

# OFFICERS' Pulse

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## Coverage.

The Hindu  
PIB  
Yojana  
Rajya Sabha TV  
All India Radio

## At a Glance & In Depth.

Polity and Social Issues  
Economy  
International Relations  
Environment  
Science and Tech  
Culture



**CURRENT AFFAIRS**  
**WEEKLY**  
THE **PULSE** OF UPSC AT  
YOUR FINGER TIPS.

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# News @ a glance

## POLITY

### 1) Article 142

#### Why in News?

- The Supreme Court invoked its plenary powers under **Article 142** of the Constitution to extend the limitation period of appeals from high courts or tribunals on account of coronavirus (**COVID-19**) **pandemic**. And also the Supreme Court decided to further restrict its functioning to the digital mode to maintain social distancing and prevent spread of infection.

#### What does the Article 142 state?

- **Article 142** - The article states that “The Supreme Court in the exercise of its jurisdiction may pass such decree or make such order as is necessary for doing **complete justice** in any cause or matter pending before it”
- “Subject to the provisions of any law made in this behalf by Parliament, the Supreme Court shall, as respects the whole of the territory of India, have all and every power to make any order for the purpose of securing the attendance of any person, the discovery or production of any documents, or the investigation or punishment of any contempt of itself”.

#### Instances where Article 142 was previously used:

- The Supreme Court had used Article 142 in 1989 to provide relief to the thousands of people affected by the Bhopal gas tragedy. Applying the provision in the case — called the Union Carbide case — the court had awarded compensation of \$470 million to the victims, observing that to do “complete justice”, it could even override parliamentary laws.
- In 2014, this very provision was used to cancel allocation of coal blocks granted from 1993 onwards, without any specific finding on the wrongdoing by those who were allotted these blocks.

- The court had also used Article 142 in its December 2016 judgment banning the sale of alcohol within a distance of 500 metres on national and state highways across the country. The ban was supposed to be implemented from 1 April 2017. The reason was to curb accidents due to drunken driving.

#### News in detail:

- The court read that, “To obviate difficulties and to ensure that lawyers/litigants do not have to come physically to file proceedings in respective courts/tribunals across the country, including this court, it is hereby ordered that a period of limitation in all proceedings, irrespective of the limitation prescribed under the general law or special laws, whether condonable or not, shall stand extended with effect from March 15 till further orders.”
- The Supreme Court Bench led by Chief Justice of India Sharad A. Bobde used its extraordinary powers under Article 142 to lift the limitation period for all cases across tribunals and courts in the country until further notice.
- The court premises would be completely shut down.
- Only extremely urgent cases would be taken up by Benches through a video application.

### 2) Section 188 IPC

#### Why in News?

- The Prime Minister has announced a 21-day countrywide lockdown to contain the spread of COVID-19. Those violating the lockdown orders can face legal action under the **Epidemic Diseases Act, 1897**, which lays down punishment as per **Section 188 of the Indian Penal Code, 1860**.

#### About Section 188 of Indian Penal Code

- **Section 3** of the **Epidemic Diseases Act, 1897**, provides penalties for disobeying any regulation or order made under the Act.
- These are according to Section 188 of the Indian Penal Code (Disobedience to order duly promulgated by a public servant).
- Section 188 reads that “Disobedience to order duly promulgated by the public servant—Whoever, knowing that, by an order promulgated by a public servant lawfully empowered to promulgate such order, he is directed to abstain from a certain act, or to take certain order with certain property in his possession or under his management, disobeys such direction”,

#### **Under Section 188, there two offences:**

- Disobedience to an order lawfully promulgated by a public servant, If such disobedience causes obstruction, annoyance or injury to persons lawfully employed
  - Punishment: Simple Imprisonment for 1 month or fine of Rs 200 or both
  - If such disobedience causes danger to human life, health or safety, etc.
  - Punishment: Simple Imprisonment for 6 months or fine of Rs 1000 or both
  - According to the First Schedule of the Criminal Procedure Code (CrPC), 1973, both offences are cognizable, bailable, and can be tried by any magistrate.

▪ It is not necessary that the offender should intend to produce harm, or contemplate his disobedience as likely to produce harm. It is sufficient that he knows of the order which he disobeys, and that his disobedience produces, or is likely to produce, harm.”

#### **About Epidemic Diseases Act, 1897:**

- The Epidemic Diseases Act of 1897 gives special powers to state governments.
- The law enables states to ban public gatherings, ask schools and large institutions to stop functioning, and issue advisories to companies to explore work-from-home models. It also gives the state a right to penalise media organisations spreading misinformation.

### **3) Pradhan Mantri Garib Kalyan Scheme**

#### **Why in News?**

- The Finance Minister has announced the Pradhan Mantri Garib Kalyan Scheme, under which the government would provide a relief package of Rs 1.7 trillion to the underprivileged, poor and migrant workers affected by a lockdown amid the Covid-19 crisis.

#### **Factors covered under PM Gareeb Kalyan Yojana :**

##### **Insurance scheme:**

- Safai karamcharis, ward-boys, nurses, ASHA workers, paramedics, technicians, doctors and specialists and other health workers would be covered by a Special insurance Scheme.
- Any health professional, who while treating Covid-19 patients, meets with some accident, then he/she would be compensated with an amount of Rs 50 lakh under the scheme.
- All government health centres, wellness centres and hospitals of Centre as well as States would be covered under this scheme approximately 22 lakh health workers would be provided insurance cover to fight this pandemic.

##### **PM Garib Kalyan Ann (अन्न) Yojana**

- The Government of India would not allow anybody, especially any poor family, to suffer on account of non-availability of foodgrains due to disruption in the next three months.
- 80 crore individuals, i.e, roughly two-thirds of India’s population would be covered under this scheme.
- Each one of them would be provided double of their current entitlement over the next three months. This additionality would be free of cost.

##### **Pulses**

- To ensure adequate availability of protein to all the above mentioned individuals, 1 kg per family would be provided pulses according to regional preferences for next three months for free.

##### **Benefit to farmers:**

- The **first instalment of Rs 2,000** due in 2020-21 will be front-loaded and paid in April 2020 itself under the PM KISAN Yojana. It would cover 8.7 crore farmers

##### **Cash transfers to help Poor:**

- A total of 20.40 crores **Pradhan Mantri Jan Dhan Yojana women** account-holders

would be given an ex-gratia of Rs 500 per month for next three months.

#### **Gas cylinders:**

- Under PM Garib Kalyan Yojana, **gas cylinders, free of cost**, would be provided to 8 crore poor families for the next three months.

#### **Help to low wage earners in organised sectors:**

- Wage-earners below Rs 15,000 per month in businesses having less than 100 workers are at risk of losing their employment.
- Under this package, the government **proposes to pay 24 percent of their monthly wages into their PF accounts** for next three months. This would prevent disruption in their employment.

#### **Support for senior citizens (above 60 years), widows and Divyang:**

- There are around 3 crore aged widows and people in Divyang category who are vulnerable due to economic disruption caused by COVID-19.
- Government will give them **Rs 1,000 to tide over difficulties during next three months.**

#### **MNREGA**

- Under PM Garib Kalyan Yojana, **MNREGA wages would be increased by Rs 20** with effect from 1 April, 2020. Wage increase under MNREGA will provide an additional Rs 2,000 benefit annually to a worker.
- This will benefit approximately 13.62 crore families.

#### **Self-Help groups:**

- Women organised through 63 lakhs Self Help Groups (SHGs) support 6.85 crore households. **Limit of collateral free lending would be increased from Rs 10 to Rs 20 lakhs.**

#### **Organised sector:**

- Employees' Provident Fund Regulations will be amended to include Pandemic as the reason to **allow non-refundable advance of 75 percent of the amount or three months of the wages, whichever is lower, from their accounts.**
- Families of four crore workers registered under EPF can take benefit of this window.

#### **X .Building and Other Construction Workers Welfare Fund:**

- A Welfare Fund for Building and Other Constructions Workers has been created under a Central Government Act.
- There are around 3.5 Crore registered workers in the Fund.
- State Governments will be given directions to utilise this fund to provide assistance and support to these workers to protect them against economic disruptions.
- **District Mineral Fund**
- The State Government will be asked to utilise the funds available under District Mineral Fund (DMF) for supplementing and augmenting facilities of medical testing, screening and other requirements in connection with preventing the spread of COVID-19 pandemic as well as treating the patients affected with this pandemic.

