

**Q.1) Consider the following statements.**

1. A mid-oceanic ridge is composed of two chains of mountains separated by a large depression.
2. Mid-oceanic ridges are formed at convergent boundary of two plates.

**Which of the above statements is/are correct?**

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) None

**Q.1) Solution (a)**

**A mid-oceanic ridge is composed of two chains of mountains separated by a large depression.** The mountain ranges can have peaks as high as 2,500 m and some even reach above the ocean's surface.

Running for a total length of 75,000 km, these ridges form the largest mountain systems on earth. These ridges are either broad, like a plateau, gently sloping or in the form of steep-sided narrow mountains.

These oceanic ridge systems are of tectonic origin formed **at divergent plate boundaries** and provide evidence in support of the theory of Plate Tectonics.

**Do you know?**

- **A land bridge**, in biogeography, is an isthmus or wider land connection between otherwise separate areas, over which animals and plants are able to cross and colonise new lands. A land bridge can be created by marine regression, in which sea levels fall, exposing shallow, previously submerged sections of continental shelf; or when new land is created by plate tectonics; or occasionally when the sea floor rises due to post-glacial rebound after an ice age.

**THINK!**

- Straits

**Q.2) 'Insular shelf' means**

- a) A continental shelf allocated to landlocked countries.
- b) The shelf surrounding an island.
- c) The shelf formed out of deposition.

- d) The shelf formed by fall in sea level.

### Q.2) Solution (b)

The continental shelf is an underwater landmass which extends from a continent, resulting in an area of relatively shallow water known as a shelf sea. Much of the shelves were exposed during glacial periods and interglacial periods.

The shelf surrounding an island is known as an insular shelf.

### Do you know?

#### Economic significance of continental shelf

- Marine food comes almost entirely from continental shelves;
- They provide the richest fishing grounds;
- They are potential sites for polymetallic nodules, petroleum.

### THINK!

- International Seabed Authority

### Q.3) With regard to Ocean currents, consider the following statements.

1. The general pattern of circulation in the southern hemisphere of the Indian Ocean is anti-clockwise as that of the other oceans.
2. The cold waters of the Peru Current are partially responsible for making the coast of the northern Chile and western Peru with very scanty rainfall.

### Which of the above statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) None

### Q.3) Solution (c)

In the South Pacific Ocean, the South Equatorial Current flows towards the west and turns southward as the East Australian Current.

From Tasmania, it flows as the cold South Pacific Current from west to east and crosses the Pacific Ocean along with the West Wind Drift.

On reaching the south-western coast of South America, it turns northward and flows as the cold Peru Current or Humbolt Current.

**The cold waters of the Peru Current are partially responsible for making the coast of the northern Chile and western Peru with very scanty rainfall.**

Peru Current eventually joins with the South Equatorial Current and completes the circuit.

The pattern of circulation of ocean currents in the Indian Ocean differs from the general pattern of circulation in the Atlantic and the Pacific Oceans.

This is because the Indian Ocean is blocked by the continental masses in the north.

**The general pattern of circulation in the southern hemisphere of the Indian Ocean is anti-clockwise as that of the other oceans.**

In the northern hemisphere, there is a clear reversal of currents in the winter and summer seasons, which are completely under the influence of the seasonal changes of monsoon winds.

**Do you know?**

- **Surface currents constitute** about 10 per cent of all the water in the ocean, these waters are the upper 400 m of the ocean;
- **Deep water currents or Thermohaline Currents** make up the other 90per cent of the ocean water. These waters move around the ocean basins due to variations in the density and gravity. Deep waters sink into the deep ocean basins at high latitudes, where the temperatures are cold enough to cause the density to increase.

**THINK!**

- Economic importance of Ocean currents.

**Q.4) A distinct dry season is absent, great uniformity of temperature throughout the year with no winters. Cloudiness and heavy precipitation takes place.**

**The above lines define which of the following type of climate.**

- a) Savanna climate
- b) Monsoon climate
- c) Equatorial climate
- d) Desert climate

**Q.4) Solution (c)**

The most outstanding feature of the equatorial climate is its **great uniformity of temperature throughout the year with no winters.**

The average monthly temperatures are about 26 – 28 degrees Celsius, with small annual range of temperature ~ 3°C & fairly greater diurnal range of temperature ~ 12\* – 15°C.

**Cloudiness and heavy precipitation ~ 150 – 250 cm of rainfall or more in a year,** helps to moderate the temperature, so that even at the equator, climate is not unbearable.

