

Key with Explanation

<p>1</p>	<p>D</p> <p>The passage describes the Pampas region. Selvas - The Amazon basin which lies close to the equator has an equatorial type of climate. It is hot and wet all the year round. This region is, therefore, covered with equatorial rain-forests locally known as Selvas. Campos (and Llanos) - On either side of the Amazon forests lies the belt which has the Savanna type of Climate. This is the region of grasslands. In the north, in the Orinoco river basin, they are locally known as the Llanos. In the south, in central Brazil, they are known as Campos. In this region, there is a distinct dry period and the rain occurs mainly in summer. Gran Chaco - In the lowlands of northern Argentina and western Paraguay, it is dry during winter and wet during summer. Rains are heavy. This region is covered with thick forests and grasslands and is locally known as the Gran Chaco.</p>	<p>coast with the Great Victoria Desert to its north. It is the world's largest single exposure of limestone bedrock, and occupies an area of about 2 Lakh square kilometers</p>
<p>2</p>	<p>C</p> <p>Badlands are a type of dry terrain where softer sedimentary rocks and clay-rich soils have been extensively eroded by wind and water. They are characterized by steep slopes, minimal vegetation, lack of a substantial regolith, and high drainage density.</p>	<p>6</p> <p>A</p> <p>The correct sequence from West to east is: Mizo Hills, Barail Range, Naga Hills, Mishmi Hills. Some details about them are:</p> <p>Mizo Hills: Mizo Hills, formerly Lushai Hills, mountain range in southeastern Mizoram state, northeastern India, forming part of the north Arakan Yoma system. The Mizo Hills rise to about 7,000 feet (2,125 metres), and their slopes are covered with thick evergreen forest containing valuable timber and bamboo. In the intermontane valleys, shifting (slash-and-burn) agriculture and some terrace cultivation are practiced. Barail range: It lies on the Assam Nagaland border. The Barak river originates from this range. Naga Hills: Naga Hills, part of the complex mountain barrier on the border of India and Myanmar (Burma). A northern extension of the Arakan Yoma system, the Naga Hills reach a height of 12,552 feet (3,826 m) in Mount Saramati on the India-Myanmar frontier. Mishmi Hills: Mishmi Hills are on the Northeastern tip of India, in central Arunachal Pradesh. The hills are a southward extension of the Great Himalayan ranges and its northern and eastern parts touch China.</p>
<p>3</p>	<p>B</p> <p>Statement 1 and 3 are correct. Western Ghats are comparatively higher in elevation and more continuous than the Eastern Ghats. Their average elevation is about 1,500 m with the height increasing from north to south. They stretch from River Tapi upto Kanyakumarai.</p>	<p>7</p> <p>C</p> <p>When both are oceanic plates then range of volcanic islands is formed.</p>
<p>4</p>	<p>D</p> <p>Lahore is situated on the bank of Ravi.</p>	<p>8</p> <p>B</p> <p>The system involves oceanic and atmospheric phenomena with the appearance of warm currents off the coast of Peru in the Eastern Pacific and affects weather in many places including India. This results in: (i) the distortion of equatorial atmospheric circulation; (ii) irregularities in the</p>
<p>5</p>	<p>C</p> <p>The Nullarbor Plain is in southern Australia, its located on the Great Australian Bight</p>	

	<p>evaporation of sea water; (iii) reduction in the amount of planktons which further reduces the number of fish in the sea. El-Nino is used in India for forecasting long range monsoon rainfall. In 1990-91, there was a wild El-Nino event and the onset of southwest monsoon was delayed over most parts of the country ranging from five to twelve days.</p>	12	D	<p>Increase in wind speed increases rate of evaporation hence salinity also increases. Enclosed seas will have higher salinity because of no dilution effect and lesser circulation.</p>	
9	C		13	A	<p>Balaghat is located in central India and Patkaibum is in North East India.</p>
	<p>The standard meridian of India passes through the following states Uttar Pradesh, Madhya Pradesh, Chhattisgarh, Andhra Pradesh and Odisha.</p>		14	D	<p>Ocean currents are streams of water flowing constantly on the ocean surface in definite directions. The ocean currents may be warm or cold Generally, the warm ocean currents originate near the equator and move towards the poles. The cold currents carry water from polar or higher latitudes to tropical or lower latitudes Warm currents bring about warm temperature over land surface. The areas where the warm and cold currents meet provide the best fishing grounds of the world. Seas around Japan and the eastern coast of North America are such examples. The areas where a warm and cold current meet also experience foggy weather making it difficult for navigation.</p>