### **4) Offences Affecting The Public Health**

#### **Why in News?**

- During the coronavirus outbreak, penal provisions, such as Sections 269 and 270 of the IPC, are being invoked to enforce the lockdown orders in various states. Sections 269 and 270 have been used to book persons defying quarantine orders for containing the spread of the pandemic.

#### **About:**

- **Sections 269 and 270** of the IPC come under Chapter XIV of the Indian Penal Code- 'Of Offences Affecting The Public Health, Safety, Convenience, Decency and Morals'.
- **Sections 269** (negligent act likely to spread infection of disease dangerous to life) provides for a jail term of six months and/or fine.
- **Section 270** (malignant act likely to spread infection of disease dangerous to life) provides for a jail term of two years and/or fine.
- In Section 270, the word '**malignantly**' indicates a **deliberate intention** on the part of the accused.
- Both Sections have been used for over a century to punish those disobeying orders issued for containing epidemics. The Sections were similarly enforced by colonial authorities during outbreaks of diseases such as smallpox and bubonic plague.

# ENVIRONMENT

## 1) A committee to study dump sites

### Why in the news?

- The National Green Tribunal (NGT) has formed a committee to study the dump sites and its impact on the environment.
- The committee will comprise members from IIT Delhi, Central Pollution Control Board (CPCB) and National Environmental Engineering Research Institute (NEERI).
- Emphasis is given on clearing the **legacy waste**.

### What is legacy waste?

- It is a waste that has been collected and kept for years at some barren land or a place dedicated for Landfill (an area already to dump the country waste).
- This waste can be roughly grouped into **four categories**:
  1. Contained and/or stored waste, ( tanks, canisters, and stainless steel bins)
  2. Buried waste (radioactive and chemically contaminated waste)
  3. Contaminated soil and groundwater,
  4. Contaminated building materials and structures.
- **Bio-mining** method is proposed by the CPCB to tackle the issue of legacy waste.
- **Bio-mining** is the process of using microorganisms (microbes) to extract metals of economic interest from rock ores or mine waste. Bio-mining techniques may also be used to clean up sites that have been polluted with metals.

## 2) Sikkim Glaciers melting fast than others

### Wadia Institute of Himalayan Geology,

- It is located in Dehradun & is an **autonomous research institute** for the study of Geology of the Himalaya under the Department of Science and Technology, Ministry of Science and Technology, Govt. of India.
- It was established in June, 1968 in the Botany Department, Delhi University, the Institute was shifted to Dehradun, Uttarakhand during April, 1976.

### Why in the news?

- In a recent study by wadia Institute of Himalayan Geology, it was found that glaciers in Sikkim are **melting at a higher magnitude** as compared to other Himalayan regions.
- After assessing the glaciers from 1991 to 2015, it was found that Small-sized glaciers in Sikkim are retreating while larger glaciers are thinning **due to climate change**.
- The Sikkim glaciers have shown negligible deceleration in melting after 2000.
- Summer temperature rise has been a prime driver of glacier changes.
- This can lead to awareness among common people regarding water supplies and possible glacier hazards, particularly to those communities that are living in close proximity.

## 3) Olive Ridley turtles



- The olive ridley turtle is named for the generally greenish color of its skin and shell, or carapace.
- Olive ridleys are found **only in warmer waters**, including the southern Atlantic, Pacific and Indian Oceans.
- They migrate hundreds or even thousands of miles every year, and come together as a group only once a year for the arribada, when females return to the beaches where they hatched and lumber onshore, sometimes in the thousands, to nest.
- Many governments have protections for olive ridleys, but still, eggs are taken and nesting females are slaughtered for their meat and skin. Fishing nets also take a large toll, frequently snagging and drowning these turtles.
- According to IUCN, Olive Ridley turtles are under **VULNERABLE** category.

### Why in News?

- Mass nesting of olive ridleys started at Odisha's Rushikulya rookery coast.



# ECONOMY

## 1) Directorate General of Foreign Trade

### About DGFT

- The Directorate General of Foreign Trade (DGFT) organisation is an attached office of the **Ministry of Commerce and Industry**. It is headquartered in New Delhi.
- This Directorate is responsible for formulating and implementing the Foreign Trade Policy with the main objective of promoting India's exports.

### What are active pharmaceutical ingredients (APIs)?

- APIs refer to the **biologically active component** of a drug product.
- Such substances are intended to furnish pharmacological activity or other direct effect in the diagnosis, cure, mitigation, treatment, or prevention of disease or to affect the structure or function of the body.

### Why in News?

- DGFT has relaxed the export restrictions on 13 active pharmaceutical ingredients and an equal number of formulations made from them.

## 2) Cabinet Okays plan for electronics manufacturing

### What's in the news?

- In a bid to boost large-scale electronics manufacturing in India, the Union Cabinet approved three schemes with a total outlay of almost Rs 48,000 crore.
- The three schemes together will enable large-scale electronics manufacturing, a domestic supply chain ecosystem of components and a state-of-the-art infrastructure and common facilities for large anchor units and their supply chain partners.
- The schemes are expected to attract new investments worth at least Rs 50,000 crore in the sector, while generating more than five lakh direct and 15 lakh indirect jobs.

### News in Detail

- The **production-linked incentive scheme** aims to attract large investments in mobile phone manufacturing and specified

electronic components. The scheme will offer an incentive of 4-6% on incremental sales of goods manufactured in India and is expected to create a total of 8 lakh jobs.

- The **'Scheme for Promotion of Manufacturing of Electronics Components and Semiconductors'** will give a financial incentive of 25% on capital expenditure for the identified list of electronic goods.
- The third scheme, **Electronics Manufacturing Clusters (EMC) 2.0**, aims at creating quality infrastructure with a minimum area of 200 acres along with industry-specific facilities such as common facility centres, ready-built factory sheds/ plug-and-play facilities.

## 3) The rupee's plunge

### What's in the news?

- The rupee has depreciated by more than 5.3% in 2020, with the bulk of its losses, a 4.1% slide, having occurred in March.

### Why is the Indian currency weakening?

- The widespread **economic uncertainty triggered by the latest COVID-19 outbreak** has forced most investors and businesses across the world to seek to conserve that most crucial asset during times of crisis: cash and more specifically the U.S. dollar.
- Since the start of March, foreign institutional investors (FIIs) have dumped Indian equities and debt on a large scale. As on March 20, **FIIs had sold a net Rs. 95,485 crore, or more than \$12 billion, of shares and bonds**. This outflow has coincided with the sharp fall in the equity market's key gauge, the 30-stock S&P BSE Sensex, which has slumped 22% so far in March.

### Where does the rupee go from here?

- The rupee's decline in March has been part of a broad trend as most currencies across the globe have weakened against their U.S. counterpart.
- Given that the increasing possibility of the global economy heading into a recession has been a key driver of the dollar's



appreciation against other currencies, including the rupee, there is clearly more pain ahead for the Indian currency.

- Add to it the fact that India's own domestic economy has been struggling to reverse an extended slowdown and it is hard to see sentiment on the rupee improving appreciably in the short-term.

#### Glimmer of hope

- However, a few offsetting factors offer just a little comfort.
- For one, India's **foreign exchange reserves** are still at a fairly robust level and as on March 13 amounted to a total of almost **\$482 billion**.
- Armed with this war chest, the RBI has stepped in every now and then, both to smooth volatility in the foreign exchange market and to ensure that a sudden shortage of dollar supply does not exacerbate the weakening trend in the rupee.
- Also, the **price of oil**, which is one the largest contributors to India's import bill, has dramatically declined this month with Brent crude oil futures having slumped more than 46% to \$26.98 as on March 20.
- With neither Saudi Arabia nor Russia appearing to be in any hurry to de-escalate their price war, and energy demand likely to remain depressed in the foreseeable future on account of the global economic downturn, oil may remain one source of respite for the rupee.

