

**CLIMATE**

**Cyclone Mocha building over Bay of Bengal, says IMD: How are cyclones formed and named?**

**CONTEXT:** The Indian Meteorological Department (IMD) has said that a cyclonic or low-pressure area is developing in the Bay of Bengal and can lead to high rainfall in the next few days in the region, from May 8 to May 12. It also said that the weather system was likely to form a depression over the southeast Bay of Bengal around May 9, and then intensify into a cyclonic storm.

- This weather system will be called Cyclone Mocha (pronounced 'Mokha'). Southern states are also expected to witness rainfall. It has been predicted that there may be moderate rainfall at most places during these days, with scattered heavy to very heavy rainfall likely over Andaman & Nicobar Islands.
- This cyclone will be named Mocha (Mokha), a name suggested by Yemen after the Red Sea port city, which is known to have introduced coffee to the world over 500 years ago.

**What has the IMD said about Cyclone Mocha?**

The weather office has warned fishermen of rains and high-speed winds in the southeast Bay of Bengal with windspeed reaching 40-50 kmph from Sunday onwards.

It has been suggested that there should be regulation of tourism and offshore activities and shipping near Andaman and Nicobar Islands between May 8 and 12.

**What is a cyclone and how are they formed?**

- Cyclones are rapid inward air circulation around a low-pressure area. The air circulates in an anticlockwise direction in the Northern hemisphere and clockwise in the Southern hemisphere.
- Cyclones are usually accompanied by violent storms and bad weather.

**Classification of Cyclones:**

There are two types of cyclones:

- **Tropical cyclones;** and
- **Extra Tropical cyclones** (also called temperate cyclones or middle latitude cyclones or Frontal cyclones or Wave Cyclones).

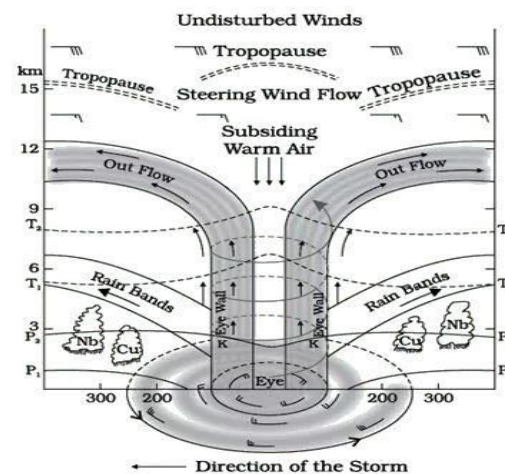
**Tropical Cyclones**

- Tropical cyclones are violent storms that originate over oceans in tropical areas and move over to the coastal areas bringing about large scale destruction caused by violent winds, very heavy rainfall and storm surges.
- Tropical Cyclones are one of the most devastating natural calamities in the world. The World Meteorological Organisation uses the term 'Tropical Cyclone' to cover weather systems in which winds exceed 'Gale Force' (minimum of 63 km per hour).
- Tropical cyclones originate and intensify over warm tropical oceans. The conditions favourable for the formation and intensification of tropical storms are:
  - ✓ Large sea surface with temperature higher than 27° C.
  - ✓ Presence of the Coriolis force.
  - ✓ Small variations in the vertical wind speed.
  - ✓ A pre-existing weak low- pressure area or low-level-cyclonic circulation.
  - ✓ Upper divergence above the sea level system.
- Tropical cyclones develop in the region between the Tropics of Capricorn and Cancer.
- Cyclones **in India:** Tropical cyclones originate over the Bay of Bengal, Arabian Sea and the Indian ocean. These tropical cyclones have very high wind velocity and heavy rainfall and hit the Indian Coastal states of Tamil Nadu, Andhra Pradesh, West Bengal, Odisha and Gujarat (These five states are more vulnerable to cyclone disasters than others in India).