10	D	<p>There are four stages to the classical demographic transition model:</p> <p>Stage 1: Pre-transition- Characterised by high birth rates, and high fluctuating death rates. Population growth was kept low by Malthusian "preventative" (late age at marriage) and "positive" (famine, war, pestilence) checks.</p> <p>Stage 2: Early transition-During the early stages of the transition, the death rate begins to fall. As birth rates remain high, the population starts to grow rapidly.</p> <p>Stage 3: Late transition- Birth rates start to decline. The rate of population growth decelerates.</p> <p>Stage 4: Post-transition- Post-transitional societies are characterised by low birth and low death rates. Population growth is negligible, or even enters a decline.</p>	15	C	<p>Dryland Farming is largely confined to the regions having annual rainfall less than 75 cms. These regions grow hardy and drought resistant crops such as ragi, bajra, moong, gram and guar (fodder crops) and practice various measures of soil moisture conservation and rain water harvesting.</p>
11	B	<p>The two distinguishing features of Himachal and Uttarakhand Himalayas from the point of view of physiography are the "Shiwalik" and "Dun formations". Some important duns located in this region are the Chandigarh-Kalka dun, Nalagarh dun, Dehra Dun, Harike dun and the Kota dun, etc. Dehra Dun is the largest of all the duns with an approximate length of 35-45 km and a width of 22-25 km.</p>	16	B	<p>Sholas are evergreen forests, but because of high-altitude location they are not dense and are separated from each other by grasslands. Thus, Sholas are a mosaic of mountane evergreen forests and grasslands. They are found only in high altitude (>1500 metres asl) regions within the tropics, and are limited to the southern part of the western ghats. They are characterised by undulating grassland patches, interspersed with thickets of stunted evergreen tree species, and are home to a host of endemic and endangered plants and animals like Nilgiri Tahr</p>

17	<p>A</p> <p>equatorial climate receives rainfall throughout the year and its vegetation have heterogeneous strata thus inefficient utilisation for commercial purpose. These hardwood logs are heavy and sink. even if they flow its direction is not certain. d option is wrong as this region is also populated and many major cities lies in this belt also there is sufficient global demand for timber resources.</p>	21	<p>D</p> <p>Statement 1: The Kerala Coast largely experiences significant upwelling during the southwest monsoon period (June to September), resulting in abundant phytoplankton and zooplankton. Statement 2: Only one third of full-time fishermen are located on India's east coast, while two thirds are from the west coast only. Statement 3: While traditional catamarans are common along the east coast, most fisheries production from the west coast is derived from the mechanized sector. Statement 4: Fisheries in the backwaters and estuaries of west coast tend to be undertaken throughout the year whereas the marine coastal fishery (mostly in east coast) is seasonal with a regulated, variable closed season during the monsoon period.</p>
18	<p>A</p> <p>Refer the Atlas.</p>	22	<p>C</p> <p>An oxbow lake forms when a river creates a meander, due to the river's eroding the bank through hydraulic action, abrasion and erosion. After a long period of time, the meander becomes very curved, and eventually the neck of the meander becomes narrower and the river cuts through the neck during a flood, cutting off the meander and forming an oxbow lake.</p>
19	<p>C</p> <p>Tectonic lakes are formed due to fractures and faults in the earth's crust. On the other hand, crater lakes are formed when the craters and calderas of volcanoes are filled with water. Bhojtal is an unique man-made wetland, characteristic of the Central Indian Plateau region. During the intervening 900 years the ecosystem has stabilized and presently it represents a near natural wetland</p>	23	<p>C</p> <p>Chota Nagpur region gets rainfall due to Arabian Sea branch as well. The winds flow through the rift valley between Vindhya & Satpura & cause rainfall over the plateau. Position of Equatorial jet stream along eastern coast of Africa is one of the many factors that impact the distribution & intensity of Monsoon in India.</p>
20	<p>D</p> <p>The consumer protection act was passed in the year 1986. It sets up a grievance redressal system at district, state and central level. It provides for six rights to the consumer.</p> <p>(a) the right to be protected against the marketing of goods and services which are hazardous to life and property;</p> <p>(b) the right to be informed about the quality, quantity, potency, purity, standard and price of goods or services, as the case may be so as to protect the consumer against unfair trade practices;</p> <p>(c) the right to be assured, wherever possible, access to a variety of goods and services at competitive prices;</p> <p>(d) the right to be heard and to be assured that consumer's interests will receive due consideration at appropriate forums;</p> <p>(e) the right to seek redressal against unfair trade practices or restrictive trade practices or unscrupulous exploitation of consumers; and</p> <p>(f) the right to consumer education.</p>	24	<p>C</p> <p>The Ten Degree Channel separates the Little Andaman and Car Nicobar in the Bay of Bengal.</p> <p>Duncan Passage is a strait in the Indian Ocean that separates Rutland Island (part of South Andaman) to the north, and Little Andaman to the south.</p>
		25	<p>B</p> <p>Argon is in greater quantity than carbon dioxide in dry air by volume. Since its dry air, water vapour will be lowest.</p>

