-down**' control. Wolves preyed on deer, which reduced overgrazing of trees and the entire forest was revitalized. When a predator (**Top**) changes the entire system, it is '**Top-down**'.

30. Answer: (a) Only 1 and 2

Explanation: Why is statement 3 incorrect? If a country's footprint is more than its bio-capacity, it is called a '**Debtor**'. If the footprint is less, it is called an '**Ecological Creditor**'.

31. Answer: (b) Only 2 and 3

Explanation: Statement 1 is incorrect because the maximum temperature is not always at the surface; many times it is slightly below the surface. However, in vertical distribution, the temperature drops down. Statement 3 is correct because at the poles, water is near zero at both the surface and depths, so no clear thermocline is formed there.

32. Answer: (c) All three

Explanation: All three statements are correct. Statement 2 represents '**Thermohaline Circulation**'. Statement 3 clarifies the principle of '**Western Boundary Intensification**', which occurs due to the Earth's rotation.

33. Answer: (a) Only 1 and 2

Explanation: Statement 3 is incorrect because below the CCD, calcium carbonate dissolves completely due to high pressure and low temperature; therefore, calcareous deposits cannot be found there. Only siliceous deposits or Red Clay are found there.

34. Answer: (b) Only two pairs

Explanation: Pairs 1 and 2 are correct. Pair 3 is incorrect because the '**Continental Shelf**' can extend up to 350 nautical miles based on geographical features, while the EEZ remains limited to 200 miles.

35. Answer: (a) Only 1 and 2

Explanation: Statement 3 is incorrect because during El-Niño, warm water accumulates on the coast of Peru, stopping the upwelling. For this reason, fish die there during El-Niño years and the fishing industry suffers heavy losses.



36. Answer: (d) 1, 2 and 3

Explanation: India is among the selected countries in the world that have received a license for deep-sea mining from the ISA (HQ: Jamaica). These 'potato' shaped nodules are very important for the clean energy (**battery manufacturing**) of the future.

37. Answer: (b) Only 1 and 3

Explanation: Statement 2 is incorrect because geostrophic winds flow parallel to isobars, not perpendicular. This happens because the pressure gradient force and the Coriolis force balance each other. Statement 3 is correct because the Coriolis force increases towards the poles, requiring lower wind speed to achieve balance.

38. Answer: (c) Only 1 and 3

Explanation: Statement 2 is incorrect because the Dry Adiabatic Rate (**10°C/1000m**) is always higher than the Moist Adiabatic Rate (**5°C-9°C/1000m**). The moist rate is lower because latent heat released during condensation slightly prevents the air from cooling.

39. Answer: (b) Only two

Explanation: Statements 1 and 2 are correct. Statement 3 is incorrect because the Subtropical Westerly Jet Stream is the main factor that pushes '**Western Disturbances**' coming from the Mediterranean Sea towards India.

40. Answer: (c) A is correct, but R is incorrect.

Explanation: The main reason for the change of seasons is the tilt of the Earth on its axis and its revolution around the Sun. The distance from the Sun (**Perihelion/Aphelion**) has a very negligible effect on seasons (**it makes a small difference in the Southern Hemisphere, but it is not the main cause**).

41. Answer: (c) Only 1 and 3

Explanation: Statement 2 is incorrect because an Occluded Front is formed when a cold front (**which moves faster**) catches up with a warm front from behind and completely lifts the warm air off the ground. Statement 3 is correct because in tropical cyclones, the air temperature is uniform, therefore fronts do not form there.