There is no month without the rain & **a distinct dry season like that of savanna or tropical monsoon climate is absent.**

Most of the rainfall is convectional, with thunderstorm & lightening often accompanying the torrential showers.

The convection uplift is related to the position of the ITCZ and rainfall totals double when the sun is directly overhead at the spring and autumn equinox, with the least rain falls at June & December solstices.

**Do you know?**

- Certain high value industrial crops for which equatorial climate suits best are grown now a day such as rubber, cocoa, oil palms, coconuts, sugarcane, coffee, tea etc.

**THINK!**

- Vegetation in Equatorial Regions.

**Q.5) Consider the following statements about British type of climate.**

1. The natural vegetation of this climatic type is deciduous forests that shed their leaves in the cold season, to protect themselves against winter snow & frost.
2. In northern America British type of climate is confined mainly to coastlands of British Columbia.

**Which of the above statements is/are correct?**

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) None

**Q.5) Solution (c)**

**British type Climate – Cool Temperate Western Margin**

Cool temperate western margins are under the permanent influence of the westerlies all-round the year approx. at 50° N- S

They are also regions of much cyclonic activity, typical of Britain, & are thus said to experience the British type of climate.

From Britain, the climatic belt stretches far inland into lowlands of N-W Europe, including such regions as northern & western France, Belgium, Netherland, Denmark, Western Norway & N-W Iberia.

There is so much oceanic influence on both the temperature & precipitation that the climate is also referred as North West European Maritime Climate.

**In northern America, the high Rockies prevent the on-shore westerlies from penetrating far inland & British type of climate is confined mainly to coastlands of British Columbia (West coast of Canada)**

In the southern hemisphere, this type of climate is experienced in southern Chile, Tasmania (southern Australia) & Most parts of New Zealand, particularly in South Island, surrounded by large expanses of water.

**The natural vegetation of this climatic type is deciduous forests that shed their leaves in the cold season, to protect themselves against winter snow & frost.**

Some of the common species which provide hardwoods from these deciduous forests are Oak, Elms, Birch, Neech, Poplar & Hornbeam; along with certain other species such as chestnut, maple & lime.

**Do you know?**

- British type of climate is even more equable in S – Hemisphere, due to lack of continental mass (Tasmania, New Zealand & Southern Chile) & more presence of oceanic water, which means extreme of temperature are not likely at all, hence annual temperature range is further reduced here.

**THINK!**

- Market Gardening

**Q.6) Lumbering & its associated timber, paper & pulp industries are the most important economic undertaking. Agriculture is less important in view of severity of winters & its long duration. Fishing is the most outstanding economic activity. This climatic region found in northern hemisphere only. The above lines describe which of the following type of climatic regions?**

- a) Siberian type of climate
- b) China type climate
- c) Polar climate
- d) Laurentian Climate

#### Q.6) Solution (d)

##### Laurentian Climate

The Laurentian type of climate has cold, dry winters & warm, wet summers.

Winter temperature may be well below freezing point & snow falls to quite a depth.

Summers are warm as the tropics approx.  $25^{\circ}\text{C}$  & if were not for the cooling effects of the off shore cold currents from arctic, the summers may even be hotter.

Though, rain falls throughout the year (except interiors of china), there is distinct summer maximum from the easterly winds from the oceans

The annual precipitation is approx. 75 -150 cm with 2/3rd of it falling in summer.

**Lumbering & its associated timber, paper & pulp industries are the most important economic undertaking.**

**Agriculture is less important in view of severity of winters & its long duration**

Fortunately, the maritime influence & heavy rainfall enables some of the hardy crops to be raised for local needs such as potatoes, oats, rye & barley.

**Fishing is the most outstanding economic activity of Laurentian climatic region especially in Newfoundland & Japan mainly due to their geographical importance.**

Gently sloping continental shelves around the islands of Newfoundland & Japan are rich in planktons, mainly due to meeting of warm & cold ocean currents.

Fish feeds on minute marine organisms – planktons, which are present in abundance only in shallow waters adjacent to land masses, where sunlight can penetrate through

Japanese also make use of fish wastes, fish meals & seaweeds as fertilizers & is among one of the few countries involved in seaweed cultivation on submerged coastal farms.

Another aspect of Japanese fishing is pearl culture obtained from the shell fish called pearl oyster found deep inside the sea.

**Do you know?**

- This climate type has been named after the coniferous forest cover of the same name found in the region. the region extends from 50-55 degrees to 60-70 degrees latitudes in northern hemisphere.
- It stretches as an almost continuous belt across southern Canada, northern Europe and Russia. The Tundra region lies on the north and the Temperate Grasslands on the south.