	<p>Nitrogen - 78.08%</p> <p>Oxygen - 20.95%</p> <p>Argon - 0.93%</p> <p>Carbon dioxide - 0.033%</p> <p>Neon is 0.0018%</p>	29	<p>A</p> <p>Important Indian National Waterways (NWs) include:</p> <ol style="list-style-type: none"> Ganga-Bhagirathi-Hooghly river system (Allahabad-Haldia-1620 km) as NW-1 (longest stretch) River Brahmaputra (Dhubri-Sadiya - 891 km) as NW-2. West Coast Canal (Kottapuram-Kollam) along with Udyogmandal and Champa kara Canals - (205 km) as NW-3. Kakinada- Puducherry canals along with Godavari and Krishna rivers (1078 km) as NW-4. East Coast Canal integrated with Brahmani river and Mahanadi delta rivers (588 km) as NW-5. <p>The Buckingham Canal is a 796 kms long fresh water navigation canal, running parallel to the Coromandel Coast from Kakinada in AP to Villupuram District in TN. It is a part of National Waterway 4 (NW-4)</p>
26	<p>B</p> <p>The Indian desert lies towards the western margins of the Aravali Hills. It is an undulating sandy plain covered with sand dunes. Barchans, which are crescent shaped dunes, cover larger areas but longitudinal dunes become more prominent near the Indo-Pakistan boundary.</p>		
27	<p>D</p> <p>The Krishna is the second largest east-flowing Peninsular river which rises near Mahabaleshwar in Sahyadri in Maharashtra, passes through Sangli and meets the sea in the Bay of Bengal at Hamasaladevi in Andhra Pradesh. It is bounded by Balaghat range on the north, by the Eastern Ghats on the south and the east and by the Western Ghats on the west. The Tungbhadra, Ghatpraba, Malpraba, Hagari (Vedavathi), Koyna, Bhima, Sina, Yerla, Warna, Dindi, Musi, Paleru, Munneru and Dudhganga are its major tributaries. The major Hydro Power stations in the basin are Koyna, Tungabhadara, Sri Sailam, Nagarjuna Sagar, Almatti, Naryanpur, Bhadra. The major Urban Centers in the Basin are Pune (Maharashtra), Hyderabad (Andhra Pradesh). The Hyderabad is located on Musi. There is a plan to construct a dam amaravati on the flood plains of Krishna and Kondaveeti vagu rivers. The Kondaveeti vagu is a tributary of Krishna river. Some Environmentalists point out that there had been no proper Environment Impact Assessment (EIA) and social disaster impact assessments done for amaravati so it may be an invitation for disaster.</p>	30	<p>D</p> <p>Benguela oceanic current is a cold ocean current, which moves the cold oceanic waters of the southern Atlantic Ocean into the warm central Atlantic Ocean regions across the Benguela coast of West Africa.</p>
		31	<p>C</p> <p>Caves are specific to few regions only. In the places where limestone is in abundance, the water percolates down or moves horizontally across the rock. In these conditions, cave formation is prominent. Such topograohy is common in the limestone plateau surrounding the city of Trieste in the northern Adriatic.</p>
		32	<p>B</p> <p>RH is the ratio of amount water holding of air to the amount which it can hold. Decrease in temp decrease amount it can hold thus, increases RH.</p>
28	<p>D</p> <p>Kanyakumari is the southernmost tip of Indian mainland, while southernmost point in India is Indira point on great Nicobar Island.</p>	33	<p>A</p> <p>The Spiti Valley is a desert mountain valley located high in the Himalaya mountains in the north-eastern part of the Indian state</p>

	of Himachal Pradesh. The name "Spiti" means "The Middle Land", i.e. the land between Tibet and India.		Equatorial waters have lower than average salinity because of heavy rainfall and high relative humidity, as precipitation adds good amount of freshwater to the ocean water.
34	A Ritchie's Archipelago and Labyrinth Islands are two principal groups of islets in the Andaman and Nicobar Island archipelago. Ritchie's Archipelago is a cluster of smaller islands which lie some 25-30 km (16-19 mi) east of Great Andaman, the main island group of the Andaman Islands.	39	D The tidal ports are the ports in which the water levels within the port are subject to change with the ocean tides. During high tides, water rushes into harbours (Tidal Bore). This helps ships enter and exit harbours safely. High tides make ocean/sea water rush into the mouths of rivers. This helps ships to enter port towns like New York, London, Rotterdam, and Hamburg. This is perfectly advantageous for some ports in India such as Kandla, Mangalore and Kolkata's diamond harbour.
35	D The conditions favourable for Tea Plantation are: <ul style="list-style-type: none"> • Decent gradient levels (not very steep) • Small amounts of fog and rainfall to maintain the moisture levels of the plants/leaves. • Duars, are the fertile soils present in the Assam and Darjeeling region which favours tea cultivation. 	40	B The Inter Tropical Convergence Zone (ITCZ) is a low pressure zone located at the equator where trade winds converge, and so, it is a zone where air tends to ascend. In July, the ITCZ is located around 20°N-25°N latitudes (over the Gangetic plain), sometimes called the monsoon trough. Meteorologists have found an interrelationship between the northward shift of the equatorial trough (ITCZ) and the withdrawal of the westerly jet stream from over the North Indian Plain. It is generally believed that there is a cause and effect relationship between the two.