42. Answer: (c) Only three pairs

Explanation:

- **Pair 1 is correct:** Laterite soil is formed by intense leaching, which washes away nutrients. Although it is not naturally fertile, with fertilizers, it is very useful for cashew and tea in South India.
- **Pair 2 is incorrect:** Saline soil has a severe deficiency of nitrogen. Additionally, due to the accumulation of salts, its structure becomes dense, resulting in very low permeability.
- **Pair 3 is correct:** In arid regions, the accumulation of calcium carbonate in the lower horizons of the soil forms a layer of '**Kankar**', which obstructs the downward movement (**infiltration**) of water during irrigation.
- **Pair 4 is correct:** Peaty or organic soil is formed by the decomposition of dead vegetation. It is found in Kerala (**Kari soil**) and parts of Uttarakhand. Its pH value is very low (**acidic**).

43. Answer: (d) All four pairs

Explanation:

- Shyok and Zaskar are important tributaries of the Indus in the Ladakh region.
- Dibang (**Arunachal**) and Dhansiri (**Assam**) contribute significantly to the water flow of the Brahmaputra.

- **Ajay and Punpun:** UPSC often asks about such small tributaries. Ajay meets the Ganga in West Bengal and Punpun in Bihar.
- Hindan and Sengar are less discussed but important tributaries of the Yamuna.

44. Answer: (d) All four pairs

Explanation:

- **Godavari:** Pranhita (**confluence of Penganga, Wardha, and Wainganga**) is its largest tributary. Manjira is a major river joining from the south.
- **Krishna:** Panchganga flows near Kolhapur and Musi near Hyderabad.
- **Kaveri:** Kabini and Bhavani are important for its lower basin.
- **Mahanadi:** The confluence of Hasdeo and Tel rivers is often incorrectly given in exams, but here they are correct. Tel river is an important river of Odisha.

45. Answer: (b) Only two

Explanation:

- **Statement 1 is correct:** The Atlas Mountains are located in North-Western Africa and are folded mountains like the Alps.
- **Statement 2 is incorrect:** The Great Dividing Range is an ancient (**old**) mountain range (**about 300 million years old**), which is now quite eroded. It can be compared to the Aravallis, not the Himalayas.
- **Statement 3 is correct:** The Andes were formed by the subduction of the Nazca oceanic plate under the South American continental plate.

46. Answer: (b) Only 2 and 3

Explanation:

- **Statement 1 is incorrect:** The '**Great Rift Valley**' is not only in Africa; it starts from Lebanon (**Asia**) and extends to Mozambique. It is the result of the separation of not two, but three major plates (**Nubian, Somali, and Arabian**).
- **Statement 2 is correct:** This is a unique geographical feature of African rivers.
- **Statement 3 is correct:** Mount Erebus is located on Ross Island in Antarctica and is the most active volcano in the polar region.

47. Answer: (b) Only two

Explanation:

- **Statement 1 is correct:** Bagar is a specific identity of the semi-arid plains of Rajasthan.
- **Statement 2 is correct:** In the Palamu and Lohardaga regions of Jharkhand, '**Pat**' (**like Netarhat Pat**) are famous. These are flat table-like hills.
- **Statement 3 is incorrect:** Kayals (**like Vembanad Lake**) are not freshwater deltas, but lagoons or backwaters (**saline water**) formed by the accumulation of sand between the sea and the coast.

48. Answer: (c) Only three pairs

Explanation: Pairs 1, 2, and 4 are correct. Pair 3 is incorrect because the Gutenberg discontinuity is between the lower mantle and the outer core. Between the upper and lower mantle is the '**Repetti**' discontinuity.

49. Answer: (d) 1, 2 and 3

Explanation: All three statements are correct. Plate tectonics depends not only on convection currents but also on '**slab pull**' (**the pulling down of a cold plate**). Samuel E. Cook clarified the role of these currents.



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50. Answer: (b) Only two

Explanation: Statements 1 and 3 are correct. Statement 2 is incorrect because in the Eye of a cyclone, air subsides, it does not ascend. For this reason, the area of the eye is cloudless and calm.

51. Answer: (d) 1, 2 and 3

Explanation: All three processes are basic yet deep concepts of geomorphology. The peeling off like an 'onion layer' in granite rocks is called exfoliation. Water and heat are essential for chemical reactions.

