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**Contact No.- 80 80 046 046**

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**PUNE-THANE-DADAR-ANDHERI**

## **Topic 1: G4 virus and Global Outbreak Alert and Response Network (GOARN)**

### ***Importance for Prelims: International Relations***

Researchers in China have discovered a **new strain of the influenza virus** which they claim has the potential to turn into a pandemic.

#### **Concept:**

- The scientists **identified the virus through surveillance of influenza viruses in pigs** that they carried out from 2011 to 2018 in ten provinces of China.
- They found that the G4 strain has the **capability of binding to human-type receptors** (like, the SARS-CoV-2 virus binds to ACE2 receptors in humans), was able to **copy itself in human airway epithelial cells**
- While researchers have found that the virus can spread from animal to human, there is still no evidence about the passing to the G4 virus from human to human.

#### **Global Outbreak Alert and Response Network (GOARN)**

- The Global Outbreak Alert and Response Network also referred to as GOARN is a **global technical partnership**, established by the **World Health Organization (WHO)** as a key mechanism to engage the resources of technical agencies beyond the United Nations for **rapid identification, confirmation and response to public health emergencies** of

international importance.

- The main objective of the network is to **provide technical support to WHO Member States** experiencing a human health emergency due to various threats including disease outbreaks, food safety, chemical toxins, zoonosis, natural and manmade disasters etc.
- GOARN currently comprises over **250 technical institutions and networks** (and their members) across the globe. These Partners include medical and surveillance initiatives, regional technical networks, networks of laboratories, United Nations organizations (e.g. UNICEF, UNHCR), the Red Cross and Red Crescent Societies (ICRC, IFRC), international humanitarian non-governmental organisations and **national public health institutions**. All have the ability to pool their resources rapidly to assist affected countries seeking support.

## **Topic 2: Right of Persons with Disabilities (RPwD) Act, 2016**

### ***Importance for Prelims: Polity***

Department of Empowerment of Persons with Disabilities move to decriminalize minor offences under Right of Persons with Disabilities (RPwD) Act, 2016 has attracted protest from people.

- The Act replaces the Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995. It fulfills the obligations to the United National Convention on the

Rights of Persons with Disabilities (UNCRPD), to which India is a signatory. The Act came into force during December 2016.

- The types of disabilities have been increased from existing 7 to 21 and the Central Government will have the power to add more types of disabilities.
- Persons with "benchmark disabilities" are defined as those certified to have at least 40 per cent of the disabilities specified above.

### **Rights and entitlements under act**

- Responsibility has been cast upon the appropriate governments to take effective measures to ensure that the persons with disabilities enjoy their rights equally with others.
- Additional benefits such as reservation in higher education (not less than 5%), government jobs (not less than 4 %), reservation in allocation of land, poverty alleviation schemes (5% allotment) etc. have been provided for persons with benchmark disabilities and those with high support needs.
- Every child with benchmark disability between the age group of 6 and 18 years shall have the right to free education.
- Government funded educational institutions as well as the government recognized institutions will have to provide inclusive education to the children with disabilities.

□ For strengthening the Prime Minister's Accessible India Campaign, stress has been given to ensure accessibility in public buildings (both Government and private) in a prescribed time-frame.

### **UN Convention on Rights of Persons with Disabilities (UNCRPD)**

□ The Convention on the Rights of Persons with Disabilities and its Optional Protocol was adopted on 13 December 2006 at the United Nations Headquarters in New York.

□ There were 82 signatories to the Convention. The Convention entered into force on 3 May 2008.

□ It is the first comprehensive human rights treaty of the 21st century.

□ The Convention follows decades of work by the United Nations to change attitudes and approaches to persons with disabilities.

□ It takes to a new height the movement from viewing persons with disabilities as “objects” of charity, medical treatment and social protection towards viewing persons with disabilities as “subjects” with rights, who are capable of claiming those rights and making decisions for their lives based on their free and informed consent as well as being active members of society.

□ The Convention is intended as a human rights instrument with an explicit, social development dimension.

□ It adopts a broad categorization of persons with disabilities and reaffirms that all persons with all types of disabilities must enjoy all

human rights and fundamental freedoms.

### **Topic 3: Bon Bibi Palagaan**

#### ***Importance for Prelims: Arts and culture***

The centuries-old folk theatre form and the worship of a forest goddess has helped the islanders of Sunderbans to understand the power of nature and the limits the human need.

- Bonbibi Palagaan is a **dramatic performance tradition** connected with the **worship of the cult goddess Bonbibi**.
- The **followers of Bon Bibi are fishermen, crab-collectors and honey-gatherers** many of them impoverished who go into the wild mangroves, teeming with wild animals such as tigers and crocodiles, to earn a livelihood. They believe that **only Bon Bibi protects them when they enter the forest**.
- Traditionally, Bonbibi-r Palagaan was **simply recited or sung as a eulogy to the deity to invoke her blessings**.
- In contrast to the Bengali literary canon, this popular performance-ritual, which is **exclusively practised in the Sundarbans** in lower delta region West Bengal and Bangladesh, has survived orally or through handwritten manuscripts in the periphery without receiving much recognition.
- The word ‘pala’ means a ‘long narrative verse’ and ‘gaan’ means ‘song’ in Bengali.
- Bonbibi Palagaan is considered to be the representative performance-ritual of the Sundarbans and also an emblem of the



syncretist nature of the region.



#### **Topic 4: Computer Emergency Response Team (CERT-In)**

##### ***Importance for Prelims: Government organizations***

The reason behind ban of 59 apps is that several citizens had reportedly raised concerns to CERT-In regarding security of data and loss of privacy in using these apps. In addition, the Ministry received recommendations from Indian Cyber Crime Coordination Centre.

□ CERT-In (the Indian Computer Emergency Response Team) is a government-mandated information technology (IT) security organization **created in 2004**.

□ The purpose of CERT-In is to **respond to computer security incidents, report on vulnerabilities and promote effective IT**

security practices throughout the country.

□ According to the provisions of the **Information Technology Amendment Act 2008**, CERT-In is responsible for overseeing administration of the Act.

□ CERT-In has been designated to serve as the **national agency to perform the following functions in the area of cyber security:**

-Collection, analysis and dissemination of information on cyber incidents.