#### 4) Union Cabinet approves recapitalisation of RRBs

##### About RRBs

- Regional Rural Banks (RRBs) were formed under the **RRB Act, 1976** with an objective to provide credit and other facilities, especially to the small and marginal farmers, agricultural labourers, artisans and small entrepreneurs in rural areas for development of agriculture, trade, commerce, industry and other productive activities.
- They are jointly owned by the **Government of India, the concerned State Government and Sponsor Banks** with the issued capital shared in the proportion of **50%, 15% and 35%** respectively.
- The Act was amended in 2015 whereby such banks were permitted to raise capital

from sources other than the Centre, states and sponsor banks.

- RRBs are required to provide **75% of their total credit as priority sector lending** with primary focus on agricultural credit, including small and marginal farmers, as well as micro entrepreneurs and rural artisans.
- **NABARD** is responsible for regulating and supervising the functions of RRBs.

#### Capital to Risk-weighted Assets Ratio (CRAR)

- CRAR, also known as **Capital Adequacy Ratio (CAR)**, is the capital needed for a bank measured in terms of the assets or loans disbursed by the banks. It measures capital adequacy in terms of riskiness of the assets or loans given.
- $CAR = (Tier\ I + Tier\ II + Tier\ III\ (Capital\ funds)) / Risk\ weighted\ assets$
- According to the RBI's capital adequacy norms, banks (including RRBs) are required to maintain CRAR at **9%** (higher than the Basel-III requirements of 8%).

#### Why in News?

- The Centre has approved a Rs. 1,340-crore recapitalisation plan for RRBs to improve their capital-to-risk weighted assets ratio.
- At a time of lockdown due to the COVID-19 crisis, financially stronger rural banks could also be crucial to ensuring liquidity in rural areas.

#### 5) RBI cuts rates, allows loan moratorium

##### Cash Reserve Ratio (CRR) and Statutory Liquidity Ratio (SLR)

- CRR is a portion of the banks' net demand and time liabilities (NDTL) or deposits that need to be kept in their specified current accounts maintained with RBI.
- SLR is a portion of the banks' NDTL that is required to invest in assets specified by RBI, including gold, and government bonds and securities.
- The important difference between CRR and SLR is that CRR has to be maintained in **cash** while SLR can be maintained **either in cash or in assets that RBI suggests**.
- Banks **don't earn any returns** from the money parked in the form of CRR. However, banks can earn returns from SLR.

- CRR **regulates the liquidity** in the economy whereas SLR **ensures the solvency** of the banks.

#### Marginal Standing Facility (MSF)

- MSF is the rate at which the banks are able to borrow overnight funds from RBI against the approved government securities.
- The scheme has been introduced by RBI with the main aim of **reducing volatility in the overnight lending rates** in the inter-bank market and to enable **smooth monetary transmission** in the financial system.

#### Repo Rate & Reverse Repo Rate

- Repo rate is the rate of interest which is applied by RBI to commercial banks when the latter borrows from RBI. Reverse Repo rate is the rate at which RBI borrows money from commercial banks by lending securities.
- Both the Repo rate and Reverse Repo rate are used to **control inflation and money supply in the economy**.

#### Why in News?

- In a move to infuse sufficient liquidity into the banking system amid COVID-19 outbreak, the RBI has announced several measures.

#### Key announcements

- The Central Bank has reduced the CRR requirement by 100 bps (100 bps is equivalent to 1%) from 4% to 3%.
- The RBI has also increased the cap for liquidity available under the marginal standing facility, from 2% of the statutory liquidity ratio (SLR) to 3% with immediate effect.

#### Repo & Reverse Repo rates

- Another significant measure is that the RBI reduced the repo rate sharply by 75 bps to 4.4% while the reverse repo rate was cut by 90 bps to 4%.
- The higher reduction in the reverse repo rate was aimed at prompting banks to lend more rather than keeping their excess liquidity with the RBI.

#### EMI relief

- RBI has also allowed banks to defer payment of EMIs on home, car, personal loans as well as credit card dues for three months till May 31.
- Since non-payment will not lead to non-performing asset classification by banks,

there will be no impact on the credit score of the borrowers.

## 6) SC relaxes BS-IV deadline

### What are Bharat Stage norms?

- The Bharat Stage are standards instituted by the government to regulate the emission of air pollutants from motor vehicles.
- As the stage goes up, the control on emissions becomes **stricter**. Thus Bharat Stage VI norms are two stages ahead of the present Bharat Stage IV norms in regulating emissions.
- These norms are **based on similar norms in Europe** called Euro 4 and Euro 6.

### How is BS6 different from BS4?

- A vital difference between BS6 and the BS4 fuel is that the BS6 fuel contains 5 times fewer **sulphur** traces (10 parts per million) compared to BS4 (50 ppm).
- NO<sub>x</sub> (**Nitrogen Oxide**) level will be brought down by a staggering 70% for Diesel engine and 25% for Petrol Engines.
- The BS6 brings along a plethora of changes, most significant being the mandatory OBD (**Onboard Diagnostics**) for all vehicles. OBD device informs the vehicle owner or the repair technician how efficient the systems in the vehicle are.
- **RDE (Real Driving Emission)** will be introduced for the first time that will measure the vehicle's emission in real-world conditions against simulated conditions.
- Introduction of **DPF (Diesel Particulate Filter)** and **SCR (Selective Catalytic Reduction)** for Diesel engines.
- So a transition from BS4 to BS6 requires modification both in the **fuel** and in the **vehicle engine**.

### Why in News?

- In a relief to automobile dealers, the Supreme Court has extended the March 31, 2020 deadline for the sale and registration of BS-IV vehicles because of the extraordinary situation arising out of the 21-day COVID-19 lockdown.
- The apex court allowed sale of 10% of the unsold stock of BS IV vehicles within 10 days of the end of the lockdown, except in Delhi and the National Capital Region.

- Dealers in Delhi-NCR have been denied the relief owing to the high levels of the

pollution in the national capital.

## INTERNATIONAL RELATIONS

### 1) India, France conduct joint patrols from Reunion Island

#### About Reunion Island

- Reunion Island is a small **French overseas territory** in the Indian Ocean.
- Since the 19th century, the French brought a large number of Indians as indentured labourers to the Island.
- It is estimated that people of Indian origin constitute over one-third of the inhabitants of the Island.



#### Why in News?

- India and France have conducted joint patrols from Reunion Island for the first time.

#### Significance

- The latest joint patrols signals India's intent to engage with friendly foreign partners in expanding its footprint on the Indian Ocean, focusing on the stretch between the East African coastline and the Malacca straits.
- India has so far carried out coordinated patrols only with maritime neighbours and had rejected a similar offer by the U.S.

#### Major strategic partner

- France has steadily emerged as a major strategic partner for India with big-ticket defence deals and increased military-to-military engagement.
- The Indian Navy is currently inducting **French Scorpene conventional submarines**, being built in India under technology transfer, and the Indian Air

Force will soon get the first batch of its **36 Rafale fighter jets**.

- France is also the first country to deploy a liaison officer at the **Indian Navy's Information Fusion Centre (IFC-IOR)** as part of efforts to improve maritime domain awareness (MDA).

#### About IFC-IOR

- The Information Fusion Centre – Indian Ocean Region (IFC-IOR) was inaugurated in 2018 within the premises of Indian Navy's **Information Management and Analysis Centre (IMAC)** in Gurugram.
- The IMAC is the single point centre **linking all the coastal radar chains** to generate a seamless real-time picture of nearly 7,500-km coastline and of some neighbouring countries.

### 2) World is now in recession: IMF

#### About International Monetary Fund (IMF)

- The IMF was conceived in 1944 at the **United Nations Bretton Woods Conference** in New Hampshire, United States.
- The IMF and the World Bank are called **Bretton Woods twins**.
- The IMF is a permanent observer at the UN.
- It is an organization of 189 countries (including **India**).
- The mandate of the IMF as follows:
  1. To promote international monetary cooperation;
  2. To facilitate the expansion and balanced growth of international trade;
  3. To promote exchange stability;
  4. To assist member countries in correcting maladjustments in their balance of payments without resorting to measures destructive of national or international prosperity;
  5. To assist in the elimination of foreign exchange restrictions which hamper the growth of world trade;

#### Why in News?

- The IMF announced that the COVID-19 pandemic has driven the global economy into a recession which will be worse than the one in 2009.