52. Answer: (a) Only 1 and 2

Explanation: Statement 3 is incorrect because during La-Niña, the intensification of Walker Circulation causes heavy rainfall in Australia and Indonesia, not drought. Drought occurs during El-Niño.

53. Answer: (d) All four pairs Explanation:

- **Mesabi Range (USA):** This is the most important iron-ore region of the United States located near Lake Superior.
- **Kiruna and Gallivare (Sweden):** These are major iron-ore regions of Europe, where high-quality magnetite ore is found.
- **Pilbara Region (Australia):** This is located in Western Australia and is one of the world's largest iron-ore producing regions.
- **Itabira (Brazil):** This is a massive iron-ore reserve located in the Minas Gerais province of Brazil.

54. Answer: (a) Only 1 and 2 Explanation:

- **Statement 1 is correct:** Anthracite coal is the best grade of coal containing 80-95% carbon. It is often found in old folded mountain ranges (like the Appalachians, USA).
- **Statement 2 is correct:** China's Shanxi and Shaanxi regions provide a large portion of China's total coal production.
- **Statement 3 is incorrect:** Russia's Kuznetsk (Kuzbass) basin is famous for its high-quality bituminous coal, not for lignite.

55. Answer: (a) Explanation:

- **Shale Gas Revolution:** The USA started extracting gas and oil trapped beneath rocks (Shale) through 'Hydraulic Fracturing' (Fracking) technology, making it a net exporter of oil.
- **Fracking:** In this technology, a mixture of water, sand, and chemicals is pumped into rocks at high pressure, for which a very large amount of water is required. Therefore, Statement II explains the technical progress behind Statement I.

56. Answer: (c) Only three pairs Explanation:

- **Katanga Plateau (DR Congo):** Famous for copper and cobalt. (Correct)
- **Chuquibambilla (Chile):** This is the world's largest copper mine. However, it is in Antofagasta, Chile, not in Chiapas (Mexico). (Incorrect)
- **Witwatersrand (S. Africa):** This is the world's most prominent region for gold production and uranium is also found here as a co-product. (Correct)
- **Weipa (Australia):** This is one of the world's largest bauxite reserves. (Correct)

57. Answer: (c) Both 1 and 2 Explanation:

- **Statement 1 is correct:** Australia has the world's largest uranium reserves (about 28%), but in terms of production, Kazakhstan currently holds the first rank in the world.
- **Statement 2 is correct:** Geothermal energy is obtained from the heat within the Earth. Hot springs and geysers are

easily available in tectonically active regions (like the 'Ring of Fire' or Iceland), making energy production effective.

58. Answer: (c) Only 1 and 3 Explanation:

- **Statement 1 is correct:** The main characteristic of mixed farming is the simultaneous occurrence of crop production and animal husbandry.
- **Statement 2 is incorrect:** This farming is practiced in highly developed and densely populated regions of the world (like North-Western Europe, Eastern North America).
- **Statement 3 is correct:** Growing fodder crops for animals is an essential part of this system.

59. Answer: (c) All three pairs Explanation:

- **Truck Farming:** In this, farmers grow only vegetables and it is located at such a distance from the market that a truck can cover overnight. (Correct)
- **Extensive Commercial Grain Farming:** This is practiced in the semi-arid grasslands of mid-latitudes (Steppes, Prairies, Pampas). (Correct)
- **Mediterranean Agriculture:** This is famous for its 'Viticulture' (grape cultivation) and citrus fruits. (Correct)

60. Answer: (c) Both 1 and 2 Explanation:

- **Statement 1 is correct:** Due to mechanized farming in the Prairie region of North America, wheat production is so high that it is called the 'Bread Basket of the World'.
- **Statement 2 is correct:** In monsoon Asia (India, China, Vietnam), due to less land and high population, 'Intensive Subsistence Agriculture' is practiced, in which rice is the main crop.

