

# Monthly Current Affairs

## APRIL-2020

## CONTENTS

---

### 1. POLITY

01

- Civil Services Day
- J&K domicile rules
- Kerala-Karnataka border row (Covid19)
- MPLADS suspended
- National Panchayati Raj Day
- State Election Commissioner (SEC) Removal
- 'Floor test is Governor's discretion'
- Institutional fixes and the need for ethical politics
- Kerala HC stays State govt. order on salary deferment
- Covid-19 has brought technology to courts

### 2. ECONOMY

11

- Armyworm attack (Fall Armyworm (FAW) or Spodoptera frugiperda)
- Bangalore Blue Grape
- Counter-Cyclical Capital Buffer (CCCB)
- Devanahalli Pomelo
- Draft Electricity Act (Amendment) Bill 2020
- e-NAM
- Facebook-Jio deal
- Global remittances will see a sharp fall: WB
- Input-Output Model
- National Thermal Power Corporation (NTPC)
- Pulses
- Software Technology Parks of India (STPI)
- Sugarcane Pricing
- How oil price crash impacts sugar, what it means for India?
- U.S. Priority Watch List
- World economy to contract by 3%: IMF
- Outdated census data keep 10 cr. out of PDS: economists
- RBI to pump in 1 lakh crore
- SEBI eases norms on IPO, rights issues
- Govt. to suspend IBC rules for up to one year
- FDI from Neighboring Countries now needs Government nod
- Franklin Templeton Crisis
- Why are oil prices in negative terrain?

### 3. INTERNATIONAL RELATIONS

27

- Comprehensive Nuclear-Test-Ban Treaty (CTBT)
- Immigration Restrictions
- Indian Council for Cultural Relations
- Iran's Military Satellite- Noor
- Nord Stream 2
- Omar Sheikh Death sentence commuted
- Operation Sanjeevani
- Pitch Black
- South China Sea Issue
- USCIRF Report
- U.S. gives 'terrorist' label to white supremacist group
- A double whammy for India-Gulf economic ties
- Putting the SAGAR vision to the test
- In a crisis year, Sri Lanka gears up for daunting debt
- Study on China dams brings the Brahmaputra into focus
- Afghan peace and India's elbow room

### 4. ART AND CULTURE

41

- Dekho Apna Desh
- Harvest Festivals
- Kumbh Mela
- Festivals, turbans and rice beer are all part of an exhaustive cultural heritage list

### 5. SCIENCE AND TECHNOLOGY

43

- JNTBGRI to play key role in sequencing of Indian species
- New model to predict ionospheric electron density can help communication/navigation
- Piezoelectricity
- Technology Development Board (TDB)
- Technology Information, Forecasting and Assessment Council (TIFAC)

<b>6. SECURITY AND DEFENCE</b>	<b>46</b>	<b>10. GEOGRAPHY</b>	<b>90</b>
<ul style="list-style-type: none"> <li>• Global Terrorism Index (GTI)</li> <li>• 'Pakistan removes names from terrorism watch list'</li> <li>• Still no bullseye, in volume and value</li> <li>• U.S. approves 2 missile deals with India</li> <li>• India among top 3 military spenders: report</li> </ul>		<ul style="list-style-type: none"> <li>• Ambukuthy Hills</li> <li>• Srinagar-Leh highway</li> <li>• A season of change</li> <li>• Solar Faculae</li> </ul>	
<b>7. ENVIRONMENT AND ECOLOGY</b>	<b>50</b>	<b>11. EDUCATION</b>	<b>92</b>
<ul style="list-style-type: none"> <li>• Chinkara/ Indian Gazelle</li> <li>• Petersberg Climate Dialogue</li> <li>• Trimeresurus Salazar</li> <li>• World Earth Day</li> <li>• Wildlife Board nod for mining in Assam elephant reserve</li> </ul>		<ul style="list-style-type: none"> <li>• Bharat Padhe Online</li> <li>• CollabCAD</li> <li>• SWAYAM Prabha and SWAYAM</li> <li>• VidyaDaan 2.0</li> <li>• Bihar launches app for govt. school students</li> <li>• Limitations of online learning</li> </ul>	
<b>8. HEALTH ISSUES</b>	<b>52</b>	<b>12. HISTORY</b>	<b>96</b>
<ul style="list-style-type: none"> <li>• Price Monitoring &amp; Resource Unit (PMRU)</li> <li>• Remdesivir</li> <li>• World Health Day</li> <li>• Attacks on health workers</li> <li>• Convalescent Plasma Therapy</li> <li>• Domestic Violence on the rise during the COVID-19 Pandemic</li> <li>• Economic liberalisation and its faults</li> <li>• Effectiveness of available drugs</li> <li>• International Coordination</li> <li>• Key Initiatives</li> <li>• Migrant Workers</li> <li>• Privacy and Stigma</li> <li>• Quarantine and the law</li> <li>• Social Vaccine</li> <li>• Successful Models</li> <li>• Testing Systems</li> <li>• WHO funding halted</li> <li>• Zoonosis</li> <li>• Related issues</li> </ul>		<ul style="list-style-type: none"> <li>• How pandemics have changed the world</li> </ul>	
<b>9. SOCIAL ISSUES</b>	<b>88</b>	<b>14. GOVERNANCE</b>	<b>97</b>
<ul style="list-style-type: none"> <li>• Van Dhan Samajik Doori Jagrookta Abhiyaan</li> <li>• Yanomami</li> <li>• 'Online child porn traffic rises by 95%'</li> <li>• No 100% quota for tribal teachers: SC</li> </ul>		<ul style="list-style-type: none"> <li>• 'Anti-graft law covers deemed universities'</li> </ul>	
		<b>14. MISCELLANEOUS</b>	<b>98</b>
		<ul style="list-style-type: none"> <li>• Anthurium</li> <li>• Central Institute of Plastics Engineering &amp; Technology (CIPET)</li> <li>• KARMI-Bot robot</li> <li>• Madhuvan Gajar</li> <li>• Nightingale-19</li> <li>• Forest department comes to the rescue of tribals</li> </ul>	
		<b>15. PRACTICE QUESTIONS</b>	<b>100</b>
		<b>16. ANSWER KEYS</b>	<b>116</b>
		<b>17. MAINS PRACTICE QUESTIONS</b>	<b>119</b>
		<b>18. INTERVIEW TRANSCRIPT</b>	<b>123</b>

# POLITY

## 1. Civil Services Day

- April 21 is observed every year in India as 'Civil Services Day'.
  - \* It was on this day in 1947 that the country's first home minister Sardar Vallabhbhai Patel addressed the probationers of Administrative Services Officers in 1947 at Metcalf House, Delhi
  - \* He rightly described the civil servants the 'steel frame of India'
- The first celebration of Civil Services Day was held on April 21, 2006, as Vigyan Bhawan, New Delhi.
- On this day, the 'Prime Minister Award for Excellence in Public Administration' is given.
  - \* The award is given in three categories, dividing the states and UTs into different categories
  - \* The award was instituted in 2006
  - \* All the officers individually or as a group or as an organization are eligible
  - \* The award includes a medal, scroll and a cash amount of Rs 1 lakh. In the case of a group, the total award money is Rs.5 lakh subject to a maximum of Rs.1 lakh per person. For an organization, the cash amount is limited to Rs.5 lakh
  - \* The award function is organized by the Department of the Administrative Reforms and Public Grievances and the Ministry of Personnel, Public Grievances and Pensions.
  - \* These awards work as an inspiration for the civil servants to work better for the government of India while ensuring the welfare of the citizens.

### Contex

- PM greets civil servants and pays tributes to Sardar Patel on Civil Services Day.

## 2. J&K domicile rules

### Contex

- The Union government has issued a notification defining "domiciles" in the Union Territory (UT) of Jammu and Kashmir for protecting jobs in the Group D category and entry-level non-gazetted posts for the domiciles.

### Background:

- On August 5th 2019, the Centre withdrew J&K's special status under Article 370 and Article 35A of the Constitution and bifurcated it into the Union Territories of J&K and Ladakh.

- Before, Article 35 A of the Constitution of India had empowered the J&K Assembly to define a J&K resident, who alone were eligible to apply for jobs or own immovable property.

### Details:

- In the gazette notification, Section 3A of the J&K Reorganization (Adaptation of State Laws) Order 2020, under the J&K Civil Services (Decentralisation and Recruitment) Act, has been introduced to define domicile.
- The order defines a domicile as one "who has resided for a period of 15 years in the UT of J&K or has studied for a period of seven years and appeared in Class 10th/12th examination in an educational institution located in the UT of J&K or who is registered as a migrant by the Relief and Rehabilitation Commissioner (Migrants)."
- Children of Central Govt. officials, All India Services, PSUs, autonomous bodies of the Centre, Public Sector Banks, officials of statutory bodies, Central Universities, recognised research institutes of the Centre who have served in J&K for a total period of 10 years will be domiciles.
- The domicile status applies to "children of such residents of J&K who reside outside J&K in connection with their employment or business or other professional or vocational reasons but their parents should fulfil any of the conditions provided".
- The Order says that the domiciles will be eligible for the purposes of appointment to any post carrying a pay scale of not more than Level 4.
  - \* The Level 4 post comprises positions such as gardeners, barbers, office peons and watermen, and the highest rank in the category is that of a junior assistant.
- Through the same order, the Centre has repealed the J&K Civil Services (Special Provisions) Act.
- The reservation for domiciles would not apply to Group A and Group B posts, and like other UTs, recruitment would be done by the Union Public Service Commission (UPSC).
  - \* This is according to the norms in other UTs and States.
- The provisions of the Act authorise the Tehsildar as competent authority for issuing the domicile certificate, as opposed to deputy commissioner or any officer specially notified by the state government by way of a gazette notification in the form of an SRO.
- 29 state laws have been repealed while 109 have been amended.

As a result, the immediate implication of this change will most likely be reflected by the administrative set-up, which has so far been dominated by J&K natives.

#### Changes in Public Safety Act:

- The notification of the Ministry of Home Affairs (MHA) also made changes to the Public Safety Act (PSA).
- A clause that prohibited J&K residents booked under the Act to be lodged in jails outside has been removed.
- It changes the criteria for appointing the PSA advisory board on the recommendation of a search committee headed by the Chief Secretary instead of the Chief Justice of the J&K High Court.
- It also bars sitting High Court judges to be made part of the board without the Chief Justice's consultation.
  - \* The board has a crucial role to play in the release of detenues.
- The order scraps a clause that dealt with the power to regulate the place and conditions of detention.

#### The move has been widely criticized by mainstream political players

- The notification has diluted the privileges enjoyed by Jammu and Kashmir residents
- There is outrage that the only government employment reserved for those with domicile are "level 4" jobs. This means that all the higher level jobs are out of the purview of reservation for domiciles.

### **3. Kerala-Karnataka border row (Covid19)**

#### Background

- Kasaragod, the northernmost district of Kerala, has been dependent on Mangalore town in Karnataka for medical emergencies and trade as it was the nearest city.
- It is alleged that Kerala had taken the decision to try and admit covid-19 patients from Kasargod to Mangaluru and Mysuru cities of Karnataka.
- So the Karnataka Govt decided to shut the Kasaragod-Mangaluru border at Talappadi.

#### Karnataka's View

- The hospitals in Mangaluru, Dakshin Kannada district, are already overburdened and the people residing in Mangaluru are in panic due to the increasing number of cases in Kerala, especially in Kasaragod.
  - \* The transfer of patients may lead to transmission to those who have not been affected yet.
- The border has been sealed by the Karnataka government as a preventive measure
  - \* The state closed borders to Maharashtra and Goa also. It is not practical to screen COVID-19 affected people at the border
  - \* Chief Minister said it is important for Karnataka to shut its border with Kerala for the safety of people in the state.

#### Kerala's view

- Kerala pointed out that people had died as they were denied entry to Mangaluru for treatment.
- The people of Kasaragod have been seeking medical help from hospitals in Mangaluru for many decades
  - \* It said that those who need to travel to Mangaluru for treatment, especially those seeking dialysis, have been adversely affected.
  - \* Be it for education, health, or employment, the district is predominantly dependent on neighboring Dakshina Kannada
- The Kerala government has undertaken all preventive measures in the district, ensuring all residents are strictly quarantined.

#### Kerala High Court

- The Kerala High Court took the view that denying emergency medical aid amounts to a violation of the right to life and liberty under article 21.
  - \* The Karnataka government had also infringed the rights of a citizen to move freely throughout the country recognized under Article 19
  - \* Karnataka has to necessarily respect and guarantee the fundamental right of a citizen, irrespective of the place of his residence or domicile within the country.
- The Kerala High Court ordered the Centre to remove blockade on National Highway 66 at the Kerala-Karnataka boarder.
- The High Court said that national highway is the property of the Centre and it is bound to ensure traffic on it.

#### How was this order issued?

226. Power of High Courts to issue certain writs

(2) The power conferred by clause (1) to issue directions, orders or writs to any Government, authority or person may also be exercised by any High Court exercising jurisdiction in relation to the territories within which the cause of action, wholly or in part, arises for the exercise of such power, notwithstanding that the seat of such Government or authority or the residence of such person is not within those territories

The State of Karnataka has moved the Supreme Court challenging the Kerala High Court order directing the Central Government to lift blockades.

- It was contended that Article 131 of the Constitution of India would apply in what was stated to be essentially an inter-state dispute.

#### Do state have power to impose such restrictions?

- Entry 81. Inter-State migration and quarantine are under the Union List
- Entry 29. Prevention of infectious diseases moving from one State to another is under the Concurrent List.

**Way forward:****Centre's role:**

- Going by the division of powers as envisaged by the 7th Schedule of the Indian Constitution, the States do have the power to impose border restrictions. However, it remains the centre's responsibility to prevent a breakdown of inter-state relations in light of restrictions.
- The centre should intervene to amicably solve the problems due to restrictions.

**Supreme Court's observation:**

- The Supreme Court has rightly directed the Centre to confer with the States and formulate the norms for creating a passage at the border to cater to emergency needs. This should lead to an amicable solution.
- The Supreme Court directed the Union Health Secretary to meet with the chief secretaries of Kerala and Karnataka and decide how to facilitate the movement of people for medical treatment from Kasaragod

**Taking a humane approach:**

- Given Kasaragod's dependence on Mangaluru and given the fact that medical emergencies involve people who may travel across the border for urgent medical needs, ideally Karnataka should allow movement in such cases with suitable safeguards in place.

**4. MPLADS suspended****Context:**

- The Union Cabinet has approved a 30% cut in the salaries of all Members of Parliament and a two-year suspension of the MP Local Area Development (MPLAD) scheme so that the amount saved can go to the Consolidated Fund of India to fight COVID-19.

**Details:**

- The Prime Minister has approved an ordinance to amend the Salaries, Allowances and Pension of Members of Parliament Act, 1954, to cut the salaries of MPs by 30%.
- In addition, the Cabinet has decided to suspend the MPLAD funds for 2020-2021 and 2021-2022.
  - \* The amount saved from the scheme would be ₹7,900 crore.
- All the amount saved would go to the Consolidated Fund of India.

**MPLADS**

- The Members of Parliament Local Area Development Scheme (MPLADS) is a programme first launched during the Narasimha Rao Government in 1993, aimed towards providing funds for developmental works recommended by individual MPs.

- \* The MPs were entitled to recommend works to the tune of Rs 1 crore annually between 1994-95 and 1997-98, after which the annual entitlement was enhanced to Rs 2 crore.

- \* The UPA government in 2011-12 raised the annual entitlement to Rs 5 crore per MP.

- According to the document 'Guidelines on Members of Parliament Local Area Development Scheme (MPLADS)' published by the Ministry of Statistics and Programme Implementation in June 2016, "The objective of the scheme is to enable MPs to recommend works of developmental nature with emphasis on the creation of durable community assets based on the locally felt needs to be taken up in their Constituencies. Right from inception of the Scheme, durable assets of national priorities viz. drinking water, primary education, public health, sanitation and roads, etc. are being created."
- The guidelines recommend MPs to suggest works costing at least 15 per cent of their MPLADS entitlement for the year for areas inhabited by Scheduled Caste population and 7.5 per cent for areas inhabited by ST population.
  - \* "In other words, out of an amount of Rs 5 crore, an MP shall recommend for areas inhabited by SC population, Rs75 lacs and Rs.37.5 lacs for areas inhabited by S.T. population.
  - \* In case there is insufficient tribal population in the area of Lok Sabha Member, they may recommend this amount for the creation of community assets in tribal areas outside of their constituency but within their State of election," the guidelines say.

**MPLADS fund should not be suspended**

- The MPLAD scheme was designed, and has traditionally been utilised, to address and remedy gaps in our governance initiatives that may have been overlooked by the state and central government in their announcements of major development projects.
- By decentralising the allocations of development funds, MPLADS has allowed legislators to usher small scale and time-sensitive projects within their respective constituencies
- It is believed that MPLADS is a targeted and nimble instrument to customise micro level interventions to alleviate distress.
  - \* Considering the above, it is argued that suspending MPLAD, meant to execute developmental works in the constituency would be a huge disservice to the constituents and would undermine the role & functions of an MP.
- MPLADS is one of the major means for an MP to direct development resources to his/her constituency. It is opined that it would have been better had the government brought in an order to earmark the funds only to be spent for COVID-19 related expenditure.



- In the fight against Covid 19, without waiting for the devolution of funds from the centre or states, parliamentarians would have been able to play a proactive role in bringing in much-needed protection and testing equipment locally and so improve the capacity of our frontline healthcare workers to address the spread of the pandemic.

By removing the resources at their disposal to make critical interventions and bringing them under the ambit of the Consolidated Fund of India, the government has made all that impossible.

#### **Criticism about the scheme**

- A conceptual flaw pointed out by experts is that it goes against the separation of powers. It allows individual legislators to encroach on the planning and implementation duties of the administration.
  - \* Simply put, this scheme, in effect, gives an executive function to legislators
  - \* The argument that MPs only recommend projects, but the final choice and implementation rests with the district authorities is strange; there are hardly any authorities in the district who have the courage or the gumption to defy the wishes of an MP.
- Jurists have pointed out that the Constitution does not confer the power to spend public money on an individual legislator.
- The CAG has flagged instances of financial mismanagement and inflation of amounts spent.
  - \* The CAG observed flouting of rules and corruption while implementing the scheme.
  - \* Various construction works that are 'not permitted' had been executed on the recommendation of MPs.
- The Second Administrative Reform Commission's report on "Ethics in Governance" takes a firm stand against the scheme arguing that it seriously erodes the notion of separation of powers, as the legislator directly becomes the executive.
  - \* It recommended its abrogation altogether, highlighting the problems of the legislator stepping into the shoes of the executive.
- It is widely alleged that MPs use these funds and get a percentage as commission.
  - \* The MPs are alleged to use this avenue to enrich themselves. There seems to be no local development but only self-development of MPs.
- Money under MPLADS being used to appease or oblige two sets of people: opinion-makers or opinion-influencers, and favourite contractors. Sometimes these two categories overlap.
  - \* An often-heard tale is that of the contractor being a relative, close friend, or a confidant of the MP, and the contractor and the MP being financially linked with each other.

#### **Conclusion**

- Reports of underutilisation and misutilisation of MPLADS funds continue to surface at regular intervals but there seems to have been no serious attempt to do anything about it till now. There are innumerable instances of misuse of these funds
- Therefore, it would be in order to convert the two-year suspension into the complete abolition of this undesirable and unconstitutional scheme.