36	D Peninsular part of India was a part of the Gondwana land. The Gondwana land included India, Australia, South Africa and South America as one single land mass. The convectional currents split the crust into a number of pieces, thus leading to the drifting of the Indo-Australian plate after being separated from the Gondwana land, towards north.	41	C Thunderstorms are typical of moist hot weather. They are of short duration and are caused by intensive heat. They form cumulonimbus clouds and produce thunder and lightning. The clouds eventually grow big and enormous as the phenomenon of convection continues.
37	B Diego Garcia, largest and southernmost island of the Chagos Archipelago, is part of the British Ocean Territory.	42	C Statement 1 is incorrect: Tsunamis are generated by undersea earthquakes and volcanic eruptions Along with other factors such as, displacement of seawater due to landslides, fall of meteorites and asteroids in the ocean. Hence, statement 1 is wrong.
38	A Salinity of oceans is highest between 20 degrees to 30 degrees North and South latitudes as the rate of evaporation is very high there due to high temperature and low humidity. Temperate oceans have lesser salinity due to lower temperature and thus lower rate of evaporation. Polar waters will have even lesser salinity because of lower evaporation and continual addition of freshwater from melting icebergs.		

	Statement 2 is incorrect: As the tsunami waves approach the shore, the water depth becomes shallower, waves slow down, wavelength becomes shorter and the waves gain larger amplitude or heights and become destructive. Statement 3 is correct.		of the tributaries of the river Yamuna have their origin in the Vindhyan and Kaimur ranges. Banas is the only significant tributary of the river Chambal that originates from the Aravalli in the west.
43	D Convection refers primarily to atmospheric motions in the vertical direction. As the earth is heated by the sun, different surfaces absorb different amounts of energy and convection may occur where the surface heats up very rapidly. As the surface warms, it heats the overlying air, which gradually becomes less dense than the surrounding air and begins to rise.	47	C 1. Reunion hotspot - Indian ocean 2. Hawaiian hotspot- Pacific ocean 3. Iceland hotspot - Atlantic ocean 4. Krakota hotspot- Pacific ocean 5. St Helena hotspot - Atlantic ocean 6. Azores hotspot - Atlantic ocean 7. Galapagos hotspot - Pacific ocean These hotspots have created prominent island clusters. Could be eliminated from Iceland Hotspot.
44	A The tropic of cancer passes through Gujarat, Madhya Pradesh, Chhattisgarh, Jharkhand, West Bengal, Tripura and Mizoram. The northern and southern parts of the state are hilly, while the central part is a fertile plain. Deciduous forests of the Eastern Highlands Forests cover roughly 44% of the state. The state animal is the van bhainsa, or wild water buffalo. The Rihand River, a tributary of the Ganges, drains this State	48	C Because of the submergence, the Western coastal plain is a narrow belt and provides natural conditions for development of ports and harbours. The rivers flowing through the former form delta whereas those flowing through the latter have estuarine mouths. Eastern and Western coastal plains of India are surrounded by mountains and soil is very fertile.
45	C Thermocline, is a boundary layer with respect to the depth of a water body from which the rapid fall in temperature takes place. In general in a water body, the temperature fall from surface to the thermocline layer gradually. However, from thermocline to bed of the ocean temperature falls rapidly causing deep freezing temperatures at the ocean depth. Halocline, is a boundary layer with respect to the depth of a water body from which the rapid increase in salinity takes place.	49	C At the Equator there is a year round gain of Insolation and this region gains the most Insolation of all of the locations on the globe. The amount of Insolation at the Equator also varies little throughout the year. As you progress north and south of the Equator the amount of Insolation received by the Earth's surface varies seasonally and decreases in quantity towards the Poles. The Northern Hemisphere receives its maximum amount of Insolation between March and September, and for the Southern Hemisphere it is between September and March. There are times of the year when Polar Regions receive no Insolation at all. During Summer Solstice, maximum insolation received at the ground surface is between the 30 to 40 degree North latitudes.