-Forecast and alerts of cyber security incidents

-Emergency measures for handling cyber security incidents •  
Coordination of cyber incident response activities.

-Issue guidelines, advisories, vulnerability notes and whitepapers relating to information security practices, procedures, prevention, response and reporting of cyber incidents.

-Such other functions relating to cyber security as may be prescribed.

### **Indian Cyber Crime Coordination Centre**

□ The scheme to set up Indian Cyber Crime Coordination Centre (I4C) was approved in October 2018, to **deal with all types of cybercrimes in a comprehensive and coordinated manner.**

□ It act as a nodal point in the fight against cybercrime

□ It **identifies the research problems/needs of LEAs and take up R&D activities** in developing new technologies and forensic tools in collaboration with academia / research institutes within India and abroad

□ It **prevents misuse of cyber space** for furthering the cause of



extremist and terrorist groups

□ It suggests amendments, if required, in cyber laws to keep pace with fast changing technologies and International cooperation and coordinate all activities related to implementation of Mutual Legal Assistance Treaties (MLAT) with other countries related to cybercrimes in consultation with the concerned nodal authority in MHA

□ Components Of The I4C Scheme

-National Cybercrime Threat Analytics Unit (TAU)

-National Cybercrime Reporting

-Platform for Joint Cybercrime Investigation Team

-National Cybercrime Forensic Laboratory (NCFL) Ecosystem

-National Cybercrime Training Centre (NCTC)

-Cybercrime Ecosystem Management Unit

-National Cyber Crime Research and Innovation Centre

## **Topic 5: Sindhu Darshan Festival**

### ***Importance for Prelims: Arts and culture***

Prime Minister has performed Sindhu Darshan puja at Nimu in Ladakh

□ It is celebrated annually from 1997 with an objective to **signify role of river Sindhu in shaping culture of this region**

□ It is celebrated for **three days on the eve of ‘Guru Purnima’** or the full moon day in June month.

□ It is also called as Singhe Kabaab Festival and **draws focus to the**

Sindhu river and promotes the waterbody as a symbol of the country's communal unity and harmony.

## **Topic 6: Global Environment Facility**

### ***Importance for Prelims: IR/Environment***

Beijing made new territorial claim on eastern Bhutan while objecting to a request to develop the Sakteng wildlife sanctuary in eastern Bhutan's Trashigang district at an online meeting of the Global Environment Facility (GEF).

- The Global Environment Facility (GEF) was **established on the eve of the 1992 Rio Earth Summit to help tackle our planet's most pressing environmental problems.**
- GEF is an **international partnership of 183 countries, international institutions**, civil society organizations and the private sector that addresses global environmental issues.
- It is independently operated as a financial organization that provides grants for projects related to biodiversity, climate change, international waters, land degradation, the ozone layer, persistent organic pollutants (POPs), mercury, sustainable forest management, food security, sustainable cities.
- The GEF **provides funding to assist developing countries** in meeting the objectives of international environmental conventions.
- The GEF **serves as a "financial mechanism" to five conventions:**

Convention on Biological Diversity (CBD), United Nations Framework Convention on Climate Change (UNFCCC), Stockholm Convention on Persistent Organic Pollutants (POPs), UN Convention to Combat Desertification (UNCCD), and Minamata Convention on Mercury.

## **Topic 7: Compulsory License**

***Importance for Prelims: Economy***

***Importance for Mains: GS paper III- Economy***

Political party CPI(M) has asked the government to invoke Clause 92 of the Patents Act and issue compulsory license to manufacturers to produce the generic version of Remdesivir used for treating coronavirus patients

- Compulsory licensing is when a **government allows someone else to produce a patented product or process without the consent of the patent owner** or plans to use the patent-protected invention itself.
- It is one of the flexibilities in the field of patent protection included in the WTO's agreement on intellectual property TRIPS (Trade-Related Aspects of Intellectual Property Rights) Agreement and also in Indian patent Act, 1972
- Under Indian Patent Act, 1970, the provision with regard to compulsory licensing is specifically given under Chapter XVI. The conditions which need to be fulfilled in order for a compulsory licence to be granted are laid down under Sections 84 and 92

of the Act.

□ As per Section 84, any person who is interested or already the holder of the licence under the patent can make a request to the Controller for grant of Compulsory Licence on patent **after three years from the date of grant of that patent.**

□ While granting the compulsory licence, the Patent office will take into account few measures such as the nature of the invention, any measures already taken by the patentees or any licensee to make full use of the invention, ability of the applicant to work the invention to the public advantage and time elapsed since the grant of the patent i.e. worked or not worked.

□ **Under clause 92, India has the right to issue a compulsory license to manufacture the drug in India.**

□ Under Clause 92A of the Patents Act, compulsory license can even be issued for export to countries that may require the drug and not have the capability to manufacture

## **Topic 8: e-Waste**

### ***Importance for Prelims: Environment***

United Nations University (UNU) released report on e-waste.

□ E-waste will **increase by 38 per cent in the decade between 2020 and 2030.**

□ There was **53.6 million tonnes (MT) e-waste in 2019**, according to the report. That is a nearly 21 per cent increase in just five years.

- **Asia generated the greatest volume of e-waste in 2019** about 24.9 MT, followed by the Americas (13.1 MT) and Europe (12 MT). Africa and Oceania generated 2.9 MT and 0.7 MT respectively.
- **Less than 18 per cent** of the e-waste generated in 2019 was **collected and recycled**.
- The number of countries that have **adopted a national e-waste policy**, legislation or regulation has increased from 61 to 78 and includes India.