**THINK!**

- Tundra climate

**Q.7) Consider the following statements about Mediterranean Climate:**

1. This is a dry-winter, wet-summer climate.
2. This climate owes its origin to the seasonal shifting of wind and pressure belts due to northward and southward migration of the sun.
3. Fires occur frequently in Mediterranean climate zones.

**Which of the above statements is/are correct?**

- a) 1, 2 and 3
- b) 1 and 2 only
- c) 2 and 3 only
- d) 2 only

**Q.7) Solution (c)****Mediterranean Climate:**

This type of climate has developed between  $30^{\circ}$  –  $40^{\circ}$  latitudes in both the hemispheres.

- This is a **wet-winter, dry-summer climate**. Extremely dry summers are caused by the sinking air of the subtropical highs and may last for up to five months.
- This climatic region includes European, Asiatic and African lands bordering the Mediterranean Sea.
- This climate owes its origin to **the seasonal shifting of wind and pressure belts** due to northward and southward migration of the sun.
- In winter they are under the influence of westerlies which are moisture laden thus brings rainfall in winters whereas they come under the influence of subtropical high-pressure belt in summers thus associated with anti-cyclonic conditions.
- Plants have adapted to the extreme difference in rainfall and temperature between winter and summer seasons. Sclerophyll plants range in formations from forests, to

woodland, and scrub. Eucalyptus forests cover most of the chaparral biome in Australia.

- Fires occur frequently in Mediterranean climate zones.

**Do you know?**

- The area is important for fruit cultivation, cereal growing, wine-making and agricultural industries as well as engineering and mining.

**THINK!**

- Steppe climate

**Q.8) which of the following statements is/ are correct regarding tsunami waves?**

1. The speed of waves is higher in open sea as compared to the continental shelf.
2. The height of waves is higher in open seas as compared to the continental shelf.

Select the code from following:

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

**Q.8) Solution (a)**

The deeper the water; the faster the **tsunami**.

In the deep ocean, **tsunamis** can move as fast as a jet plane, over 500 mph, and can cross entire oceans in less than a day. As the **waves** enter shallow water near land, they slow to the **speed** of a car, approximately 20 or 30 mph.

As the Tsunami approaches the coast, wave shoaling effect takes place which increases amplitude (height) of the wave enormously.

**Q.9) Which of the following are responsible for drop in temperature at Peru coast?**

1. Upwelling of water
2. Cold ocean current
3. El Nino

Select the code from below:



- a) 1 only
- b) 2 and 3
- c) 1 and 2
- d) All of the above

**Q.9) solution (c)**

Upwelling of water and cold Peru current is responsible for drop in temperature at the Peru coast.

El Nino is an anomaly which increases the temperature of Peru coast and creates low pressure.