46	B Several tributaries of the Ganga-Yamuna system originate from the Vindhyas. These include Chambal, Betwa, Ken, Kali Sindh and Parbati. The northern slopes of the Vindhyas are drained by these rivers. Most	50	B The system involves oceanic and atmospheric phenomena with the appearance of warm currents off the coast of Peru in

	<p>the Eastern Pacific and affects weather in many places including India. This results in: (i) the distortion of equatorial atmospheric circulation; (ii) irregularities in the evaporation of sea water; (iii) reduction in the amount of planktons which further reduces the number of fish in the sea. El-Nino is used in India for forecasting long range monsoon rainfall. In 1990-91, there was a wild El-Nino event and the onset of south-west monsoon was delayed over most parts of the country ranging from five to twelve days.</p>		<p>seismic waves. When an earthquake occurs anywhere on Earth, seismic waves travel outward from the earthquake's center. The speed, motion, and direction of seismic waves changes dramatically at different levels within Earth, known as seismic transition zones</p>
51	<p>C</p> <p>Arabian Sea surface temperature is lower compared to that of Bay of Bengal due to less river flows. Also, the winds over the Arabian Sea are stronger because of the presence of the mountains of East Africa. These strong winds force a much more vigorous oceanic circulation and the heat received at the surface is transported southward and into the deeper ocean.</p> <p>Bay of Bengal receives the remnants of typhoons originated in North-western Pacific ocean.</p>	55	C
52	<p>A</p> <p>El-Nino refers to a condition of unusual warming of Peru current resulting in heavy rainfall in west coastal region of South America and drought like condition in India, Indonesia and Australia and other South Asian regions.</p>		<p>The Fisher Bank is a sand bank in the North Sea, off the west coast of Denmark. Dogger bank is shallow area of the North Sea about 100 km off the east coast of England.</p>
53	<p>C</p> <p>Map based factual question</p>	56	C
54	<p>D</p> <p>Geologists collect information about Earth's remote interior from several different sources. Some rocks found at the earth's surface, known as kimberlite and ophiolite, originate deep in the crust and mantle. Some meteorites are also believed to be representative of the rocks of the earth's mantle and core. These rocks provide geologists with some idea of the composition of the interior. Another source of information, while more indirect, is perhaps more important. That source is earthquake, or</p>	57	D
			<p>Caspian Sea - It is the world's largest inland body of water. It lies to the east of the Caucasus Mountains and to the west of the vast steppe of Central Asia. The sea's name derives from the ancient Kaspi peoples, who once lived in Transcaucasia to the west. The sea is bordered in the northeast by Kazakhstan, in the southeast by Turkmenistan, in the south by Iran, in the southwest by Azerbaijan, and in the northwest by Russia. The major rivers-the Volga, Ural, and Terek-empty into the northern Caspian, with their combined annual flow accounting for about 88 percent of all river water entering the sea. The Caspian Sea has been famous for its sturgeon, a fish prized for its caviar, and the sea accounts for the great bulk of the world catch. Petroleum and natural gas have become the region's most important resources.</p>
		58	C
			<p>The Western Ghats and the Eastern Ghats mark the western and the eastern edges of the Deccan Plateau respectively. Western Ghats lie parallel to the western coast. They are continuous and can be crossed through passes only. The Western Ghats are higher than the Eastern Ghats. Their average elevation is 900- 1600 metres as against 600 metres of the Eastern Ghats. The Eastern Ghats are discontinuous and irregular and dissected by rivers draining into the Bay of Bengal.</p>

59	<p>C</p> <p>Indian deltas are sinking, and no, it is not because of sea level rise. A proliferation of large dams that starve deltas of sediment, groundwater mining that causes land compaction, and artificial levees that affect river courses, have been responsible for the subsiding of major Indian deltas including Ganga-Brahmaputra, Krishna-Godavari, Brahmani and Mahanadi. Groundwater mining has led to a significant compaction and subsidence of land over the last 15 years.</p>	64	<p>D</p> <p>Shipki La pass is located in Himachal Pradesh.</p> <p>Bara Lacha pass is another pass in the state.</p> <p>LipuLekh pass is located in Uttarakhand.</p> <p>Bomdila pass is located in Arunchal Pradesh.</p>
60	<p>A</p> <p>While India is the 2nd largest producer of Silk in the world after China, it is also the largest consumer of silk in the world. The five commercially traded varieties of natural silks are Mulberry, Tropical Tasar, Oak Tasar, Eri and Muga. Silks other than mulberry are all grouped together and called as 'Vanya Silks'. And India is the only country in the world that produces all 5 varieties of silk on commercial scale and holds the global monopoly for production of the famed golden 'Muga' silk. Almost all the Indian States, except Gujarat and Rajasthan are involved in the production of one or the other variety of silk.</p>	65	<p>C</p> <p>The Mariana Trench or Marianas Trench is the deepest part of the world's oceans. It is located in the western Pacific Ocean, to the east of the Mariana Islands. Java Trench is located in the northeastern Indian Ocean. It is the deepest point in the Indian Ocean.</p> <p>The Aleutian Trench is an oceanic trench along a convergent plate boundary which runs along the southern coastline of Alaska and the Aleutian islands, in the northern pacific.</p>
61	<p>A</p> <p>Cotopaxi- Ecuador Rest all are correct. Mount Erebus is the only live volcano on Antarctica. Mount Etna is the tallest active volcano in Europe.</p>	66	<p>C</p> <p>Sedimentary rocks contain remains of living beings and vegetation but not in metamorphic rocks.</p>
62	<p>B</p> <p>Denser the material, higher the velocity. Hence, velocity increases as waves moves from crust to core. Density of crust is $3g/cm^3$, while that of mantle and core are $3.4g/cm^3$ and $5g/cm^3$ respectively. Both P and S waves provide an idea about the interior of earth. How? P waves bend as it enters the mantle. It suggests that the medium has changed (in this case: solid to molten). While, S waves travel only through the solid state. This characteristic helps scientists in understanding the interior of the earth.</p>	67	<p>D</p> <p>Horns and Cirque are the erosional landforms while Drumlins and Eskers are depositional landforms in a glaciated region. Cique are deep and wide troughs with steep and concave walls. Horns are pointed and steep sided peaks formed due to erosion of cirque walls. Eskers are the ridges formed by consisting of course materials carried by the glacier. Drumlins are smooth ridges which are situated parallel to the direction of ice movement. They are mainly composed of glacial till.</p>
63	<p>A</p> <p>Map based factual question</p>	68	<p>C</p> <p>Arabian Sea surface temperature is lower compared to that of Bay of Bengal due to less river flows. Also, the winds over the Arabian Sea are stronger because of the presence of the mountains of East Africa. These strong winds force a much more vigorous oceanic circulation and the heat received at the surface is transported southward and into the deeper ocean.</p>

	Bay of Bengal receives the remnants of typhoons originated in North-western Pacific ocean.		