61. Answer: (c) All three

Explanation:

- **Historical Context:** Plantation agriculture was introduced during the colonial period with the aim of earning profit (e.g., tea, rubber, coffee).
- **Fazenda:** Large coffee plantations in Brazil are still known by this name today.
- **Feature:** It is based on 'monoculture' and requires large estates, modern machinery, and heavy investment.

62. Answer: (a)

Explanation: Dairy products have a very short shelf-life. Although refrigeration has increased the distance, dairy farms are always established in suburban areas of large cities where demand is high, to ensure the supply of fresh milk.

63. Answer: (a) Only 1

Explanation:

- **Statement 1 is correct:** Earlier, the iron industry used to be near coal mines, but now it is being established near the 'market' because 'scrap' (scrap iron) is easily available there, which acts as a raw material.
- **Statement 2 is incorrect:** The development of the Anshan-Fushun region of China is based on local coal and local iron ore. China imports coal from Mongolia, but the main basis of this particular region has been local resources.

64. Answer: (c) All three

Explanation:

- **Lithium Triangle:** Argentina, Bolivia, and Chile in South America hold more than 50% of the world's lithium reserves. It is called the 'Lithium Triangle'. (Correct)
- **Cobalt:** The Democratic Republic of the Congo (DRC) produces more than 70% of the world's cobalt, which is crucial for electric vehicle batteries. (Correct)