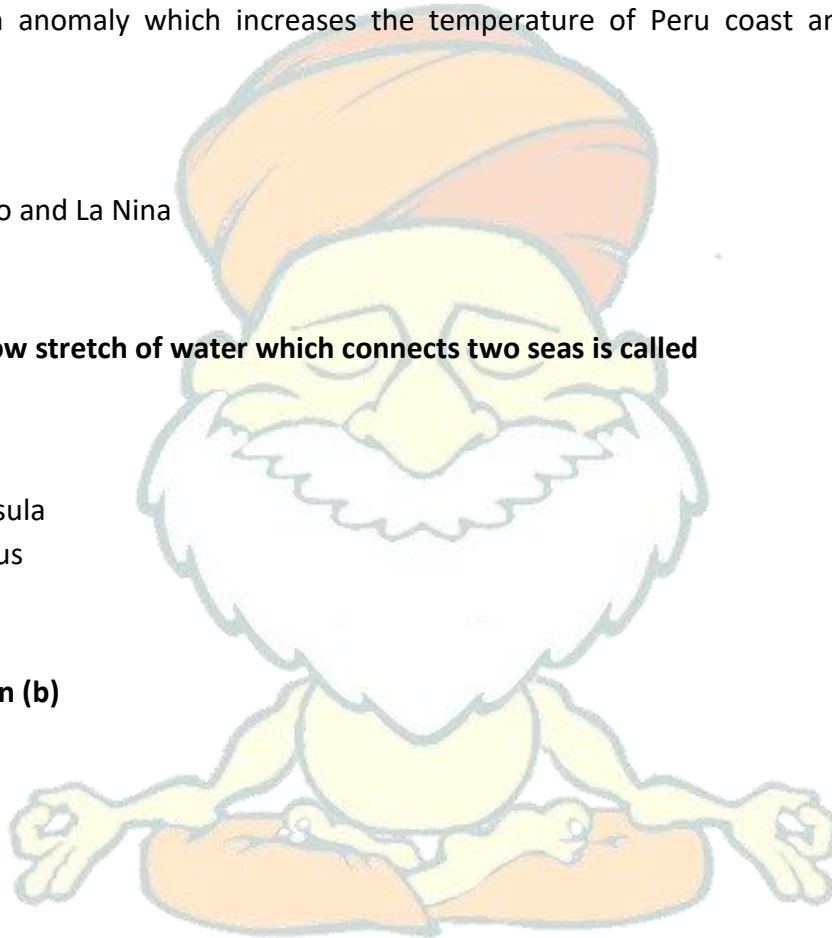
**Think**

- El Nino and La Nina

**Q.10) A narrow stretch of water which connects two seas is called**

- a. Bay
- b. Strait
- c. Peninsula
- d. Isthmus

**Q.10) Solution (b)**





### Strait of Gibraltar

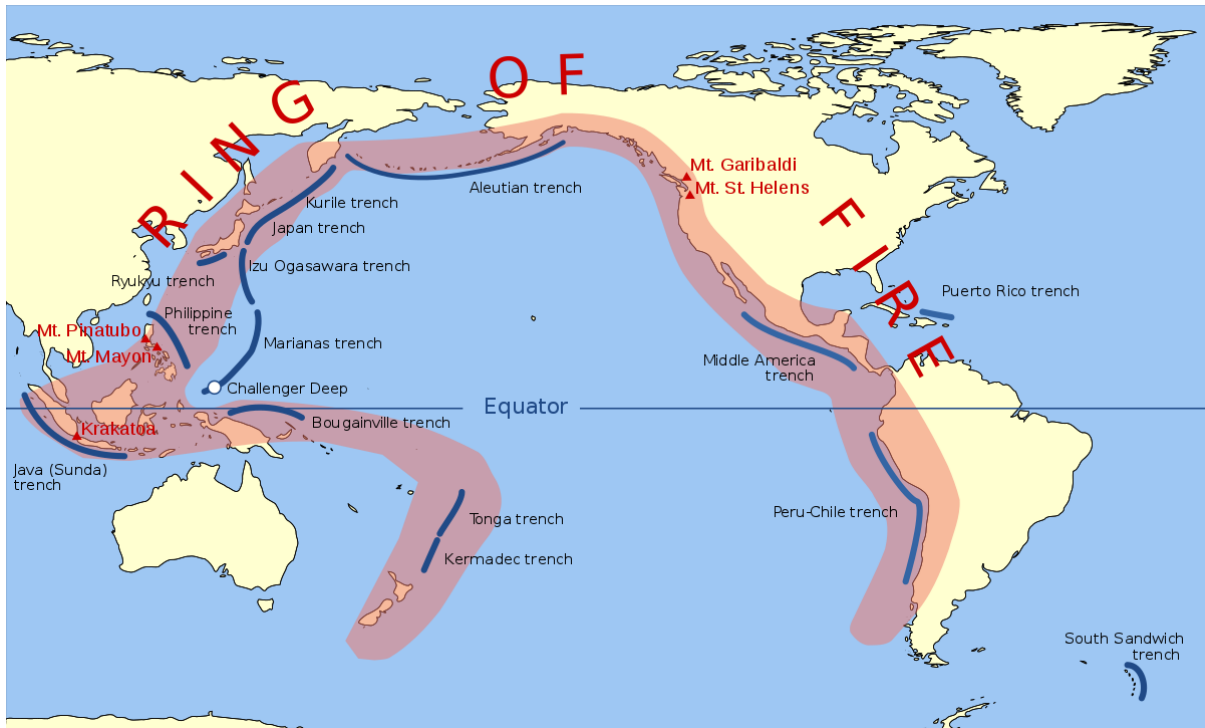
A strait is a naturally formed, narrow, typically navigable waterway that connects two larger bodies of water. Most commonly it is a channel of water that lies between two land masses.

**Q.11) Main cause of formation of Pacific Ring of Fire is**

- a) Meteor shower
- b) Divergence of Pacific plate
- c) Thermal power plants
- d) Subduction of Pacific plate

**Q.11) Solution (d)**

**Ring of Fire**



The Ring of Fire is a major area in the basin of the Pacific Ocean where many earthquakes and volcanic eruptions occur. In a 40,000 km (25,000 mi) horseshoe shape, it is associated with a nearly continuous series of oceanic trenches, volcanic arcs, and volcanic belts and plate movements. It has 452 volcanoes (more than 75% of the world's active and dormant volcanoes). The Ring of Fire is sometimes called the circum-Pacific belt.