**Stages of Formation: Tropical Cyclones**

The development cycle of tropical cyclones may be divided into three stages:

- Formation and Initial Development Stage:
  - The formation and initial development of a cyclonic storm depends upon the transfer of water vapour and heat from the warm ocean to the overlying air, primarily by evaporation from the sea surface.
  - It encourages formation of massive vertical cumulus clouds due to convection with condensation of rising air above the ocean surface.
- Mature Stage:
  - When a tropical storm intensifies, the air rises in vigorous thunderstorms and tends to spread out horizontally at the tropopause level. Once air spreads



**Fig: Vertical section of the tropical cyclone**

out, a positive pressure at high levels is produced, which accelerates the downward motion of air due to convection.

- With the inducement of subsidence, air warms up by compression and a warm 'Eye' (Low pressure centre) is generated. The main physical feature of a mature tropical cyclone in the Indian Ocean is a concentric pattern of highly turbulent giant cumulus thundercloud bands.
- **Modification and Decay:**
- A tropical cyclone begins to weaken in terms of its central low pressure, internal warmth and extremely high speeds, as soon as its source of warm moist air begins to ebb or is abruptly cut off.
- This happens after its landfall or when it passes over cold waters.

**Extratropical Cyclone**

- Extratropical cyclones are referred to as mid-latitude depressions, temperate cyclones, frontal depressions and wave cyclones.
- These are active above the mid-latitudinal region between 35° and 65° latitude in both the hemispheres. The direction of movement is from west to east and more pronounced in the winter seasons. It is in these latitude zones the polar and tropical air masses meet and form fronts

**Formation of Extratropical Cyclones:**

- The origin and development of temperate cyclones is best explained by the Polar Front theory.
- According to this theory, the warm-humid air masses from the tropics meet the dry-cold air masses from the poles and thus a polar front is formed. The cold air mass is denser and heavier and due to this reason, warm air mass is pushed up.
- This interaction of cold and warm air masses creates instability and a low pressure is created at the junction particularly in the center of interactions. Thus, a void is created because of lessening of pressure. The surrounding air rushed in to occupy this void and coupled with the earth's rotation a cyclone is formed.
- Extra tropical cyclones present a contrast to the more violent cyclones or hurricanes of the tropics, which form in regions of relatively uniform temperatures.

**How are cyclones named?**

- Cyclones that form in every ocean basin across the world are named by the regional specialised meteorological centres (RSMCs) and Tropical Cyclone Warning Centres (TCWCs). There are six RSMCs in the world, including the India Meteorological Department (IMD), and five TCWCs.
- As an RSMC, the IMD names the cyclones developing over the north Indian Ocean, including the Bay of Bengal and the Arabian Sea, after following a standard procedure. The IMD is also mandated to issue advisories to 12 other countries in the region on the development of cyclones and storms.
- In 2000, a group of nations called WMO/ESCAP (World Meteorological Organisation/United Nations Economic and Social Commission for Asia and the Pacific), which comprised Bangladesh, India, the Maldives, Myanmar, Oman, Pakistan, Sri Lanka and Thailand, decided to start naming cyclones in the region. After each country sent in suggestions, the WMO/ESCAP Panel on Tropical Cyclones (PTC) finalised the list.
- The WMO/ESCAP expanded to include five more countries in 2018 — Iran, Qatar, Saudi Arabia, United Arab Emirates and Yemen.
- The list of 169 cyclone names released by IMD in April 2020 were provided by these countries — 13 suggestions from each of the 13 countries.

**What are the guidelines to adopt names of cyclones?**

While picking names for cyclones, countries need to follow some rules. If those guidelines are followed, the name is accepted by the panel on tropical cyclones (PTC) that finalises the selection. The guidelines are:

- The proposed name should be neutral to (a) politics and political figures (b) religious beliefs, (c) cultures and (d) gender
- Name should be chosen in such a way that it does not hurt the sentiments of any group of population over the globe



Fig: Cyclone prone areas in India.