### **Concept:**

- E-waste is a **health and environmental hazard**, containing **toxic additives or hazardous substances such as mercury**, which damages the human brain and / or coordination system. according to the report.
- There are 312 authorized recyclers of e-waste in India, with the capacity for treating approximately 800 kilo tonnes annually.
- However, formal recycling capacity remains under-utilized, as the large majority of the waste is still handled by the informal sector. **About 90 per cent of the country's e-waste is recycled in the informal sector, according to the report.**

## **Topic 9: Assessment of Climate Change over the Indian Region**

### ***Importance for Prelims: Report***



Ministry of Earth Sciences has released the **report First Assessment of Climate Change over the Indian Region.**

**Findings:**

- ❑ **West Bengal is one of the most climatically vulnerable states** of India with a history of a high number of severe cyclones in the Bay of Bengal coast, severe thunderstorms, a high sea-level rise and projected flood risk.
- ❑ The **flood risk has increased over the east coast**; West Bengal, eastern Uttar Pradesh, Gujarat and Konkan region, as well as a majority of urban areas such as Mumbai, Kolkata and Chennai.
- ❑ As against the global average warming of 0.7 degrees Celsius, **sea surface temperature of the tropical Indian Ocean rose by on an average of 1°C** between 1951 and 2015. Such an increase in ocean temperature has a **direct bearing on the intensity of thunderstorms and cyclones** in the zone.
- ❑ In a worst-case scenario, **average surface air temperatures over India could rise by up to 4.4°C** by the end of the century as compared to the period between 1976 and 2005.
- ❑ The **sea level has been rising at a rate of five centimetres per decade** off the Bengal coast, the highest in the country. The rise is about three centimetres per decade close to Mumbai.
- ❑ By 2100, the **frequency of warm days and warm nights might also increase** by 55% and 70% respectively, as compared to the period 1976-2005 under the RCP 8.5 scenario.
- ❑ The **incidences of heat waves over the country could also**

increase by three to four times. Their duration of occurrence might also increase which was already witnessed by the country in 2019.

## **Topic 10: Emergency Response Programme**

### ***Importance for Prelims: IR/Economy***

The World Bank and the Government of India has signed the \$750 million agreement for the MSME Emergency Response Programme.

□ The World Bank's MSME Emergency Response Programme will **address the immediate liquidity and credit needs of some 1.5 million viable MSMEs** to help them withstand the impact of the current shock and protect millions of jobs.

□ The World Bank Group, including its private sector arm – the International Finance Corporation (IFC), will **support the government's initiatives to protect the MSME sector** by:

**1. Unlocking liquidity:** This program will support government's efforts to channel that liquidity to the MSME sector by **de-risking lending from banks and Non-Banking Financial Companies (NBFCs)** to MSMEs through a range of instruments, including credit guarantees.

**2. Strengthening NBFCs and SFBs:** Improving the funding capacity of key market-oriented channels of credit, such as the NBFCs and Small Finance Bank (SFBs), will help them respond to the urgent and varied needs of the MSMEs. This will include supporting government's refinance facility for NBFCs. In parallel, the

IFC is also providing direct support to SFBs through loans and equity.

**3. Enabling financial innovations:** The program will **incentivize and mainstream the use of fintech and digital financial services in MSME lending and payments**. Digital platforms will lay an important role by enabling lenders, suppliers, and buyers to reach firms faster and at a lower cost, especially small enterprises who currently may not have access to the formal channels.

## **Topic 11: Zardozi**

### ***Importance for Prelims: Arts and culture***

Zardozi workers have been left with joblessness due to lockdown

- ☐ Zardozi is form of embroidery that came to **India from Persia**.
- ☐ Its literal translation, “zar” meaning gold and “dozi” meaning embroidery, refers to the process of **using metallic-bound threads to sew embellishment** on to various fabrics.
- ☐ This heavy and intricate style of design is said to have been **brought to India with the Mughal conquerors**.
- ☐ After flourishing seamlessly in the initial Mughal period, the craft **declined during the rule of Emperor Aurangzeb** when the royal patronage that had been extended to craftsmen was stopped. The onset of industrialization in the 18th and 19th centuries was yet another setback.
- ☐ It has been given **GI tag in 2013**.



## Topic 12: Winter grade diesel

### *Importance for Prelims: Science and technology*

Indian Oil Corporation Ltd (IOC) launched a special winter-grade diesel in Ladakh.

- ❑ **Motorists in high-altitude sectors** like Ladakh, Kargil, Kaza and Keylong face the **problem of freezing of diesel in their vehicles** when winter temperatures drop to as low as -30°Celsius.
- ❑ Indian Oil has come up with an innovative solution to this problem by introducing a special winter-grade diesel with a low pour-point of -33° Celsius, which does not lose its fluidity function even in extreme winter conditions
- ❑ **Regular diesel fuel contains paraffin wax** which is **added for improving viscosity and lubrication**. At low temperatures, the **paraffin wax thickens or “gels”** and hinders the flow of the fuel in

the car engine.

❑ **Special types of diesel** are thus used at low temperatures that contain **additives enabling the fuel to remain fluid in such conditions.**

### **Topic 13: Index of eight Core industries**

#### ***Importance for Prelims: Economy***

The **output of eight core infrastructure industries shrank by 23.4 per cent** in May due to the coronavirus-induced lockdown, according to the official data.

❑ The index was released by the Office of Economic Affairs under the Department for Promotion of Industry and Internal Trade.

❑ Out of the **total items in the Index of Industrial Production, the Eight Core Industries comprises of 40.27 percent weight** of the total.

❑ The Eight Core Industries are: (i) Coal (ii) Crude Oil (iii) Natural Gas (iv) Refinery Products (v)Fertilizers (vi) Steel (vii)Cement (viii) Electricity

### **Topic 14: Extreme Climatic events**

#### ***Importance for Prelims: Environment***

The major cause of worst locust attack after gap of 26 years is extreme weather events linked to climate change.



- Extreme weather events include **unexpected, unusual, severe, or unseasonal weather**; weather at the **extremes of the historical distribution**, the range that has been seen in the past.
- As the world has warmed, that **warming has triggered many other changes to the Earth's climate**.
- Changes in extreme weather and climate events, such as **heat waves and droughts**, are the primary way that most people experience climate change.
- Human-induced climate change has **already increased the number and strength of some of these extreme events**.

## **Topic 15: Accelerate Vigyaan**

### ***Importance for Prelims: Schemes***

Union government has initiated “Accelerate Vigyan” scheme to push scientific research

- **Science and Engineering Research Board (SERB)** has launched this new scheme to provide a single platform for research internships, capacity building programs, and workshops across the country.
- The primary objective of this **inter-ministerial scheme** is to give more **thrust on encouraging high-end scientific research and preparing scientific manpower**, which can lead to research careers and knowledge-based economy.
- The AV will work on mission mode, particularly with respect to its

component dealing with consolidation / aggregation of all major scientific events in the country.