#### What is recession?

- An economic recession signifies shrinkage **in the GDP** for two or more consecutive quarters.
- It should be noted that **recession is different from an economic slowdown** which occurs when the GDP continues to grow but at a slower rate than the previous period in question.
- A slowdown is a pointer towards recession and usually precedes one but does not necessarily lead to recession.
- Recession- Drop in the GDP; Slow down- Decline in the growth rate of the GDP.

### 3) G20 commits \$5 trillion amid COVID-19 scare

#### About G20

- The Group of Twenty (G20) is the premier forum for its members' international economic cooperation and decision-making.

- It was founded in 1999 with the aim to discuss policy pertaining to the promotion of international financial stability.
- Its membership comprises 19 countries (including **India**) plus the European Union.

#### G20 members



Note: The European Union is also a member

BBC

#### Why in News?

- During the latest video conference summit, the G20 countries committed to inject more than \$5 trillion into the global economy, and contribute to the COVID-19 solidarity response fund led by the World Health Organization (WHO).



# SCIENCE AND TECHNOLOGY

## 1) Fish fossil show how fins evolved into human hands

### Why in News?

- Researchers have revealed new insights into how the human hand evolved from fish fins based on their analysis of an ancient fossil found in **Miguasha, Canada**.

### News in Detail

- Palaeontologists said the fish specimen has yielded the **missing evolutionary link in the transition from fish to four legged animals**.
- This happened during the **Late Devonian period**, millions of years ago, as **fish began to foray** in habitats such as **shallow water and land**.



- The 1.57 m long fossil shows the **complete arm — pectoral fin — skeleton** for the first time in any **elpistostegalian fish (Elpistostege watsoni)**.
- The scientists assessed the skeleton of the pectoral fin, revealing the presence of a humerus (arm), radius and ulna (forearm), rows of carpus (wrist) and phalanges organized in digits (fingers).
- The articulating digits in the fin are **like the finger bones** found in the hands of most animals.
- The finding pushes back the origin of fingers in vertebrates to the fish level.

### Water to land

- The evolution of fishes into four-legged vertebrates was one of the most significant events in the history of life.
- With this adaptation, the scientists said, vertebrates, or back-boned animals, were

then able to leave the water and conquer land.

- To complete this transition one of the most significant changes was the evolution of hands and feet.
- The origin of digits relates to developing the capability for the fish to support its weight in shallow water or for short trips out on land.

## 2) BIRAC

### Biotechnology Industry Research Assistance Council (BIRAC)

- It is a **not-for-profit Public Sector Enterprise**, set up by the **Department of Biotechnology (DBT)**, as an Interface Agency to **strengthen and empower the emerging Biotech enterprise** to undertake strategic research and innovation, addressing nationally relevant product development needs.
- BIRAC is an **industry-academia interface** and focuses on providing access to risk capital through targeted funding, technology transfer, IP management and schemes that help bring innovation excellence to the biotech firms and make them globally competitive.

### Important initiatives of BIRAC

#### Bio-NEST

- It was launched by BIRAC with a vision that focused on **fostering the biotech innovation ecosystem** in the country.
- Bio-NEST program provides support to **establish bio-incubators** either as a standalone entity or as a part of the academia.

#### Biotechnology Ignition Grant Scheme (BIG)

- BIG is a flagship programme of BIRAC, which provides the right admixture of fuel and **support to young startups and entrepreneurial individuals**.
- BIG is the largest early stage biotech funding programme in India.

#### Intensifying the Impact of Industrial Innovation (i4)

- The programme has been initiated to support biotechnological product/technology development by strengthening R&D capabilities of start-ups/companies/LLPs.

- The programme is operated through two schemes: **Small Business Innovation Research Initiative (SBIRI)** and **Biotechnology Industry Partnership Programme (BIPP)**.

#### Sparsh

- It is the Social Innovation programme for Products: Affordable & Relevant to Societal Health.
- The programme aims at promoting the development of innovative solutions to society's most pressing social problems.
- The scheme intends to create a pool of **social innovators** in the biotech arena who will identify the specific needs and gaps in healthcare.

#### Why in News?

- Pune-based **MyLab** is the first indigenous manufacturer to be approved for deploying its kits for COVID-19 testing.
- MyLab was one of the biotechnology companies that is being supported by the Biotechnology Industry Research Assistance Council (BIRAC).

#### More in News

- While diagnostic tests for COVID-19 are **largely reliant on foreign companies**, several labs in India had applied to the **National Institute of Virology, Pune**, for getting their own kits vetted.
- Written guidelines by the **Indian Council for Medical Research (ICMR)** require that only diagnostic kits that have been approved by the **United States Food and Drugs Administration** or certified by the **European Union** be allowed to offer commercial tests for detecting **SARS CoV-2**.
- However, Director General of ICMR Dr. Balram Bhargava on Monday said this was no longer a requirement and even those approved by the NIV would be eligible for approval.

### 3) When will a COVID-19 vaccine be ready?

#### What are vaccines?

- Vaccines are one of the most effective tools to **prevent** diseases.
- A vaccine is “a product that produces immunity from a disease External link and can be administered through needle injections, by mouth or by aerosol.”

- A vaccine is a substance that **resembles the disease-causing agent** (also called pathogen) but does not cause the disease.
- It **trains the body's immune system** to recognise and kill the pathogen, and creates a memory for the future.
- Vaccines are available to protect us against many life-threatening diseases such as **polio, influenza, meningitis, typhoid, tetanus, diphtheria**, and certain types of cancers.
- Vaccines have also been responsible for **eradication (or near eradication) of deadly diseases such as smallpox and polio**.

#### How are these made?

- There are multiple ways to make vaccines.
- For a **killed vaccine**, the pathogen can be **grown outside the body, purified and inactivated** with chemicals. Example: injectable polio vaccine.
- Alternatively, the pathogen can be **weakened by repeated culture or by genetic means**. Example: oral polio vaccine.
- One of the proteins on the pathogen surface can also be produced artificially and used to raise immunity. An example of this would be the Hepatitis B vaccine.

#### Stages of vaccine development

- Development of vaccines can be simplified into two broad stages:
- **Pre-clinical development** is research carried out in lab assays and on animals. It includes:
  - Identification (discovery) of relevant antigens (e.g. **screening**)
  - Evaluation of vaccine **efficacy in test tubes and animals**
  - Manufacture of the vaccine to Good Manufacturing Practice standards
- **Clinical development** is when the vaccine is **first tested in humans**.
  - It covers four stages over several years, from initial **clinical trials in humans (phase I)** right through to introduction and beyond (phase IV).
  - Clinical development is built on rigorous ethical principles of informed consent from volunteers, with an emphasis on vaccine safety as well as efficacy.

#### Why in News?

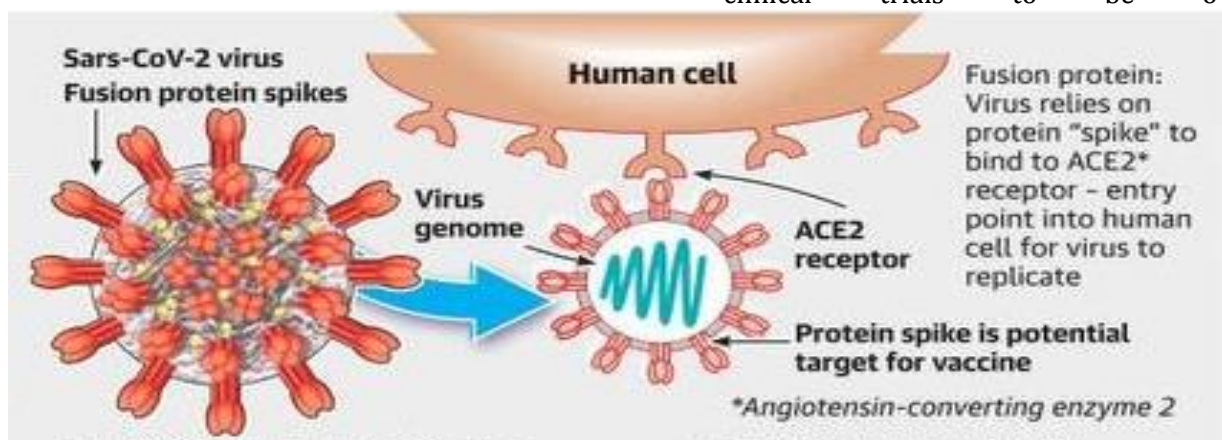


- A vaccine for COVID-19, called **mRNA (or messenger ribonucleic acid)-1273** is being tested in the U.S.