- It should not be very rude and cruel in nature
- It should be short, easy to pronounce and should not be offensive to any member
- The maximum length of the name will be eight letters
- The proposed name should be provided with its pronunciation and voice over
- The names of tropical cyclones over the north Indian Ocean will not be repeated. Once used, it will cease to be used again. Thus, the name should be new.

### **ENVIRONMENT & ECOLOGY**

#### **Centre looks into options to counter EU's carbon tax plan**

**CONTEXT:** The Commerce Ministry is exploring various options to cope with the European Union's decision to introduce a Carbon Tax.

- On December 13, 2022, the Council of the European Union ("the Council") and European Parliament came to a provisional agreement on the final text of a Carbon Border Adjustment Mechanism ("CBAM") regulation.
- The EU is planning to introduce a Carbon Border Adjustment Mechanism (CBAM). CBAM will entail a monitoring mechanism for imports from producers deploying non-green technologies starting this October and a tax levy from January 2026.

#### **Carbon Border Adjustment Mechanism (CBAM)**

##### **Background:**

- In 2021, the European Union (EU) proposed the Carbon Border Adjustment Mechanism (CBAM), which would tax very carbon-intensive items such as cement and steel beginning in 2026.
- CBAM is part of the "**Fit for 55 in 2030 package**", the EU's plan to reduce greenhouse gas emissions by at least 55% by 2030 compared to 1990 levels.

##### **About:**

- The CBAM regulation would require importers of certain energy-intensive goods to pay a levy in respect of their imports that corresponds to the price of emissions allowances under the EU Emissions Trading System ("EU ETS").
- A carbon border adjustment tax is a **duty on imports based on the amount of carbon emissions** resulting from the production of the product in question.
- As a price on carbon, it discourages emissions and as a trade-related measure, it affects production and exports.
- The CBAM will enter into force in its transitional phase as of 1 October 2023 and the permanent system will enter into force on 1 January 2026.
- CBAM would apply to covered products imported from all countries outside the EU, unless the country (i) already participates in the EU ETS – such as Iceland, Liechtenstein and Norway, which are part of the European Economic Area ("EEA") – or (ii) fully links its own emission trading system to the EU ETS and adopts the same carbon price as paid under the EU ETS – such as Switzerland.

##### **Purpose of CBAM:**

The CBAM regulation would require importers of certain carbon-intensive goods to pay a levy on their imports corresponding to the charge imposed on comparable domestic industries under the EU ETS, thus extending the carbon price paid by EU firms to foreign producers of the same goods.

##### **How does it work?**

- If implemented as intended, EU importers will be required to purchase **carbon certificates equal to the carbon price** paid in the EU if the items had been manufactured locally.
- The certificates' price would be determined by the auction prices





in the EU carbon credit market.

- The number of certificates required would be determined yearly by the quantity of commodities imported into the EU and the embedded emissions in those goods.
- The CBAM would first apply to cement, **iron and steel, aluminum, fertilizers and electricity imports.**

**Concerns:**

- The US, China, India, Brazil, South Africa and several others, including least-developed countries, have expressed concern over -
  - How to fairly account for emissions related to the production of imported goods?
  - How to duly consider the costs that companies already face in complying with climate regulations in exporting countries?
- It places a carbon charge on companies from countries that did not primarily cause climate change. Mozambique's GDP, for example, would drop by about 1.5% due to the tariffs on aluminium exports alone.
- According to the EU, CBAM is designed to be in full compliance with WTO rules and international climate law.
- However, questions have been raised over the consistency of CBAM with international trade law and environmental principles.
- It is likely to be viewed as unfair by trading partners since it runs the possibility of unfairly protecting local industries from foreign competition in so-called '**green protectionism.**'