#### **Cease the distractions, seize the moment**

#### **Context**

The Government recently has issued two ordinances:

- One, an amendment to the Members of Parliament Act, 1954, which will reduce the allowances and pension by 30 per cent with effect from April 1, 2020. The reduction will be applicable for a year.
- Two, the MP Local Area Development Scheme (MPLADS) fund has been suspended for two years (2020-22), and the money will be given to the Consolidated Fund of India.

These measures are purportedly to save costs as the nation tackles the COVID-19 pandemic.

#### **Salary break up**

- The MPs receive a basic salary of Rs 1 lakh and several allowances, including a constituency allowance of Rs 70,000 and a secretarial cost for office expense of Rs 60,000.
- This means there would be a 30% cut in per month salary and the constituency allowances which amounts to savings of less than ₹5 crore per month.
- The cut in sumptuary allowances for ministers results in a total savings of ₹25,000 per month.
- These are cosmetic measures and are immaterial for the Central Government.

On the contrary, the United Kingdom has increased the allowance for Members of Parliament by £10,000 to help them manage extra costs of working from home.

The real issue is, are our parliamentarians performing their constitutional roles during the crisis?

#### **Managing the pandemic will require due deliberations and discussions**

- During the crisis, Members of Parliament should be deliberating on the actions and policies to be taken to manage the epidemic, and the costs and consequences of various alternatives.
- They should also be trying to figure out ways to have committee meetings and even the meetings of the full House through alternate mechanisms such as video-conferencing.

#### **Examples**

- The U.K. has also implemented a lockdown, its Parliament is connecting all Members through video-conferencing (by April 15) so that the session can resume virtually on April 21 after the Easter break.

- \* The British Parliament has created a page on its website tracking all government orders related to the pandemic, and its Secondary Legislation Scrutiny Committee is scrutinising the orders.
- The New Zealand Parliament has formed an Epidemic Response Committee that will examine the government's management of the epidemic. This committee and other select committees are meeting through video-conference.
- Other parliaments are also working to fulfil their role as oversight bodies.

#### **Parliament absent**

- After the Janata Curfew, the Indian Parliament was adjourned.
  - \* A week before Janata Curfew, even as the crisis was unfolding, the Parliament was debating the establishment of a Sanskrit University and an Ayurveda institute, and that of regulatory boards for aircraft, Indian Systems of Medicine and Homoeopathy.
  - \* The Finance Bill was passed without any discussion.
- There was no discussion on the possible implications of the coronavirus epidemic and policy measures to tackle it — this was also the week when the Prime Minister made the first televised speech to the nation on the issue.
- Since then, the Parliament has not held committee meetings. There have been no official statements regarding the possibility of holding these through video-conference.
- Thus, the government's actions are going unchecked. In brief, the Parliament has abdicated its role as the elected body that checks the work of the government on behalf of citizens.

#### **Scope for reform**

The current crisis provides several opportunities for reform.

- For example, the Parliament should explore how technology can be used to improve its efficiency.
- Much of the daily paper work such as filing questions and other interventions have been digitised while protocols and infrastructure may be needed if meetings have to be held through secure video-conferencing.
- Other issues such as pay and allowances for Members of Parliament need to be discussed.
- The Members of Parliament should be provided with office space and research staff. They should be compensated in line with their duties as national legislators.
  - \* For example, the pay (₹1 lakh per month) and allowances (₹1.3 lakh per month) pale in comparison to that of U.S. Senators (pay \$174,000 per annum plus allowances over \$3 million per annum).

- At the same time, hidden perks such as housing in central Delhi must be made transparent — few democracies provide housing for legislators or civil servants; they are paid well and expected to find housing on their own.

#### **Conclusion**

- Therefore, in the future, public debates on issues that impact the working of our legislature should be taken up and at the same time we need to hold the executive accountable.

### **5. National Panchayati Raj Day**

#### **Background**

- 24th of April is observed as Panchayati Raj Day because, on this day in 1993, the 73rd Constitutional Amendment was implemented, setting up the three-tier panchayat system — village panchayats, panchayat unions and district panchayats — for grass root-level governance.

#### **Details**

- Accordingly, the Government of India decided in consultation with the States to celebrate 24th April as National Panchayati Raj Day.
- The commemoration is being anchored by the Ministry of Panchayati Raj.
- The first National Panchayati Raj Day was celebrated in 2010. Since then, the National Panchayati Raj Day is celebrated on April 24th, every year, in India.
- Every year on National Panchayati Raj Day, Union Ministry of Panchayati Raj organises National Conference and awards best performing Gram Panchayats with 'The Panchayat Shashaktikaran Puraskar/Rashtriya Gaurav Gram Sabha Puraskar'.

#### **Quotes by Mahatma Gandhi**

- "When the panchayat raj is established, public opinion will do what violence can never do."
- "The voice of the people may be said to be God's voice, the voice of the Panchayat."

#### **Key Statements**

- Manmohan Singh in 2010 urged panchayats to play a big role in helping the Centre tackle the rebels by working more effectively and ensuring administrative transparency.
  - \* He mentioned that if Panchayati Raj institutions (PRIs) functioned properly and locals participated in the development process, the Maoist threat could be countered.
- Prime Minister Narendra Modi in 2015 called for an end to the practice of "husbands of women sarpanches" or "sarpanch pati" exercising undue influence on the work of their wives elected to power.

**Context**

- Prime Minister Shri Narendra Modi interacted with Sarpanchs of Gram Panchayats throughout the country through Video Conferencing, on the occasion of National Panchayati Raj Day 2020.
- The PM launched the unified e-GramSwaraj Portal and Swamitva Scheme

**e-GramSwaraj Portal and Mobile App**

- The Unified Portal is a new initiative of the Ministry of Panchayati Raj.
- It will provide the Gram Panchayats with a single interface to prepare and implement their Gram Panchayat Development Plan (GPDP).

**Significance**

- The portal will ensure real time monitoring and accountability.
- The portal is a major step towards digitization down to the Gram Panchayat level.

**Swamitva Scheme**

- The scheme provides for an integrated property validation solution for rural India.
- Through this scheme, the surveying and demarcation of inhabited land in rural areas will be done by the use of latest surveying methods such as drone technology, with the collaborated efforts of the Ministry of Panchayati Raj, State Panchayati Raj Departments, State Revenue Departments and Survey of India.

**Significance**

- The scheme will ensure streamlined planning, revenue collection and provide clarity over property rights in rural areas.
- This will open up avenues for applying for loans from financial institutions by the owners.
- Disputes related to the property would also be settled through the title deeds allotted through this scheme.

**6. State Election Commissioner (SEC) Removal****Context:**

- The removal of Andhra Pradesh State Election Commissioner (SEC).

**Background:**

- In March 2020, days before the local body polls were to be held in Andhra Pradesh, the SEC postponed the elections, citing the COVID-19 outbreak. The state government claimed political reasons for the postponement.
- The State government approached the Supreme Court against the decision of the SEC, but the court declined to interfere.

- The State government got the Governor to issue an ordinance to reduce the SEC's tenure from five to three years, and amend the criterion for holding that office from being an officer of the rank of Principal Secretary and above to one who had served as a High Court judge.
- This automatically rendered the current SEC's continuance in office invalid.

**Misuse of power:**

- Having exhausted its legal remedy, the state government should have waited for the ongoing fight against the Pandemic to be over. Instead the state government decided to use the ordinance route to remove the SEC from office.

**Legality of the move:**

- There are several Constitutional provisions to safeguard the independence of the State Election Commission.
- The Constitution notes that the SEC may be removed from the post only in the same manner as a High Court judge, which needs a special majority concurrence from both the houses of the parliament and assent of the President. The Governor's ordinance based on the advice of the Council of Ministers hence has no legal right to terminate the SEC's tenure.
- Further, the Constitution, under Article 243K, prohibits the variation of any condition of service to the detriment of any incumbent. Even if the State government argues that a change of tenure does not amount to varying the conditions of service, the new norm can only apply to the successor SEC, and not the current SEC.
- It is a well-settled principle in law that what cannot be done directly cannot be done indirectly. The removal of an incumbent SEC through the subterfuge of changing the eligibility norms for appointment may not survive judicial scrutiny.

**Judicial Precedents:**

AP Government is justifying the ordinance promulgated removing the SEC, citing two judgments

- First judgment in Kailash Chandh Mahajan v State of Himachal Pradesh. Supreme Court held that cessation of office because of reduction of the term of office will not amount to the removal of the officer holder.
- Second Judgment, the AP Government heavily depended on Allahabad High Court's judgment in Aparmita Prasad Singh versus State of Uttar Pradesh decided in 2007.
- The AP Government is trying to justify that Ramesh Kumar was not removed but just his term was shortened and hence he must step out.

**Questions raised about the Judgment**

- The judgment seems erroneous, as it gives a free hand to the State government to remove an inconvenient election authority by merely changing the tenure or retirement age.



- If courts uphold such questionable practices, it would adversely affect the ability of the State Election Commission to conduct free and fair elections.

### **Conclusion**

- Thus, the ordinance strikes fatally at the independence of the State Election Commission and creates doubts on the sincerity of Government in conducting elections in free and fair manner.
- Free and fair election is the basic structure of our constitution.

## **7. 'Floor test is Governor's discretion'**

### **Context:**

- The Supreme Court upheld Madhya Pradesh Governor's decision asking the then Kamal Nath led-Congress government to prove majority by holding a floor test in the Legislative Assembly after the resignation of 22 Congress MLAs.
- It said a Governor can call for a floor test any time he objectively feels a government in power has lost the confidence of the House and is on shaky ground

### **Details:**

- In a judgment, a Bench of Justices D.Y. Chandrachud and Hemant Gupta concluded that a Governor could call for a trust vote if he has arrived at a prima facie opinion, based on objective material, that the incumbent State government has lost its majority in the Assembly.
- The intention behind a trust vote was to enable the elected representatives to determine if the Council of Ministers commanded the confidence of the House.
- It was the MLAs, and not the Governor, who made the ultimate call whether a government should stay in power or not, the court said.
- It said that a Governor's power to call for a floor test is not restricted only before the inception of a State government immediately after elections, but continues throughout its term.
- The court clarified that the Governor's requirement to have a trust vote does not "short-circuit" any disqualification proceedings pending before the Speaker.
- It said a Governor need not wait for the Speaker's decision on the resignation of rebel MLAs before calling for a trust vote.

### **Observations made:**

- It was observed that the idea underlying the trust vote is to uphold the political accountability of the elected government to the State legislature.
- In directing a trust vote, the Governor does not favour a particular political party.
- It is inevitable that the specific timing of a trust vote may tilt the balance towards the party, possessing a majority at the time the trust vote is directed.

- All political parties are equally at risk of losing the support of their elected legislators, just as the legislators are at risk of losing the vote of the electorate. This is how the system of parliamentary governance operates.

### **What is a Floor Test?**

- A floor test is conducted mainly to assess if the executive maintains the legislature's confidence.
- It is a statutory procedure that on the floor of the Legislative Assembly, a Chief Minister appointed by the Governor may be asked to prove support or a floor test is a way to decide whether the majority of MLAs support a government or a Chief Minister.
- With a yes or a no, the MLA-elect will vote to answer if they support the individual as the Chief Minister.

### **S.R. Bommai case**

- Indian constitution under Article 356, provides that if Governor of a state feels that there has been a breakdown of constitutional machinery in a state, he can request the President of India to take direct control of the state, which is simply called President's Rule.
- Since the Governors are appointed by the President with the advice of the cabinet, technically the President's Rule is equivalent to the central government running the state government, which is against the federal structure.
- Dissatisfied with this blatant misuse of power, the Supreme Court of India in the S.R. Bommai case decided that the test of the Constitutional machinery has to be decided on the floor of Legislative Assembly of the state (by voting) and not as per the whim of Governor.
- The purpose behind the floor test is to enquire the question of whether the claimant will be able to provide the people, a stable (in terms of unity) and consistent (in terms of the period, i.e. five years) government.

## **8. Institutional fixes and the need for ethical politics**

### **Context:**

- Bypassing Anti-defection law to topple elected governments

### **New method of bypassing the anti-defection law:**

The Karnataka example:

- The Congress-JD(S) government was brought down in 2019, with 17 MLAs of the ruling coalition resigning and joining the BJP.
- Under this novel method, a set of legislators of the party in power are made to resign from the Assembly to reduce the total strength of the House enough for the other party to cross the halfway mark to form government.

- This method of mass defection circumvents the provisions of the Tenth Schedule of the Constitution (better known as the anti-defection law) that prescribes the grounds for disqualification of legislators:
  - \* Voluntarily giving up party membership
  - \* Voting or abstaining to vote against party directions etc.
- Though resignation is not mentioned as a ground for disqualification, the Speaker in Karnataka disqualified them for the rest of the Assembly's term, thereby barring them from contesting the by-polls.
- While the Supreme Court upheld the disqualification, it stuck down the bar from contesting by-polls.
- In the ensuing by-elections, the members who resigned were then fielded as BJP candidates (most of whom have been re-elected in the case of Karnataka).

#### **Madhya Pradesh**

- In Madhya Pradesh, the Speaker accepted the resignation of the MLAs, the defectors would be able to contest the by-polls.

#### **Concerns:**

- The recurrence of this model of defection in Madhya Pradesh as well, signals the exploitation of the inherent weaknesses of the anti-defection law.
- While solo legislators jumping ship might have reduced now, "horse-trading" persists.
- This threatens the underpinnings of India's electoral democracy since such surreptitious capture of power essentially betrays the people's mandate in a general election.
- Further, as the by-polls are held after the alternate political formation has assumed office, the turncoats now have an upper-hand in the election as members of the ruling dispensation.
- The constitutionality of the Tenth Schedule was challenged for violating the Basic Structure of Constitution with regard to parliamentary democracy and free speech.
  - \* But the Supreme Court in *Kihoto Hollohan v. Zachillhu* (1992) in a 3-2 verdict upheld the law while reserving the right of judicial review of the Speaker's decision.
- In this context, it is important to examine whether the anti-defection law fulfils any purpose.
  - \* This law raises fundamental concerns regarding the role of a legislator in a parliamentary democracy.
  - \* It denies the legislator the right to take a principled position on a policy matter and reduces her to an involuntary supporter of the whims of party bosses.

- The anti-defection law, on the one hand, severely restricts the freedom of a legislator and makes her a slave of party whips.

- \* On the other hand, it has not been able to meet its primary objective of preventing horse-trading and continues to be circumvented to bring down elected governments.

#### **Way forward:**

This calls for reforms that address concerns at both ends of the spectrum.

- For addressing the first issue, as the Dinesh Goswami Committee also suggested, the scope of the binding whip should be restricted to a vote of confidence.
- For addressing the second issue, it is best to institutionalise the Karnataka Speaker's decision to bar the defected members from contesting in the ensuing by-poll, if not for a longer period, and thereby disincentivise MLAs from jumping ship.
- These reforms would require a constitutional amendment to the Tenth Schedule, an uphill task under the current circumstances.
- Beyond institutional fixes, there is a need for popular articulation of an ethical politics that causes the public to shun such political manoeuvres.

### **9. Kerala HC stays State govt. order on salary deferment**

#### **Context:**

- The Kerala High Court has stayed for two months, the operationalisation of the State government order to defer the payment of the salary of government employees and the staff of State government-owned undertakings.

#### **Details:**

- The interim order was passed on a slew of petitions filed by various unions challenging the order to defer payment of six days' salary every month from April to August.
  - \* The order is not applicable to employees who draw a gross salary below ₹20,000.
- Counsel for the unions contended that Article 300A of the Constitution (right to property) would include within its ambit 'salary' as well.
  - \* The article mandates that no person shall be deprived of his/her property save by the authority of the law.
- It was further argued that no law empowered the government to defer the salary payment of the employees.
  - \* Besides, the payment could not be deferred without their consent.

**Kerala High Court Order:**

- Rejecting a contention of the government, the court pointed out that the Disaster Management Act or the Epidemic Diseases Act did not specifically confer any power on the government to defer salary payments during the times of any disaster.
- The court said that financial difficulty was not a ground for the government to defer payment of salary of its employees.
- It said that, prima facie, deferment of payment of salary, for whatever purposes, amounted to denial of the right to property.

**10. Covid-19 has brought technology to courts****Restrictions on court hearings lawful: SC****Context:**

- The Supreme Court has deemed all restrictions imposed on people from entering, attending or taking part in court hearings as lawful in the wake of the COVID-19 pandemic.

**Details:**

- The court invoked its extraordinary constitutional powers under Article 142 to step away from the convention of open court hearings.
- The open court system ensures transparency in administration of justice.
- The court made it clear that public health takes precedence over conventions.
- "Access to justice is fundamental to preserve the rule of law in the democracy envisaged by the Constitution of India. The challenges occasioned by the outbreak of COVID-19 have to be addressed while preserving the constitutional commitment to ensuring the delivery of and access to justice to those who seek it... Indian courts have been proactive in embracing advancement in technology in judicial proceedings," the order said.

**Way forward:**

- In the future judiciary will have to improvise and continue to bank heavily on "videoconferencing technologies" in the wake of unprecedented and extraordinary outbreak of the pandemic.

**Accessing justice online****Context:**

- The article discusses the need for an e-court system and the steps to be taken to ensure the setting up of an effective framework for e-courts.

**Background:**

- In the light of the national lockdown, the Indian courts too are under a lockdown thus severely restricting the citizen's access to justice for this period.
- The judiciary is also plagued by the complete inability of the conventional court system to deliver timely justice. The average time for case disposal in India is comparatively much larger than in other countries.

- The issue of delay in justice delivery shakes the very foundation of the principle of rule of law on which the entire constitution rests on.
- Thus the Judiciary has resorted to virtual court proceedings. This is of significance because it ensures that the courts are open even during a national lockdown so that access to justice is not denied to anyone, and also helps maintain physical distancing.

**Significance:**

- E-courts will not only enable easier access to courts but also increase the access to justice. The e-courts system will enable the judiciary to shorten the case disposal time thus ensuring timely justice.
- The e-court system apart from increasing the access to justice can also simultaneously reduce the burden on conventional courts. Given the current situation of low judge: population ratio in India, the more efficient e-court system will enable the judiciary to more effectively use its scarce resources.
- The e-court system would enable the generation of large and easy to use database. This could help provide useful insights to policy making. The advent of technologies like big data and artificial intelligence can help use the large database to come up with effective policies, frameworks and schemes.

**Concerns:****Idea of open courts:**

- There have been concerns being expressed on if virtual courts would become the "new normal" and mark a move away from the idea of open courts.
- This would inhibit the presence of lawyers and litigants in the judicial process.
- Citing earlier judgments on the importance of open court hearings, the Supreme Court Bar Association has requested that the use of video conferencing should be limited to the duration of the current crisis, and should not replace open court hearings.

**Way forward:****Framework for e-courts:**

- The government must establish a task force consisting of judges, technologists, court administrators, skill developers and system analysts to draw up a blueprint for institutionalising e-courts.
- The task force would take up the responsibility of establishing hardware, software and IT systems for the e-courts. It would establish appropriate e-filing systems and procedures. It would work towards creating skill training and recognition for paralegals, help advocates and others to help access the system.
- Once the blueprint is ready, the High Courts may refer the same to the Rule Committee of the High Court to frame appropriate rules to operationalize the e-court system.