69	C Chambal, Sindh, Betwa, and Ken are all right bank tributaries of Yamuna Ramganga, Gomti, Ghaghara, Gandaki, Bagmati, Koshi, Mahananda are left bank tributaries of Ganga while Yamuna, Tamsa, Son, Punpun are right bank tributaries	73	C Snow line is a line above which no vegetation grows on high altitude mountains because of permanent snow cover. This snow line is lower for Eastern Himalayas compared to that of Western Himalayas. This is because of three reasons - 1. Eastern Himalayas are near to the Equator. 2. Western Himalayas are more continental in their location thus has lesser maritime influence. 3. Southwest monsoon winds have the moderating effect on the Western Himalayas.
70	D Aizwal, Imphal, Dispur and Itanagar are the state capitals of Mizoram, Manipur, Assam and Arunachal Pradesh respectively.		
71	D An easterly jet stream flows over the southern part of the Peninsula in June. The easterlies normally do not extend to the north of 30° N latitude in the upper atmosphere. The easterly jet stream steers the tropical depressions into India. These depressions play a significant role in the distribution of monsoon rainfall over the Indian subcontinent. The tracks of these depressions are the areas of highest rainfall in India. The easterly jet stream sets in along 15°N latitude only after the western jet stream has withdrawn itself from the region. This easterly jet stream is held responsible for the burst of the monsoon in India.	74	B The Kharif season (June-September) largely coincides with southwest monsoon under which the cultivation of tropical crops such as rice, cotton, jute, Jowar etc. is possible. The Rabi season begins with the onset of winter in October- November and ends in March- April. The low temperature conditions during this season facilitate the cultivation of temperate and subtropical crops such as wheat, gram and mustard. Hence, statement 1 is wrong. Zaid is a short duration summer cropping season beginning after harvesting of Rabi crops in the months of April-June. The crops such as sunflower, melons etc. are grown which require hot and humid conditions for Growth.
72	B The Aravalli range are the oldest fold mountains in India. It's dates back to pre-Indian subcontinental collision with the mainland Eurasian plate. The highest peak is Guru Shikhar in Mount Abu in Rajasthan. Rising to 5650 ft (1722 m), it lies near the South-Western extremity of the range. The effectiveness of the barrier is felt only in the Central and Western parts. Numerous rivers rise amidst the ranges including the Banas river, the Luni river, the Sahib, the Sakhi and the Sabarmati river. They stretch diagonally from Kotra in the northeast to Khetri in the southwest direction. Aravali hills which act as a natural barrier - blocking the northwards spread of the mighty Thar desert.	75	A Elements found at the earth crust are: O ₂ - 46.6% Si - 27.7% Al - 8.1% Fe - 5% Ca - 3.6%
		76	D The hot deserts occur between 15 to 45 degree latitudes in the Northern Hemisphere and between 15 to 30 latitudes in the Southern hemisphere. The major hot deserts are : Californian and Mohave desert, Atacama

	Desert, Sahara, Namib, Kalahari, Arabian desert, Iranian desert, Great Australian Desert and Thar desert. Temperate deserts occur in the continental interiors of North America and Asia between 30 to 45 degree North latitudes. The Gobi desert, the deserts of the Tarim Basin and the Great Basin of Nevada (USA) are the major examples. The only remaining mid-latitude desert is the Patagonian desert in southern Argentina. It lies in the rain shadow of the Andes. Also a cold offshore current prevents local onshore winds from bringing rain.		Here the weather remains fine and the sky is clear.