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- **Rare Earth Elements (REE):** Although reserves are in other countries too, China controls about 80-90% of their complex refining and processing. **(Correct)**
65. Answer: (b) Only two pairs
Explanation:
- **Suez Canal:** It connects the Red Sea to the Mediterranean Sea, not the Gulf of Aden. **(Incorrect)**
 - **Panama Canal:** Due to the difference in water levels and the height of the terrain between the Pacific Ocean and the Atlantic Ocean, a 'Lock System' is used to raise and lower ships. **(Correct)**
 - **Kiel Canal:** It is located in Germany and connects the North Sea to the Baltic Sea. **(Correct)**
66. Answer: (a) Both Statement I and Statement II are correct and Statement II is the correct explanation of Statement I.
Explanation:
- In the cotton textile industry, there is no significant difference in the weight of raw material (**cotton**) and finished goods (**cloth**) (it is a 'pure' raw material). Therefore, it is not mandatory to set it up near the raw material area.
 - Since this industry is labor-intensive, at the end of the 20th century, it shifted from high-wage countries (**USA/Europe**) to Asian countries (**China, India, Vietnam**) with cheap labor and large markets.
67. Answer: (c) Both 1 and 2
Explanation:
- **Statement 1 is correct:** In geological structures, 'anticlines' (**convex folds**) and 'fault traps' are places where oil and gas get trapped and accumulated.
 - **Statement 2 is correct:** The Athabasca Basin in Canada is famous for the world's highest-grade uranium deposits. Whereas the reserves of Australia and Kazakhstan are in different geological regions.
68. Answer: (c) All three pairs
Explanation:
- **Rotterdam (Netherlands):** It is the largest port in Europe and is called an 'Entrepot' (where goods are brought for re-export). It is connected to interior Europe by the Rhine River. **(Correct)**
 - **Murmansk (Russia):** Despite being in the Arctic region, this port remains ice-free throughout the year due to the North Atlantic Drift (**warm current**). **(Correct)**
 - **Shanghai (China):** It is situated at the mouth of the Yangtze River and is currently the world's busiest container port. **(Correct)**
69. Answer: (c) Both 1 and 2
Explanation:
- **Statement 1 is correct:** Thailand, Indonesia, and Vietnam are the world's top natural rubber producers. Favorable tropical climate is responsible for this.
 - **Statement 2 is correct:** Brazil is the world's largest coffee producer. The 'Terra Roxa' soil there is extremely suitable for coffee, and large plantations are called 'Fazendas'.
70. Answer: (c) Both 1 and 2
Explanation:
- **Statement 1 is correct:** Continental Shelves are shallow, where sunlight reaches deep. This leads to the development of 'plankton' (fish food), making them rich fishing grounds.
 - **Statement 2 is correct:** Where warm and cold currents meet (such as Kuroshio and Oyashio near Japan), world-class fishing grounds develop due to the abundance of plankton.
71. Answer: (b) Proximity to oil refineries.
Explanation: The petrochemical industry uses 'Naphtha' or other by-products of the refining process instead of crude oil. Therefore, to save transportation costs, these industries are established near oil refineries, not near oil wells.
72. Answer: (c)
Explanation: In extensive agriculture, the land is very large, so the production per person is very high, but the grain obtained from every small piece of land (**per acre**) is low.
73. Answer: (b) Only two
Explanation:
- **Statement 1 is correct:** Ukraine is surrounded by the Black Sea in the south and the Sea of Azov in the southeast (**the Kerch Strait connects them**).
 - **Statement 2 is correct:** Armenia is a landlocked country in the Caucasus region.
 - **Statement 3 is incorrect:** Israel's border in the south meets the Gulf of Aqaba (**part of the Red Sea**) through the port of Eilat.
74. Answer: (c) All three pairs
Explanation: All three pairs are absolutely correct. Canada's coastline is approximately 202,080 km. The Denmark Strait is an important route connecting the North Atlantic to the Arctic Ocean.
75. Answer: (a) Both Statement I and II are correct and II is the correct explanation of I.
Explanation: Venezuela's oil is 'ultra-heavy'. Its extraction and refining required heavy investment and American technology, which was disrupted due to sanctions and mismanagement.
76. Answer: (c) Only 1 and 3
Explanation:
- **Statement 2 is incorrect:** Iraq is not landlocked; it has a very small coastline (**about 58 km**) on the Persian Gulf where 'Basra' port is located.
 - Statements 1 and 3 are extremely important geographical facts from a strategic point of view.
77. Answer: (a) Only 1
Explanation:
- **Statement 1 is correct:** Kaliningrad is a part of Russia but it is separate from mainland Russia.
 - **Statement 2 is incorrect:** Among the countries sharing a border with the Caspian Sea (**TARIK**), Turkmenistan is included, not Uzbekistan. (**T-Turkmenistan, A-Azerbaijan, R-Russia, I-Iran, K-Kazakhstan**).
78. Answer: (b) Only 2 and 3
Explanation:
- **Statement 1 is incorrect:** The Tropic of Cancer passes through 8 states (**Gujarat, Rajasthan, Madhya Pradesh, Chhattisgarh, Jharkhand, West Bengal, Tripura, and Mizoram**), but Odisha is not included in this.
 - **Statement 2 is correct:** The Mahi River originates from Madhya Pradesh, flows through Rajasthan and Gujarat, and crosses the Tropic of Cancer twice.
 - **Statement 3 is correct:** Jharkhand's capital Ranchi is located closest to the Tropic of Cancer (**at approximately 23.340 N latitude**).



79. Answer: (d) All four pairs

Explanation:

- **Pair 1 is correct:** Mount Etna is located on the island of Sicily. It is not only active but its layered structure (**alternating layers of lava and ash deposits**) makes it an excellent '**stratovolcano**' or '**composite volcano**'.
- **Pair 2 is correct:** The Peninsular Plateau of India (**most of Maharashtra**) is the result of '**fissure eruption**'. Here the lava was so thin that it spread over thousands of square kilometers, which is called '**flood basalt**'.
- **Pair 3 is correct:** Kilimanjaro is considered a result of '**hotspot**' activity within the African plate. Currently, it is placed in the extinct category because no eruption has occurred here in historical times.
- **Pair 4 is correct:** Barren Island, located in the Andaman Sea, is India's only active volcano. Eruptions have been observed here in recent years (**1991, 2017**).