***Creating awareness among the stakeholders:***

- The lack of information and awareness among the general populace might pose a major inhibition in the adoption of the e-court systems.
- The next logical step after the preparation of the e-court framework is to create awareness among the relevant stakeholders. The Legal Services Authorities Act of 1987 and the officers functioning under them can play a huge role in this direction.
- Appropriate information about the system needs to be provided comprehensively at the grassroots levels and made available online in as many Indian languages as possible. This could be a huge step in creating awareness.
- There is the need for initial handholding of the stakeholders and appropriate incentives to deepen the adoption of e-court systems.

***Live streaming:***

- The proceedings held virtually may also be streamed live so that access is not limited to the lawyers concerned, but is also available to the litigants and the public.
- The issue of limited media access can also be resolved through live-streaming.

***Implementation challenges:***

- However well-intended a scheme may be, it becomes ineffective without proper implementation and accountability provisions.
- Given the digital divide in the society, some people would find it difficult to access the e-court system. Hence a system must be set in place for the applicant to lodge online complaints with the Legal Services Authorities who can then ensure accountability and effective implementation.
- The local panchayat, municipal or corporation office, or any NGO can assist the complainant to make these online complaints to the Legal Services Authority if the complainant is unable to do so directly.
- The officers under the Legal Services Authorities Act may then be authorised to hear the complaints online and to direct delivery of redress to the aggrieved complainant in accordance with the law in a time-bound manner.

# ECONOMY

## 1. Armyworm attack (Fall Armyworm (FAW) or Spodoptera frugiperda)

- It is a native of the tropical and sub-tropical regions of the Americas
- FAW was first detected in the African continent in 2016. Since then, it has spread to other countries such as China, Thailand, Malaysia and Sri Lanka.
- It was reported in India for the first time in 2018, when it affected crops in Karnataka.
- What makes FAW dangerous is the polyphagous (ability to feed on different kinds of food) nature of the caterpillar and the ability of the adult moth to fly more than 100 km per night.
- Given its ability to feed on multiple crops — nearly 80 different crops ranging from maize to sugarcane — FAW can attack multiple crops.
- Similarly, it can spread across large tracts of land as it can fly over large distances.

### Context:

- A pest attack has added to the COVID-19-related woes of Assam's farmers. However, it is confined to a district.

### Details:

- The Directorate of Agriculture said farmers in Northeastern Dhemaji district reported armyworm attack on the standing crops.
- The armyworm attack has been on patches where harvesting was not completed.
- The armyworm caterpillar, the larval stage of several species of moths, has a voracious appetite.

### Issues:

- FAW represents a real threat to food security and livelihoods of millions of smallholder farmers.

### Measures to control Growth

- The first line of defence against the Fall Armyworm will be insecticides like lambda-cyhalothrin
- Natural predators such as coccinellid beetles can aid biological control
- Most entomologists have suggested the Integrated Pest Management system to control the pest.
  - \* This would involve constant surveillance of the pest during its vegetative growth phase and taking measures like mechanically destroying the egg masses and using pheromone traps to catch the insects.
  - \* 1. Pheromone traps are devices which are used to attract male insects by luring them with female pheromones.

- \* Farmers should also be discouraged from taking up staggered sowing, as this would allow the pest to have multiple reservations for growth.

## 2. Bangalore Blue Grape

- Bangalore blue grape, also simply called Bangalore Blue, is a variety of fox grape grown in districts around Bengaluru, Bengaluru rural, Chikkaballapur and Kolar districts.
- The variety has a "foxy flavor" and a soft skin. It is known to have anti-cancer and anti-ageing properties.
- The grape is mainly used for raw consumption, making jams and jellies, juice and juice concentrates
- It has been given the Geographical Indication (GI) status in 2013. The Bangalore Blue got the GI tag for its specific geographic and indigenous variety.
- Its cultivation has been going on for the past 150 years in about 5,000 hectares.

### Ideal conditions needed to grow Bangalore Blue

- They require soil of red sandy loam type,
- Day temperature of 35 °C to 37 °C and night temperature of 12 °C to 15 °C.

### Context

- Growers of Bangalore Blue grapes are in dire straits as their crops have started drying up with no buyers due to the COVID-19 lockdown.

## 3. Counter-Cyclical Capital Buffer (CCCB)

- It is part of the Basel III regulatory capital framework.
- The aim of the Countercyclical Capital Buffer (CCCB) regime is twofold.
  - \* Firstly, it requires banks to build up a buffer of capital in good times which may be used to maintain flow of credit to the real sector in difficult times.
  - \* Banks may face difficulties in phases like recession when the loan amount doesn't return. To meet such situations, banks should have own additional capital.
  - \* Secondly, it achieves the broader macro-prudential goal of restricting the banking sector from indiscriminate lending in the periods of excess credit growth that have often been associated with the building up of system-wide risk.
- It is thus intended to protect the banking sector against losses that could be caused by cyclical systemic risks increasing in the economy.



**Context**

- RBI has decided that it is not necessary to activate the CCCB at this point in time.

**4. Devanahalli Pomelo**

- Devanahalli Pomelo, a citrus fruit, is popularly known as chakota. Its scientific name is Citrus Maxima
- It is exclusively grown in the region around Devanahalli taluk, Bangalore Rural District, Karnataka, as an exotic crop variety.
- The fruit enjoys a strong market demand. Its sweet taste and flavour are considered to be better than those of other varieties in the market
  - \* The fruit is directly edible and is also used to prepare desserts and jellies
  - \* Pomelo peel is also used in making cosmetics and Ayurvedic medicines
  - \* The tree's fruit is rich in Vitamin C.
- The Devanahalli Pomelo is protected under the Geographical Indications of Goods (Registration & Protection) Act (GI Act) 1999 of the Government of India.

**Context**

- Bangalore International Airport Limited (BIAL) which owns and operates Kempegowda International Airport (BLR-Airport), as part of the 50th anniversary of World Earth Day, hopes to conserve the endangered fruit by cultivating it within the airport campus.

**Details:**

- Hectares of pomelo plantation, which once dotted Devanahalli region, have now all but vanished. Currently, there are less than 100 cultivators in the area.
  - \* This is due to construction of the Bengaluru International Airport at Devanahalli.
  - \* 1. The horticultural land on which the trees were growing was sold by farmers at high prices, and many Devanahalli pomelo trees were felled.
  - \* The absence of an organised market for the fruit was another factor
- Now as part of its flagship CSR Programme Namma Ooru, BIAL will plant 500 pomelo trees.

**5. Draft Electricity Act (Amendment) Bill 2020****Context**

- The Electricity Act, 2003 (the "Electricity Act") was enacted to consolidate the electricity laws in India. While the Electricity Act facilitated significant private investments, market development, and adoption of transparent tariff mechanism etc., the power sector has been facing various developmental hurdles for some time.

- Consequently, to address various issues which have been highlighted by the industry and to further reform the power sector, the Ministry of Power ("MoP"), Government of India, released the draft Electricity (Amendment) Bill, 2020 to amend the Electricity Act.

**Why was it introduced?**

- In India, most electricity distribution companies are run by states and many are under financial stress despite many reforms brought in by the central government.
- The draft proposes to privatise discoms by way of sub-licensing and franchisee models.
  - \* The sub-licensing will allow states to choose a private company for the distribution of electricity supply of a particular area to help it bring down losses of both electricity and finances.
  - \* There is a franchisee model where a private company works on bringing down electricity supply loss and improve billing collections on behalf of discoms.
- As of now under discom license, public-private partnership models like in Mumbai and Delhi are run by private companies like Adani and BSES.

**Major amendments proposed in the Electricity Act are as follows:**

- The Power Ministry proposes introduction of Direct Benefit Transfer (DBT) in the sector, wherein the electricity tariffs will be determined by commissions without taking subsidy into account, which will be directly given by the government to the intended consumers.
  - \* The new Bill aims to end industrial and commercial consumers subsidising electricity charges for domestic consumers and farmers.
  - \* For the needy, electricity charges would be lowered by transferring subsidy directly into the accounts of beneficiary consumers through the DBT platform.
- Another issue plaguing the Indian power sector is non-adherence to terms as agreed to in contracts. This has resulted in a situation where in several states have asked for revision of tariffs from power producers even after the inking of Power Purchase Agreements (PPAs).
  - \* To ensure that this does not result in disputes, the draft Bill proposes establishment of Electricity Contract Enforcement Authority headed by a retired High Court Judge and with powers of a civil court to enforce implementation of the contracts.
- Besides, the regulatory regime will be strengthened by increasing the powers of the Appellate Tribunal for Electricity. The tribunal will also be empowered to enforce its decisions.

- \* The new Bill proposes a system of higher penalties to enable adherence to the guidelines outlined in the proposed legislation.
- It also proposed a National Renewable Energy Policy for the development and promotion of generation of electricity from renewable sources of energy.
  - \* A minimum percentage of purchase of electricity from sources of hydroelectricity is to be specified by the electricity commissions. Non-fulfilment of obligation to buy electricity from renewable and/or sources of hydroelectricity will attract hefty penalty.

#### **Significance**

- The DBT system in the power sector, once implemented, would not only reduce the power subsidy burden of the state governments but also help in making electricity tariffs more economical through sharp reductions in cross-subsidy surcharges.
- The proposed amendments are progressive, transformative and formulated with the objective to remove the regulatory impediments/shortcomings that were being experienced in sectoral functioning

## **6. e-NAM**

#### **Context:**

- Union Agriculture Minister launches new features of e-NAM platform.
- The new features aim to strengthen agriculture marketing by farmers which will reduce their need to physically come to wholesale mandis for selling their harvested produce, at a time when there is critical need to decongest mandis to effectively fight against COVID-19.

#### **Three modules have been launched for enhancing the effectiveness of e-NAM:**

##### ***I) Launch of Negotiable Warehouse Receipt (e-NWRs) module in National Agriculture Market (e-NAM) software.***

- Warehouse (Registered with WDRA – Warehousing Development and Regulatory Authority) trading module with payment feature is launched to enable small & marginal farmers to directly trade their stored produce from selected WDRA registered warehouses which are declared deemed market by the State.
- Farmers will be able to place their produce in WDRA accredited warehouses.
- Already States of Telangana (14 warehouses) & Andhra Pradesh (23 warehouses) declared designated warehouses in the State as deemed market.
- Benefits of e-NWRs integration with e-NAM:
  - \* Depositor can save the logistics expenses and will have better income.
  - \* Farmers can sell the produce across the nation to get better price and at the same time avoid the hassle of mandis.

- \* Farmers will be able to place their produce in WDRA accredited warehouses and avail the benefit of pledge loan if required.
- \* Price stabilization by matching supply and demand through time and place utility.

##### ***II) Farmer Producer Organisation (FPO) trading module***

- FPO trading module is launched to enable FPOs to upload their produce from their premise/collection centres for bidding. They can upload the picture of the produce and quality parameters from their premises to help distant bidders to visualise the produce before bidding.
- FPOs have the option for delivery of produce either from their premises or by bringing to mandi premise after successful bidding. This will not only decongest the mandis but also reduce the logistics cost for the FPOs.
- Facility provided to FPO to upload assaying report/ photo of their produce from their premise to enable traders to visualise the produce before bidding.
- Benefits:
  - \* This will not only decongest the mandis but also reduce the hassle of FPOs in dealing with mandis.
  - \* This will help FPOs by reducing transaction costs (Transportation) and enhancing their bargaining power.
  - \* Facilitates FPOs to avail online payment facility with ease of doing business.

##### ***III) Launch of Logistic Module***

- Presently, e-NAM provides a database of individual transporters to the traders.
- However, as a quantum response to logistic need by traders, provision has been made for linking large logistic aggregator platforms, which will provide choices to users.
- Traders would be able to use the link to navigate to the logistics provider's website and select appropriate services.
- With these additions, more than 3,75,000 number of trucks from large logistic providers would be added for logistic purpose.
- Benefits:
  - \* This will help in seamless transportation of agricultural produce.
  - \* This will promote inter-State trade under e-NAM by providing online transport facilities for distant buyers.

## 7. Facebook-Jio deal

### Context

- Facebook purchased a nearly 10% stake in Reliance Industries' digital business unit Jio Platform
- It brings one of the world's largest Internet companies on the table with India's largest telecom player.

**Before we look at what Facebook's investment in Jio is all about, it is important to understand what this investment is not about.**

- The agreement does not represent an American business buying a majority or controlling stake in an Indian company.
- Second, by no stretch of the imagination is it an 'opportunistic bid' to extract resources from a lucrative Indian business or the burgeoning Indian digital market at a time when Government's attention is diverted by a national crisis caused by a raging pandemic. Hence, it is neither a predatory purchase nor a soft investment to place a small bet on the future.

### **What does the deal mean for Reliance Industries?**

- The deal which pegs the value of Jio platforms at Rs 4.62 lakh crore will help the Reliance group to reduce its debt burden

### **What does it mean for India's Internet ecosystem?**

- The deal marks Facebook's entry among elite investors in India's technology space, joining the likes of SoftBank, Amazon and Google that have together poured in billions of dollars in Indian tech startups and their own ventures over the years.
- Prior to Jio Platforms, Facebook had invested around \$20-25 million in social commerce platform Meesho in 2019
- The deal with Reliance also gives Facebook access to the latter's bouquet of digital apps. These include in-house apps such as Jio Money, Jio TV, etc in addition to the young startups acquired by Reliance or its subsidiaries across categories such as logistics, e-commerce and artificial intelligence.

### **Significance**

- The agreement and the implicit trust of the investor in the Indian market validate the potential of fintech, e-commerce and a reliable data infrastructure to boost growth and development in India.
- This potential extends well beyond India's urban middle classes. In fact, the primary beneficiaries of this new arrangement will also be India's as yet untapped semi-urban and rural digital economy.
- It will be a big step towards giving form and shape to Prime Minister Narendra Modi's 'Digital India'.

### **Concerns**

- For one, given the dominant market position of the players, concerns over the market structure and its implications for consumer welfare are bound to arise.
- Second, the tie-up also raises questions on net neutrality with the possibility of preferential treatment being granted.
- Third, given the data privacy issues highlighted in the past by the Cambridge Analytica episode, for instance, there are apprehensions over the enormous amounts of data that will be collected by these entities, especially when India still does not have a personal data protection law.

### **JioMart**

- It is an e-commerce platform.
- The service, however, is yet to be available in all circles of the country. Currently, consumers in Thane, Navi-Mumbai and Kalyan can use the service to order daily essentials during the lockdown.
- Some of the key features of JioMart are free home delivery, no minimum order value, express delivery, no questions asked return policy and more
- Jio claims offers on products available on JioMart will be much better than the competitor and notes consumers will have "savings" like never before.

### **How it helps the deal?**

- It is expected that the partnership will lead to JioMart using WhatsApp's Business app to help small businesses reach their customer easily. WhatsApp Pay and JioMoney could also merge in to offer a seamless online shopping experience.
- The JioMart and WhatsApp Business collaboration could boost millions of small and medium sized businesses of the country by offering a single platform for shopping, connecting businesses with customers directly and also helping consumers pay for their orders online using the same platform.

### **Should other platforms worry?**

- There are several e-commerce platforms available in the country from BigBasket to Grofers to Amazon and more. Given the surge in demand for groceries or daily essentials due to lockdown, many companies such as Zomato, Swiggy, Uber, among others have started delivering groceries at the doorstep.
- The launch of JioMart in collaboration with WhatsApp could pose a threat to these platforms given the popularity of both the platforms.
- Jio and WhatsApp together have over 750 million users – a lot of whom will be common.

## 8. Global remittances will see a sharp fall: WB

### Context:

- The World Bank Group in a report "COVID-19 Crisis through a Migration Lens" has said that global remittances are projected to experience their sharpest decline in recent times — 20% — owing to migrants losing jobs and wages because of the COVID-19 pandemic.

### Details:

- The pandemic and declining oil prices are likely to reduce remittances from the U.S., the U.K., and EU countries to South Asia, resulting in a projected fall of 22% in remittances to \$109 billion.
  - \* In 2019, these remittances grew by 6.1%.
- In India, remittances for 2020 are projected to fall by 23% to \$64 billion.
  - \* They grew 5.5% in the previous year to \$83 billion.
- The sharpest decline was for Europe and Central Asia — where Russia is a strong source of income and the Ruble had weakened against the U.S. dollar.
- Sub-Saharan Africa and South Asia were next in terms of projected declines in remittances.

### Importance of remittances:

- Remittances are crucial in low and middle income countries.
- Remittances are used in financing household and family expenses — such as on higher education.
- Studies have shown that higher remittances improve nutritional outcomes by increasing investments in higher education.

### Conclusion:

- A fall in these remittances puts various positive outcomes at risk, the World Bank has warned. This is especially true at a time when households were tackling food shortages and financing livelihood needs.
- It is believed that quick actions that make it easier to send and receive remittances can provide much-needed support to the lives of migrants and their families. These include treating remittance services as essential and making them more accessible to migrants.

## 9. Input–Output Model

- It is a form of macroeconomic analysis based on the interdependencies between economic sectors or industries.
- It represents the interdependencies between different sectors of a national economy or different regional economies.

- Wassily Leontief is credited with developing this type of analysis and earned the Nobel Prize in Economics for his development of this model.

### Significance

- This method is commonly used for estimating the impacts of positive or negative economic shocks and analyzing the ripple effects throughout an economy.
- It provides detailed sector-wise information of output and consumption in different sectors of the economy and their inter-linkages, along with the sum total of wages, profits, savings, and expenditures in each sector and by each section of final consumers (households, government, etc.).
- The key advantage of such a model is that it allows the calculation of the impact of any change in any sector in both direct and indirect terms, which has made this model somewhat ubiquitous in the computation of the economic impact of disasters.

## 10. National Thermal Power Corporation (NTPC)

- NTPC is the largest power generating company in India.
- NTPC was incorporated with the objective of building large size thermal power stations, along with associated transmission systems, to accelerate the integrated development of the power sector in the country.
- In 2010, NTPC was granted the coveted status of 'Maharatna Company' by Government of India to make it a global giant in line with its vision "To be the world's largest and best power producer, powering India's Growth".

## 11. Pulses

- They are leguminous crops. Legumes harvested for dry grains are classified as pulses
- They are an inexpensive source of plant-based proteins, vitamins and minerals for people
  - \* Legumes are not only a rich source of protein but also cheaper when compared to animal proteins.
  - \* In addition, pulses are an important source for some of the essential amino acids and have been reported to reduce the levels of cholesterol and blood glucose.
- Pulses contribute to healthy soils and climate change mitigation through their nitrogen-fixing properties.
- They provide green, nutritious fodder for animal.
- Some legumes are known to have medicinal and therapeutic properties also. Hence, they were rightly termed as 'Unique Jewels' of Indian crop husbandry



**Examples**

- Bengal Gram (Desi Chick Pea / Desi Chana), Pigeon Peas (Arhar / Toor / Red Gram), Green Beans (Moong Beans), Chick Peas (Kabuli Chana), Black Matpe (Urad / Mah / Black Gram), Red Kidney Beans (Rajma), Black Eyed Peas (Lobiya), Lentils (Masoor), White Peas (Matar) are major pulses grown and consumed in India.

**Key Stats**

- India is the largest producer (25% of global production), consumer (27% of world consumption) and importer (14%) of pulses in the world.
  - \* Myanmar is the second largest producer, followed by Canada, China, Nigeria, Brazil, and Australia.
- Pulses account for around 20 per cent of the area under foodgrains and contribute around 7-10 per cent of the total foodgrains production in the country.
- Though pulses are grown in both Kharif and Rabi seasons, Rabi pulses contribute more than 60 per cent of the total production.
- The major pulses producing states are Madhya Pradesh, Uttar Pradesh, Maharashtra, Rajasthan and Andhra Pradesh.