**Impact of CBAM on India**

- **Adverse impact on India's exports of metals**
  - ✓ CBAM will have an adverse impact on India's exports of metals such as iron, steel and aluminium products to the EU.
  - ✓ In 2022, India's 27 per cent exports of iron, steel, and aluminium products of value USD 8.2 billion went to the EU.
  - ✓ From January 2026, when CBAM will be fully enforced, more than 50 percent of Indian exports come under the CBAM proposal.
  - ✓ This will leave a dent on India's European exports.
- **Increased compliance costs**
  - ✓ CBAM is bound to pose challenges to those industries which are exporting to European markets in terms of increased compliance costs. This is due to the requirement to monitor, calculate, report, and verify emissions.
- **India at a disadvantageous position**
  - ✓ In terms of carbon intensity, the carbon intensity of Indian products is significantly higher than that of the EU and many other countries.
  - ✓ This is because coal dominates the overall energy consumption. Hence, higher emissions would translate to higher carbon tariffs to be paid to the EU. The proportion of coal-fired power in India is close to 75%, which is much higher than the EU (15%) and the global average (36%).
  - ✓ Moreover, India has no domestic carbon pricing scheme in place which poses a greater risk to export competitiveness. Other countries with such a system in place might have to pay less carbon tax or get exemptions.
- **Goal of 5 trillion economy:** A prerequisite for India to become a 5 trillion economy is to expand its exports and the EU is India's third largest trading partner. EU accounted for €88 billion in goods trade in 2021, or 10.8% of total Indian trade.

**PRELIMS**

**1. River Cities Alliance:**

**Context:** National Mission for Clean Ganga (NMCG) in association with the National Institute of Urban Affairs (NIUA) organized the 'River-Cities Alliance (RCA) Global Seminar: Partnership for Building International River-Sensitive Cities' recently in New Delhi.

- The River Cities Alliance (RCA) has been launched with the objective to provide the member cities with a platform to discuss and exchange information on aspects that are vital for sustainable management of urban rivers, sharing best practices and supporting innovation.
- The alliance has been launched initially with 30 cities namely Dehradun, Rishikesh, Haridwar, Srinagar, Varanasi, Kanpur, Prayagraj, Farrukhabad, Mirzapur, Mathura, Bijnor, Ayodhya, Patna, Bhagalpur, Begusarai, Munger, Sahibganj, Rajmahal, Howrah, Jangipur, Hugli-Chinsurah, Behrampore, Maheshtala, Aurangabad, Chennai, Bhubaneswar, Hyderabad, Pune, Udaipur and Vijaywada.
- The Alliance is open to all river cities of India. Any river city can join the Alliance at any time.
- State Governments are implementing Action Plans for restoration of water quality of the identified polluted river stretches.

- The implementation is being monitored regularly at State level by Chief Secretary of the respective State/UT and at Central level by the Central Monitoring Committee under the Chairmanship of Secretary, Ministry of Jal Shakti.

## 2. **King Cobra**

**Context:** Recent studies suggest that King Cobra may be under-threat in India.

### **About King Cobra:-**

- They are one of the most venomous snakes on the planet.
- It is also the longest of all venomous snakes.
- The venom is not the most potent among venomous snakes, but the amount of neurotoxin they can deliver in a single bite up to two-tenths of a fluid ounce is enough to kill 20 people or even an elephant.
- They are the only snakes in the world that build nests for their eggs, which they guard ferociously until the hatchlings emerge.

### **Habitat:-**

- They live mainly in the rainforests and plains of India, southern China, and Southeast Asia.
- They are comfortable in a variety of habitats, including forests, bamboo thickets, mangrove swamps, high-altitude grasslands, and in rivers.

### **Protection Status:**

- IUCN Red List: Vulnerable.
- CITES: Appendix II.
- Wildlife (Protection) Act, 1972: Schedule II.

## 3. **Women in Territorial Army**

**Context:** In a major development, Ministry of Defence, Department of Military Affairs, has approved amendment to existing cadre management provisions for Women Officers of the Territorial Army (TA).