□ Thus, an **Inter-Ministerial Overseeing Committee (IMOC)** involving all the scientific ministries/departments and a few others has been constituted for the **purpose of supporting SERB in implementing the AV scheme in a successful manner.**

## **Topic 16: State of the World Population Report 2020**

### ***Importance for Prelims: Reports***

The State of World Population 2020 report released by the **United Nations Population Fund (UNFPA)**

### **Findings**

- **Theme:** Against my will - Defying the practices that harm women and girls and undermine equality
- Every year, millions of girls are **subjected to practices that harm them physically and emotionally**, with the full knowledge and consent of their families, friends and communities
- At least 19 harmful practices, ranging from breast ironing to virginity testing, are considered **human rights violations**, according to the UNFPA report, which focuses on the three most prevalent ones: **female genital mutilation, child marriage, and extreme bias against daughters in favour of sons.**
- There is extreme preference for sons over daughters in some countries have fuelled gender-biased sex selection or extreme neglect

that leads to their death as children, **resulting in 140 million “missing females.”**

### **About India:**

□ India accounts for 45.8 million of the world's 142.6 million "missing females" over the past 50 years. “Missing females” are **women missing from the population at given dates due to the cumulative effect of postnatal and prenatal sex selection in the past.**

□ **Preference for a male child** manifested in sex selection has led to **dramatic, long-term shifts in the proportions of women and men in the populations of country.**

□ This demographic imbalance will have an inevitable impact on marriage systems. In countries where marriage is nearly universal, many men may need to delay or forego marriage because they will be unable to find a spouse, the report said. This so-called **"marriage squeeze"**.

□ It could result in more child marriages. Some studies suggest that the **marriage squeeze will peak in India in 2055.**

### **United Nations Population Fund (UNFPA)**

□ UNFPA is the United Nations sexual and reproductive health agency.

□ Its mission is to deliver a world where every pregnancy is wanted, every childbirth is safe and every young person's potential is fulfilled.

### **Topic 17: Mars Orbiter Mission**

### ***Importance for Prelims: Science and technology***

The Mars Colour Camera (MCC) onboard ISRO's Mars Orbiter Mission has captured the **image of Phobos, the closest and biggest moon of Mars.**

□ Mars Orbiter Mission is **India's first interplanetary mission to planet Mars** with an orbiter craft designed to orbit Mars in an elliptical orbit.

□ It has been configured to **carry out observation of physical features of mars and carry out limited study of Martian atmosphere** with following five payloads:

o Mars Colour Camera (MCC)

o Thermal Infrared Imaging Spectrometer (TIS)

o Methane Sensor for Mars (MSM)

o Mars Exospheric Neutral Composition Analyser (MENCA)

o Lyman Alpha Photometer (LAP)

□ ISRO had launched the spacecraft on PSLV C25 rocket from Sriharikota on November 5, 2013.

### **Topic 18: Globba Andersonii Plant**

#### ***Importance for Prelims: Environment***

Researchers have “**rediscovered**” a **rare plant species** called Globba andersonii from the Sikkim Himalayas near the Teesta river valley region **after a gap of nearly 136 years.**

□ It is “**critically endangered**” and “**narrowly endemic**”, the



species is **restricted mainly to Teesta River Valley region** which includes the Sikkim Himalays and Darjeeling hill ranges.

- Plant usually grows in a **dense colony as a lithophyte (plant growing on a bare rock or stone)** on rocky slopes in the outskirts of evergreen forests.
- It is especially prevalent near small waterfalls along the roadside leading to these hill forests, which are 400-800 m. above sea level.



## **Topic 19: Namami Ganga**

### ***Importance for Prelims: International Relations***

The World Bank has approved a five year loan to the Namami Gange project worth ₹3,000 crore (\$400 million) to develop and improve infrastructure projects to abate pollution in the river basin.



□ Namami Gange Programme is an **Integrated Conservation Mission**, approved as 'Flagship Programme' by the Union Government in June 2014 with budget outlay of Rs.20,000 Crore to accomplish the twin objectives of **effective abatement of pollution, conservation and rejuvenation of National River Ganga.**

□ Main pillars of the Namami Gange Programme are:

- o Sewerage Treatment Infrastructure
- o River-Surface Cleaning
- o Afforestation
- o Industrial Effluent Monitoring
- o River-Front Development
- o Bio-Diversity
- o Public Awareness
- o Ganga Gram

□ **National Mission for Clean Ganga(NMCG)** was registered as a society under the Societies Registration Act 1860.It acted as **implementation arm of National Ganga River Basin Authority(NGRBA)** which was constituted under the provisions of the **Environment (Protection) Act (EPA),1986.**

□ **The Act envisages five tier structure at national, state and district level** to take measures for prevention, control and abatement of environmental pollution in river Ganga and to ensure continuous adequate flow of water so as to rejuvenate the river

Ganga as below;

o **National Ganga Council** under chairmanship of Hon'ble Prime

Minister of India.

- o **Empowered Task Force (ETF)** on river Ganga under chairmanship of Hon'ble Union Minister of Jal Shakti
- o **National Mission for Clean Ganga(NMCG).**
- o **State Ganga Committees**
- o **District Ganga Committees** in every specified district abutting river Ganga and its tributaries in the states.

## **Topic 20: Urban Forest**

### ***Importance for Prelims: Environment***

Urban Forest inaugurated at the Office of the Comptroller and Auditor General of India in New Delhi

- ☐ Urban forests are the **lungs of the cities and act as an oxygen bank and Carbon Sink.**
- ☐ **Miyawaki method** of forest creation is employed which could help in reducing the temperature by as much as 14 degree & increase the moisture by more than 40%.
- ☐ The Urban forest has an ecosystem which has the **capacity to restore habitat** for birds, bees, butterflies and micro fauna. These are essential for pollination of crops and fruits and to help **maintain a balanced ecosystem.**
- ☐ On the occasion of World Environment Day this year, the **government announced implementation of the Nagar van scheme** to develop **200 Urban Forests across the country in next five years**

with a renewed focus on people's participation and collaboration between Forest Department, Municipal bodies, NGOs, Corporates and local citizens.

### **Miyawaki method**

Miyawaki method is a method of urban afforestation by turning backyards into mini-forests.

## **Topic 21: Udyam registration portal for MSME**

### ***Importance for Prelims: Economy***

Udyam Registration Portal developed by Ministry of Micro, Small and Medium Enterprises has become operational.