**Why is it important to grow pulses?**

- With the problems of malnutrition and micro-nutrient deficiencies affecting sections of our population, pulses can play a significant role in promoting healthy diet. They are low in fat and rich in complex carbohydrates, micro-nutrients, proteins and B vitamins.
- As such, pulses are recommended because they lower the risk of cardiovascular diseases and diabetes. Pulses have also been shown to help combat obesity.
- Apart from improving soil fertility due to their nitrogen-fixing property, they also contribute towards climate change mitigation by reducing dependence on synthetic fertilizers. Greenhouse gases are released during the manufacturing and application of these fertilizers.

**Way forward**

- There is a need to learn from the best practices from around the world and within the country to improve crop productivity
- Universities, Krishi Vigyan Kendras (KVKs) and the government must come together with long term strategies for producing new high yielding varieties, which are resilient to diseases and climate change.
- There is also a need to create value addition and proper marketing facilities for pulses.

**Conclusion**

- With pulses playing a pivotal role in promoting national food security, we need to introduce better seed varieties that are high-yielding, disease and pest-resilient, improve crop production techniques and bring additional fallow lands under pulses production. There is also a need to ensure adequate MSP to the farmers.

**Context**

- In order to meet the protein needs of people during this on-going crisis due to the COVID-19 pandemic, the Central government had decided to provide one kg of milled and cleaned pulses to each National Food Security Act (NFSA) household for three months.
- This is being carried out under the PM Garib Kalyan Anna Yojana (PMGKAY).

**12. Software Technology Parks of India (STPI)****Context:**

- Government of India gives 4 months' rental waiver to the IT companies operating from Software Technology Parks of India (STPI) centres.

**Details:**

- In light of the current coronavirus pandemic, the Ministry of Electronics and Information Technology (MeitY) has decided to provide rental waiver to IT companies housed in STPI premises in the country from March to June, i.e., for 4 months period as of now.

**About the Software Technology Parks of India (STPI):**

- Software Technology Parks of India (STPI) is an autonomous society under the Ministry of Electronics & Information Technology, Government of India.
- It was established in 1991 with the objective of encouraging, promoting and boosting the export of software from India.
- STPI maintains internal engineering resources to provide consulting, training and implementation services.
- Services cover Network Design, System Integration, Installation, Operations and maintenance of application networks and facilities in varied areas.
- The STPI's major functions are to establish software technology parks in various locations in India, and to perform various financial management functions related to it.
- It has 60 centres across India.
- The STPI's Governing Council's Chairperson is the Union Minister for Electronics & Information Technology.



**STPI Objectives:**

- To promote the development and export of software and software services including Information Technology Enabled Services/Bio-IT.
- To provide statutory and other promotional services to the exporters by implementing Software Technology Park/Electronics and Hardware Technology Park Schemes and other such schemes which may be formulated and entrusted by the Government from time to time.
- To provide data communication services including value added services to IT/IT Enabled Services related industries.
- To promote micro, small and medium entrepreneurs by creating conducive environment for entrepreneurship in the field of IT/IT Enabled Services.

**13. Sugarcane Pricing****Context:**

- A Constitution Bench of the Supreme Court has held that both the Central and State governments have the power to fix the price of sugarcane under the Concurrent List of the Constitution.

**Background:**

- The case revolved around a petition by the Western Uttar Pradesh Sugar Mills Association questioning if the State had the power to fix a minimum price when a similar price had already been set by a Central legislation.

**Details:**

- Noting that both the Centre and states have concurrent powers on the subject, a five-judge Constitution Bench, however, said the latter were free to fix sugarcane price higher than the minimum price fixed by the former.
  - \* The five-judge Bench said that even though a State cannot fix a minimum price if the Centre has already fixed it, the State is always welcome to fix the advised price.
- States can't fix sugarcane price lower than the statutory minimum price fixed by the Centre.
- The price fixed by Centre is the "Statutory Minimum Price" and the price fixed by state is "Advisory Minimum Price".
- There was no conflict between the two until the Advisory minimum price was higher than the statutory minimum price of sugarcane, it said, adding, the Centre has complete authority to set the statutory minimum price and states can fix an advisory price, which needed to be higher than the one fixed by Centre.

- \* It is only in a case where the "advised price" fixed by the state government is lower than the "minimum price" fixed by the central government, the provisions of the central enactments will prevail and the "minimum price" fixed by the central government would prevail.
- \* So long as the "advised price" fixed by the state government is higher than the "minimum price" fixed by the central government, the same cannot be said to be void as per the provisions of the Constitution of India.

**14. How oil price crash impacts sugar, what it means for India?****Background**

- All commodities have taken a demand hit from subdued economic activity and lockdowns imposed by many countries to combat the COVID-19 pandemic.
- But sugar is one commodity that, until quite recently, was on a bull run.
- Most estimates showed global production in 2019-20 (October-September) to fall short of consumption by 8-9 million tonnes (mt).
- But there was drop in demand.

**Reasons**

- One reason for this collapse is the closure of restaurants, weddings and other social functions not taking place, and people avoiding ice-creams and sweetened cold beverages that might cause throat infections.
  - \* Coronavirus-induced lockdowns has impacted out-of-home consumption
- Sinking crude prices appear an even bigger factor. The juice from crushing sugarcane can be crystallised into sugar or fermented into alcohol. When oil prices are high, mills — especially in Brazil — tend to divert cane for making ethanol (alcohol of 99%-plus purity) that is used for blending with petrol.
  - \* In 2019-20 (April-March), only 34.32% of cane crushed by Brazilian mills went for manufacturing 26.73 mt of sugar. The rest was used to produce 31.62 billion litres of ethanol.
  - \* But with oil prices tanking mills will not find it attractive to divert cane for ethanol.

**How will this affect India?**

- Dip in sugar consumption, together with higher Brazilian output, is bad news for both Indian sugar mills and cane farmers. Before COVID-19 happened, the Indian industry was expecting to export 5.5-6 mt of raw sugar in 2019-20. Mills had already entered into contracts of some 3.8 mt, out of which 3.05 mt have been shipped out so far.
- The current plunge in world prices, plus Brazil's likely production surge, would upset these calculations.

**Are other agri-commodities impacted?**

- Prices of corn, which is also used for making ethanol, fell to their lowest since September 2009 at Chicago on April 21.
- Likewise, palm oil, again a feedstock for bio-diesel, ended 7.5% lower at the Bursa Malaysia futures exchange.
- Corn prices can, in turn, drag down other cereals, just as palm oil could to soyabean and other oilseeds.
- They are all ultimately linked to oil, whose prices matter as much to petroleum companies as farmers.

\* The report also mentioned high customs duties on medical devices and Information and Communications Technology. These goods categories were persistent challenges in trade talks between India and the U.S in 2019.

- Online IP enforcement in India has improved, the report said, but progress is undercut by factors including weak enforcement by courts and the police, lack of familiarity with investigative techniques and no centralized IP enforcement agency.

**Special 301 Report:**

- It is prepared annually by the Office of the United States Trade Representative (USTR) that identifies trade barriers to United States companies and products due to the intellectual property laws, such as copyright, patents and trademarks, in other countries.
- The Special 301 Report is published pursuant to Section 301 of the Trade Act of 1974.
- By statute, the annual Special 301 Report includes a list of "Priority Foreign Countries", that are judged to have inadequate intellectual property laws; these countries may be subject to sanctions.
- In addition, the report contains a "Priority Watch List" and a "Watch List", containing countries whose intellectual property regimes are deemed of concern.

**15. U.S. Priority Watch List****Context:**

- United States Trade Representative (USTR) has released its Annual Special 301 Report.

**Details:**

- India continues to be on the 'Priority Watch List' of the USTR for lack of adequate intellectual property (IP) rights protection and enforcement.
- The same assessment was made in the 2019 report.
- Algeria, Argentina, Chile, China, Indonesia, Russia, Saudi Arabia, Ukraine and Venezuela are also on the Priority Watch List.

**What does the report say about India?**

- India remains one of the most challenging economies for IP enforcement and protection.
- While India made meaningful progress to enhance IP protection and enforcement in some areas over the past year, it did not resolve recent and long-standing challenges, and created new ones, the report said.
- The long-standing concerns are about:
  - \* Innovators being able to receive, maintain and enforce patents particularly in the pharmaceutical sector.
  - \* Concerns over copyright laws not incentivising the creation and commercialization of content.
  - \* An outdated trade secrets framework.
- Other concerns stated by the report are that:
  - \* India also further restricted the transparency of information provided on state-issued pharmaceutical manufacturing licenses.
  - \* It continues to apply restrictive patentability criteria to reject pharmaceutical patents.
  - \* It has still not established an effective system for protecting against the unfair commercial use, as well as the unauthorized disclosure, of undisclosed test or other data generated to obtain marketing approval for pharmaceuticals and certain agricultural chemical products.

**16. World economy to contract by 3%: IMF****Context:**

- As per the International Monetary Fund's (IMF) World Economic Outlook (WEO), the COVID-19 pandemic is having a severe effect on the world economy which is expected to contract by 3% in 2020, much worse than the 2008-09 financial crises.

**WEO findings:**

- World growth rates have been revised downwards by more than six percentage points since the January WEO update.
- The cumulative loss to global GDP over 2020 and 2021 from the pandemic crisis could be around \$9 trillion, greater than the economies of Japan and Germany combined.
- The global forecast is characterised by 'extreme uncertainty,' the IMF warned.
- Emerging Asia is projected to be the only region that grows in 2020, at a rate of 1% — still more than 5 percentage points below the previous decade's average.
- In China, where the coronavirus's impacts were first recorded this year, the first quarter economic activity could have contracted by 8% year-on-year. China is projected to grow at 1.2% in 2020 and 9.2% in 2021.

- Assuming the pandemic fades in the second half of this year, with containment efforts gradually easing up, the world economy is projected to grow at 5.8% in 2021 as economic activity normalises, aided by policy, the IMF said.

#### India:

- India's growth is expected to dip to 1.9% in 2020 and rebound to 7.4% in 2021, as per the WEO released by the IMF.
- India's growth projection for 2020 is 3.9% less than what was projected in the January update to the WEO while its rebound in 2021 is 0.9 % higher than the January projection (for India, forecasts are on a fiscal year basis).

#### Way forward:

- IMF called on policymakers to make targeted fiscal, monetary and financial sector interventions to support impacted households and businesses.
- It advised that the fiscal measures should be two-fold, cushioning the impact on the most-exposed households and businesses and reducing firm closures, i.e., preserving economic relationships.
- It was said that necessary measures to reduce contagion and protect lives will take a short-term toll on economic activity but should also be seen as an important investment in long-term human and economic health.
- The economic impact of the disease depends on a number of factors and their unpredictable interaction, including the pandemic's pathway, the intensity and effectiveness of containment efforts, significant tightening of global financial market conditions and so forth.

### **17. Outdated census data keep 10 cr. out of PDS: economists**

#### Context:

- Over 10 crore people have been excluded from the Public Distribution System because outdated 2011 census data is being used to calculate State-wise National Food Security Act (NFSA) coverage, according to economists Jean Dreze and Reetika Khera.

#### Details:

- Under the NFSA, the PDS is supposed to cover 75% of the population in rural areas and 50% of the population in urban areas, which works out to 67% of the total population, using the rural-urban population ratio in 2011.
  - \* India's population was about 121 crore in 2011 and so PDS covered approximately 80 crore people.

- When the NFSA came into effect in 2013, State-wise ratios were worked out for rural and urban areas, using National Sample Survey data, in such a manner that everyone below a given national "per-capita expenditure benchmark" is covered, meaning that PDS coverage should be higher in poorer States.
- However, applying the 67% ratio to a projected population of 137 crore for 2020, PDS coverage today should be around 92 crore.
- The economists highlight that, taking into account growing urbanisation, the shortfall would be around 10 crore people who have slipped through the cracks.

#### Concerns:

- Many State governments are reluctant to issue new ration cards beyond the numbers that will be provided for by the Central quota, making it difficult to reduce exclusion errors in the PDS.
  - \* About seven lakh applications for ration cards are pending in Jharkhand, because the State government stopped issuing new ration cards several years ago to avoid exceeding the numbers provided for by the Central government
- The biggest gaps are in Uttar Pradesh, where 2.8 crore people may have been left out, and Bihar, which would have had almost 1.8 crore people excluded from the NFSA.
- With the 2021 census process being delayed due to the COVID-19 crisis, any proposed revision of PDS coverage using that data could now take several years.

#### Conclusion:

- The Centre's calculation of the actual number of people to be covered in each State has remained frozen. The numbers should be updated using projected population figures, allowing State governments to issue new ration cards over time.

### **18. RBI to pump in 1 lakh crore**

#### Context:

- The Reserve Bank of India (RBI) has announced liquidity measures to ease financial stress and increase credit flows in the Indian economy.

#### Details:

#### **Ensuring liquidity:**

- The newly announced measures include liquidity infusion of 1 lakh crore rupees, of which 50,000 crore rupees is exclusively for Non-Banking Finance Companies (NBFCs), via banks.
- While the NBFCs have extended the loan moratorium option to their customers, the banks have not offered the NBFCs any moratorium for repayment, due to which the NBFCs have experienced liquidity shortage.
- The RBI has extended another 50,000 crore rupees to refinancing agencies like NABARD, SIDBI and National Housing Bank.

**Help for States:**

- The RBI has increased the Ways and Means Advances (WMA) limits of States by 60%, over and above the level as on March 31, 2020. The increased limit will be available till September 30, 2020.
- Ways and means advances is a mechanism used by Reserve Bank of India under its credit policy to provide to States, banking with it, to help them tide over temporary mismatches in the cash flow of their receipts and payments.
- The increased limit for WMAs will help the states plan their market borrowing programmes better while ensuring greater containment and mitigation efforts by the states.

**Inflation:**

- The RBI Governor has stated that inflation could be on a declining trajectory given the fact that it has fallen by 170 basis points from its January 2020 peak. The retail inflation for March 2020 stands at 5.9%.
- Food inflation has decreased by around 160 bps though in other categories of the CPI, inflation pressures remained firm.
- The RBI Governor has predicted that the inflation could recede even further in the absence of supply disruption shocks and may settle well below the target of 4% by the second half of 2020-21.
- Such a favorable outlook for Inflation trends would make policy space available to address the risks to growth and financial stability brought on by COVID-19. This would allow room for reduction in interest rates.

**Interest rates:**

- The surplus liquidity in the banking system has risen significantly in the wake of government spending and the various liquidity enhancing measures by RBI.
- This had led the banks to park 9 lakh crore rupees in the RBI through the reverse repo window.
- The RBI has reduced the reserve repo rate by 25 bps to 3.5%, to discourage banks from parking their excess liquidity with RBI. Reverse repo rate cut will nudge banks to lend more.
- The repo rate has not been changed.

**NBFCs get 50,000-cr. liquidity booster****Context:**

- The Reserve Bank of India (RBI) has announced measures to provide support to the Non-Banking Financial Companies (NBFCs).

**Details:**

- The RBI has announced measures to provide liquidity support to NBFCs.

- The RBI has stipulated that small and mid-sized NBFCs and micro-finance institutions (MFIs) should receive at least 50% of the funds availed by the banks under targeted long-term repo operation (TLTRO).
- Banks can avail 50,000 crore rupees through the targeted long-term repo operation.
- The newly announced measures by the RBI requires the banks to invest the funds availed by the banks under TLTRO in investment grade bonds, commercial paper, and non-convertible debentures of NBFCs.
- Of the 50% stipulated for smaller entities, 10% has to be invested by banks in securities of MFIs, 15% in securities issued by NBFCs with asset size of 500 crore rupees and below; and 25% in securities issued by NBFCs with assets size between 500 crore and 5,000 crore rupees.
- The RBI would be providing special refinance facility of 50,000 crore rupees to NABARD, SIDBI and NHB to enable them to meet sectoral credit needs.
- This involves 25,000 crore rupees to NABARD for refinancing Regional Rural Banks (RRBs), cooperative banks and Micro Finance Institutions (MFIs); 15,000 crore rupees to SIDBI for on-lending/refinancing; and 10,000 crore rupees to NHB for supporting Housing Finance Companies (HFCs).

**Significance:****Avoiding financial instability:**

- Since the current situation has led to delays in projects which have availed loans from the NBFCs, the regulator has allowed non-banking institutions to extend the Date for Commencement for Commercial Operations (DCCO) by an additional one year, without treating the same as restructuring, since the project is delayed due to reasons beyond the control of the promoter.

**Commercial real estate sector:**

- The new measures provide certain benefits for loans extended to the crucial commercial real estate sector.
- The allotment of 10,000 crore rupees to the National Housing Bank is a big move for the real estate sector reeling under a liquidity crisis. It will help provide capital to HFCs and eventually provide major relief to developers battling liquidity issues.
- For real estate, the announcement that loans given by NBFCs to real estate companies would get similar benefits as those given by the scheduled commercial banks is positive. This involves measures like loan moratorium and extended timeframe for NPA classification.
- The RBI's decision will provide some relief to the sector, which had already been dealing with its own set of issues prior to the pandemic.



## 19. SEBI eases norms on IPO, rights issues

### Context

- The Securities and Exchange Board of India (SEBI) has relaxed certain regulatory requirements related to rights issues and Initial Public Offers (IPOs) to make it easier for companies to raise funds at a time when the COVID-19 pandemic has made the secondary markets increasingly volatile.

### Details:

- SEBI has said that any listed entity with a market capitalisation of at least ₹100 crore can use the fast track route for rights issue.
  - \* Earlier, the base limit was set at ₹250 crore for such offerings.
- Any company that has been listed for 18 months can raise funds through fast track rights issue.
  - \* The earlier eligibility was set at three years.
- The minimum subscription requirement to make the issue successful has been lowered from the earlier 90% of the offer size to 75% of the issuance.
- Issuers have been allowed to amend the issue size by up to 50%, up from the current 20% — without the requirement of filing a fresh draft offer document.
- SEBI has also extended the validity of its observations issued on draft documents by six months for issuers whose observations have expired or will expire between March 1 and September 30.
  - \* SEBI issues final observations on IPO draft documents after which the company has one year to launch the public issue.

## 20. Govt. to suspend IBC rules for up to one year

### Context:

- In a major relief for corporate borrowers hit hard by the COVID-19 pandemic, the government has decided to amend the insolvency law to suspend up to one year provisions that trigger insolvency proceedings against defaulters.

### Details:

- An ordinance would be promulgated to suspend three sections of the IBC (Insolvency and Bankruptcy Code) for up to one year.
- Sections 7, 9 and 10 of the IBC would be suspended for six months and the suspension time can be extended by up to one year.
  - \* Section 7 and 9 pertain to initiation of corporate insolvency proceedings by a financial creditor and an operational creditor, respectively.
  - \* Section 10 relates to filing of an application for insolvency resolution by a corporate.

### Significance of the move:

- Amendments to the IBC would pave the way for banks to restructure loans.
- The decision in a way provides more leeway for corporate borrowers in repaying their loans.
- Currently, RBI norms prohibit restructuring of loans and resolution has to be done under IBC.
  - \* As per existing norms, if a payment default exceeds 90 days then the lender concerned has to refer the account for resolution under IBC or any other mechanism permitted by the Reserve Bank of India (RBI).
  - \* The lender does not have the option to restructure the loan.
- In March 2020, the government raised the threshold default amount for invoking insolvency proceedings under IBC to ₹1 crore from ₹1 lakh in order to prevent triggering of such proceedings against small and medium enterprises. Many such enterprises are under financial stress due to the lockdown.