The Ring of Fire is a direct result of plate tectonics: the movement and collisions of lithospheric plates. The eastern section of the ring is the result of the Nazca Plate and the Cocos Plate being subducted beneath the westward-moving South American Plate. The Cocos Plate is being subducted beneath the Caribbean Plate, in Central America. A portion of the Pacific Plate and the small Juan de Fuca Plate are being subducted beneath the North American Plate. Along the northern portion, the northwestward-moving Pacific plate is being subducted beneath the Aleutian Islands arc. Farther west, the Pacific plate is being subducted along the Kamchatka Peninsula arcs on south past Japan. The southern portion is more complex, with a number of smaller tectonic plates in collision with the Pacific plate from the Mariana Islands, the Philippines, Bougainville, Tonga, and New Zealand; this portion excludes Australia, since it lies in the center of its tectonic plate. Indonesia lies between the Ring of Fire along the northeastern islands adjacent to and including New Guinea and the Alpidic belt along the south and west from Sumatra, Java, Bali, Flores, and Timor.

**Q.12) Which of the following statements are correct regarding Atoll?**

- a) It is a ring shaped coral island.
- b) It is the name given to cluster of mangrove trees.
- c) It is the name given to a sandbar which connects mainland to an island.
- d) It is the name given to an island formed by mid oceanic ridge.

**Q.12) Solution (a)****Atoll:**

It is a ring shaped island reef that encircles (sometimes completely surrounding) a central lagoon in which detrital material collects. In some oceanic Atolls calcareous Algae forms the bulk of the reef.

Note: The Lakshadweep and Maldives islands in the Indian ocean are composed of Atolls

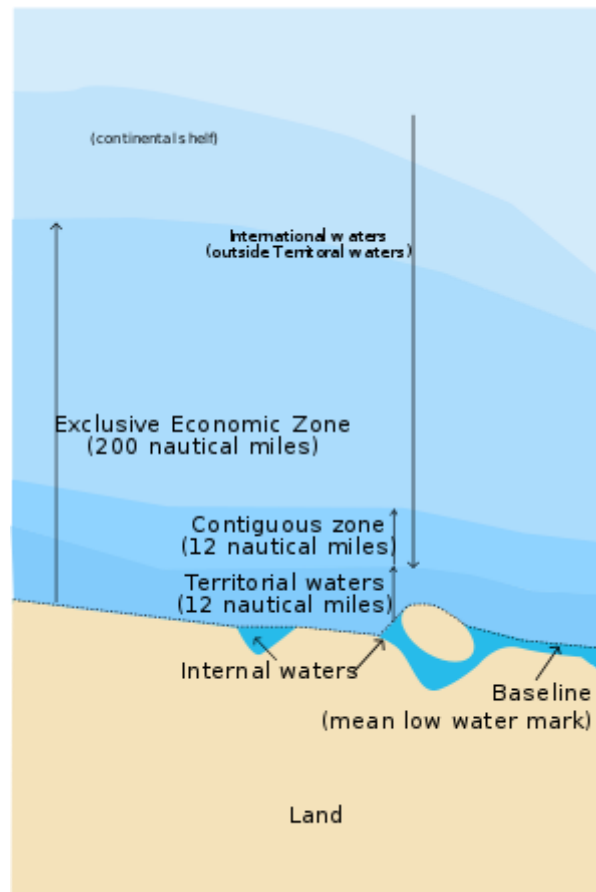


**Q.13) According to UNCLOS, the territorial waters of a country are extended to what distance?**

- a) 12 km
- b) 24 km
- c) 200 km
- d) None of the above

**Q.13) Solution (d)**

The territorial waters are upto 12 Nautical Miles. Note, the distance is not in kilometres.



**Q.14) Which of the following countries have a coastline in Pacific as well as Atlantic Ocean?**

1. USA
2. Mexico
3. Brazil
4. Columbia

**Select the code from below:**

- a) 1 and 2
- b) 1,2 and 3
- c) 1 and 3
- d) 1,2 and 4

**Q.14) Solution (d)**

Factual Question

Note: Columbia is the only South American Country with coastline in Pacific and Atlantic.