### **Features:**

- ☐ MSME registration process is **fully online, paperless and based on self-declaration**. No documents or proof are required to be uploaded for registering an MSME
- ☐ A Registration number will be given after registration
- ☐ After completion of the process of registration, an Udyam Registration Certificate will be issued This certificate will have a dynamic QR Code from which the web page on our Portal and details about the enterprise can be accessed.
- ☐ PAN & GST linked details on investment and turnover of enterprises will be taken automatically from the respective Government data bases.

### **Benefits:**

- ☐ This process will be extremely **simple, seamless entrepreneur**

friendly.

- ☐ It will set an example in **Ease of Doing Business**, not only in India but internationally.
- ☐ It **will reduce transaction time and costs**. Entrepreneurs and Enterprises can focus on their real work and become globally competitive.

## **Topic 22: Central Zoo Authority**

### ***Importance for Prelims: Government bodies***

The Environment Ministry has recently reconstituted the Central Zoo Authority.

- ☐ The CZA is a **statutory body** constituted under **Wildlife protection act amended in 1992**.
- ☐ It is **chaired by the Environment Minister**
- ☐ Apart from the chairman, it **consists of 10 members and a member-secretary**.
- ☐ Almost all of them are officials in the Environment Ministry and non-government experts are those who are wildlife conservationists or retired forest officers.
- ☐ **Functions:**
  - 1) to specify the minimum standards
  - 2) to evaluate and assess the functioning of the zoos
  - 3) to recognise or derecognise zoos;
  - 4) to identify endangered species

- 5) to coordinate the acquisition exchange
- 6) Identify priorities, themes and approval of Master Plan
- 7) Provide technical assistance to Zoos
- 8) to release financial assistance to Zoos
- 9) to ensure maintenance of studbooks
- 10) to coordinate training of zoo personnel
- 11) to coordinate research and education

### **Topic 23: Namdapha National Park.**

#### ***Importance for Prelims: Environment***

Lepidopterists have discovered two new butterflies Striped Hairstreak and Elusive Prince in Arunachal Pradesh

□ The Striped Hairstreak (*Yamamotozephyrus kwangtugensis*) was located in Vijaynagar bordering Myanmar while the Elusive Prince was found in Miao on the periphery of the Namdapha National Park.

#### **Namdapha national park**

□ Namdapha National Park is the **largest protected area in the Eastern Himalaya biodiversity** hotspot and is located in **Arunachal Pradesh**.

□ It is India's **easternmost tiger reserve**. It is located in the Changlang district of Arunachal Pradesh near the international border with Myanmar.

□ Among the last great remote wilderness areas of Asia, Namdapha and its adjoining areas, is flanked by the Patkai hills to the south and



south-east and by the Himalaya in the north.



The area lies close to the **Indo-Myanmar-China trijunction**.

- ☐ The entire area is mountainous and comprises the **catchment of the Noa-Dihing River, a tributary of the great Brahmaputra river** which flows westwards through the middle of Namdapha
- ☐ It is **only park in the World to have the four Feline species** of big cat namely the Tiger, Leopard, Snow Leopard and Clouded Leopard and numbers of Lesser cats.
- ☐ A number of primate species are seen in the park, such as Assamese macaque, pig-tailed macaque, stump-tailed macaque and number of the **distinctive Hoolock Gibbons**, highly **virgin forest**.
- ☐ Of the many other important animals are the elephants, black bear, Indian Bison, several species of deers, reptiles and a variety of arboreal animals.
- ☐ Among the bird species, most notable are the White winged Wood Ducks, a rare and endangered species, the great Indian hornbills,

jungle fowls and pheasants flop their noisy way through the jungle, and which harbours other colourful bird and animal species.

## **Topic 24: World Investment Report**

### ***Importance for Prelims: Reports***

UNCTAD has released world investment report last month.

#### **Findings:**

- ❑ In the "developing Asia" region, **India was among the top five host economies for FDI.**
- ❑ The report said that **global FDI flows are forecast to decrease by up to 40 per cent** in 2020, from their 2019 value of USD 1.54 trillion.
- ❑ Foreign direct investment (**FDI**) **into India may decline sharply in 2020** because of the impact of the coronavirus pandemic and the consequent lockdown measures, supply chain disruptions and economic slowdown
- ❑ India jumped from 12th position in 2018 **to 9th position in 2019 among the world's largest FDI recipient.**
- ❑ India's most sought-after industries, which include professional services and the digital economy, could see a faster rebound as global venture capital firms and technology companies continue to show interest in India's market through acquisitions

## **Topic 25: Unlawful Activities Prevention Act (UAPA)**

### ***Importance for Prelims: Polity***

Government has declared nine individuals linked to separatist Khalistani organisations as designated terrorists under provisions of the Unlawful Activities (Prevention) Act (UAPA).

- ❑ UAPA was **passed in 1967**. It aims at **effective prevention of unlawful activities associations in India**.
- ❑ Unlawful activity refers to any action taken by an individual or association intended to disrupt the territorial integrity and sovereignty of India.
- ❑ The Act assigns absolute **power to the central government, by way of which if the Centre deems an activity as unlawful** then it may, by way of an Official Gazette, declare it so.
- ❑ It has death penalty and life imprisonment as highest punishments.
- ❑ Central government had **amended the Unlawful Activities (Prevention) Act, 1967, in August 2019** to include the provision of **designating an individual as a terrorist**.
- ❑ Prior to this amendment, only organisations could be designated as terrorist organisations.

## **Topic 26: Soyabean**

### ***Importance for Prelims: Economy***

Farmers from various parts of Maharashtra have complained of germination failure of soyabean seeds.

□ Seed companies start their work for seed preparation, which involves **procurement of seeds** either from the farmers or growing them on their own plots, well before the season.

□ **Treatment of the seed with bio-fertilisers, insecticides** etc is followed by the certification process.

□ During this process, **germination tests are carried out**, and seeds which fail to produce 70 per cent yield and more germination, are rejected.

### **Reasons**

□ **Unseasonal rain in October and November last year** had **affected the quality of the seed**, which had put a question mark over seed availability and quality for the current season.

□ The lockdown from March had also **put brakes on the seed production and certification process**, both in Maharashtra and Madhya Pradesh **Soyabean**

□ Soyabean is one of the fastest growing crops in India. Soyabean is grown as a **Kharif Crop in India**.