## 21. FDI from Neighboring Countries now needs

### Government nod

### **Chinese bank picks up 1% stake in HDFC**

### Context

- China's central bank People's Bank of China (PBoC) has picked over 1% stake in the country's largest mortgage lender Housing Development Finance Corporation (HDFC) Ltd.

### Details

- The People's Bank of China has 1.75 crore shares or 1.01% stake in HDFC.
- The Chinese bank had some stake in HDFC prior to Jan-March quarter i.e. they held 0.8 percent in the company. But the disclosure was made since the shareholding crossed 1% during the fourth quarter of 2019-20.
  - \* It is compulsory for firms to disclose data for shareholders with over 1% stake at the end of every quarter.

### Other major holders

- The government of Singapore which holds a 3.23 percent stake in HDFC.
- Similarly, the Saudi Arabian Monetary Authority (SAMA) has also picked up a 0.7 percent stake in HDFC on behalf of Saudi sovereign wealth fund
  - \* SAMA's name isn't reflected in the names of major shareholders as the holding in the company is less than one percent



**Why China makes news?**

- It made news probably in the context of China's aggressive bid to dominate the region. Over the years, China has attempted to dominate the trade, investment areas in Asian countries.
- China has been buying stakes across major financial institutions in Asia amid the stock market crash in major economies.
  - \* The fear is partly due to the concerns arising from other countries where Chinese investments in the time of COVID-19 are seen as an attempt to take over national assets at a time of crisis.

**FDI****Context**

- In a move that will restrict Chinese investments, the Centre has made prior government approval mandatory for foreign direct investments from countries which share a land border with India.
  - \* Until now, Chinese investments were automatically allowed, similar to those from other nations.
  - \* Previously, only investments from Pakistan and Bangladesh faced such restrictions.

**Why was this decision taken?**

- With many Indian businesses coming to a halt due to the lockdown imposed to contain the COVID-19 pandemic and valuations plummeting, a number of domestic firms may be vulnerable to "opportunistic takeovers or acquisitions" from foreign players.
- The revised FDI policy is aimed at "curbing opportunistic takeovers/acquisitions of Indian companies.
  - \* Given the macro situation, it is a measure to protect vulnerable companies, with possibly low valuations, from unwelcome takeovers.
- The separation between state-owned enterprise and private enterprise of China is minimal.
  - \* Most prominent private technology companies – including those that are major investors in India – playing key roles in advancing government initiatives at home, including in running an effective censorship regime.

**Govt route:**

- The government's approval is mandatory.
- The company will have to file an application through Foreign Investment Facilitation Portal, which facilitates single-window clearance.
- The application is then forwarded to the respective ministry, which will approve/reject the application in consultation with the Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce.

**New Rules**

- A Non-Resident Entity can invest in India, subject to the FDI Policy except in those sectors/activities which are prohibited.
  - \* Non-resident entity means a 'person resident outside India' as defined under FEMA.
- However, an entity of a country, which shares land border with India or where the beneficial owner of an investment into India is situated in or is a citizen of any such country, can invest only under the Government route.
  - \* The new rules will also apply to all the existing and planned investments by foreign firms in Indian businesses
  - \* The revised position mentions that government's nod is required for every type of FDI - green field or brown field.
  - \* It also does not distinguish between the different types of investors, such as industry players, financial institutions, or venture capital funds.
- Investors from countries not covered by the new policy only have to inform the RBI after a transaction rather than asking for prior permission from the relevant government department.

**Negative Impact**

- The restrictions on green field investments will impact India's Make in India plans as the country has been wooing Chinese firms like mobile manufacturers to set shop in the country and reduce imports from China.
- China investments in India spans across sectors with significant ones in mobile and related technologies and products, automobiles, and financial technologies.
- Indian start up ecosystem is also seeing lot of Chinese investments.
  - \* Flipkart has an investment from Tencent (about 5 per cent) and Alibaba owns a significant stake in Paytm.
- The absence of an investment may cause bankruptcy and job losses
- The decision will be a dampener for such initiatives and may act as disincentive for the future investments.
  - \* This may also strain the bilateral ties between India and China.
- The COVID-19 pandemic has and will definitely cause financial stress in many unlisted or private companies.
  - \* Making government approval necessary for acquisitions in private companies by Chinese investors will only reduce the number of potential investors available and will drive down the valuation.

**Conclusion**

- The market pundits fear that Chinese with large foreign exchange reserve of more \$3 trillion may prowl and buy shares of MNC's and eventually take over the management.
- Such a restriction is warranted at least during the time India Inc recovers and stands on its feet again.

**22. Franklin Templeton Crisis****Context**

- Franklin Templeton is the country's ninth-largest mutual fund house. It announced that it was winding up six debt schemes

**Winding up**

- It means that investors who had put money into those six Franklin Templeton schemes can no longer simply withdraw their cash based on the value of the underlying assets.
- Instead, the money is now frozen.

**Details**

- These schemes are
  - \* Franklin India Ultra Short Bond Fund,
  - \* Franklin India Short Term Income Fund,
  - \* Franklin India Credit Risk Fund,
  - \* Franklin India Low Duration Fund,
  - \* Franklin India Dynamic Accrual Fund and
  - \* Franklin India Income Opportunities Fund.
- Together these schemes had nearly Rs 30,000 crore of investor assets in them, equivalent to a quarter of all assets that Franklin Templeton was managing.

**Why was the decision taken?**

- The fund house said that it had decided to wind up the schemes to preserve the value, at least, at the current levels, for, the value was getting eroded due to a combination of redemption pressures and mark-to-market losses following the lack of liquidity on account of the COVID-19 impact on markets.
- Franklin also said that some of the schemes that were closed had direct exposure to high-yielding securities across the rating spectrum but the instruments rated below 'AAA' were the most impacted.
- Such a move is unprecedented for India, where the last time a mutual fund was forced to wind up a scheme was because of regulatory and legal orders.

**Will it shut its operations?**

- The combined size of these funds are Rs 25,856 crore as on April 22. This does not mean that Franklin Templeton is shutting down.
- Even after these schemes are wound up, Templeton still has seven other debt funds in its stable, with combined assets under management of about Rs 17,800 crore as on April 22.

- These apart, the house has 15 equity funds worth Rs 36,663 crore and 11 hybrid category schemes (those that invest in a combination of equity and debt) with assets of Rs 3,143 crore as on March 31, as per Value Research data. These funds will continue to function as usual.
- So, the winding up of these schemes will have a limited impact on investors of other schemes.

**What does the winding up of schemes mean for investors?**

- It essentially means that Franklin Templeton MF will first liquidate the assets in the schemes and then return the money to investors.
- With the market situation tough for now, investors may not get an immediate exit. Industry insiders say the fund house may find it difficult to get a buyer for the low-rated assets in the portfolio, so investors may have to wait.
- On the other hand, if the fund house pushes hard to get new buyers for those assets, it will go at a substantial haircut, which would mean a big loss for investors on their capital investment.
- Shutting down six schemes is unprecedented and can break investor confidence in mutual funds.

**What are credit risk funds?**

- Credit risk funds are debt funds that play on the principle of high-risk-high-reward.
- By definition, credit funds invest 65 per cent of the portfolio in bonds that are AA rated or below, and investors must be aware that they are investing in schemes that are investing in lower-rated papers.
- While higher-rated bonds of companies are more secure and offer lower interest rates, credit risk funds generally invest in lower-rated bonds which offer higher return but also carry a higher risk.

**Why are they risky?**

- The managers of most credit risk funds have been seen chasing high yields and ignoring the associated higher risk. This strategy worked well when the external environment was good — the economy witnessing higher growth rates, and no undue pressures on the liquidity front. In such times, when credit funds were exposed to companies with a weaker balance sheet, chances of default were low.
- However, when there is stress in the economy, and even strong companies are finding it tough to raise funds, companies with a weaker balance sheet and higher leverage (AA rated and below) are most vulnerable.
- At such a time, banks, mutual funds and financial institutions that have lending exposure to such companies will see stress building in their books, and borrowers will not be able to service the interest and principal payment.

**How important is the role of the fund manager?**

- While all credit risk funds invest up to 65 per cent in bonds rated AA or below, market experts say that fund managers can lower their risk by following a higher diversification strategy.
- If the scheme is diversified significantly on the asset side (not given large exposure to a few companies), then even if there is a default by one or two companies, the entire portfolio does not get affected.
- Similarly, if the scheme is well diversified on the liability side (not having just a few large investors), then even if one or two investors seek redemption, it does not push the fund house to sell — as has happened with Franklin Templeton.

**What is a mutual fund?**

- A mutual fund is an investment vehicle in which investors pool money to earn returns over a period of time. The money collected is managed by a fund manager who is an investment professional.
- The money is invested in different securities such as bonds, stocks, gold and other assets and seek to provide potential returns.
- Any gains or losses that come in from these investments are shared by investors in proportion to their contribution to the fund.

**What are the different types of mutual funds?**

There are broadly three kinds of funds: debt funds, equity oriented funds and hybrid funds.

- Debt funds invest in assets like government securities and corporate bonds. These funds aim to offer reasonable returns to the investor and are considered relatively less risky.
- Equity funds invest in stocks and look to give investors capital appreciation. Since the returns on equity funds are linked to market movements of stocks, these funds have a higher degree of risk.
- Hybrid funds invest in a mix of both equity and fixed income securities. The proportion of equity could vary between 0-100%.

**RBI opens ₹50,000 cr. liquidity tap for MFs****Context:**

- The Reserve Bank of India (RBI) has announced a special window of ₹50,000 crore for mutual funds in view of the redemption pressure that the fund houses are facing.
- The move comes after Franklin Templeton Mutual Fund decided to wind up six debt funds

**RBI measures:**

- Recognizing the urgent need to intervene, the RBI has assigned 50,000 crore rupees exclusively for commercial banks to lend to mutual funds.
- The new facility is a 90-day repo-based lending window from which banks can avail credit to provide loans to mutual funds.

- There are several provisions in place to incentivise the banks to lend to ease the flow of credit to the fund houses.
  - \* RBI has allowed the banks to breach their 25% ceiling on held-to-maturity investments as a consequence of lending to mutual funds.
  - \* The support extended from banks through this facility would not be counted under the overall capital market exposure limits of the bank.

**Significance:**

- The RBI's move helps reassure investors of adequate liquidity in the mutual fund houses.
- The move also signals to the investors that RBI is alert to the need to preserve financial stability in these challenging times.
- This will help reduce unnecessary speculation and redemption pressures in the industry.

**Concerns:****Credit risk:**

- With the economy still in lockdown and the credit ratings of even relatively well-established companies facing the threat of downgrades, there is considerable credit risk involved in lending.
- The banking industry is already plagued by bad loans and there are doubts about the banking industry's willingness to expose itself to the credit risk involved in making fresh loans.

**Way forward:**

- In case of the RBI's scheme failing to relieve pressure on the mutual fund industry, the Central government may need to step in with a direct intervention

**23. Why are oil prices in negative terrain?****Context:**

- Prices of West Texas Intermediate (WTI), the American benchmark for crude oil, fell to less than zero on 20th April 2020 trade.
- The price of a barrel of WTI fell to minus \$37.63 a barrel. What this means is that sellers have to pay buyers to get rid of their crude.
- This is unprecedented in the oil market, even accounting for its notoriety for being volatile.

**Why did prices fall like this?**

- WTI oil is traded as futures contracts in the NYMEX (New York Mercantile Exchange) where traders buy and sell monthly futures.
  - \* The sellers of such futures will have to deliver a barrel of crude oil at the contracted price in the contracted month just as buyers will have to take delivery at the contracted date.

- \* As with all trading in commodities, there's a huge speculative participation in oil futures trading too.
- \* So speculators buy and sell contracts with no intention of taking delivery (in the case of buyers) or offering delivery (in the case of sellers) of the physical oil, on the contracted date.
- \* These speculators have to unwind their positions on the contract expiry date. If they fail to do so, they will have to take physical delivery of the crude oil on the contracted date.
- \* The term Unwind Position refers to when a trader systematically closes out a trade.
- Speculators who did not want to take delivery in May proceeded to unwind their positions, leading to the massive fall in prices.
  - \* It could be that these were financial speculators who never take physical delivery and hence closed their contracts.
  - \* Or, these could also be delivery-based traders backing out as the bottom has fallen off demand for oil.
- The bottomline is that prices fell as demand for oil is falling and the world, especially America, is running out of storage space.

**May WTI futures prices went negative but June futures prices are still at \$20.43 a barrel. Why?**

- Traders expect demand to recover by June as lockdowns are lifted across the world and economic activity resumes.
- Traders also expect that storage space may be created as existing inventory is drawn down.
- America is also talking of adding to their strategic storage by taking advantage of the low prices. This could create demand for oil.
- Finally, contract expiry for June contracts has given speculators more time to speculate.

**What are contango trades in the oil market?**

- Contango trades happen when traders anticipate a surge or rise in demand and value the commodity higher for the future.
- For instance, while May oil futures are negative and June is at \$20.43 a barrel, November futures for the same grade of oil have ended at a hefty \$31.66 a barrel.

**Can the traders buy cheap oil now and store them for release in future when demand and prices rise?**

- The traders are resorting to such a practice now.
- Such a practice became famous during Iraq's invasion of Kuwait in 1990 when a trader took massive positions at cheap prices ahead of the invasion and sold them when prices rose after the invasion.

- Oil was stored in tankers floating on the sea and unloaded at considerably higher prices. Traders are doing the same now.
- Year-long hiring contracts for VLCC (Very Large Crude Carriers) that can store up to 2 million barrels of oil are soaring through the roof.
  - \* According to a report in the Wall Street Journal, VLCC hiring charges for year-long contracts are now at \$72,500 a day, compared to \$30,500 a day, a year ago.

**The prices of Brent grade are still at \$20.58 a barrel for May futures. What's the reason for the difference?**

- Brent oil has traditionally quoted higher than WTI with the difference being about \$6-7 a barrel between the two.
- Brent is a superior grade produced in the North Sea off the British coast and is the accepted benchmark for this part of the world.
  - \* The market that it serves is considerably larger than that of the United States and demand is, therefore, higher.
- Transporting oil from the U.S. to Asia is not economical thus limiting the scope for the WTI grade.
- Refineries in Europe are configured for Brent rather than WTI.
- Prices of Brent are therefore, always higher than that of WTI.
- Importantly, unlike WTI futures on NYMEX, Brent futures traded in London can be settled by cash when the contract expires. In other words, a trader who has bought oil for May delivery is not forced to take physical delivery of the oil but can settle the contract in cash.
  - \* This difference between WTI and Brent has ensured that Brent futures will not crash like that of WTI.

**How is India benefiting from this price crash?**

- The oil import bill will fall sharply this fiscal year, giving tremendous relief to the government on the external account front.
  - \* With merchandise exports from India badly hit due to the lockdown in the West, foreign exchange earnings are under pressure. With oil prices falling and foreign exchange outgo reducing, the pressure on the current account balance is off.
- \* In fact, India may be looking at a positive balance in the current account if global economic recovery is quick and the exports recover.

- India is quietly building up its strategic reserves, taking advantage of the cheap prices.
  - \* India has a capacity to hold over 39 million barrels of oil at its strategic reserves in Visakhapatnam, Mangalore and Padur, near Udupi.
  - \* These are underground salt caverns converted and built to store crude oil.

**Way forward:**

- Oil producers will have to consider considerably curtailing output.
- After the lockdown, the Central Government of India ought to consider using the low prices opportunity to cut retail fuel prices sharply by foregoing some excise revenue for a while in order to incentivize momentum into the wider economy.



# INTERNATIONAL RELATIONS

## 1. Comprehensive Nuclear-Test-Ban Treaty (CTBT)

### Context

- In mid-April, a report issued by the United States State Department on "Adherence to and Compliance with Arms Control, Nonproliferation, and Disarmament Agreements and Commitments (Compliance Report)" raised concerns that China might be conducting nuclear tests with low yields at its Lop Nur test site, in violation of its Comprehensive Nuclear-Test-Ban Treaty (CTBT) undertakings.
- The U.S. report also claims that Russia has conducted nuclear weapons experiments that produced a nuclear yield and were inconsistent with 'zero yield' understanding underlying the CTBT, though it was uncertain about how many such experiments had been conducted.
- Russia and China have rejected the U.S.'s claims, but with growing rivalry among major powers the report is a likely harbinger of a new nuclear arms race which would also mark the demise of the CTBT that came into being in 1996 but has failed to enter into force even after a quarter century.

### Limited or Partial Test Ban Treaty (LTBT/PTBT)

#### Background

- Two superpower's USA and Soviet Union during the cold war period had engaged in nuclear arms race. It was a competition to dominate the world and attract countries towards its ideology. But there were fears about the impact of nuclear testing on the environment and human health.
- The Cuban Missile Crisis in 1962 brought the United States and Soviet Union to the brink of nuclear war.
- The incident highlighted the necessity for greater cooperation between the two principal nuclear powers, and served as an impetus for the LTBT. This is where they came up with a treaty with mutual desire to restrain the nuclear arms race.

#### LTBT

- It is an arms control agreement intended to restrict the testing of nuclear weapons and limit nuclear proliferation.
- As a result, the treaty prohibits testing nuclear weapons in the atmosphere, underwater, and in outer space. It does, however, permit nuclear test explosions underground.

#### Significance

- The LTBT ushered in a new era of superpower cooperation on nuclear arms control and proliferation.
- USA and USSR worked with other international nuclear powers to sign the Nuclear Non-Proliferation Treaty (NPT)

- It contributed to slowing proliferation.

### Concerns

- Since it allowed underground testing, the LTBT however did little to limit the superpower nuclear arms race
- On the ground that it was "difficult to evolve a fool proof verification system"
- And even as superpower nuclear tests went underground, China and France, which refused to join the PTBT, continued to conduct atmospheric tests.

The belief that PTBT would play a crucial role in reversing the intense arms-race among the Nuclear Weapons States (NWS) was essentially flawed.

### CTBT

- The Comprehensive Nuclear-Test-Ban Treaty (CTBT) is the Treaty banning all nuclear test explosions anywhere in the world. The CTBT obligates countries that sign and ratify "not to carry out any nuclear weapon test explosion or any other nuclear explosion."

### What is the CTBT verification regime?

The CTBT verification regime is a unique, comprehensive system, consisting of the International Monitoring System (IMS), International Data Centre (IDC) and On-Site Inspections (OSI). It constantly monitors the planet for nuclear explosions and shares its findings with Member States

International Monitoring System (IMS) - Detect Nuclear Explosions

- Seismic: to detect shockwaves in the Earth.
- Hydroacoustic: to detect acoustic signals in the oceans
- Infrasound: to detect low-frequency sound waves in the air with a network of 60 stations
- Radionuclide: to detect radionuclide particles and noble gas.

International Data Center (IDC)

- It processes and distributes data to State Parties

On-Site Inspections (OSI)

- This involves a team of 40 inspectors who search the area where data suggest that a nuclear explosion may have taken place.
- It may be requested by any State Party to determine whether suspected cheating has occurred.

### Why is the CTBT so important?

The CTBT is the last barrier on the way to develop nuclear

weapons.