#### What is the mRNA vaccine?

- The genetic blueprint (or code) in living organisms is stored in a double-stranded molecule called **DNA (deoxyribonucleic acid)**, which makes proteins that are responsible for nearly every function in the human body.
- The conversion of DNA code into proteins requires a single-stranded molecule called the **mRNA (messenger ribonucleic acid)**.

- The **mRNA-1273** is a piece of RNA that carries the **code to make the COVID-19 virus Spike protein** when introduced into cells.
- This protein present on the virus surface is critical for its entry into cells.
- **Immunity (antibodies) to the Spike protein can block virus entry** and its multiplication, and thus ameliorate the disease.
- The COVID-19 vaccine has been fast-tracked into humans without prior testing in animals.
- Still, it may take one to two years for the clinical trials to be over.



- Since there is no guarantee that the mRNA-1273 (or another) vaccine would work, a rich pipeline of over 40 candidates is important.

#### Is a virus needed to develop a vaccine against it?

- With modern molecular tools and technologies, **isolating a virus is not required** to make a vaccine against it.
- The **genetic sequence** can be obtained directly from infected patients and this can be converted into proteins using various platform technologies.
- This makes it possible to have vaccines ready for hundreds of pathogens that have not yet infected humans, but have the potential to do so in future.

#### 4) A step closer to developing a potent drug for COVID-19

##### Why in News?

- Designing better antivirals that would prevent the novel coronavirus (SARS-CoV-2) from infecting human cells may now become possible thanks to a team of researchers producing the **crystal**

**structure of the main protease of the virus.**

##### News in Detail

- A team led by Rolf Hilgenfeld from the University of Lubeck, Germany developed the crystal structure of the main protease of the virus at 1.75 angstrom resolution.
- By redesigning an existing inhibitor developed for other coronaviruses, the researchers have been able to develop a **potent inhibitor** that can effectively **block the enzyme and neutralise the novel coronavirus**.

##### Significance of main protease of the virus

- Main virus protease is an **enzyme** that processes **proteins critical to virus development**.
- An antiviral that blocks this enzyme, as in the case of drugs used against HIV virus, effectively **prevents the virus from replicating**.
- Hence, such an inhibitor will be effective against the novel coronavirus.
- Main virus protease is one of the **best characterised drug targets among coronaviruses**.

- The inhibitor against the main protease targets a specific region of the enzyme.
- And any **antiviral** that targets this region of the enzyme will be specific to the virus and **will not be toxic to human cells**.

## 5) India to join WHO's COVID-19 "Solidarity trial"

### About Solidarity Trial

- The Solidarity Trial will test four different drugs or combinations — (i) **remdesivir**, (ii) a **combination of two drugs, lopinavir and ritonavir**, (iii) the two drugs **plus interferon beta**, and (iv) **chloroquine**.
- It will compare their effectiveness to what is called **standard of care**, the regular support hospitals treating COVID-19 patients use now.

### About the drugs

#### Remdesivir

- Remdesivir is an **investigational drug** with broad-spectrum **antiviral** activity.
- However it is **not yet approved anywhere** globally for any use.
- Remdesivir has demonstrated **in vitro and in vivo activity** in animal models against the viral pathogens **MERS and SARS**, which are also coronaviruses and are structurally similar to COVID-19.
- The limited preclinical data indicate that remdesivir **may have potential activity against COVID-19**.

#### Lopinavir and Ritonavir

- The combination of lopinavir and ritonavir is used with other medications **to treat HIV infection**.
- Lopinavir and ritonavir are in a class of medications called **protease inhibitors**.
- They work by **decreasing the amount of HIV** in the blood.
- Although lopinavir and ritonavir **will not cure HIV**, these medications **may decrease the chance of developing AIDS** and HIV-related illnesses such as serious infections or cancer.
- Recently Russian doctors have found lopinavir/ritonavir (**LPV/r**) medication effective for the treatment of mild coronavirus cases.

#### Interferon beta (along with LPV/r)

- The body produces **naturally** anti-inflammatory interferon beta to ward off viruses.

- The drug combination (two HIV drugs- lopinavir and ritonavir plus Interferon beta) was used in patients during the SARS and MERS outbreaks, and it appeared to help.

### Chloroquine

- The drug has been around for decades as an **antimalarial** treatment.
- Studies found that chloroquine and the related **hydroxychloroquine** can stop the novel coronavirus from infecting cells in the lab, and anecdotal evidence suggests that it may help patients with COVID-19.
- The ICMR recently recommended the use of hydroxychloroquine for the treatment of COVID-19 for 'high risk population' such as health workers and family members of infected patients.

### Why in News?

- India is all set to join the World Health Organisation's "Solidarity trial" aimed at **rapid global search for drugs to treat COVID-19**.

## 6) Corona Kavach

### Why in News?

- The Government of India has launched a **coronavirus risk-tracking app** called 'Corona Kavach.'

### News in Detail

- Jointly developed by the **Union Ministry of Electronics and Information Technology and the Union Ministry of Health and Family Welfare**, the app uses a **person's location** to assess whether they are in the high risk geographical zone or not.

### More about the App

- Corona Kavach is designed to provide information about COVID-19 and capture information.
- It will track the data of the users every one hour to alert them of whether they have crossed paths with any person who has tested positive for the infection.
- The app makes users sign in using their phone number and uses the **GPS** to track their movement.
- While that could raise **privacy concerns** among the users, the app description suggests that the **identity of a user will not be disclosed** to anyone, including the government, the server or any third party client.

- Users will be informed if they come within the infection range of a host or carrier of the disease.
- This will also **help in identifying the relevant chain of contact.**
- Moreover, the user will be alerted of the potential infection range so that they can act accordingly.

## 7) Indian Council of Medical Research (ICMR)

### About ICMR

- The ICMR, **New Delhi**, is the apex body in India for the formulation, coordination and promotion of **biomedical research.**
- It is one of the oldest medical research bodies in the world.
- The ICMR has always attempted to address itself to the growing demands of scientific advances in biomedical research on the one hand, and to the need of finding practical

solutions to the health problems of the country, on the other.

- The ICMR is funded by the Government of India through the **Department of Health Research, Ministry of Health & Family Welfare.**

### Mandate

- Apex body in India for formulation, coordination and promotion of biomedical research
- Conduct, coordinate and implement medical research for the benefit of the Society
- Translating medical innovations in to products/processes and introducing them in to the public health system

### Why in News?

- The ICMR was in the News repeatedly due to the COVID-19 outbreak.

# PIB ANALYSIS

## 1) Employees Provident Fund (Amendment) scheme, 2020

### Why in News?

- The Ministry of Labour and Employment has amended the EPF Scheme 1952. It allows withdrawal of non-refundable advance by EPF members in the wake of COVID-19 pandemic in the country.

### News in Detail:

- The notification permits withdrawal not exceeding the basic wages and dearness allowance for **three months or upto 75 per cent of the amount standing** to member's credit in the EPF account in the event of outbreak of epidemic or pandemic.
- COVID-19 has been declared pandemic by appropriate authorities for the entire country and therefore employees working in establishments and factories across entire India, who are members of the EPF Scheme, 1952 are **eligible for the benefits of non-refundable advance**.
- A sub-para(3) under para 68L has been inserted in the EPF scheme, 1952.
- The amended scheme Employees Provident Fund (Amendment) scheme, 2020 has come into force from 28th March, 2020.

## 2) Benefits to Farmers

### Why in News?

- The government gives benefits to farmers on crop loan repayments due to Covid-19 lockdown.