□ Soyabean is an **oilseed produced for extracting edible oils**.

□ Soyabean is **mostly grown in Madhya Pradesh and Maharashtra**. These two states together produce about **90 per cent of total output of soyabean** in the country

## Topic 27: ITER

*Importance for Prelims: Science and technology*

*Importance for Mains: GS paper III- Science and technology*

India has completed its 50% contribution to ITER in France

□ ITER is one of the **most ambitious energy projects** in the world today.

□ In southern France, **35 nations are collaborating to build the world's largest tokamak**, a magnetic fusion device that has been **designed to prove the feasibility of fusion** as a large-scale and carbon-free source of energy based on the **same principle that powers our Sun and stars**.

□ **The ITER Members China, the European Union, India, Japan, Korea, Russia and the United States** have combined resources to conquer one of the greatest frontiers in science. As signatories to the ITER Agreement, concluded in 2006, the seven Members will **share of the cost of project construction, operation and decommissioning**. They also share the experimental results and any intellectual property generated by the fabrication, construction and operation phases.

### **ITER-India**

□ **ITER-India is a special project** under Institute for Plasma Research.

□ It is governed by the Empowered Board, which is chaired by the



Secretary, Department of Atomic Energy (DAE).

□ India became a **full seventh partner of ITER in December 2005**.

□ ITER-India, Institute for Plasma Research (IPR), located in Gandhinagar, western India, is the Indian Domestic Agency to **design, build and deliver the Indian in-kind contribution to ITER**

**India's is responsible for delivery of the following ITER packages:**

- Cryostat
- In-wall Shielding
- Cooling Water System
- Cryogenic System
- Ion-Cyclotron RF Heating System
- Electron Cyclotron RF Heating System
- Diagnostic Neutral Beam System
- Power Supplies
- Diagnostics

### **What is fusion?**

- Fusion is the **energy source of the Sun and stars**.
- In the tremendous heat and gravity at the core of these stellar bodies, **hydrogen nuclei collide, fuse into heavier helium atoms and release tremendous amounts of energy in the process**.
- Twentieth-century fusion science identified the **most efficient fusion reaction in the laboratory setting** to be the reaction between two hydrogen isotopes, deuterium (D) and tritium (T). The DT fusion reaction produces the highest energy gain at the "lowest"

temperatures.

## **Topic 28: National statistics Commission**

### ***Importance for Prelims: Polity***

The Draft National Statistics Commission Bill has been put out on public domain for comments.

#### **Features:**

□ Draft bill aimed at empowering the National Statistical Commission (NSC) to become the **nodal body for all core statistics in the country.**

□ It proposed to give **sweeping power to the commission on its authority over nongovernment agencies** by making compliance of non-government agencies to mandatory audit.

□ The draft bill proposes to restructure the composition of NSC.

#### **NSC**

□ **Dr.C.Rangarajan Commission set up in 2000** has recommended to establish a permanent National Commission on Statistics to serve as a nodal and empowered body for all core statistical activities of the country, **evolve, monitor and enforce statistical priorities and standards and to ensure statistical co-ordination** among the different agencies involved.

□ In line with the recommendations in 2005, the Government of India has set up a National Statistical Commission (NSC) through

a resolution.

□ The Commission has a **part-time Chairperson, four part-time Members and an exofficio Member**. The **Chief Statistician of India** is the Secretary of the Commission. He is also the Secretary to the Government of India in the Ministry of Statistics and Programme Implementation.

## **Topic 29: Torture and custodial deaths**

### ***Importance for Prelims: Polity***

Five policemen have been arrested and charged with murder in relation to the custodial deaths of a father and son in Tamil Nadu which created debate over torture.

### **UN Convention against Torture**

□ The United Nations Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment (UNCAT or the Convention) is an **international human rights treaty** which mandates a **global prohibition on torture and other acts** of cruel, inhuman, or degrading treatment or punishment and creates an instrument **to monitor governments and hold them to account**.

□ The UNCAT was **adopted by the UN General Assembly on 10 December 1984 and came into force on 26 June 1987**.

□ The absolute prohibition on torture and other acts of cruel, inhuman, or degrading treatment or punishment is also accepted as a principle of customary international law.

□ There are **16 substantive articles of the UNCAT which describe**

**the obligations** to respect, protect and fulfill the absolute prohibition against torture and other forms of illtreatment, and various additional procedural provisions.

□ On ratification, all the obligations in the UNCAT become **binding legal commitments**.

□ Although **India signed the UNCAT in 1997**, it is yet to ratify it.

□ In 2010, **Prevention of Torture Bill** was passed by the Lok Sabha, and the Rajya Sabha later sent it to a select Committee for review. But the Bill was lapsed.

### **Article 21 and Right against Torture**

□ In **Francis Coralie Mullin v. Union Territory of Delhi (1981)** and **Sheela Barse v. State of Maharashtra (1987)**, Supreme Court condemned cruelty and torture as violative of Article 21. This interpretation of Article 21 is consistent with the principles contained in the UNCAT.

## **Topic 30: Defence Acquisition Council**

### ***Importance for Prelims: Government bodies***

Deals worth ₹38,900 crore for 3 new fighter jets has been approved.

□ It was formed, after the Group of Ministers recommendations on '**Reforming the National Security System**', in 2001, post Kargil War (1999).

□ The Defence Acquisition Council is **the highest decision-making body in the Defence Ministry for deciding on new policies and**

**capital acquisitions** for the three services (Army, Navy and Air Force) and the Indian Coast Guard.

- ❑ The **Minister of Defence is the Chairman of the Council.**
- ❑ The objective of the Defence Acquisition Council is to **ensure expeditious procurement** of the approved requirements of the Armed Forces in terms of capabilities sought, and time frame prescribed, by **optimally utilizing the allocated budgetary resources.**

### **Topic 31: UNCLOS and PCA**

#### ***Importance for Prelims: International Relations***

Permanent Court of Arbitration ruled that India is entitled to get compensation in the Italian marines case but can't prosecute them.