- It curbs the development of new nuclear weapons and the improvement of existing nuclear weapon designs.
- When the Treaty enters into force it provides a legally binding norm against nuclear testing.
- The Treaty also helps prevent human suffering and environmental damages caused by nuclear testing.

#### **Why is CTBT not in force?**

- CTBT has so far been signed by 183 states and ratified by 162 states. Yet, a structural prerequisite of the treaty has held it hostage from coming into force.
- Namely, Article 14 of the CTBT, which stipulates that for the treaty to enter into force the signature and ratification by all the 44 states possessing nuclear weapons capabilities and research reactors as listed in Annex 2 is a prerequisite.
- Of the 44 listed countries, to date only 36 have ratified the treaty.
  - \* China, Egypt, Iran, Israel and the U.S. have signed but not ratified.
  - \* In addition, North Korea, India and Pakistan are the three who have not signed.

The CTBT has therefore not entered into force and lacks legal authority.

#### **Concerns with CTBT:**

##### **1. Unequal provisions:**

- The current provisions of CTBT only appear to strengthen the inequality in terms of nuclear arms possession between the haves and have-nots.
- Though the best way to verify a comprehensive test ban would have been to permanently shut down all test sites, the idea was not acceptable to the nuclear weapon states.
- The treaty does not try to address the inequality by measures like disarmament. Despite well-intended proposals from some negotiating countries like India, the CTBT could not anchor itself in a disarmament framework.

##### **2. Ineffective provisions**

- The idea of defining the “comprehensive test ban” as a “zero yield” test ban only prohibited supercritical hydro-nuclear tests and not sub-critical hydrodynamic nuclear tests. This served only U.S. interests and helped it secure unipolar supremacy.
- The CTBT prohibits all parties from carrying out any nuclear weapon test explosion or any other nuclear explosion without clearly defining or elaborating the terms.

#### **Changes in global politics and tensions**

- The key change from the 1990s is that the U.S.'s unipolar moment is over and strategic competition among major powers is back.

- The U.S. now identifies Russia and China as ‘rivals’. Its Nuclear Posture Review asserts that the U.S. faces new nuclear threats because both Russia and China are increasing their reliance on nuclear weapons.
- Tensions with China are already high with trade and technology disputes, militarisation in the South China Sea and most recently, with the novel coronavirus pandemic. The U.S. could also be preparing the ground for resuming testing at Nevada.
- The U.S., therefore, has to expand the role of its nuclear weapons and have a more usable and diversified nuclear arsenal.

#### **Upgradation at work**

- The Trump administration has embarked on a 30-year modernisation plan with a price tag of \$1.2 trillion, which could go up over the years.
- Readiness levels at the Nevada test site that has been silent since 1992 are being enhanced to permit resumption of testing at six months' notice.

#### **Concerns of Russia and China**

- Russia and China have been anxious about the U.S.'s growing technological lead particularly in missile defence and conventional global precision-strike capabilities.
- Russia has responded by exploring hypersonic delivery systems and theatre systems while China has embarked on a modernisation programme to enhance the survivability of its arsenal which is considerably smaller.
- In addition, both countries are also investing heavily in offensive cyber capabilities.

Both China and Russia have dismissed the U.S.'s allegations, pointing to the Trump administration's backtracking from other negotiated agreements such as the Iran nuclear deal or the U.S.-Russia Intermediate-Range Nuclear Forces (INF) Treaty.

#### **Conclusion**

- Resumption of nuclear testing may signal the demise of the ill-fated CTBT, marking the beginnings of a new nuclear arms race.

## **2. Immigration Restrictions**

#### **Context:**

- U.S. President Donald Trump has taken his administration's war on immigration to the next level with his decision to temporarily suspend issuance of green cards.
- He has also confirmed that he would sign an order partially blocking immigration to the U.S., in a move he argues would protect workers from the economic fallout of the COVID-19 pandemic.

#### **Details:**

- About 22 million Americans have lost their jobs since the outbreak forced a global shutdown.

- The U.S. is the world's hardest-hit country, and health care infrastructure in hotspots such as New York has struggled to cope.
- The new order, while in effect, will prevent individuals from bringing their parents, adult children, or siblings into the U.S. (Mr. Trump has called this "chain migration").

#### **Rationale behind the decision:**

- With about 22 million Americans losing jobs, the pandemic has devastated the economy. By pausing immigration, the idea is to help put unemployed Americans first in line for jobs as America reopens.

#### **Exemptions**

- The order has several exemptions, including for those who are already in the U.S. seeking to switch their visa status to permanent residency.
  - \* Entry into the U.S. for individuals who are already legal permanent residents is not suspended.
  - \* The order also does not apply to spouses of U.S. citizens or those seeking entry on the EB-5 investor visa.
  - \* Some immigrant visa holders such as doctors, nurses, healthcare workers and COVID-19 researchers and their spouses and minor dependents are exempt from the suspension order.

#### **Conclusion**

- Trump has said that after 60 days, the policy will be evaluated based on economic conditions in the country.

### **3. Indian Council for Cultural Relations**

- The ICCR is an autonomous organisation of the Government of India involved in India's external cultural relations, through cultural exchanges with other countries and their peoples.
- It was founded in 1950 by Maulana Abul Kalam Azad, independent India's first Education Minister.
- Its objectives are:
  - \* To actively participate in the formulation and implementation of policies and programmes pertaining to India's external cultural relations.
  - \* To foster and strengthen cultural relations and mutual understanding between India and other countries.
  - \* To promote cultural exchanges with other countries and people, and to develop relations with nations.

#### **Context**

- Indian Council for Cultural Relations (ICCR) celebrates its foundation day on 9th of April.

#### **Role of ICCR in the present world:**

- The ICCR was established when there was neither the concept of soft power nor was the term in use.
  - \* Naturally then, the activities were limited in terms of their number and their diverse character as well.
  - \* Majorly, it was about scholarships to foreign students, cultural exchanges involving artistes and youths as also establishing some chairs in some universities, etc.
- Now, in a world where every nation wants to influence and occupy the mind space of the global community and thereby add to its prowess, the ICCR has a major role to play.
- Owing to the limitations of military might which are more obvious, the importance of soft power is increasing.

### **4. Iran's Military Satellite- Noor**

#### **Context**

- Iran's Revolutionary Guard Corps — a branch of the country's armed forces — launched military spacecraft into orbit

#### **Details**

- 'Noor' meaning "light" in Persian, had been launched from the Markazi desert, a vast expanse in Iran's central plateau.
- The Noor satellite was launched by a three-stage rocket which the Iran's Revolutionary Guards Corps (IRGC) said was powered by a combination of solid and liquid fuels.
- The rocket bore the name Qassed, meaning messenger.

#### **Concerns**

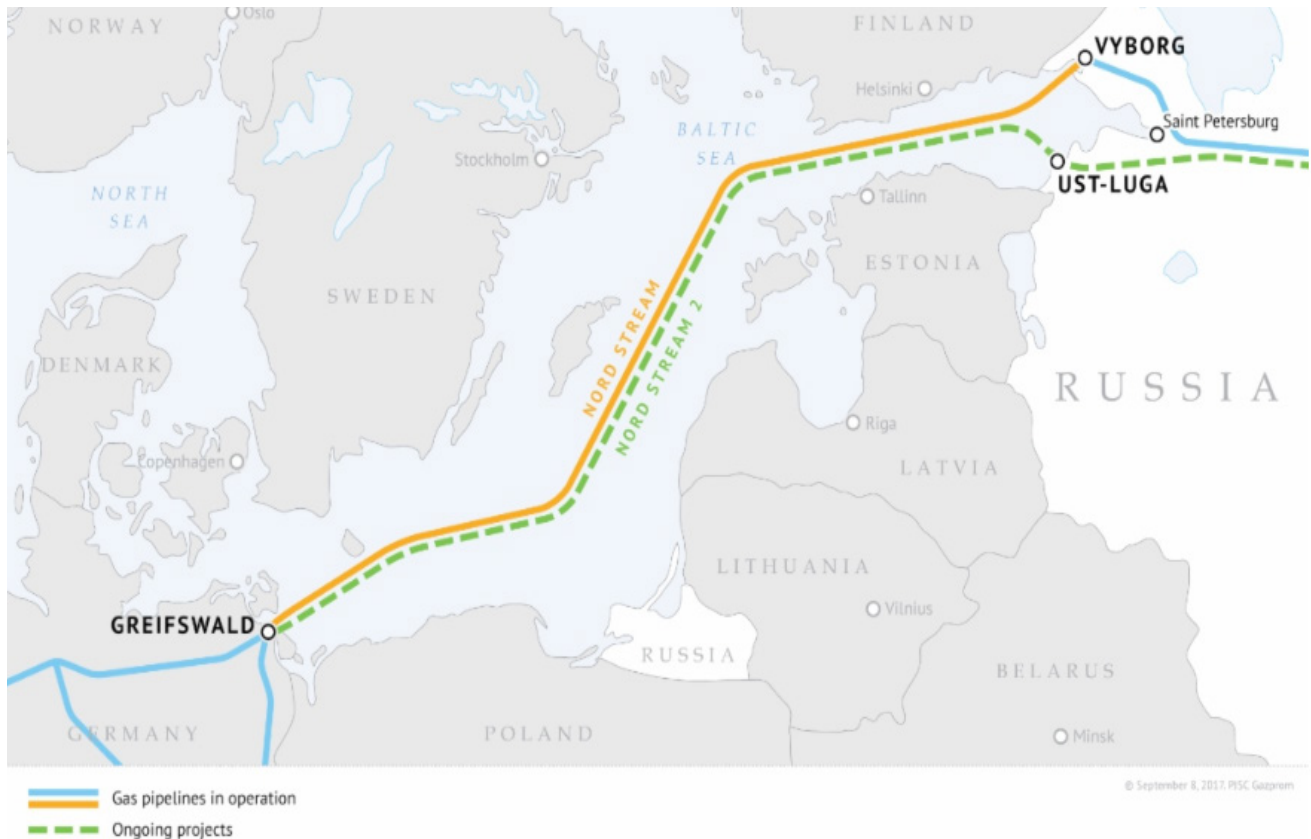
- Despite the fact that Iran has been one of the worst-affected in terms of the COVID-19 cases, Tehran has been engaged in serious strategic competition heightening the tensions in the region.
- The successful launch preceded by a series of failed launches reflects Iran's resolve, muscle flexing and defiance to any infringement on its rise to power in the Gulf and Middle East Region

#### **Launches in the past**

- The country placed its first satellite into orbit in 2009, then performed successful satellite launches in 2011, 2012 and 2015, all using Safir rockets.
- All three orbital launch attempts using the larger Simorgh rocket have failed.

## 5. Nord Stream 2

- It is a new export gas pipeline running from Russia to Europe across the Baltic Sea.
- It will also ensure a highly reliable supply of Russian gas to Europe.
- The entry point of the Nord Stream 2 gas pipeline into the Baltic Sea will be the Ust-Luga area of the Leningrad Region. Then the pipeline will stretch across the Baltic Sea. Its exit point in Germany will be in the Greifswald area.



## 6. Omar Sheikh Death sentence commuted

### Context

- Omar Saeed Sheikh, accused of kidnapping and killing American journalist Daniel Pearl in Karachi in 2002, and who was sentenced to death by a Hyderabad Sindh special court, has been acquitted of the charge of murder by the Sindh High Court after 18 years

### Details

- The Sindh High Court overturned the murder conviction and instead found Sheikh guilty of the lesser charge of kidnapping
- He was sentenced to 7 years in prison.
- However, as Sheikh has already been on death row for the past 18 years, the sentence will be counted as time served

- The court also acquitted three others who had been serving life sentences in the case. All four are likely to be released

### Daniel Pearl's murder

- Daniel Pearl, was an American journalist who worked as the South Asia bureau chief of The Wall Street Journal. He was abducted in Pakistan's Karachi in January 2002, while he was working on a story about Pakistani terror groups linked to Al Qaeda.
- Pearl was later beheaded and a graphic video of his decapitation was sent to Karachi's US consulate
- After global outcry and pressure from the US, Pakistan's then President Pervez Musharraf had Sheikh and the three other militants arrested in the same year, after which they were convicted for Pearl's abduction and murder.

### Ahmed Omar Saeed Sheikh

- A British national who, during the war in Bosnia in the early 1990s, was ferrying relief supplies to the Bosnian side, and soon after that joined the Muzaffarabad-based Harkat ul Ansar, a group that had fought in the Afghan jihad and was closely linked to the Pakistani intelligence, and was then deployed in the proxy war in Kashmir
- He was in Indian prisons from 1994-1999.
- On January 1, 2000, Sheikh was freed along with Maulana Masood Azhar and Mushtaq Ahmed Zargar by India in exchange for the hostages of the hijacked Indian Airlines flight IC-814.
- Sheikh then travelled back to Pakistan. At the time of his arrest in 2002, he was a member of the terror group Jaish-e-Muhammad.
- He was arrested for the kidnapping and killing of the Wall Street Journal's correspondent in Pakistan in 2002.

### **7. Operation Sanjeevani**

- An Indian Air Force (IAF) C-130J transport aircraft delivered 6.2 tonnes of essential medicines and hospital consumables to Maldives under Operation Sanjeevani.
- At the request of the government of Maldives, the IAF aircraft activated Operation Sanjeevani and lifted these medicines from airports in New Delhi, Mumbai, Chennai and Madurai before flying to the Maldives.
- These medicines and consumables were procured from India but couldn't be transported due to the 21-day lockdown imposed to contain the spread of COVID-19.
- Among other things, these medicines include influenza vaccines, anti-viral drugs such as lopinavir and ritonavir — which have been used to treat patients with COVID-19 in other countries — medicines for cardiac conditions, kidney ailments, hypertension, high blood pressure, diabetes, arthritis, allergies and cancer treatment, anticonvulsants, as well as catheters, nebulisers, urine bags and infant feeding tubes.

### **8. Pitch Black**

- It is a biennial warfare exercise hosted by the Royal Australian Air Force (RAAF)
- The aim of the exercise is to practice Offensive Counter Air (OCA) and Defensive Counter Air (DCA) combat, in a simulated war environment.
- It traditionally consists of a 'red team' and a 'blue team' based at separate locations, with one attacking the other.
  - \* Exercise Pitch Black features a range of realistic, simulated threats which can be found in a modern battle-space environment and is an opportunity to test and improve our force integration

### India

- IAF participated with air assets in the year 2018.
- Indian Air Force had earlier participated in the exercise as observers

### Significance

- The objectives for the exercise were to foster closer relationship between the participating friendly forces and to promote interoperability through exchange of knowledge and experience.
- The exercise provided a unique opportunity for exchange of knowledge and experience with the participating nations in a dynamic warfare environment.
- The IAF contingent interacted with various countries, gained first-hand experience of training patterns, employment and operating philosophies of their combat assets.

## **9. South China Sea Issue**

### Context

- As most countries in the Indo-Pacific region are battling the coronavirus pandemic, China is actively pursuing its military moves in the South China Sea by conducting military drills and deploying large-scale military assets to the maritime area.
- It has further consolidated power and has been exploiting energy resources in the sea.

### China Chases Indonesia's Fishing Fleets

- China has been hounding Indonesian fishing vessels in the Indonesian waters off the Natuna Islands.
- Chinese fishing fleets with the support of armed Chinese Coast Guard ships have been encroaching into areas that Indonesia considers exclusive.
- Indonesian fishermen are worried that the government is not doing anything to protect them.
- China's illegal fishing near the Natuna Sea carries global consequences, reminding regional governments of Beijing's expanding claims to the South China Sea through which one-third of the world's maritime trade flows.

### Vietnam protests Beijing's Aggression

- The Vietnamese Ministry of Foreign Affairs reported that a Chinese Coast Guard vessel "rammed and sunk" a Vietnamese fishing boat carrying eight Vietnamese fishermen in the Paracel Islands in the South China Sea.
- It maintained that this violates "Vietnam's sovereignty over the Paracel Islands, causes property losses and endangers the lives, safety and legitimate interests of the Vietnamese fishermen".
  - \* It underlined that Chinese actions "also run counter to agreements reached by Hanoi and Beijing's leaders."



- The Vietnamese government lodged a diplomatic protest with China's embassy in Hanoi, requesting the Chinese side to investigate the incident, strictly discipline the officers aboard the Chinese vessel aforementioned, prevent the recurrence of similar actions, and make adequate compensation for the losses of the Vietnamese fishermen.

#### **Other instances of Chinese Belligerence**

- Besides these incidents, there were satellite images showing a Chinese military plane landing on Kagitingan Reef in the West Philippine Sea.
- There are also reports that China recently opened a research station on Kagitingan and Zamora Reef, also in the West Philippine Sea, to gather data on the ecology, geology, and environment in the Spratlys.

#### **U.S. State Department issued a statement condemning the act**

- It said "We call on the PRC to remain focused on supporting international efforts to combat the global pandemic, and to stop exploiting the distraction or vulnerability of other states to expand its unlawful claims in the South China Sea."

#### **How have countries reacted?**

- Among all the claimant countries, Vietnam has always taken a strong stand against Chinese actions in the South China Sea.
- Unlike the Philippines, which has changed its stance quite often with respect to Chinese activities in the South China Sea, and Indonesia, which recognised the Chinese threat in the Natuna Sea rather late, Vietnam has held a firm stand against China.
- Even with regard to its COVID-19 response, Vietnam was the first country in the ASEAN to suspend all flights to and from China as early as February.

Hence, China has always kept a watch on Vietnamese manoeuvres in the South China Sea dispute.

#### **Window of opportunity**

American ties with Vietnam have been on an upward trajectory in recent times.

- Freedom of Navigation Operations (FONOPS) are operations by U.S. naval and air forces that reinforce internationally-recognized rights and freedoms by challenging excessive maritime claims.
  - \* Vietnam has been an ardent supporter of the U.S.'s freedom of navigation operations (FONOPS) carried out in the South China Sea.
  - \* China has always taken a strong stand against these FONOPS of the U.S.
- China has flexed its muscles to match up to these operations.

- \* In that direction, China also conducted anti-submarine drills in the disputed areas soon after the Pentagon deployed the U.S.-guided missile destroyer USS McCampbell in a FONOP in the South China Sea before the pandemic hit the U.S. mainland with full force.

#### **Conclusion**

- As China seeks to restore its global credibility, creating tensions in the South China Sea should be the least of its priorities.
- A more generous China during a global pandemic might go a long way in ensuring its global ascent.

### **10. USCIRF Report**

#### **U.S. Commission on International Religious Freedom (USCIRF)**

- The USCIRF is an advisory or a consultative body, which advises the US Congress and the administration on issues pertaining to international religious freedom.
- The USCIRF describes itself as an independent, bipartisan US federal government commission that was created by The International Religious Freedom Act (IRFA).
- In practice, the USCIRF has little teeth in implementation, but acts as a conscience-keeper for the two branches in the US government — the legislature and the executive. It often takes maximalist or extreme positions, and has been used by civil society groups to put pressure on US Congress members and administration officials.
- The USCIRF is mandated by US statute to "monitor the universal right to freedom of religion or belief abroad — not in the United States — using international standards to do so and makes policy recommendations to the President, Secretary of State, and Congress". "USCIRF Commissioners are appointed by the President and Congressional leaders of both political parties.

#### **How does USCIRF define "freedom of religion or belief abroad"?**

- The Commission says: "Religious freedom is an important human right recognized in international law and treaties... The freedom of religion or belief is an expansive right that includes the freedoms of thought and conscience, and is intertwined with the freedoms of expression, association, and assembly. The promotion of this freedom is a necessary component of US foreign policy."