**Q.15) A flat, largely featureless part of the ocean floor between the mid-ocean ridge and the continental rise is called –**

- a) Abyssal Plain
- b) Seamount
- c) Oceanic (Volcanic) Island
- d) Gyre

**Q.15) Solution (a)**

**Abyssal Plain** - A flat, largely featureless part of the ocean floor between the mid-ocean ridge and the continental rise.

**Seamount** - A submarine mountain (usually volcanic) that rises 1 km or more above the sea-floor (Example: Emperor Seamount chain). Most form above a mantle plume.

**Oceanic (Volcanic) Island** - A seamount that rises above sea level (Example: Hawaiian Islands). Most form above a mantle plume.

**Atoll** - A circular coral reef that forms a ring of islands around a central lagoon. Form in shallow water on the flanks of a submerging oceanic island.

**Deep Ocean Trenches** - Most occur along subduction zones. Previously discussed under 'Plate Tectonics'.

**Q.16) Consider the below statements with regard to Neap Tide:**

1. It occurs when the Earth, Sun and Moon are aligned.
2. Results in greatest variation between high and low tides.
3. Neap tides occur during the first and third quarter moon, when the moon appears "half full."

**Which of the statements given above is/are correct?**

- a) 1 only
- b) 3 only
- c) 1 and 2 only
- d) 1, 2 and 3

**Q.16) Solution (b)**

Tides are long-period waves that roll around the planet as the ocean is "pulled" back and forth by the gravitational pull of the moon and the sun as these bodies interact with the Earth in their monthly and yearly orbits.

During full or new moons—which occur when the Earth, sun, and moon are nearly in alignment—average tidal ranges are slightly larger. This occurs twice each month. The moon appears new (dark) when it is directly between the Earth and the sun. The moon appears full when the Earth is between the moon and the sun. In both cases, the gravitational pull of the sun is "added" to the gravitational pull of the moon on Earth, causing the oceans to bulge a bit more than usual. This means that high tides are a little higher and low tides are a little lower than average.

These are called spring tides, a common historical term that has nothing to do with the season of spring. Rather, the term is derived from the concept of the tide "springing forth." Spring tides occur twice each lunar month all year long, without regard to the season.

Seven days after a spring tide, the sun and moon are at right angles to each other. When this happens, the bulge of the ocean caused by the sun partially cancels out the bulge of the ocean caused by the moon. This produces moderate tides known as neap tides, meaning that high tides are a little lower and low tides are a little higher than average. Neap tides occur during the first and third quarter moon, when the moon appears "half full."

In simple words,

Spring Tide - Occurs when the Earth, Sun and Moon are aligned (full moon, new moon). Results in greatest variation between high and low tides.

Neap Tide - Occurs when the Moon is  $90^\circ$  out of alignment with the Sun and Earth (first quarter moon, third quarter moon). Results in smallest variation between high and low tides.

**Q.17) With reference to North Equatorial Current, consider the below statements and identify the incorrect statement:**

- It is a significant Pacific and the Atlantic Ocean current that flows from east to west.
- They flow in between  $10^\circ$  north and  $20^\circ$  north latitudes.
- The current passes or cuts through the equator, hence the name North Equatorial Current.

- d) In both oceans, it is separated from the equatorial circulation by the equatorial counter current, which flows eastward.

**Q.17) Solution (c)**

The North Equatorial Current is a significant Pacific and Atlantic Ocean current that flows east-to-west between about 10° north and 20° north. It is the southern side of a clockwise subtropical gyre. Despite its name, the North Equatorial Current is not connected to the equator. In both oceans, it is separated from the equatorial circulation by the Equatorial Countercurrent (also known as the North Equatorial Countercurrent), which flows eastward. The westward surface flow at the equator in both oceans is part of the South Equatorial Current.

**Q.18) Which of the following are the breeding grounds for temperate cyclone?**

1. South-east Caribbean region
2. Mexican Gulf
3. Mediterranean basin extending up to Russia
4. North-west Australia

**Codes:**

- a) 1, 2 and 3
- b) 2 and 3 only
- c) 3 and 4 only
- d) 1, 3 and 4

**Q.18) Solution (b)**

The favourite breeding grounds of temperate cyclones are:

- Over USA and Canada, extending over Sierra Nevada, Colorado, Eastern Canadian Rockies and the Great Lakes region.
- Mexican Gulf
- The belt extending from Iceland to Barents Sea and continuing over Russia and Siberia.
- Winter storms over Baltic Sea.
- Mediterranean basin extending upto Russia and even upto India in winters (called western disturbances).



- The Antarctic frontal zone.