- Women Officers of the Territorial Army will now be posted with Engineer Regiments of the Territorial Army serving along the Line of Control and as staff officers at TA Group Headquarters/ Directorate General of Territorial Army at New Delhi, as per organizational requirement.
- This progressive policy measure is aimed at enhancing the scope of employment of Women Officers as also meet their professional aspirations since they will now serve and train under the same conditions as their male counterparts in a wider range of units and appointments including serving in challenging field conditions and in important staff appointments.
- The Territorial Army is based on a Citizen Soldiers' army concept and officers undergo Annual Training on basic military skills while remaining gainfully employed in civilian life.

## 4. **BRO celebrates 64th Raising Day**

**Context:** Border Roads Organisation (BRO) celebrated its 64th Raising Day on May 07, 2023 at all its detachments across the country. The main function 'Chief Engineers and Equipment Management Conference' was organised at BRO School & Centre in Pune, which was graced by Raksha Rajya Mantri Shri Ajay Bhatt.

- The BRO, in more than six decades, has constructed over 61,000 kms of roads, over 900 Bridges, four Tunnels and 19 airfields under challenging conditions along India's borders and in friendly foreign countries, including Bhutan, Myanmar, Afghanistan and Tajikistan.
- In 2022-23, the BRO completed 103 infrastructure projects, the most by the organisation in a single year. These include construction of Shyok Bridge in Eastern Ladakh and Steel Arch Siyom Bridge of Load Class 70 in Arunachal Pradesh on Along-Yinkiong Road. These and other similar projects of strategic importance were dedicated to the nation by Raksha Mantri Shri Rajnath Singh during the last one year.

## 5. **World Red Cross Day 2023**

**In news:** World Red Cross Day is observed every year on May 8 to share the principles of the International Red Cross and the Red Crescent Movement with everyone.

- ✓ World Red Cross and Red Crescent Day aims to highlight the principles of the Red Cross Movement and make humanitarian work a priority for all. Diseases, economic disparity and similar causes lead to a great deal of suffering in the world. Red Cross Movement is dedicated to helping those in need through humanitarian acts.
- ✓ World Red Cross Day theme 2023 is "To highlight the universal, human, and diverse aspects of the Red Cross Movement".

### **Red Cross Day History**

- ✓ Jean Henry Dunant, the founder of the International Committee of the Red Cross is responsible for World Red Cross Day. Check out the complete history of this day here.
- ✓ The idea of holding an International Red Cross Day was conceived soon after the First World War.

- ✓ At the 14th International Conference of the Red Cross, the idea of celebrating the Red Cross Day for monitoring health and peace in the world was first shared.
- ✓ The report of the Red Cross Truce got approved in 1934 at the 15th International Conference in Tokyo.
- ✓ However, this proposal was put into effect after World War II in 1946.
- ✓ World Red Cross Day marks the birth anniversary of its founder, Jean Henry Dunant, born on May 8, 1828, in Geneva.

**World Red Cross Day Significance**

- ✓ This day honours the contributions of millions of volunteers, members, and staff of the Red Cross Organisation who protect human health and life all across the length and breadth of the globe.
- ✓ World Red Cross Day is dedicated to those suffering from food scarcity, and victims of natural calamities, including war or any epidemic disease.
- ✓ Red Cross Day also encourages people to participate in the cause by taking up volunteer work. In fact, the World Red Cross Day theme 2023 also focuses on putting the work of its volunteers and partners on the front.

**6. Respiratory syncytial virus (RSV) vaccine:**

**In news:** The US Food and Drug Administration (FDA) has approved the first-ever respiratory syncytial virus (RSV) vaccine, developed by UK-based pharmaceutical company GSK, for use in people aged 60 years and older.