80. Answer: (d) All four pairs

Explanation:

- **Pair 1 is correct:** Hakki-Pikki is a semi-nomadic tribe of Karnataka. These are mainly bird hunters and herb sellers. When civil war broke out in Sudan, many people from this community were stranded there, bringing them into discussion.
- **Pair 2 is correct:** Meitei is the majority community of Manipur. Currently, they are in the national headlines due to the demand for Scheduled Tribe (**ST**) status and ethnic tensions with the Kuki-Zomi communities.
- **Pair 3 is correct:** The Hatti community lives in the '**Trans-Giri**' area of Sirmour district of Himachal Pradesh. Recently, the Central Government has granted them Scheduled Tribe status, which was a decades-old demand.
- **Pair 4 is correct:** Shompen is a Particularly Vulnerable Tribal Group (**PVTG**) of the Nicobar Islands. In the 2024 general elections, members of this tribe exercised their democratic right (**voting**) for the first time, which is a historic event.

81. Answer: (b) Only two

Explanation: Statements 1 and 2 are correct. Statement 3 is incorrect because a '**Positive**' IOD is favorable (**beneficial**) for the Indian monsoon, not unfavorable.

82. Answer: (d) 1, 2 and 3

Explanation: All three statements are geographically accurate. The intense westerly winds of the Southern Hemisphere are known as the '**Roaring Forties**'.

83. Answer: (d) All four pairs

Explanation: These four pairs are the most important examples of ocean currents. The meeting zone of the Labrador and Gulf Stream is also famous for fishing.

84. Answer: (a) Both A and R are correct and R is the correct explanation of A.

Explanation: This is called the '**Break in Monsoon**'. This causes floods in Bihar and Assam, while Central India faces drought.

85. Answer: (d) All four pairs

Explanation: All four sites have been continuously in the news for the past 1–2 years. Banni Grasslands (**Gujarat**) have recently been selected for Cheetah breeding.

86. Answer: (d) 1, 2 and 3

Explanation: All three statements are factually correct. The '**Keibul Lamjao**' National Park of Loktak Lake is famous for the '**Sangai Deer**'.

87. Answer: (c) All four pairs

Explanation: Jog Falls is also called '**Gersoppa**'. Dudhsagar, located on the Mandovi River, is famous for its height and beauty. Dhuandhar is located on the Narmada at Bhedaghat (**Jabalpur**).

88. Answer: (g) All three

Explanation: Concerns have been raised regarding the Core area of Panna Tiger Reserve due to the Ken-Betwa Link Project. The Narmada Canal (**Sanchole, Rajasthan**) is an example for modern methods of irrigation.

89. Answer: (a) Both Statement I and II are correct and II is the correct explanation of I.

Explanation: The Kra Canal project has been a subject of discussion between China and Thailand to resolve the '**Malacca Dilemma**'.

90. Answer: (b) Only two

Explanation: Statements 1 and 3 are correct. Statement 2 is incorrect because corals require clear and transparent water. Excessive sediment (**silt**) blocks the mouths of corals, due to which they cannot breathe and die.

91. Answer: (c) Only three pairs

Explanation: Pairs 1, 2 and 3 are correct. Pair 4 is incorrect because Ocean Trenches are the most active tectonic regions in the world, where the occurrence of earthquakes and volcanoes is highest.

92. Answer: (b) Only 2 and 3

Explanation: Statement 1 is incorrect because Mariculture includes seaweed, crabs, oysters, and fish. Seaweed farming is becoming a new source of income for India's coastal communities.

93. Answer: (a) Both A and R are correct and R is the correct explanation of A.

Explanation: When temperatures rise, the algae become toxic, so the corals expel them. Since the color comes from the algae, the corals appear white, which is called '**Bleaching**'.

94. Answer: (b) Only two

Explanation: Statements 1 and 3 are correct. Statement 2 is incorrect because the Great Barrier Reef is located on the Eastern Coast (**Queensland**) of Australia, not on the western coast.