**Q.19) Consider the below statements:**

1. An isthmus is a narrow piece of land connecting two larger areas across an expanse of water that otherwise separates them.
2. The Kra Isthmus is the narrowest part of the Malay Peninsula, in southern Thailand and Malaysia.

**Which of the statements given above is/are correct?**

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

**Q.19) Solution (a)**

An isthmus is a narrow piece of land connecting two larger areas across an expanse of water that otherwise separates them.

The Kra Isthmus is the narrowest part of the Malay Peninsula, in southern Thailand and Myanmar (not Malaysia).



**Q.20) Consider the following statements regarding type of climate:**

1. It is a transitional type of climate found between the equatorial forests and trade wind hot deserts.
2. This type of climate is characterized by an alternate hot, rainy season and cool, dry season.
3. Extreme diurnal range of temperature is another characteristic of this type of climate
4. This landscape is typified by tall grass and short trees

**Identify the type of climate from the below given options:**

- a) Tropical Monsoon type of climate
- b) Sudan type of climate
- c) Warm temperate western margin climate
- d) Steppe climate

**Q.20) Solution (b)**

**Savanna or Sudan Climate:**

- It is a transitional type of climate found between the equatorial forests and trade wind hot deserts.
- This type of climate is characterized by an alternate hot, rainy season and cool, dry season.
- Extreme diurnal range of temperature is another characteristic of this type of climate
- This landscape is typified by tall grass and short trees

**Q.21) Nordic countries are generally considered to refer to which among the below countries?**

1. Denmark
2. Sweden
3. Norway
4. Latvia
5. Lithuania

**Select the appropriate option using the code below**

- a) 1 and 2 only
- b) 2, 3 and 4
- c) 1, 2 and 3
- d) 3, 4 and 5

**Q.21) Solution (c)**

Nordic countries are a group of countries in Northern Europe. These countries include Denmark, Finland, Iceland, Sweden, Norway, and the territories of the Aland Islands and the Faroe Islands.

**Do you know?**

Modi and the leaders of the five Nordic countries participated in the **first India-Nordic Summit** co-hosted by India and Sweden in Stockholm.

Summit titled '**India-Nordic Summit: Shared Values, Mutual Prosperity**'.

The Prime Ministers pledged to deepen cooperation between India and the Nordic countries and focused their discussions on key issues related to global security, economic growth, innovation and climate change.

They acknowledged that innovation and digital transformation drive growth in an interconnected world, which underpin a growing engagement between India and the Nordic countries.

India and five Nordic countries reaffirmed the importance of free trade as a catalyst for achieving inclusive growth and realising the Sustainable Development Goals amid rising protectionist tendencies displayed by powerful economies.

Source: <https://economictimes.indiatimes.com/news/politics-and-nation/first-india-nordic-summit-calls-for-free-trade-and-rules-based-global-order/articleshow/63808071.cms>

**Q.22) Consider the following statements**

1. National Legal Services Authority (NALSA) has been constituted under the Legal Services Authorities Act, 1987 to provide free Legal Services to the weaker sections of the society and to organize Lok Adalats for amicable settlement of disputes.
2. The State Legal Services Authority is headed by Hon'ble the Chief Justice of the respective High Court who is the Patron-in-Chief of the State Legal Services Authority.

**Select the correct code:**

- a) 1 Only
- b) 2 Only

- c) Both 1 and 2
- d) Neither 1 nor 2

**Q.22) Solution (c)**

**National Legal Services Authority (NALSA)**

- It has been constituted under the Legal Services Authorities Act, 1987 to provide free Legal Services to the weaker sections of the society and to organize Lok Adalats for amicable settlement of disputes.
- In every State, State Legal Services Authority has been constituted to give effect to the policies and directions of the NALSA and to give free legal services to the people and conduct Lok Adalats in the State.
- The State Legal Services Authority is headed by Hon'ble the Chief Justice of the respective High Court who is the Patron-in-Chief of the State Legal Services Authority.
- In every District, District Legal Services Authority has been constituted to implement Legal Services Programmes in the District.
- The District Legal Services Authority is situated in the District Courts Complex in every District and chaired by the District Judge of the respective district.
- Taluk Legal Services Committees are also constituted for each of the Taluk or Mandal or for group of Taluk or Mandals to coordinate the activities of legal services in the Taluk and to organise Lok Adalats.
- Every Taluk Legal Services Committee is headed by a senior Civil Judge operating within the jurisdiction of the Committee who is its ex-officio Chairman.