### News in Detail:

- In the wake of the lockdown, the Government has **extended the benefit of 2% Interest Subvention (IS) to banks and 3% Prompt Repayment Incentive (PRI) to all farmers up to 31st May, 2020** for all crop loans up to Rs.3 lakh given by banks which have become due or are becoming due between 1st March, 2020 and 31st May, 2020.
- Due to restrictions imposed on movement of people, many farmers are not able to travel to bank branches for payment of their short term crop loan dues.
- Moreover, due to restrictions on movement of people and difficulty in timely sale and receipt of payment of their produce,

farmers may be facing difficulties in repayment of their short term crop loans falling due during this period.

- The Government is also providing concessional crop loans to farmers through banks with 2% p.a. interest subvention to banks and 3% additional benefit on timely repayment to farmers thus providing loans up to Rs.3 lakh at 4% p.a. interest on timely repayment.
- **About Interest Subvention Scheme:**
- The interest subvention scheme for farmers aims at providing short term credit to farmers at subsidised interest rate. The policy came into force with effect from Kharif 2006-07. The scheme is being implemented for the year 2018-19 and 2019-20.
- The interest subvention will be given to Public Sector Banks (PSBs), Private Sector Banks, Cooperative Banks and Regional Rural Banks (RRBs) on use of own funds and to NABARD for refinance to RRBs and Cooperative Banks.
- The Interest Subvention Scheme is being implemented by **NABARD and RBI**.
- The Central Government provides to all farmers for short term crop loan upto one year for loan upto Rs. 3 lakhs borrowed by them.
- Under this scheme, the farmers can avail concessional crop loans of upto Rs.3 lakh at 7 per cent rate of interest. It also provides for an additional subvention of 3 per cent for prompt repayment within a period of one year from the date of advance. The scheme will help farmers to avail short term crop loans up to Rs. 3 lakh payable within one year at only 4 per cent per annum.

## 3) COVID-19 National Teleconsultation Centre (CoNTeC)

### Why in News?

- The Union Minister of Health & Family Welfare Dr. Harsh Vardhan launched the National Teleconsultation Centre (CoNTeC). It has been conceptualised by the Ministry of Health & Family Welfare and

has been implemented by the All India Institute of Medical Sciences, New Delhi.

#### **What is CoNTeC?**

- The CoNTeC is a Telemedicine Hub wherein expert doctors from various clinical domains will be available 24×7 to answer the multifaceted questions from specialists from all over the country.
- It is a multi-modal telecommunications hub through which 2 way audio-video and text communications can be undertaken from any part of the country as well as the world at large.
- The modes of communication will include simple mobile telephony as well as two way video communications, using WhatsApp, Skype and Google Duo.
- CoNTeC has been made operational at AIIMS with a view to connect the Doctors across the country to AIIMS in real time for treatment of the COVID-19 patients.
- CoNTeC has been set up in the AIIMS so that the small states should also make use of the vast experience of the Doctors at AIIMS.
- The CoNTeC is also fully integrated with the National Medical College Network (NMCN) to conduct a full fledged Video Conference (VC) between the 50 Medical Colleges connected through the NMCN with its National Resource Centre located at SGPGI, Lucknow.
- The patient management advice offered will be standardized as per the national guidelines supplemented protocols developed by the team at AIIMS, nominated by the Director, AIIMS.

#### **Significance:**

- The goal of the facility is to at least connect the doctors in the country together to discuss amongst themselves the protocols undertaken and provide the best treatment accordingly.
- The telemedicine guidelines have also been notified by the Government of India and with the help of digital platform and

technology, the public at large will get the benefit not only for COVID- 19 but other diseases also.

## **4) Agriculture-Farming and allied activities exempted from Lockdown**

### **Why in News?**

- Government has granted relaxation in the nationwide lockdown for activities related to agriculture-farming and allied activities with a view to address problems being faced by the farming community.
- This will also ensure uninterrupted harvesting of crops.

### **News in Detail:**

- The Union Home Ministry has issued second Addendum to the Guidelines related to the nationwide lockdown
- Under this Addendum, activities related to Agriculture and related products, services and such other activities have been brought under the exception categories from the 21 day lockdown. This will also allow unhindered harvesting of crops.
- Under the 2nd Addendum issued by the Union Home Ministry the following categories have been exempted from the lockdown:
  - Agencies engaged in procurement of agriculture products, including MSP operations.
  - 'Mandis' operated by the Agriculture Produce Market Committee or as notified by the State Government.
  - Farming operations by farmers and farm workers in the field.
  - 'Custom Hiring Centres (CHC)' related to farm machinery.
  - Manufacturing and packaging units of fertilisers, pesticides and seed, and
  - Intra and Inter-State movement of harvesting and sowing related machines like combined harvester and other agriculture/horticulture implements.



# News in Depth

## AIR NEWS

### 1) UAE observes Earth Hour

#### What is Earth Hour?

- Earth Hour, organized by the **World Wide Fund for Nature**, is a global grassroots movement uniting people to take action on environmental issues and protect the planet. Engaging a massive mainstream community. Earth Hour was started as a lights out event in Sydney, Australia in 2007.

#### When does Earth Hour take place?

- While WWF projects and individual actions under the Earth Hour movement continue throughout the year, the annual Earth Hour lights out event is held worldwide toward the end of March to encourage individuals, households, communities and businesses to turn off their non-essential lights for one hour as a symbol for their commitment to the planet.

#### Why is Earth Hour the event held in late March?

- The second-to-last and last weekend of March is around the time of the Spring and Autumn equinoxes in the northern and southern hemispheres respectively, which allows for near coincidental sunset times in both hemispheres, thereby ensuring the greatest visual impact for a global 'lights out' event.

#### Earth Hour logo:

- Earlier it was 60 (60 symbolizes 60 minutes). But since 2011 it is 60+. Here + represents the commitment to go beyond the earth hour (i.e. switching off non-essential lights in day to day life).

#### Why in News?

- UAE is observing Earth Hour, the global environmental event, in cooperation with the Dubai Supreme Council of Energy and Emirates Nature in association with the World Wide Fund for Nature.

### 2) PM-CARES fund

- PM-CARES fund will be a dedicated national fund with the primary objective of dealing with any kind of emergency or distress situation, like posed by the COVID-19 pandemic.

- The Prime Minister is the Chairman of this trust and its Members include Defence Minister, Home Minister and Finance Minister.

Citizens and organisations can go to the website [pmindia.gov.in](http://pmindia.gov.in) and donate to PM CARES Fund. This fund will enable micro-donations allowing a large number of people will be able to contribute with smallest of denominations.

- Donations to this fund will be exempted from income tax under section 80(G).

#### Why in News?

- Prime Minister Narendra Modi announced the constitution of the PM's Citizen Assistance and Relief in Emergency Situations (PM-CARES) fund.

### 3) Olympics Postponed to 2021

#### Why in News?

- Japan's Prime Minister and the head of the International Olympic Committee Shinzo Abe agreed to postpone the Tokyo 2020 Games by a year in an extraordinary move, unprecedented in peacetime, as the world battles the coronavirus pandemic.

#### About:

- The Olympic Games is a quadrennial international multi-sport event celebrated as a global sports festival by people all over the world. The Olympic Games are held in both the summer and winter, with the ultimate goal of cultivating people and world peace through sports.

#### The Ancient Olympic Games

- The roots of today's Olympic Games date back to the ancient Olympic Games, held 2,800 years ago. Also known as the "Olympiad," the event took place in the



Olympia region of ancient Greece. There are various opinions regarding its origins. It is said that the event was an athletic and artistic festival dedicated to the worship of the gods.

#### **News in Detail:**

- The Olympics, which has experienced boycotts, terrorist attacks and protests, but has been held every four years since 1948, would be the highest-profile event affected by the Coronavirus that has killed thousands and closed sports competitions worldwide.
- Three other times, the Olympic games were cancelled altogether because of World War I (1916) and World War II (1940 and 1944) — and in those latter two quadrennials, both the Summer and Winter Games were shelved.

#### **4) Project 'Isaac'**

##### **About:**

- Project Isaac is a model for academic institutions worldwide to explore ways to engage students in the midst of the pandemic.

- As part of the project, four different competitions are being organized by IIT, Gandhinagar to cultivate new skills among students regarding writing, painting, coding, music, creative expression, and so on. Students can take part in competitions online.
- The project is inspired by Sir Isaac Newton, who was similarly sent home by Trinity College, Cambridge, because of the Great Plague of London in 1665.
- During this year, Newton, then a 22-year-old college student developed some of his most profound discoveries, including early calculus, as well as his theories of optics and gravity.