95. Answer (d) All four pairs

Explanation: Ansupa: This oxbow lake formed by the Mahanadi is an important wetland of Odisha.

- **Karavetti and Magadi Kere:** Both were included in the list of India's Ramsar sites in 2024. Magadi Kere is located in Haveri, Karnataka, and is a major hub for migratory birds.
- **Tampara:** This is located in the Ganjam district of Odisha and is an important freshwater lake.

96. Answer (b) Only 2 and 3

Explanation: Statement 1 is incorrect: The highest number of Ramsar sites in India is in Tamil Nadu (**16**) and Uttar Pradesh (**10**). There are many sites in the Western Ghats, but the number is also quite high in the Himalayan region (**Ladakh, Himachal, J&K**). The number of Ramsar sites in the North-Eastern states falling under the Indo-Burma hotspot is comparatively low.

- **Statement 2 is correct:** The Vembannur complex is located in the Kanyakumari district of Tamil Nadu and is the southernmost Ramsar site of mainland India.
- **Statement 3 is correct:** Kanjli Wetland is located in Kapurthala, Punjab. It was created in 1870 by constructing



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a regulator on the Kali Bein river. It also holds religious significance for Sikhs.

97. Answer: (d) 1, 2 and 3

Explanation: Statements 1 and 2 are correct: Tropical evergreen forests are found in India's Western Ghats, Andaman-Nicobar, and North-Eastern states. '**Stratification**' is found in them, meaning there are many layers from small plants to tall trees.

- **Statement 3 is correct:** Rosewood and Mahogany are pure evergreens. Semi-evergreen forests are often a transition zone between evergreen and moist deciduous forests.

98. Answer: (d) All four pairs

Explanation: Pair 1 is correct: Deciduous forests are spread across the largest area of India. They shed their leaves for 6–8 weeks at the beginning of summer.

- **Pair 2 is correct:** The temperate forests found at high altitudes in the Nilgiri, Anaimalai, and Palani hills of South India are locally called '**Sholas**'.
- **Pair 3 is correct:** The vegetation of thorny forests has long roots and small leaves or leaves modified into thorns to reduce transpiration.
- **Pair 4 is correct:** The wood of the Sundari tree (**Mangroves**) is strong and water-resistant, which is the hallmark of the Sundarbans Delta.

99. Answer: (d) All four pairs

Explanation:

- **Hangul:** It is also called the Kashmir Stag. It is the only surviving sub-species of the European Red Deer found in the Indian subcontinent. Its habitat has become limited only to Dachigam in Kashmir.
- **Sangai:** It is also called the '**Dancing Deer**'. It resides on the floating '**Phumdi**' on Loktak Lake in Manipur. This is the only floating deer habitat in the world.
- **Lion-tailed Macaque:** This is a special monkey found only in the evergreen rainforests of South India (**Western Ghats**). It is a frugivorous and arboreal (**tree-dwelling**) creature.
- **Great Indian Bustard (GIB):** This is India's heaviest flying bird. Currently, its population remains at less than 150. Colliding with power lines has become the biggest threat to its existence.

100. Answer: (d) All four

Explanation:

- **Statement 1 is correct:** Manas (**Assam**) is famous for its biodiversity and the '**Pygmy Hog**'. It is a trans-boundary protected area.
- **Statement 2 is correct:** The water of the Kunthipuzha river in Silent Valley (**Kerala**) is considered extremely clean because it is free from human intervention. It is a major habitat for the Lion-tailed Macaque.
- **Statement 3 is correct:** Namdapha is known for its unique feature—four big species of the '**cat family**' (**Tiger, Leopard, Snow Leopard, and Clouded Leopard**) are found here. Noa-Dihing is a tributary of the Brahmaputra.
- **Statement 4 is correct:** The Ramganga river flowing through the middle of Jim Corbett (**Uttarakhand**) is the lifeline for the wildlife here.