**About Respiratory syncytial virus (RSV)**

- ✓ Respiratory syncytial virus (RSV) is a common virus that can cause mild to severe respiratory illness, especially in young children and older adults.
- ✓ RSV can cause symptoms such as coughing, wheezing, fever, runny nose, and difficulty breathing.
- ✓ Treatment for RSV is mainly supportive, such as with fluids, oxygen therapy, and fever reducers.
- ✓ It is characterized by its highly contagious nature i.e., it has a high potential to infect people.
- ✓ It exacerbated the seasonal lung infection.
- ✓ It commonly infects children especially under 2 to 6 years of age.
- ✓ In most of the cases it has symptoms like the common cold but in advanced stages it converts into pneumonia and bronchiolitis.

**ANSWER WRITING**

**Q. Climate change is imperiling the livelihoods of farmers by exacerbating droughts, heat waves, floods and other extreme-weather events. In this regard analyse how smart farming would prove to be the savior of Indian farming. Also, explain what makes millets worth an ‘International Year’?**

Climate change refers to long-term shifts in temperatures and weather patterns. India’s agricultural sector faces a significant threat from climate change and directly impacts the daily lives of farmers in India.

The vulnerability factor of Indian agriculture to climate change is very high. It is listed in the top 20 most vulnerable countries to climate change.

Climate change is imperiling the livelihoods of farmers

- Due to changes in temperature, precipitation and carbon dioxide concentrations and the distribution and frequency of infestation by pests and diseases there is decline in agricultural productivity.
- Increasing surface temperatures leading to higher CO<sub>2</sub> emissions and reducing natural nitrogen availability is impacting soil health:
- Heat waves, which are projected to increase under climate change, could threaten livestock by increasing their vulnerability to disease, reducing fertility, and declining milk production.
- Changes in temperature and seasons can affect the timing of reproduction and migration. Some marine disease outbreaks have also been linked with changing climate.
- Change in weather pattern: Ex-Untimely rains during harvesting season causes huge losses.

Smart farming is the transformation and reorientation of farming to increase yields through enhanced productivity, improved resilience and reduced side effects. Smart farming centre around

- Efficient use of limited natural resources such as higher production per unit of water, land, and labour resources
- Enhancement in production through higher productivity
- Energy saving of limited fossil fuel
- Environment/ecology protection

Smart farming can be the savior of Indian farming from climate change in following ways

- Farm Management Information Systems represent mainly software systems for collecting, processing, storing, and disseminating data in the form required to carry out a farm’s operations and functions.
- Precision Agriculture is aimed at optimizing use of inputs through use of technology, improving economic returns and reducing environmental impact.

- Less wastage of resources - Agri-drones enable optimum usage of all resources such as fertilizer, water, seeds, and pesticides.
- Smart farming helps to sustainably increase agricultural productivity and incomes from crops, livestock and fish, without having a negative impact on the environment.
- Smart farming helps to reduce the exposure of farmers to short-term risks, while also strengthening their resilience by building their capacity to adapt and prosper in the face of shocks and longer-term stresses. Particular attention is given to protecting the ecosystem services which ecosystems provide to farmers and others. These services are essential for maintaining productivity and our ability to adapt to climate changes.
- Smart farming helps to reduce and/or remove greenhouse gas (GHG) emissions. This implies that we reduce emissions for each calorie or kilo of food, fibre and fuel that we produce. That we avoid deforestation from agriculture. And that we manage soils and trees in ways that maximizes their potential to acts as carbon sinks and absorb CO<sub>2</sub> from the atmosphere.

India's proposal to observe an International Year of Millets in 2023 has been approved at the by the Food and Agriculture Organisation (FAO). Millet is a collective term referring to a number of small-seeded annual grasses that are cultivated as grain crops, primarily on marginal lands in dry areas in temperate, subtropical and tropical regions.

Some of the common millets available in India are Ragi (Finger millet), Jowar (Sorghum), Sama (Little millet), Bajra (Pearl millet), and Variga (Proso millet).