77	D Most kayals or backwaters are predominantly brackish i.e. saline. In certain areas, such as the Vembanad Kayal, where a barrage has been built near Kumarakom, salt water from the sea is prevented from entering the deep inside, keeping the fresh water intact. Such fresh water is extensively used for irrigation purposes.	81	B Submarine Trenches - These are the deepest parts of the oceans with their bottoms far below the average level of the ocean floors. They are believed to have resulted from down faulting or down folding of the earth's crust and are therefore, of tectonic origin. They run generally parallel to the bordering island chains of fold mountains. Although they are found in all major oceans, they are most common in the Pacific Ocean.
78	D The Tropic of Cancer passes through the central part of India in east-west direction. Thus, northern part of India lies in subtropical and temperate zone and the part lying south of the Tropic of Cancer falls in the tropical zone. The tropical zone being nearer to the equator, experiences high temperatures throughout the year with small daily and annual range. Area north of the Tropic of Cancer being away from the equator, experiences extreme climate with high daily and annual range of temperature.	82	B Jet streams are high velocity winds associated with the troposphere. Hence, statement 1 is incorrect. Density is highest on the surface of the earth. It gradually decreases on going upwards (Therefore, density of Troposphere > Stratosphere > Mesosphere > Thermosphere). Electrically charged layer Ionosphere reflects the radio waves transmitted from the earth, this helps in communication. Since, Ionosphere is a part of Thermosphere, hence Thermosphere helps in communication. Temperature in Mesosphere decreases with height.
79	B High temperature coupled with air convergence reduces the pressure of the equatorial region. Humidity and Coriolis force does not impact the pressure of equatorial region.	83	C <ul style="list-style-type: none"> o A typical black soil is highly argillaceous [Geology (of rocks or sediment) consisting of or containing clay] with a large clay factor, 62 per cent or more. o In general, black soils of uplands are of low fertility while those in the valleys are very fertile. o The black soil is highly retentive of moisture. It swells greatly on accumulating moisture. Strenuous effort is required to work on such soil in rainy season as it gets very sticky. o In summer, the moisture evaporates, the soil shrinks and is seamed with broad and deep cracks. The lower layers can still retain moisture. The cracks permit oxygenation of the soil to sufficient depths and the soil has extraordinary fertility.
80	A Anticyclones are opposite to the cyclones. Here, the pressure is high at the centre. The winds are light. Their movement is clockwise in the northern hemisphere and anticlockwise in the southern hemisphere.		

84	<p>A</p> <p>Statement 1 is correct. Antarctica does not have a fixed time zone. Different based stations follow different time zones, usually that of the parent country or their supply base. Statement 2 is incorrect. The international date line has kinks or deviations from the 180 degree meridian to avoid intersecting landmasses, so that one country does not have to follow two dates</p>	90	<p>D</p> <p>The British, taking advantage of the physical conditions of Darjeeling Himalayas such as moderate slope, thick soil cover with high organic content, well distributed rainfall throughout the year and mild winters, introduced tea plantations in this region.</p>
85	<p>A</p> <p>Coal occurs in rock sequences mainly of two geological ages, namely Gondwana and tertiary deposits. Gondwana coal accounts for 98 per cent of the total reserves in India. About 80 per cent of the coal deposits in India is of bituminous type and is of non-coking grade. Therefore, (a) is the correct answer.</p>	91	<p>C</p> <p>The north-eastern part of the Kashmir Himalayas is a cold desert, which lies between the Greater Himalayas and the Karakoram ranges. Between the Great Himalayas and the Pir Panjal range, lies the world famous valley of Kashmir and the famous Dal Lake.</p>
86	<p>A</p> <p>These disturbances enter in Indian subcontinent from West and North west.</p>	92	<p>C</p> <p>Winter monsoons do not cause rainfall as they move from land to the sea. It is because firstly, they have little humidity; and secondly, due to anti cyclonic circulation on land, the possibility of rainfall from them reduces. So, most parts of India do not have rainfall in the winter season.</p>
87	<p>B</p> <p>Based on the world map, the given countries may be placed in increasing order of their distance from the Malabar coast in India, in the following order: Maldives, Seychelles, Mauritius, Madagascar.</p>	93	<p>C</p> <p>The Great Indian Desert lies to the North-West of the Aravali hills. It is a land of undulating topography dotted with longitudinal dunes and barchans. Thar region receives a very low rainfall and has arid climate. It is believed that during the Mesozoic era, this region was under the sea. This can be identified by the evidence available at Wood Fossils park at Aakal and Marine deposits around Brahmsar near Jaisalmer. The approximate age of the wooden-fossils is estimated to be 180 million years.</p> <p>Some wildlife species, which are fast vanishing in other parts of India, are found in the desert in large numbers such as the blackbuck (<i>Antilope cervicapra</i>), chinkara (<i>Gazella bennettii</i>) and Indian wild ass (<i>Equus hemionus khur</i>) in the Rann of Kutch. They have evolved excellent survival strategies, their size is smaller than other similar animals living in different conditions, and they are mainly nocturnal.</p>