##### **Why in News?**

- Indian Institute of Technology, Gandhinagar (IITGN) has launched Project 'Isaac' to engage its students in creative projects to enhance their critical skills while they are confined to their homes because of Coronavirus.

# THE HINDU EDITORIALS

## 1) Giving Human Rights Commissions more teeth



### Why in News?

- The Paris Principles on Human Rights was adopted in 1993 by the UN General Assembly.
- The principles adoption has led to the constitution of national human rights institutions in almost every country.
- The Indian Parliament enacted the Protection of Human Rights Act, 1993 (PHR Act) in this pursuit.

### What is the Background?

- The Protection of Human Rights Act, 1993 (PHR Act) created the National Human Rights Commission (NHRC) at the centre.
- The Act also created Human Rights Commissions at the levels of the various States.
- Along with the legislature, the executive and the judiciary which forms the three branches of the government, the NHRC and SHRCs form the “fourth branch of institutions”.
- The Fourth branch has been addressed as “Toothless Tiger” by the Supreme Court and has come under scrutiny and criticism due to lack of autonomy and political interference.

### What is the structure of NHRC?

- The NHRC consists of:
  1. A Chairperson, who has been a Chief Justice of India or a Judge of the Supreme Court
  2. One member who is, or has been, a Judge of the Supreme Court of India
  3. One member who is, or has been, the Chief Justice of a High Court
  4. Three Members, out of which at least one shall be a woman to be appointed from amongst persons having knowledge of, or

practical experience in, matters relating to human rights

5. In addition, the Chairpersons of National Commissions viz., National Commission for Scheduled Castes, National Commission for Scheduled Tribes, National Commission for Women, National Commission for Minorities, National Commission for Backward Classes, National Commission for Protection of Child Rights; and the Chief Commissioner for Persons with Disabilities serve as ex officio members.
6. The sitting Judge of the Supreme Court or sitting Chief Justice of any High Court can be appointed only after the consultation with the Chief Justice of Supreme Court

### What are its powers and functions?

- The Protection of Human Rights Act mandates the NHRC to perform the following:
  - Proactively or reactively inquire into violations of human rights by government of India or negligence of such violation by a public servant
  - the protection of human rights and recommend measures for their effective implementation
  - review the factors, including acts of terrorism that inhibit the enjoyment of human rights and recommend appropriate remedial measures
  - to study treaties and other international instruments on human rights and make recommendations for their effective implementation
  - undertake and promote research in the field of human rights
  - to visit jails and study the condition of inmates
  - engage in human rights education among various sections of society and promote awareness of the safeguards available for the protection of these rights through publications, the media, seminars and other available means
  - encourage the efforts of NGOs and institutions congress to working in the field of human rights

- it considers the necessity for the protection of human rights
- requisitioning any public record or copy thereof from any court or office

### What constitutes the Fourth Branch Institutions?

- The complexity of governance and administration in the modern world has necessitated the existence of a set of independent bodies, which are charged with performing vital functions of oversight and are termed as fourth branch institutions.
- Some bodies like the Election Commission and the Office of the Comptroller and Auditor General are constitutional bodies while others have been established under law, for example, the Information Commission under the Right to Information Act, and Human Rights Commissions under the Protection of Human Rights Act.

### What are the issues associated?

- The selection committee has been dominated by the political leaders which creates a conflict of interest.
- The commission has no autonomy over the investigating police officers whose conflict of interest restricts the scope of their work.
- As per the Protection of Human Rights Act under Section 18, the Human Rights

Commission can only recommend but its non binding.

- No cases of Human Rights violation can be investigated by NHRC in case the violation is reported against armed forces.

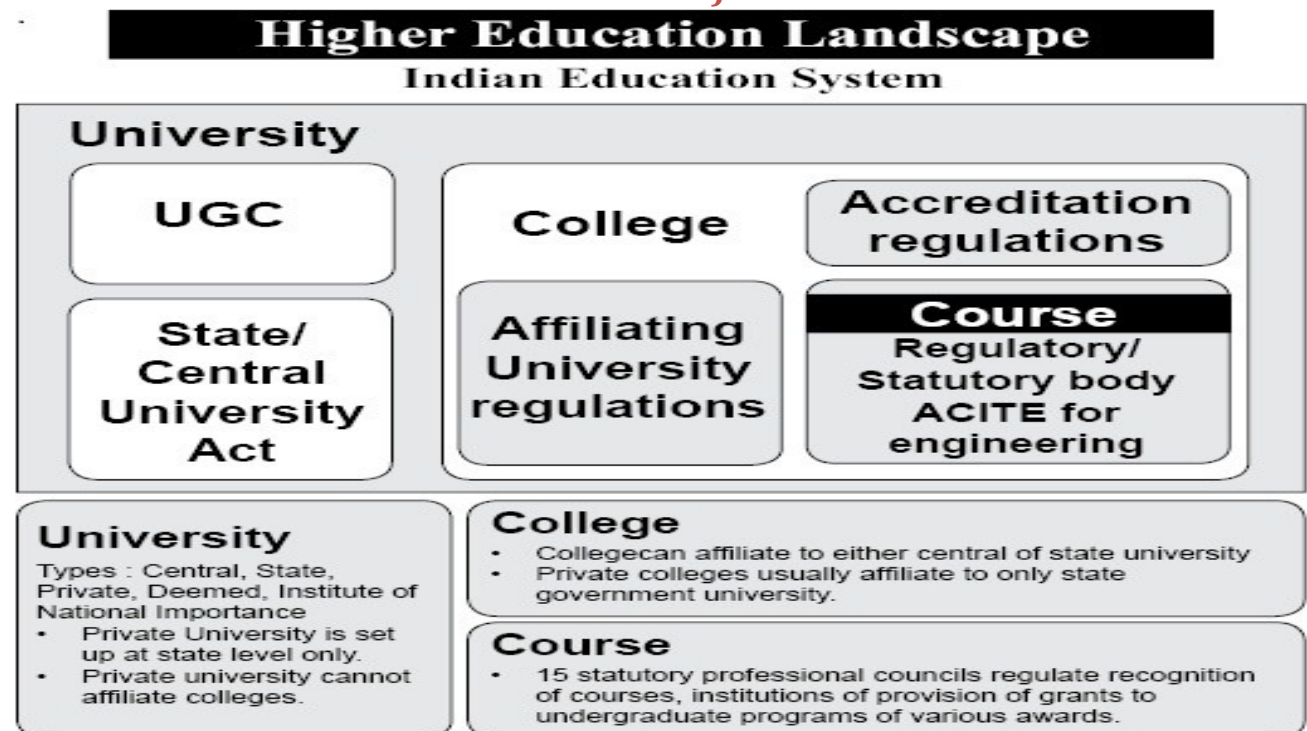
### What is the way forward?

- The recommendations of NHRC can be made binding.
- The Human Rights Commission should have equal footing as other quasi judicial bodies.
- Human rights commissions should be provided with their independent cadre of staff with appropriate experience, so that they can function autonomously.
- Human rights education can be made part of school curriculum.

### Conclusion

- The PHR Act defines Human Rights as the rights relating to life, liberty, equality and dignity of the individual guaranteed by the Constitution or embodied in the International Covenants and enforceable by courts in India. In order to uphold the spirit of the constitution has creatively interpreted the powers of various fourth branch institutions in cases of ambiguity.

## 2) Need for reorientation



### Why in News?

- India's higher education system has still not been developed fully and is evidenced by its poor performance in institutional rankings, the poor employment status of its students, poor track record in receiving national awards and recognition, poor share in research funding even after more than 70 years of independence.

#### What are the reasons behind?

- Enrolment has been a major issue as evident in the All-India Survey on Higher Education (AISHE) report 2018-19, the Gross Enrolment Ratio (GER) in Higher education in India is only 26.3%, which is quite low as compared to the developed as well as, other developing countries.
- Though there are mandatory guidelines and minimum requirements laid down by the UGC, ensuring quality in higher education is amongst the foremost challenges being faced in India today.
- Political Interference in the management of higher education jeopardises the autonomy of Higher Educational Institutions.
- Compared to private institutions the public sector institutes suffer from poor physical facilities and infrastructure.
- There is also the challenge of faculty shortages and the inability of the state educational system to attract and retain well-qualified teachers.