**What makes millets worth an 'International Year'?**

- Millets are less expensive and nutritionally superior to wheat & rice owing to their high protein, fibre, vitamins and minerals like iron content.
- Millets are also rich in calcium and magnesium. For example, Ragi is known to have the highest calcium content among all the food grains.
- Millets can provide nutritional security and act as a shield against nutritional deficiency, especially among children and women.
- Its high iron content can fight high prevalence of anaemia in India women of reproductive age and infants.
- Millets are rich in antioxidants.
- Millets can help tackle lifestyle problems and health challenges such as obesity and diabetes as they are gluten-free and have a low glycemic index (a relative ranking of carbohydrate in foods according to how they affect blood glucose levels).

Agriculture and climate change are deeply intertwined. It's time to change the way agriculture affects the environment, and vice versa. Adoption of permaculture, Zero Budget Natural Farming, climate- resilient crop varieties are needed for climate smart agriculture.

**MCQs**

**1. With reference to 'Multiple energy pathways', recently seen in news, consider the following:**

1. It would enable countries to choose resources, even coal, while working towards plans on net zero emissions.
2. It was proposed by Group of Seven wealthy nations at a meeting of the G20 (which includes G7 countries) Energy Transitions Working Group (ETWG).

Which of the statements given above is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) None of the above

2. Recently seen in news, *Scary Barbie* refers to:
  - (a) AI tool used as a guard against potential hackers
  - (b) A malicious computer program or authored code
  - (c) EU Strategy on combating trafficking in Human Beings

**(d) A supermassive black hole**

3. With reference to Neurotoxins, recently seen in news due to Ludhiana gas leak, consider the following statements:

1. Neurotoxins substances can eventually disrupt or even kill neurons or nerve cells, which are important for transmitting and processing signals in the brain and other parts of the nervous system.
2. Methane, hydrogen sulphide, carbon monoxide and carbon dioxide are common neurotoxic gases.

Which of the statements above is/are *not* correct?

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

4. Consider the following statements about Innovative Finance Facility for Climate in Asia and the Pacific (IF-CAP):

1. It is an initiative of the Asia Development Bank.



2. The finance facility is limited to Asian countries only.

Which of the statement(s) given above is/are correct?

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

5. 'Levant' recently seen in news, which of the following statements are referred to the term 'Levant'?

1. It is an historical geographical term referring to a large area in the Eastern Mediterranean region of western – Asia.
2. It represents the land bridge between Africa and Eurasia.
3. The term refers to the countries namely Cyprus, Egypt, Iraq, Israel, Jordan, Lebanon, Palestine, Syria and Turkey.

Codes:

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

6. The term 'Title 42' is related with:

- (a) An Artificial Intelligence project by Google
- (b) Covid – 19 restrictions for migrants coming to US
- (c) A project of India Government to counter poverty.
- (d) Name given to a special operation conducted in Middle East.

7. Consider the following statements regarding Respiratory Syncytial Virus (RSV)

1. RSV are more frequent in older person
2. It is highly contagious in nature
3. There is no vaccine available to cure this infection.

Which of the above statements is/are correct?

- (a) 1 only

(b) 2 only

- (c) 2 and 3 only
- (d) all of the above

8. Consider the following statements regarding Galapagos Islands.

1. It is an archipelago of Volcanic islands.
2. The archipelago is precisely located on the Nazca plate.
3. It belongs to the Republic of Ecuador

Which of the above statements is/are correct?

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

9. Consider the following statements regarding cyclone Mocha/ Mokha:

1. Cyclone Mokha is named by Jordan
2. It will be build over Arabian Sea
3. It will be tropical cyclone.

Which of the above statements is/are correct?

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

10. Consider the following statements regarding Carbon Border Adjustment Mechanism (CBAM):

1. CBAM is proposed by European Union (EU)
2. CBAM is part of the "Fit for 55 in 2030" package.
3. A carbon border adjustment tax is a duty on imports based on the amount of carbon emissions.

Which of the above statements is/are correct?

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