#### **And what is the IRFA?**

- The International Religious Freedom Act of 1998 was passed by the 105th US Congress (1997-99) and signed into law by then President Bill Clinton on October 27, 1998. It is a statement of the US's concern over violations of religious freedoms overseas.

- The full title of the Act reads: "An act to express United States foreign policy with respect to, and to strengthen United States advocacy on behalf of, individuals persecuted in foreign countries on account of religion; to authorize United States actions in response to violations of religious freedom in foreign countries; to establish an Ambassador at Large for International Religious Freedom within the Department of State, a Commission on International Religious Freedom, and a Special Adviser on International Religious Freedom within the National Security Council; and for other purposes."

US Commission on International Religious Freedom (USCIRF) thus has two key roles

- To monitor religious freedom violations across the world
- To make recommendations to the US government on how to promote religious freedom as part of American foreign policy.

### Context

- The U.S. Commission on International Religious Freedom (USCIRF) has downgraded India to the lowest ranking, "countries of particular concern" (CPC) in its 2020 report.
- USCIRF had placed India on CPC and watch list in 2001, 2002, 2003, 2004, 2009 and 2010.

### Details

- In its 2019 report, India continued to remain a Tier 2 country, a list it has been unable to get off of since 2009.
  - \* Tier 2 countries are those in which violations engaged in or tolerated by government are serious and characterized by at least one of the elements of systematic, ongoing, and egregious (horrible).
- The 2020 report, released in Washington by the federal government commission that functions as an advisory body, placed India alongside countries including China, North Korea, Saudi Arabia and Pakistan.
  - \* This is the first time since 2004 that India has been placed in this category.
  - \* CPC is designated to a nation guilty of particularly severe violations of religious freedom under the International Religious Freedom Act (IRFA) of 1998.
  - \* The term 'particularly severe violations of religious freedom' means systematic, ongoing, egregious violations of religious freedom.

### Why has India been moved to Countries of Particular Concern?

- The commission noted in its report that "India took a sharp downward turn in 2019, which included specific concerns about the Citizenship Amendment Act, the proposed National Register for Citizens, anti-conversion laws and the situation in Jammu and Kashmir."

- "The national government used its strengthened parliamentary majority to institute national-level policies violating religious freedom across India, especially for Muslims."
- The panel said that the CPC designation was also recommended because "national and various State governments also allowed nationwide campaigns of harassment and violence against religious minorities to continue with impunity, and engaged in and tolerated hate speech and incitement to violence against them".

### Concerns

- The commission also recommended that the U.S. government take stringent action against India under the "International Religious Freedom Act" (IRFA).
- It called on the administration to "impose targeted sanctions on Indian government agencies and officials responsible for severe violations of religious freedom by freezing those individuals' assets and/or barring their entry into the United States under human rights-related financial and visa authorities, citing specific religious freedom violations".
- In 2005, Prime Minister Narendra Modi who was at the time the Chief Minister of Gujarat was censured by the USCIRF.
  - \* The commission had recommended sanctions against Mr. Modi for the 2002 riots and the U.S. government had subsequently cancelled his visa.
- The USCIRF 2020 report makes a specific mention of Home Minister Amit Shah, for not taking what it deemed as sufficient action to stop cases of mob lynching in the country, and for referring to migrants as termites.
  - \* In December 2019, the USCIRF had also asked the U.S. government to consider sanctions against Mr. Shah and other principal leadership over the decision to pass the Citizenship Amendment Act.

### Country of Particular Concern (CPC)

- There is a reputational issue involved, for India, as the world's largest democracy that draws strength from the protection of diversity
- To be clubbed with China and Burma, Pakistan and North Korea as a country of particular concern is unfortunate.

However, two of the nine members have expressed their dissent over the USCIRF recommendation to place India in the CPC.

- India is not the equivalent of communist China, which wages war on all faiths;
- nor of North Korea, a prison masquerading as a country;
- nor of Iran, whose Islamic extremist leaders regularly threaten to unleash a second Holocaust.

- India is the largest democratic nation in the world, where the CAA has been challenged openly by the opposition parties and lawmakers, civil society, and various groups

#### Will it impact India's relationship?

- Former Indian Ambassadors to the U.S. point out that though a CPC designation is unlikely to make any difference to the U.S.-India bilateral relationship on other issues, it would be premature to dismiss the USCIRF's recommendation completely.
- In practice, the USCIRF has little teeth in implementation.
- State department hasn't always followed the USCIRF's recommendations.

### **11. U.S. gives 'terrorist' label to white supremacist group**

#### Context:

- The Trump administration has designated an ultranationalist group based in Russia – the Russian Imperial Movement as a terrorist organisation.

#### Russian Imperial Movement (RIM):

- The RIM is an ultra-nationalist paramilitary group based in St Petersburg, where it has training camps, with alleged links to other white supremacist organisations. According to the US State Department, it is a terrorist group that provides paramilitary-style training to neo-Nazis and white supremacists.
- The RIM is not considered to be sponsored by the Russian government, although President Vladimir Putin has tolerated its activities and it has helped advance the Russian government's external goals by recruiting Russian fighters to aid pro-Russia separatists in eastern Ukraine.
- The group has also helped support neo-Nazi groups in Scandinavia.
- Although a Russian Imperial Movement member has visited the U.S., the organisation does not appear to have domestic members. It is not clear if the group has provided training to U.S.-based neo-Nazis.

#### Details:

- It is the first time the government has applied the label to a white supremacist group.
- The designation has been seen as an unusual move, as President Trump has previously been criticised for failure to do more about the threat of white supremacy.
- While the label of Specially Designated Global Terrorist has been frequently used for Islamist extremists, there have been growing concerns among U.S. officials about violent white supremacists with transnational links over the past five years.

- \* In 2018, the White House added that threat to the government's National Strategy for Counterterrorism.

- The authority for either the Treasury Department or the State Department to deem a group or an individual a specially designated global terrorist traces back to an executive order issued by President George W. Bush after the September 11, 2001, terrorist attacks.
- President Donald Trump, in 2019, signed an executive order expanding that authority to cover groups that provide training for terrorists even if the groups are not directly linked to any attack.
- To receive such a designation, a group must be a foreign organisation and must engage in terrorist activity that threatens the security of US nationals or the national security of the US.

#### Impact:

- The State Department's designation for the organisation, the Russian Imperial Movement, sets up the Treasury Department's Office of Foreign Assets Control to block any American property or assets belonging to the group.
- It will also bar Americans from financial dealings with the organisation and make it easier to ban its members from travelling to the U.S.
- The U.S. is also designating three of the group's leaders — Stanislav Anatolyevich Vorobyev, Denis Valliullovi Gariev and Nikolay Nikolayevich Trushchalov — as individual terrorists who will face similar sanctions.

#### RIM's designation, however, is less significant than it might appear

- Many outlets reported that the United States had designated RIM a "foreign terrorist organization." But this term has a specific meaning in U.S. law — and in this case, the United States didn't apply it.
  - \* The U.S. Foreign Terrorist Organization (FTO) list criminalizes anyone who provides support to any organization on the list, including by joining that organization. These organizations must operate overseas, and they must meet the federal definition of "terrorist activities." Though some policymakers have called the list "largely symbolic," it can be a powerful national security tool. For example, the FTO list is the basis for prosecuting many of the U.S. nationals who joined the Islamic State.
  - \* 1. But the State Department classified RIM as a "Specially Designated Global Terrorist" (SDGT), which is a much more limited measure. An SDGT designation means that the U.S. Treasury's Office of Foreign Assets Control applies sanctions to the individual or organization that has been designated.
  - \* 2. In plain language, the United States can apply financial sanctions to the group, but it can't prosecute any current or future members of RIM based on their membership in the group alone.

- RIM is not a household name in the United States, in large part because it operates elsewhere. RIM works primarily with pro-Russian separatists in eastern Ukraine and neo-Nazi organizations in Scandinavia.

### Significance

- \* It was most recently connected — loosely — to a 2017 bomb plot targeting asylum seekers in Sweden.
- \* Unlike other international white supremacist organizations, such as Combat 18 or Generation Identity, it has not been linked to high-profile attacks
- RIM may have been easier to designate, since it's an obscure organization that was not likely to raise objections from U.S. policymakers. Many higher-profile white supremacist organizations have stronger connections to the United States. But by making RIM the first pick, the United States limited the broader impact of its first white supremacist terrorist designation.

## **12. A double whammy for India-Gulf economic ties**

### Context

- This article highlights the issues the Gulf region faces in the middle of the COVID-19 crisis. It is at the epicentre of not only the COVID-19 pandemic, but also, its economy is in deep jeopardy due to oil price meltdown.
- Given India's vital relations with the eight Gulf countries, the situation's impact on bilateral economic ties needs to be anticipated and managed.

### Impact on the Gulf region

- A Goldman Sachs report published recently estimated that COVID-19 had lowered the world crude consumption by 28 million bpd.
- In a rare joint statement on March 16, the heads of OPEC and the International Energy Agency (IEA) warned that developing countries' oil and gas revenues will decline by 50% to 85% in 2020 with potentially far-reaching economic and social consequences.
- The economic outlook for the Gulf has indeed deteriorated.
  - \* Saudi Arabia's fiscal deficit expected to cross 8% in 2020.
  - \* The tourism and hospitality sectors, the core of Dubai's economy, may take much longer to revive.
  - \* The pandemic has already made Hajj and Dubai Expo doubtful.

Note: The drop in price of oil is majorly because the Organization of the Petroleum Exporting Countries and other crude producers (OPEC+) failed to reach a production-curtailling strategy as Saudi Arabia and Russia, the cartel's two biggest producers, held different views.

### India's economic ties with the Gulf States

India has two dominant verticals: the economic symbiosis and India's expatriate community.

- Bilateral economic ties are strong: the India-Gulf trade stood at around \$162 billion in 2018-19, being nearly a fifth of India's global trade.
  - \* It was dominated by import of crude oil and natural gas worth nearly \$75 billion, meeting nearly 65% of India's total requirements.
  - \* Some of these countries have large Indian investments and some have planned large investments in India.
- Second, the number of Indian expatriates in the Gulf States is about nine million, and they remitted nearly \$40 billion back home.
  - \* The Gulf's lower oil revenues means less bilateral trade and investments as well as expatriates' remittances — all of them adding to India's current financial stress.

### Impact on expatriates

Oil is a cyclic commodity and the Gulf producers have long evolved a pattern to handle its periodic lows. As the drop in oil continues the effect tends to fall on the last person in line, viz. the Asian expatriate.

- The fresh recruitment stops, salaries are either lowered or stalled, taxes raised and localisation drives launched.
- The net result is that a large number of expatriates return to their homes.
  - \* This time there is an added complication of the pandemic, to which the Asian expatriates living in densely populated camps are particularly vulnerable.
  - \* In case the pandemic worsens in the lower Gulf, panic-stricken, wage-deprived Indians may prefer to come back.
- This would create an exodus of epic proportions, the nearest example being the evacuation of over 1,50,000 Indians from Kuwait in 1990-91, albeit for political reasons, an event that upset India's economy.
- Apart from creating a logistical nightmare of transporting millions of expatriates back, they would need to be resettled and re-employed.

### In the wake of the COVID-19 spread, the situation of Indian immigrants is very precarious.

- Nurses, small businessmen, labourers have been infected in significant numbers.
- The mostly low and semi-skilled labourers have often reported multiple ailments like diabetes, blood pressure, cholesterol and even kidney, liver problems and cancer.



- \* Since medicines are very expensive in Gulf countries, migrants often procure their medication from India and stockpile for three to four months. With the current restrictions in place, there are reports of acute shortage of medicines among the Indian community.
- Most Indian migrants in the GCC countries are at the bottom of the pyramid in their host countries and have limited access to healthcare.
  - \* The Gulf countries lack broad-based healthcare facilities to accommodate a high number of patients.
  - \* The migrants are struggling for their safety and survival.
- Most of the migrant labourers are single men living in congested labour camps, using common toilets, rooms etc. Their living conditions do not allow social distancing.
  - \* In such scenarios, the risk of spread is even higher, making the migrants very vulnerable to the pandemic.

#### **Way forward**

In the longer run, we need to find new drivers for the India-Gulf synergy.

- This could begin with cooperation in healthcare and gradually extend outward towards pharmaceutical research and production, petrochemical complexes, building infrastructure in India and in third countries, agriculture, education and skilling as well as the economic activities in bilateral free zones created along our Arabian Sea coast eventually leading to an India-Gulf Cooperation Council Free Trade Area.
- Only then would we have sufficiently diversified the India-Gulf economic ties to protect from such shocks.

#### **Conclusion**

- Gulf States going forward should contain the pandemic and the oil shock and at the same time India needs to come up with contingency plans in consultation with the individual countries.
  - \* It should do whatever it takes to enhance their capacity to handle COVID-19 cases among the Indian expatriates.
- India's missions there also need to monitor the situation and try to avoid panic among its nationals.

### **13. Putting the SAGAR vision to the test**

#### **Context**

- India has been recently granted observer status in the Indian Ocean Commission (IOC).

#### **Background:**

##### ***Indian Ocean Commission:***

- The Indian Ocean Commission is an intergovernmental organisation founded in 1982. It is headquartered in Ebene, Mauritius.

- It comprises of five small-island states in the Western Indian Ocean: the Comoros, Madagascar, Mauritius, Reunion (a French department), and Seychelles.
- Over the years, the IOC has emerged as an active and trusted regional actor, working in and for the Western Indian Ocean and implementing a range of projects.

#### **Details:**

##### ***Maritime security in Indian Ocean:***

- Despite the high-level counter-piracy presence of naval forces from the EU, the Combined Maritime Forces, and Independent Forces in the Indian Ocean region, maritime crime is still prevalent in the region.
- The counter-piracy response off the coast of Somalia delivered unprecedented regional and international cooperation in the domain of maritime security. However, it resulted in multiple players, the duplication of actions, and regional dependence on international navies.
- The countries in the region still face issues in policing and patrolling their often enormous Exclusive Economic Zones (EEZs).

#### **IOC efforts:**

##### ***Regional Maritime security architecture:***

- The IOC has demonstrated leadership in the maritime security domain and has made impressive progress in the design and implementation of a regional maritime security architecture in the Western Indian Ocean.
- In 2012, the IOC, in collaboration with other regional organisations, launched the MASE Programme to promote Maritime Security in Eastern and Southern Africa and Indian Ocean.
- Under MASE, the IOC has established a mechanism for surveillance and control of the Western Indian Ocean with two regional centres.
  - \* The Regional Maritime Information Fusion Centre (RMIFC), based in Madagascar, and the Regional Coordination Operations Centre (RCOC), based in Seychelles.
  - \* The system is designed to deepen maritime domain awareness by monitoring maritime activities and promoting information sharing and exchange. Based on the information available there would be joint or jointly coordinated interventions at sea.
- The multilateral maritime security architecture has produced a sub-regional view of maritime security problems and has resulted in local ownership of actions towards workable and sustainable solutions to improve maritime control and surveillance.

##### ***Promoting collaboration in the region:***

- The IOC has wielded a disproportionate degree of convening power.



- In 2018 and 2019, serving as the Chair of the Contact Group on Piracy off the Coast of Somalia (CGPCS), the IOC held ministerial meetings on maritime security in the Western Indian Ocean, drawing state representations from the region plus major powers such as India, the EU, the U.S., the U.K., Australia, and Russia.
- These meetings resulted in formal declarations, facilitated convergence around common, sub-region-specific definitions of maritime security threats and the legal way of dealing with them.

#### **Mutually beneficial association:**

- Following a request from India, the IOC granted observer status to India at the Commission's 34th Council of Ministers.
- The involvement of India in IOC can be a mutually beneficial relationship for the IOC member nations and India.

#### **India's interests:**

##### *Maritime security:*

- As a major stakeholder in the Indian Ocean with maritime security high on the agenda, India has been pursuing its interests and tackling maritime security challenges in the region.
- Maritime security is a prominent feature of India's relations with Indian Ocean littoral states.
- India could use the information available through the Regional Maritime Information Fusion centre to increase its maritime awareness in the region and can supplement the capacity of India's own Information Fusion Centre.
- The maritime security architecture being propounded by the IOC presents workable and sustainable solutions to improve maritime control and surveillance. The regional coordination and local successes at curbing maritime threats will have broader security dividends for the Indian Ocean space.
- The regional maritime security architecture with support from naval powers like India can deliver an urgently needed deterrent against unabating maritime crime at sea.

##### *Regional diplomacy:*

- India has, till recently, limited itself to bilateral cooperation in the Indian Ocean region. The observer status in IOC offers an opportunity for India to engage constructively with the member nations of IOC.
- The membership would allow India to strengthen its relations and influence in the strategic Indian Ocean region.

#### **India's interests:**

- The IOC requires support from regional actors like India. Nearly all littoral states in the Western Indian Ocean need assistance in developing their maritime domain awareness and in building capacity to patrol their EEZs.

- With its observer status, India could extend its expertise to the region, supplement the RMIFC through India's extensive satellite system and establish links with its own Information Fusion Centre.

#### **Way forward:**

##### *India's approach:*

- India has repeatedly stated its strategic vision for the Indian Ocean based on Security and Growth for All in the Region (SAGAR) approach.
- India's SAGAR vision is intended to be more consultative, democratic and equitable in dealing with smaller but equally significant countries in the region.
- SAGAR seeks to differentiate India's leadership from the *modus operandi* of other regionally active major powers focussing on creating spheres of influence in the region. This will help reassure littoral states as India's maritime influence grows.

### **14. In a crisis year, Sri Lanka gears up for daunting debt repayment**

#### **Context:**

- As Sri Lanka battles COVID-19, it is gearing up for another imminent crisis — servicing its mounting external debt, of which \$2.9 billion is due this year.

#### **Details:**

- Of the many economic side effects of the global pandemic, is the drastic fall in Sri Lanka's foreign exchange reserves — driven mainly by exports, remittances and tourism that have all suffered heavily due to COVID-19.
- The Central Bank of Sri Lanka recently sought a \$400 million currency swap with the Reserve Bank of India (RBI), to boost its foreign reserves.
  - \* Sri Lanka has resorted to the currency swap facility with the RBI from time to time to maintain its reserves.
  - \* But the middle-income country has a daunting road ahead, as it must pay a sizeable portion of its foreign debt amounting to 42.6% of the country's GDP in 2019.

#### **Sri Lanka's Debts:**

- Contrary to the popular "Chinese debt trap" analysis often made in regard to Sri Lanka's economy, the country's debt concerns are not confined to borrowings from China alone.
- Well before COVID-19 emerged as a threat, Sri Lanka considered appealing for loan moratoriums from India and China, two of its willing lenders.
  - \* Sri Lanka owes about \$960 million to India.
  - \* Its debt to China was \$5 billion in 2018.

- Sri Lanka's debt owed to financial markets (holders of international sovereign bonds issued in Sri Lanka) are more significant than that owed to multilateral lenders [such as the World Bank, IMF], and bilateral lenders [including China, Japan and India].
- With a \$1 billion-international sovereign bond maturing in October 2020, the alarm bells are already ringing in Sri Lanka.
- Sri Lanka's Central Bank told that it had maintained an unblemished record of debt servicing and had entered into a long-term financing arrangement through which it received funds totaling \$500 million in March 2020, and expected an additional \$300 million soon.
- The apex bank said liquidity facilitation arrangements with the RBI in the form of swap facilities and other major central banks are at an advanced stage of completion.
- It said that the arrangements with the IMF and other multilateral donors are also under review.