- There is inadequate focus on research in higher education institutes as large numbers of NET/PhD candidates are unemployed even though there are a lot of vacancies in higher education.

#### What is the way forward?

- State Higher Educational Institutions should be revamped with new vision and programmes specifically addressing the needs of the State, its industry, economy and society.
- There needs to be more collaboration between Indian higher education institutes and top international institutes.
- There needs to be more linkages between national research laboratories and research centres of top institutions for better quality and collaborative research.
- Multidisciplinary approach needs to be stressed more for research.
- All educational institutes must be away from political affiliations, provided with good infrastructure and facilities.

#### Conclusion

- With growing demographics and changing society the education needs to be revamped and redesigned to expand its arena.

### 3) Picking up the quantum technology baton

**केन्द्रीय बजट UNION BUDGET 2020**

**Budget 2020 announced Rs 8,000 crore over the next 5-yrs in the National Mission on Quantum technology and its applications**

- The areas of focus for the NM-QTA Mission will be in fundamental science, translation, technology development and towards addressing issues concerning national priorities
- The mission can help prepare next generation skilled manpower, boost translational research and also encourage entrepreneurship and start-up ecosystem development.
- Quantum principles will be used for engineering solutions to extremely complex problems in computing, communications, sensing, chemistry, cryptography, imaging and mechanics

Their applications which will be boosted include those in aero-space engineering, numerical weather predictions, simulations, securing the communications & financial transactions, cyber security, advanced manufacturing, health, agriculture, education

It can bring India in the list of few countries with an edge in this emerging field will have a greater advantage in garnering multifold economic growth and dominant leadership role

#### Why in News?

- National Mission on Quantum Technologies and Applications (NMQTA) was launched



during the Union Budget 2020-21 to spend ₹8,000 crore (\$ 1.2 billion) with an objective to develop quantum computing linked technologies amidst the second quantum revolution and make India the world's third biggest nation in the sector after the US and China.

### What is Quantum Computing?

- The technology is based on the principles of Quantum mechanics.
- It was developed in the early 20th century to describe nature in the small at the scale of atoms and elementary particles.
- The first phase provided the foundations of our understanding of the physical world, including the interaction of light and matter, and led to ubiquitous inventions such as lasers and semiconductor transistors.
- The second revolution is currently underway with the goal of putting properties of quantum mechanics in the realms of computing.
- Quantum computers compute in 'qubits' (or quantum bits) while v Conventional computers process information in 'bits' or 1s and 0s, following classical physics under which our computers can process a '1' or a '0' at a time.

### What are the applications?

- It can secure quantum communication links between terrestrial stations and satellites and is significant to satellites, military and cyber security among others.
- It can be applied in solving some of the fundamental questions in physics related to

gravity, black holes and could give a big boost to the Genome India project.

- It can help in disaster management as in Tsunamis, drought, earthquakes and floods may become more predictable with quantum applications.
- Quantum computing could reduce the time frame of the discovery of new molecules and related processes to a few days from the present 10-year slog that scientists put in considering India's interest in the pharmaceutical and healthcare industry which is huge.
- It being an integral part of Industrial revolution 4.0 can help in strategic initiatives like the Internet-of-Things, machine learning, robotics, and artificial intelligence across sectors.

### What are the associated challenges?

- Harnessing the properties of quantum superposition in a highly controlled manner as qubits tend to be very fragile and lose their "quantumness" if not controlled properly.
- Creating the algorithms and applications for quantum computers poses a challenge.
- Information technology-based security infrastructure challenges.

### Conclusion

- Though this is two decades old globally, India is yet to begin any major research project. An unprecedented collaboration between physicists, computer scientists, material scientists and engineers is needed for better exploitation of this technology.

## 4) Not an unfettered right

**Narendra Modi**  
@narendramodi

A landmark day for India and our nation's ethos of compassion and brotherhood... This Bill will alleviate the suffering of many who faced persecution for years

**KEY FEATURES**

**Bill grants citizenship to Hindus, Sikhs, Christians, Jains, Buddhists & Parsis from Pakistan, Bangladesh and Afghanistan who moved to India before Dec 31, 2014**

**Reduces duration of residency from 11 years to 5 years**

**States with ILPs and areas under Sixth Schedule in north-east exempt from new law**

**Authorises govt to cancel registration of OCI cardholders in case of violation of provisions of Citizenship Act or any other law**

**MORE REPORTS**  
➤ PAGE 2

### Why in News?

- The Government of India has stated strongly that Citizenship (Amendment) Act,

2019 (CAA) is an internal matter which is the sovereign right of Parliament to make laws and there is no locus standi rights to any foreign body on issues pertaining to India's sovereignty.

### **Background**

- The UN High Commissioner for Human Rights (UNCHR), Michelle Bachelet filed an application seeking to intervene as amicus curiae in a petition ('Deb Mukharji & Ors vs Union of India & Ors') challenging the constitutionality of the Citizenship (Amendment) Act, 2019 (CAA) in the Supreme Court of India.
- This case provides an opportunity for India to have a clear picture on questions pertaining to sovereignty in relation to international law which may intervene in domestic proceedings.

### **What do we understand by Amicus Curiae?**

- It literally means friend of the court.
- It refers to someone who is not a party to a case and may or may not have been solicited by a party and who assists a court by offering information, expertise, or insight that has a bearing on the issues in the case.

### **What is the concept of sovereignty?**

- It refers to the full right and power of a governing body over itself without any interference from outside sources or bodies.
- India has laid down in the Preamble that the people of India have resolved to constitute the Indian Republic into a sovereign country.
- Practically no country can exercise sovereignty by being isolated with other countries, it has to engage and collaborate with other nations under a defined set of international law.

### **What are the key points in this case?**

- This case is a voluntary application rather than at the invitation of the Supreme Court of India.
- India has been party to various international conventions including the International Covenant on Civil and Political Rights and the International Covenant on Economic, Social and Culture Rights which contain important non-discrimination clauses, including on the ground of religion.
- The UNHCR routinely intervenes before regional and domestic courts across the

world and has previously filed amicus briefs before regional courts such as the European Court of Human Rights and the Inter-American Court on Human Rights as well as domestic courts such as the US Supreme Court and final appellate courts in Asia and Latin America.

### **Conclusion**

- In order to address the implications of the CAA under international law, India should reconsider its stance of not allowing UNHCR as amicus curiae in the CAA case. It also provides an opportunity to lay down the law on whether such applications interfere with national sovereignty and sends a strong signal to the international community that India is a nation that respects the rule of international law.

## **5) To mitigate the crisis, rethink role of regulators**

### **Why in News?**

- Before the spread of Covid-19 the global economy was stabilising but now it seems that the economic impacts of the pandemic coronavirus disease may last longer than its health effects.

### **Background**

- The global bodies like the Organisation for Economic Cooperation and Development (OECD) and the World Trade Organization (WTO) estimate that this pandemic will lead to nearly 1.5% slows down in the global economy.
- Since most of Indian jobs are informal with the state disaster response being comparatively low this can have a profound impact on India both economically and socially.

### **What are the issues with the regulatory bodies?**

- Political populism has always overshadowed regulations and economic agenda in India.
- The regulatory bodies are often interfered with their functioning by the ruling political parties.
- The appointment of non experts to the regulatory bodies has created a tense due to lack of efficiency and interference in functioning.
- There has been an inefficient review mechanism of these regulatory bodies by the parliamentary committees.



- These regulatory bodies are only recommended in nature and their recommendations are rarely implemented.
- There have also been issues of overlapping powers due to the presence of regulatory bodies.

#### **What is the way forward?**

- Self assessment should be mandated to all regulatory bodies to keep them on check and function efficiently.
- There needs to be reduced political interference and respect their functional autonomy.

- Transparency and accountability should be enforced on these bodies.

#### **Conclusion**

- With lockdown all over in the country resulting in huge economic losses there needs to be more power in the hands of the regulatory bodies to control the economy and help mitigate the impacts of the pandemic.

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