**Do You Know?**

- Article 39A of the Constitution of India provides that State shall secure that the operation of the legal system promotes justice on a basis of equal opportunity, and shall in particular, provide free legal aid, by suitable legislation or schemes or in any other way, to ensure that opportunities for securing justice are not denied to any citizen by reason of economic or other disability.
- Articles 14 and 22(1) also make it obligatory for the State to ensure equality before law and a legal system which promotes justice on a basis of equal opportunity to all.

**Q.23) Consider the following statements about 'Biofuture Platform'**

1. It aims to accelerate development and scale-up the deployment of modern sustainable low-carbon alternatives to fossil based solutions in transport fuels, industrial processes, chemicals, plastics and other sectors
2. It was launched at the twenty-third Conference of the Parties (COP23), Bonn

**Select the correct statements**

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

**Q.23) Solution (a)**

Biofuture Platform, a coalition of 20 leading countries in the clean energy and the bio economy fields was launched 16 November 2016 at COP22, Marrakech.

It aims to be an action-oriented, country-led, multistakeholder mechanism for policy dialogue and collaboration among leading countries, organizations, academia and the private sector conscious of the need to accelerate development and scale up deployment of modern sustainable low carbon alternatives to fossil based solutions in transport, chemicals, plastics and other sectors.

It has been proposed by the government of Brazil to several leading countries in all five continents.

Twenty countries are the founding and current Member States of the Biofuture Platform: Argentina, Brazil, Canada, China, Denmark, Egypt, Finland, France, India, Indonesia, Italy, Morocco, Mozambique, the Netherlands, Paraguay, the Philippines, Sweden, United Kingdom, United States and Uruguay.

A number of international organisations, such as IRENA, UNCTAD, IEA, FAO, and SE4ALL, as well as private sector associations and initiatives such as the WBCSD, ABBI, UNICA, and below50, are supporting this initiative.

Brazil is serving as the interim secretariat/facilitator of the Biofuture Platform since its launch in November 16, 2016.

**Q.24) 'Global Energy Interconnection Development and Cooperation Organisation (GEIDCO)'**

1. It is an international organization among willing firms, associations, institutions and individuals who are dedicated to promoting the sustainable development of energy worldwide.
2. It is the brainchild of European Union

**Select the correct code:**

- a) 1 Only
- b) 2 Only
- c) Both 1 and 2
- d) Neither 1 nor 2

**Q.24) Solution (a)**

The Global Energy Interconnection Development and Cooperation Organization (GEIDCO), with its permanent office domiciled in Beijing, China, is an international organization among willing firms, associations, institutions and individuals who are dedicated to promoting the sustainable development of energy worldwide.

The purpose of GEIDCO is to promote the establishment of a GEI system, to meet the global demand for electricity in a clean and green way, to implement the United Nations “Sustainable Energy for All” and climate change initiatives, and to serve the sustainable development of humanity.

The GEIDCO will promote the concept of GEI, formulate GEI development plans, promote the creation of a GEI technical standards framework, organize concerted and collaborative efforts in researches and innovations, key studies, international communication and cooperation, engineering project implementation, provide consulting services, and lead the development of GEI.

**Q.25) ‘Global Climate Risk Index’ is published by**

- a) World Economic Forum
- b) UNEP
- c) Climate Vulnerable Forum
- d) GermanWatch

**Q.25) Solution (d)**

Global Climate Risk Index (CRI) is released by Germanwatch, an independent Berlin-based development and environmental organisation

The Germanwatch comes out with the CRI by analysing number of deaths per 1,00,000 inhabitants, extent of financial losses and loss per unit of Gross Domestic Product (GDP) of countries.

India is the sixth most vulnerable country in the world in terms of facing extreme weather events with Haiti, Zimbabwe, Fiji, Sri Lanka and Vietnam taking top five positions

India was at number four in terms of CRI ranking last year. Economic and population data from International Monetary Fund (IMF) was taken into account while arriving at the ranking. The CRI indicates a level of exposure and vulnerability to extreme events.

In the present analysis, only weather related events - storms, floods and temperature extremes (heat and cold waves) - are incorporated. "Geological incidents like earthquakes, volcanic eruptions or tsunamis, for which data is also available, are not relevant in this context as they do not depend on the weather and therefore are not possibly related to climate change".

**Q.26) 'VIVID 2018' was a national meet on**

- a) Medical Tourism
- b) Intellectual Property Rights
- c) Cyber Security
- d) Harnessing Solar Energy

**Q.26) Solution (c)**

The Theme for VIVID 2018 is "Cyber Security and Innovation".

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