88	<p>C</p> <p>TFR (Total Fertility Rate) is the average number of children a woman bears over her lifetime. India's TFR remained stationery at 2.3 in 2013. The ideal TFR being targeted by the government is 2.1 per cent. However, in 23 districts - 11 in Uttar Pradesh, eight in Bihar and two each in Rajasthan and Madhya Pradesh - the rate is higher than 4 per cent; while in 123 other districts across seven states the TFR stands between three and 3.9 per cent.</p>	94	<p>A</p> <p>Bureau of Indian Standard has grouped the country into four seismic zones viz. Zone-II, Zone-III, Zone-IV and Zone-V. Of these,</p>
89	<p>A</p> <p>Bhangar soils are rich in kankarie calcareous deposits like calcium carbonate. Second statement is wrong and Infact kankar deposits improves soil fertility.</p> <p>Also that in Khader soils nutrients are renewed every year from flood waters and thus more fertile than Bangar soils which is rarely replenished with nutrients.</p>		

	<p>Zone V is seismically the most prone region with higher incidence of activities of earthquakes and Zone II is the least prone region with lower incidents of activities of earthquakes. Broadly, Zone-V comprises of entire northeastern India, parts of Jammu and Kashmir, Himachal Pradesh, Uttaranchal, Rann of Kutch in Gujarat, part of North Bihar and Andaman & Nicobar islands.</p> <p>Zone-IV covers remaining parts of Jammu & Kashmir and Himachal Pradesh, Union Territory of Delhi, Sikkim, northern parts of Uttar Pradesh, Bihar and West Bengal, parts of Gujarat and small portions of Maharashtra near the west coast and Rajasthan. Zone-III comprises of Kerala, Goa, Lakshadweep islands, remaining parts of Uttar Pradesh, Gujarat and West Bengal, parts of Punjab, Rajasthan, Madhya Pradesh, Bihar, Jharkhand, Chhattisgarh, Maharashtra, Orissa, parts of Telangana, parts of Andhra Pradesh, Tamilnadu and Karnataka. Zone-II covers remaining parts of the country.</p>	97	<p>C</p> <p>The Bay of Bengal islands including the Andaman and Nicobar Islands are largely tectonic and volcanic in origin. While the Islands of Arabian Sea including Lakshadweep are mainly coral formations. Deccan trap was formed during cretaceous period due to intense volcanic activities. Aravali ranges are nothing but the remains of old fold mountains.</p>
95	<p>C</p> <p>Traditionally, in comparison to the area sown during Rabi, farmers cultivate only about 50% of the area during the season of Kharif in Bundelkhand. While the net cropped area during Rabi is approximately 18.50 lakh hectares, the area cropped during Kharif has hovered around 9 lakh hectares. The primary reason given is that the region suffers due to Anna Pratha. This is a traditional system under which people leave their milch cattle unfettered to graze in the fields. These cattle eat up the crops and therefore the farmers are not inclined to sow their lands during the season of Kharif. This does not happen during the Rabi season as he farmers keep their cattle at home.</p>	98	<p>D</p> <p>Cyclones form in certain favourable atmospheric and Oceanic conditions. Source of energy of tropical cyclones is latent heat obtained from hot humid air. They are marked seasonal variations in their places of origin, tracks and attainment of intensities. These behaviours help in predicting their movements. Cyclones affect both the Bay of Bengal and the Arabian Sea. They are rare in Bay of Bengal from January to March. After summer season the frequency of tropical cyclones in the Bay of Bengal maximum because at that time their is high pressure area.</p> <p>storm surge is a rising of the sea as a result of wind and atmospheric pressure changes associated with a cyclones</p>
96	<p>A</p> <p>The processes the cause rocks to decay i.e., to decompose instead of disintegration are known as chemical weathering . Carbonation, oxidation, hydration and solution are processes involved in chemical weathering. Exfoliation is weathering in concentric circles. Solifluction is the gradual movement of wet soil or other material down a slope, especially where frozen subsoil acts as a barrier to the percolation of water.</p>	99	<p>C</p> <p>A mineral, by definition, is any naturally occurring, inorganic substance, often additionally characterized by an exact crystal structure. Its chemical structure can be exact, or can vary within limits. Native elements that occur naturally are also considered minerals. A rock is an indefinite mixture of naturally occurring substances, mainly minerals. Its makeup may vary in containment of minerals and organic substances, and its composition is never exactly.</p>
		100	<p>C</p> <p>Western Cyclonic Disturbance and Tropical Cyclones : The western cyclonic disturbances which enter the Indian subcontinent from the west and the northwest during the winter months, originate over the Mediterranean Sea and are brought into India by the westerly jet stream. An increase in the prevailing night temperature generally indicates an advance in the arrival of these cyclones disturbances.</p>
<p><i>For further clarifications and feedback feel free to write to us at "testseriesrcr@gmail.com"</i></p>			