- ❑ The two Italian marines are **accused of shooting down two Indian fishermen in Kerala in 2012.**
- ❑ The tribunal ruled that the Italian marines enjoyed diplomatic immunity as Italian state officials under the United Nations Convention on the Law of Sea.
- ❑ Italy had approached the **International Tribunal for the Law of the Sea, an arbitral tribunal under the International Court of Justice** in 2015, and the matter was heard by the **Permanent Court of Arbitration in July 2019.**

### **UNCLOS**

- ❑ The United Nations Convention on the Law of the Sea (UNCLOS) is an **international treaty which was adopted and signed in 1982.**



- It replaced the four Geneva Conventions of April, 1958, which respectively concerned the territorial sea and the contiguous zone, the continental shelf, the high seas, fishing and conservation of living resources on the high seas.
- The Convention has created three new institutions on the international scene :
  - o the International Tribunal for the Law of the Sea
  - o the International Seabed Authority
  - o the Commission on the Limits of the Continental Shelf
- **UNCLOS as the currently prevailing law of the sea is binding completely.**
- There are 17 parts, 320 articles and nine annexes to UNCLOS
- The law of the sea provides for **full rights to nations for a 200-mile zone from their shoreline**. The sea and oceanic bed extending this area is regarded to be Exclusive Economic Zone (EEZ) and any country can use these waters for their economic utilization.

## PCA

- The PCA was the **first permanent intergovernmental organization** to provide a forum for the resolution of international disputes through **arbitration and other peaceful means**.
- The PCA was established by the **Convention for the Pacific Settlement of International Disputes**, concluded at The Hague in **1899** during the first Hague Peace Conference.

- The PCA has **122 Contracting Parties**.

## **Topic 32: Postal ballot**

### ***Importance for Prelims: Polity***

Union government has introduced a new category of ‘absentee voters’, who can now also opt for postal voting.

- In October last year, Law Ministry amended the **Conduct of Election Rules, 1961**, to extend the facility of postal ballots to people who are unable to cast their vote because of service conditions.
- On June 19, the ministry notified a fresh change in the rules, **allowing those aged 65 years and above and COVID 19 suspect or affected persons to opt for postal ballot.**
- These people can choose to vote through postal ballot by **filling up Form 12D and submitting it to the nodal officer within five days of notification of an election.**

## **Topic 33: Covaxin**

### ***Importance for Prelims: Science and tech***

Indian Council of Medical Research (ICMR) has **envisaged launch of a Covid vaccine “Covaxin” for public health use latest by August 15**. It sparked debate that **whether it is possible to check efficacy and safety** of vaccine in short time.

- Covaxin has been developed by the company **Bharat Biotech India (BBIL)** in collaboration with ICMR’s National Institute of

## **Virology (NIV).**

□ It is an **inactivated vaccine** that is made by **using particles of the Covid-19 virus** that were killed, making them unable to infect or replicate.

□ Injecting particular doses of these particles **serves to build immunity by helping the body create antibodies** against the dead virus.

## **Vaccine development**

□ The general stages of the **development cycle of a vaccine** are:

o Exploratory stage

o Pre-clinical stage

o Clinical development

o Regulatory review and approval

o Manufacturing

o Quality control

□ **Clinical development is a three-phase process.**

□ During **Phase I**, **small groups of people receive the trial vaccine.**

□ In **Phase II**, the clinical study is expanded and vaccine is given to people who have characteristics (such as age and physical health) similar to those for whom the new vaccine is intended.

□ In **Phase III**, the vaccine is given to thousands of people and tested for efficacy and safety.

□ In India, **Central Drugs Standard Control Organisation** gives approvals for clinical trials.

## **Central Drugs Standard Control Organisation**

- CDSCO under Directorate General of Health Services, Ministry of Health & Family Welfare is the National Regulatory Authority (NRA) of India.
- The Drugs & Cosmetics Act, 1940 and rules 1945 have entrusted various responsibilities to central & state regulators for regulation of drugs & cosmetics.
- CDSCO is constantly thriving upon to bring out transparency, accountability and uniformity in its services in order to **ensure safety, efficacy and quality of the medical product manufactured, imported and distributed in the country.**
- Under the **Drugs and Cosmetics Act**, CDSCO is responsible for **approval of Drugs, Conduct of Clinical Trials, laying down the standards for Drugs, control over the quality of imported Drugs** in the country and coordination of the activities of State Drug Control Organizations by providing expert advice.
- **Drug Controller General of India** within CDSCO is responsible for **approval of licenses** of specified categories of Drugs such as blood and blood products, I. V. Fluids, Vaccine and Sera

### **Immunogenicity**

- Immunogenicity is the **ability of a foreign substance** to enter a person's body and **cause an immune response.**
- A great **example of immunogenicity is a vaccination.**
- When a person gets vaccinated, they are injected with a very tiny amount of a specific disease. Once a person **receives the injection,**

their immune system will begin to create antibodies, which are special proteins created by the body that help protect us against infectious viruses and bacteria.

### **Topic 34: What is India Patent Act?**

#### ***Importance for Prelims: Polity***

There is a growing clamour in India for boycotting trade with China amidst recent political tensions between the two countries. It became major cause of concern for India's pharmaceutical industry as it depends on china for APIs.

- India is the third largest producer of finished drugs in the world, it relies significantly on China for supplies of active pharmaceutical ingredients (APIs), the key components in making medicines.
- An estimated 70 per cent of API requirements of India's pharmaceutical industry are sourced from China.
- The 1970 Indian Patent Act is widely lauded for **facilitating the growth of India's pharmaceutical industry.**

#### **Indian patent act 1970**

- The Patents Act, 1970 is the legislation that till date governs patents in India. It first came into **force in 1972.**
- The Patents Act has been repeatedly amended: 1999, 2002, 2005, 2006. These amendments were required to **make the Patents Act**

#### **TRIPS-compliant**

- The major amendment was in 2005, when product patent was

extended to all fields of technology like food, drugs, chemicals and micro organisms.

□ The Indian Patent Act, 1970 strikes a **balance between the rights of the applicant and his obligation to the society granting the rights.**

□ Some salient features of the Act include, **product and process patent, term of patent as 20 years**, patent examination conducted on request, fast track mechanism for quick disposal of appeals, pre-grant and post-grant opposition allowed, **protection of biodiversity and traditional knowledge**, and, publication of applications after 18 months of date of filing of patent application.

□ One of the most important aspects of Indian Patents Act, 1970, is **compulsory licensing** of the patent subject to the fulfillment of certain conditions.

□ **Section 3(d)** stipulates that the **mere discovery of a new form of a known substance** which does not result in the enhancement of the known efficacy of that substance or the mere discovery of any new property or new use for a known substance or of the mere use of a known process, machine or apparatus unless such known process results in a new product or employs at least one new reactant, is **not patentable**

### **Topic 35: Nagarahole Park**

***Importance for Prelims: Environment***

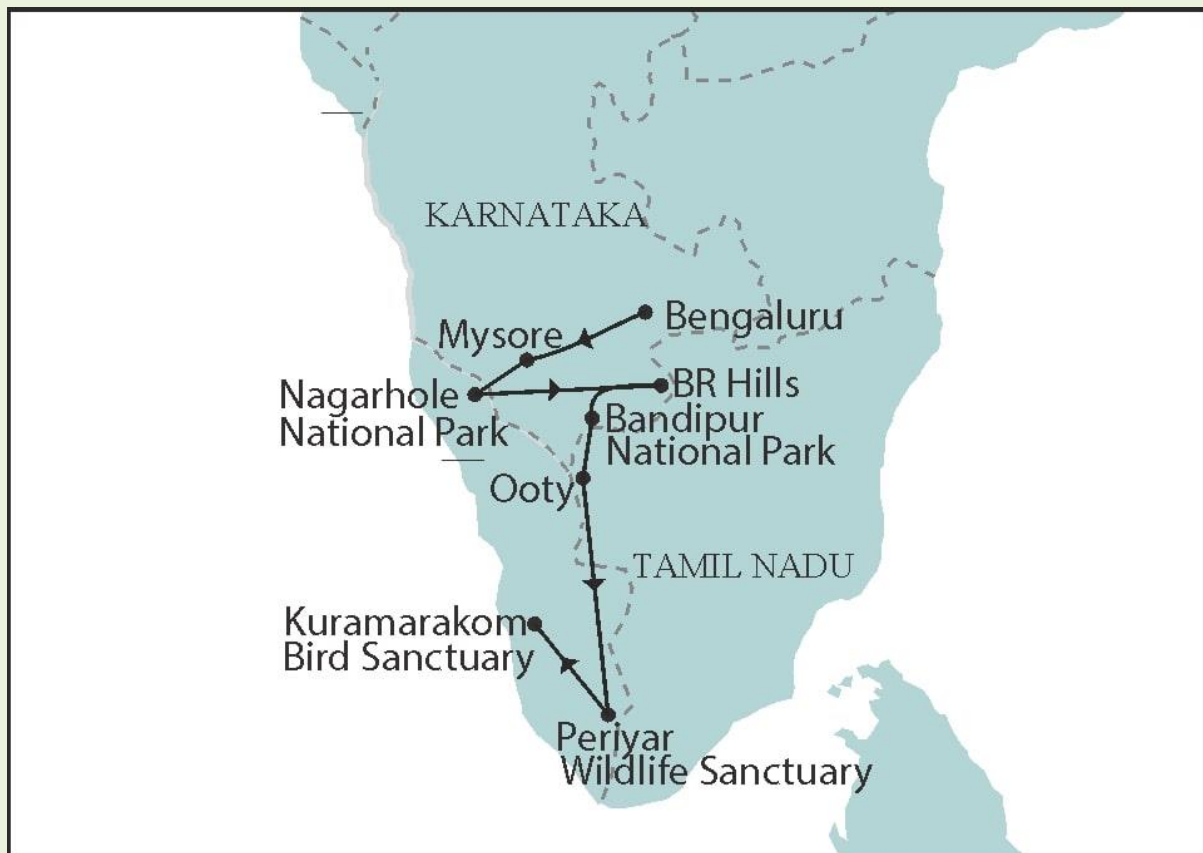


The Forest Department is going to have **traffic monitoring mechanism** along the roads adjacent to Nagarahole National Park to **ensure better compliance of forest laws** by motorists and to minimise road kills.

□ Nagarahole is named after Nagarahole (Cobra river in the local language, Kannada), **a winding river which runs eastwards through its centre**. Situated in the two districts of Mysore and Kodagu in the **state of Karnataka**.

□ It was originally constituted into a sanctuary in the year 1955 and given the status of a National Park in 1983.

□ It is located to the north-west of Bandipur National Park and the **Kabini reservoir separates the two parks**.



□ Nagarahole National Park **forms a part of the Nilgiri Biosphere**

**Reserve** and together with Bandipur National Park (875 sq. kms) and Mudumalai Wildlife Sanctuary (325 sq. kms) to its South East and Wayanad (350 sq. kms) to the South-West

□ It is one of the last remaining and **best protected habitats for endangered species like the Elephant and the Tiger.**

□ The vegetation in this park predominantly comprises of **moist, tropical and mixed deciduous forest, with some portions being the dry deciduous type.** Rosewood, Sandalwood, Teakwood and Silver Oak are some of the more commercially important and easily available trees in this area.

### **Topic 36: Seismic Zones of India**

#### ***Importance for Prelims: Geography***

Since April, 20 earthquakes have been recorded in and around Delhi. Of the 20, two were above magnitude 4.

□ Earthquake - prone areas of the country have been identified on the **basis of scientific inputs relating to seismicity, earthquakes occurred in the past and tectonic setup** of the region.

□ Based on these inputs, **Bureau of Indian Standards [IS 1893 (Part I):2002]**, has **grouped the country into four seismic zones**, viz. Zone II, III, IV and V.

□ Of these, **Zone V is seismically the most active region, while zone II is the least.**

□ Broadly, **Zone - V comprises entire northeastern India**, parts of

Jammu and Kashmir, Himachal Pradesh, Uttarakhand, Rann of Kutch in Gujarat, part of North Bihar and **Andaman & Nicobar Islands**.

□ **Zone - IV** covers remaining parts of Jammu and Kashmir and Himachal Pradesh, **National Capital Territory (NCT) 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 Kerala, Goa, Lakshadweep islands, remaining parts of Uttar Pradesh, Gujarat and West Bengal, Parts of Punjab, Rajasthan, Madhya Pradesh, Bihar, Jharkhand, Chhattisgarh, Maharashtra, Orissa, Andhra Pradesh, Tamilnadu and Karnataka.

□ **Zone - II** covers remaining parts of country.