#### **Way forward:**

- In the current situation, it is predicted that the government will be squeezed by its demanding foreign lenders, while facing growing discontent from citizens who are denied imported goods that Sri Lanka has failed to substitute in the past.
- Sri Lanka's limited foreign reserves are necessary not only for debt servicing but also for essential imports amid falling foreign earnings.
- In addition to managing different lenders, it is time for Sri Lanka to consider some fundamental changes to its policy, economists emphasise, pointing to the need for greater attention to the rural economy, mainly agriculture, and a shift from an urban bias in policy.

### **15. Study on China dams brings the Brahmaputra into focus**

#### **Context:**

- A new study highlighting the impact of China's dams on the Mekong River has been published.

#### **Details:**

- It was published by the Sustainable Infrastructure Partnership in Bangkok and the Lower Mekong Initiative, which is a U.S. partnership with all the downstream countries besides Myanmar.
- The study was funded by the U.S. government.

#### **Findings of the study:**

- The study said six dams built since the commissioning of the Nuozhadu dam in 2012 had altered natural flow of the Mekong River.
  - \* It has raised fresh questions on whether dams being built on other rivers that originate in China, such as the Brahmaputra, may similarly impact countries downstream.

- Based on a satellite data from 1992 to 2019, the study found that there was severe lack of water in the lower Mekong.

\* This is despite China's southwestern Yunnan province having above-average rainfall from May to October 2019.

- The Mekong flows from China to Myanmar, Laos, Thailand, Cambodia and Vietnam.
- The Mekong River Commission, which comprises Cambodia, Laos, Thailand, and Vietnam, has said more scientific evidence was needed to establish whether dams caused a 2019 drought.

#### **India's Concerns:**

- India has long expressed concerns over dam-building on the Brahmaputra.
- In 2015, China operationalized its first hydropower project at Zangmu, while three other dams at Dagou, Jiexu and Jiacha are being developed.
- However, Indian officials have said that the dams are not likely to impact the quantity of the Brahmaputra's flows because they are only storing water for power generation.
- Moreover, the Brahmaputra is not entirely dependent on upstream flows and an estimated 35% of its basin is in India.
- Nevertheless, India will continue to raise the issue of river waters in the Brahmaputra with China.

#### **Note:**

- India does not have a water-sharing agreement with China, but both sides share hydrological data.
- China cooperates with India for warnings on how floods are moving down the Yarlung Tsangpo and into the Brahmaputra, so that India can warn its population living in low-lying areas and move them safely to higher ground.

### **16. Afghan peace and India's elbow room**

#### **Background:**

- Recently, the United Nations Secretariat held a meeting of what it calls the "6+2+1" group on regional efforts to support peace in Afghanistan, a group that includes six neighbouring countries: China, Iran, Pakistan, Tajikistan, Turkmenistan and Uzbekistan; global players, the United States and Russia, and Afghanistan itself.
- India was conspicuous by its absence from the meeting, given its historical and strategic ties with Afghanistan, but not for the first time.

#### **Details:**

- In December 2001, the Indian team led by special envoy Satinder Lambah arrived in Germany to find no reservations had been made for them at the official venue (where the famous Bonn Agreement was negotiated).

- In January 2010, India was invited to attend the "London Conference" on Afghanistan, but left out of the room during a crucial meeting that decided on opening talks with the Taliban.
- In 2020, the reason given for keeping India out of regional discussions on Afghanistan was ostensibly that it holds no boundary with Afghanistan; but in fact it is because New Delhi has never announced its support for the U.S.-Taliban peace process.
- In both 2001 and 2010, however, India fought back its exclusion successfully.
  - \* At the Bonn Agreement, Ambassador Lambah was widely credited for ensuring that Northern Alliance leaders came to a consensus to accept Hamid Karzai as the Chairman of the interim arrangement that replaced the Taliban regime.
  - \* After the 2010 conference, New Delhi redoubled its efforts with Kabul, and in 2011, Prime Minister Manmohan Singh and Afghanistan President Karzai signed the historic Strategic Partnership Agreement, which was Afghanistan's first such agreement with any country.

#### **India's stand:**

- As India now consider its next steps in Afghanistan, it must fight back against the idea that any lasting solution in Afghanistan can be discussed without India in the room, while also studying the reasons for such exclusions.
  - \* India's resistance to publicly talking to the Taliban has made it an awkward interlocutor at any table.
  - \* Its position that only an Afghan-led, Afghan-owned, and Afghan-controlled process can be allowed is a principled one, but has no takers.
- Kabul, or the Ashraf Ghani government does not lead, own or control the reconciliation process today, comprising the U.S.-Taliban negotiation for an American troops withdrawal, and intra-Afghan talks on power sharing.
- The U.S.-Taliban peace deal means that the Taliban, which has not let up on violent attacks on the Afghan Army, will become more potent as the U.S. withdraws soldiers from the country, and will hold more sway in the inter-Afghan process as well, as the U.S. withdraws funding for the government in Kabul.

#### **Way forward:**

##### **Controversy over the Citizenship (Amendment) Act:**

- The building blocks of India's goodwill are its assistance in infrastructure projects, health care, education, trade and food security, and also in the liberal access for Afghans to study, train and work in India.
- Above all, it is India's example as a pluralistic, inclusive democracy that inspires many.

- Afghanistan's majority-Muslim citizens, many of whom have treated India as a second home, have felt cut out of the move to offer fast track citizenship to only Afghan minorities, as much as they have by reports of anti-Muslim rhetoric and incidents of violence in India.
- The government of India must consider the damage done to the vast reservoir of goodwill India enjoys in Afghanistan because of the controversy over the Citizenship (Amendment) Act.

##### **Financial Assistance:**

- India must move swiftly to regain the upper hand in the narrative in Afghanistan.
- India's assistance of more than \$3 billion in projects, trade of about \$1 billion, a \$20 billion projected development expenditure of an alternate route through Chabahar, as well as its support to the Afghan National Army, bureaucrats, doctors and other professionals for training in India should assure it a leading position in Afghanistan's regional formulation.
- Three major projects: the Afghan Parliament, the Zaranj-Delaram Highway, and the Afghanistan-India Friendship Dam (Salma dam), along with hundreds of small development projects (of schools, hospitals and water projects) have cemented that position in Afghan hearts nationwide, regardless of Pakistan's attempts to undermine that position, particularly in the South.
- India must strive to endure that its aid and assistance is broad-based, particularly during the novel coronavirus pandemic to centres outside the capital, even if some lie in areas held by the Taliban.

##### **India's presence in Afghanistan:**

- India's presence inside Afghanistan, which has been painstakingly built up since 2001, is being threatened a new by terror groups such as the Islamic State Khorasan Province (ISKP), believed to be backed by Pakistan's establishment.
- Intercepts showed that the brutal attack, in March 2020, that killed 25 at a gurudwara in Kabul was meant for the embassy in Kabul.
- A full security reassessment is still under way for both Indian consulates.
- India's diplomatic strength in Afghanistan should not appear to be in retreat just when it is needed the most.

##### **India must fulfil its role in the peace efforts in Afghanistan:**

- India must also pursue opportunities to fulfil its role in the peace efforts in Afghanistan, starting with efforts to bridge the Ghani-Abdullah divide, and bringing together other major leaders with whom India has built ties for decades.
- An understanding between Iran and the U.S. on Afghanistan is necessary for lasting peace as well, and India could play a mediatory part, as it did in order for the Chabahar project.

- India should use the United Nations's call for a pause in conflicts during the novel coronavirus pandemic, to ensure a hold on hostilities with Pakistan.

**Appointment of a special envoy:**

- Above all, the government must consider the appointment of a special envoy, as it has been done in the past, to deal with its efforts in Afghanistan.
- There is a need for both diplomatic agility and a firmness of purpose at a watershed moment in that country's history.

# ART AND CULTURE

## 1. Dekho Apna Desh

- In a bid to boost tourism in the country, the government has come out with a very creative approach which might cheer travel enthusiasts.
- The Ministry of Tourism has stated that it would reward people who visit at least 15 tourist spots in the country in a year.
  - \* The tourism ministry will fund the travel expenses of tourists who visit 15 destinations in the country in a year and submit the photos on the department's website.
- One needs to travel outside their home state to be eligible.

### Context:

- The Ministry of Tourism organised the 8th webinar of "Dekho Apna Desh" series on "North East India – Experience the Exclusive Villages".

### Prelims Facts – Assam:

- The bell metal industry of Assam is the second-largest handicraft sector after bamboo craft.
  - \* Bell metal is an alloy of copper and tin.
  - \* The craftsmen of this industry are referred to as 'Kahar' or 'Orja'.
- Sualkuchi is situated on the northern banks of the Brahmaputra.
  - \* It is one of the world's largest weaving villages where 74% of the households are engaged in weaving exquisite silk fabrics ranging from the golden Muga to the ivory white Pat and the light beige Eri or Endi silk. It is famous for its centuries-old heritage of weaving.
  - \* People here support the concept of Ahimsa Silk breeding where silk is obtained without killing the silk worms.
  - \* It is a noble step towards creating an eco-friendly environment.
- The endangered species of the greater adjutant stork finds an exclusive home in Dadara.
  - \* It is called Hargila in Assamese.
  - \* It is the world's most endangered of the stork species.
- Majuli is one of the largest river islands of the world.
  - \* It is situated in the midst of the river Brahmaputra.
  - \* Majuli is a hub of Assamese neo-Vaishnavite culture, initiated around the 15th century by the revered Assamese saint Srimanta Sankardeva and his disciple Madhavdeva.
  - \* It is known as the cradle of Assamese civilization.

## 2. Harvest Festivals

Vaisakhi, Vishu, Puthandu, Masadi, Vaishakhadi and Bahag Bihu were celebrated in different parts of the country. These are the first harvest festivals of the year.

- Vaisakhi, also pronounced as Baisakhi is a historical and religious festival in Sikhism as well as a celebration of the New Year.
- Vishu is a Hindu festival celebrated in the South Indian state of Kerala, Tulu Nadu region in Karnataka, bordering areas of Tamil Nadu and their diaspora communities.
- Puthandu, also known as Puthuvarusham or Tamil New Year, is the first day of year on the Tamil calendar and traditionally celebrated as a festival.
- Poila Boishakh is celebrated in West Bengal, and parts of Tripura. According to the Bengali calendar, it is the first day of the first month.
- Bohag Bihu or Rongali Bihu also called Xaat Bihu is a festival celebrated in the state of Assam and other parts of north-eastern India, and marks the beginning of the Assamese New Year.
- Maha Bishuba Pana Sankranti is the traditional New Year day festival of Buddhists and Hindus in Odisha.

### Context:

- The President of India's greetings on the occasion of Vaisakhi, Vishu, Rongali Bihu, Naba Barsha, Vaisakhadi, Puthandu, Pirappu, which are being celebrated in different parts of the country on 13th and 14th April, 2020

## 3. Kumbh Mela

- Kumbh Mela comes under the UNESCO's Representative List of Intangible Cultural Heritage of Humanity.
  - \* It was added to the list in 2017.
- Kumbh Mela is celebrated four times over a course of 12 years.
- Kumbh Mela locations in India:
  - \* Haridwar on the Ganges in Uttarakhand.
  - \* Ujjain on the Shipra in Madhya Pradesh.
  - \* Nashik on the Godavari in Maharashtra.
  - \* Prayagraj at the confluence of the Ganges, the Yamuna, and the mythical Sarasvati in Uttar Pradesh.
- The Mela site keeps rotating between one of the four pilgrimage places on four sacred rivers.

### Context:

- The government is planning for the Maha Kumbh Mela in Haridwar, Uttarakhand, in January 2021.



#### 4. Festivals, turbans and rice beer are all part of an exhaustive cultural heritage list

##### Context:

- Draft intangible cultural heritage list released by the Union Culture Ministry.

##### Details:

- 106 items have been listed as intangible cultural heritage in the draft released by the Union Culture Ministry as a part of the ministry's Vision 2024 programme.
  - \* Out of these 13 traditions of Indian intangible cultural heritage are already recognised by UNESCO.
- As per the 2003 UNESCO Convention for Safeguarding of Intangible Cultural Heritage, the list has five broad categories — oral traditions, performing arts, social practices, knowledge and practices related to nature and traditional craftsmanship.
- Some of the major mentions in the draft list:

Kalaripayattu (martial art form)	Kerala
Kolam (practice of making designs at the entrance of homes and temples)	Kerala, Andhra Pradesh, Tamil Nadu and Andhra Pradesh.
Pachoti (Traditional folk festival-birth of a baby, particularly a male infant is celebrated with relatives and neighbours. Related to the birth of Krishna)	Assam
Kinnar Kanthgeet (Oral traditions of the transgender community)	Delhi

Patola silk textiles (Geometric and figurative patterns)	Gujarat (Patan)
Buddhist chanting	Leh and Kargil districts
Kalam Bhat or Qalambaft gharna of Sufiana music	Jammu and Kashmir
Khor (Rice Beer by Tangkhul community)	Manipur
Tying a turban or safa	Rajasthan

- Other notable mentions include:

- \* Devotional music of Qawwali and the music of the oldest instrument in the country, the Veena.
- \* The Kumbh Mela and Ramlila traditions of different States.
- \* The compositions of Ameer Khusro.
- \* The making of gourd vessels and wicker baskets in Manipur.
- \* Different forms of shadow puppet theatre — Chamadyacha Bahulya in Maharashtra, Tolu Bommalatta in Andhra Pradesh and Tamil Nadu, Togalu Gombeyatta in Karnataka, Tolpava Kuthu in Kerala and Ravanchhaya in Odisha — have also been included.

##### Significance:

- The national list is an attempt to further awareness and protection to the valuable cultural heritage of India.

# SCIENCE AND TECHNOLOGY

## 1. JNTBGRI to play key role in sequencing of Indian species

### Context:

- The Jawaharlal Nehru Tropical Botanic Garden and Research Institute (JNTBGRI) has been selected as one of the Biological Knowledge and Resource Centres of the Indian Initiative on Earth BioGenome Sequencing (IIEBS).

### Details

- It will join hands with other premier research institutes to utilise cutting edge technologies for genome sequencing.
- The Union Department of Biotechnology has allotted ₹143.89 lakh for JNTBGRI to take up the project.
- The National Institute of Plant Genome Research, New Delhi is the coordinating centre for the nationwide project involving a total of 24 institutes.

### Earth BioGenome Project (EBP)

- The project was part of the Earth BioGenome Project, an international initiative to catalogue life on the planet
- EBP aims to sequence the genetic codes of all of earth's eukaryotic biodiversity over a period of 10 years.
- The digital repository of genome sequences is expected to provide the critical infrastructure for better understanding of ecosystems and conservation of biodiversity as well as the development of new treatments for infectious and inherited diseases, agricultural products, biomaterials and biological fuels.

### Significance

- India's participation in the EBP would provide a boost for the field of genomics and bioinformatics within the country.
- The project will enable collection and preservation of endangered and economically important species. The decoded genetic information will also be a useful tool to prevent biopiracy.
  - \* Often, in the search for new bioresources, researchers draw on local people's traditional knowledge about the properties of a particular plant, animal or chemical compound.
  - \* When researchers use traditional knowledge without permission, or exploits the cultures they're drawing from – it's called biopiracy.
  - \* 1. Biopiracy happens when researchers or research organisations take biological resources without official sanction, largely from less affluent countries or marginalised people.

- With over 5,000 plant species in its field gene bank and conservatories, JNTBGRI has a major role in conserving the endemic flora of the Western Ghats.
- It will eventually lead to the generation of the genetic blueprint of all living forms

## 2. New model to predict ionospheric electron density can help communication/navigation

### Context:

- Researchers from Indian Institute of Geomagnetism (IIG), have developed a global model to predict the ionospheric electron density with larger data coverage—a crucial need for communication and navigation.
- They have developed a new Artificial Neural Networks based global Ionospheric Model (ANNIM) using long-term ionospheric observations to predict the ionospheric electron density and the peak parameters.

### Artificial Neural Networks (ANN)

- They are one of the main tools used in machine learning.
- As the “neural” part of their name suggests, they are brain-inspired systems which are intended to replicate the way that we humans learn.
- Neural networks consist of input and output layers, as well as (in most cases) a hidden layer consisting of units that transform the input into something that the output layer can use.
  - \* They are excellent tools for finding patterns which are far too complex or numerous for a human programmer to extract and teach the machine to recognize.
- ANNs replicate the processes in the human brain (or biological neurons) to solve problems such as pattern recognition, classification, clustering, generalization, linear and nonlinear data fitting, and time series prediction, and very few attempts have been made to model the global ionosphere variability using ANNs.

In recent years, the Artificial Neural Networks (ANNs) are showing potential to handle more complex and non-linear problems. Keeping these aspects in mind, a novel machine learning approach was implemented by the IIG team in the ionospheric model development using global ionospheric observations.

### Ionospheric Model

- The researchers developed a neural network-based global ionospheric model by using an extensive database consisting of nearly two decades of global Digisonde (an instrument that measures real-time on-site electron density of the ionosphere by sending the radiofrequency pulses), Global Navigation Satellite System (GNSS) radio occultation and topside sounders observations.

- These datasets were processed with various quality control measures to eliminate spurious data points (outliers) and prepared for the training. Day number, Universal Time, latitude, longitude, F10.7 index (responsible for Photo-ionization), Kp (represents the disturbed space weather conditions), magnetic declination, inclination, dip latitude, zonal and meridional neutral winds were taken as inputs in the study.
- The target (output) of ANNs is the electron density as a function of altitude for any given location and time. The data was trained with the ANNs using high-performance computer at IIG to develop the ANNIM.

### Indian Institute of Geomagnetism

- The Indian Institute of Geomagnetism, Mumbai is an autonomous research institute by Department of Science & Technology, Govt. of India
- The facility is engaged in basic and applied research in geomagnetism, as well as allied areas of geophysics, atmospheric physics and space physics, as well as plasma physics.
- The Institute currently operates 12 magnetic observatories and actively participates in the Indian Antarctic Program
- IIG conducts basic and applied research in Geomagnetism and allied fields like Solid Earth Geomagnetism/Geophysics, Magnetosphere, Space and Atmospheric Sciences.

### 3. Piezoelectricity

- Piezoelectricity (also called the piezoelectric effect) is the ability of certain materials to generate an electric charge in response to applied mechanical stress.
  - \* The word Piezoelectric is derived from the Greek word Piezein, which means to squeeze or press, and piezo, which is Greek for "push".
- The piezoelectric effect is a reversible process: materials exhibiting the piezoelectric effect (the internal generation of electrical charge resulting from an applied mechanical force) also exhibit the reverse piezoelectric effect, the internal generation of a mechanical strain resulting from an applied electrical field.
- French physicists Jacques and Pierre Curie discovered piezoelectricity in 1880

#### Piezoelectric Materials

There are many materials, both natural and man-made, that exhibit a range of piezoelectric effects.

- Some naturally piezoelectric occurring materials include Berlinite (structurally identical to quartz), cane sugar, quartz, Rochelle salt, topaz, tourmaline, and bone (dry bone exhibits some piezoelectric properties due to the apatite crystals, and the piezoelectric effect is generally thought to act as a biological force sensor).

- An example of man-made piezoelectric materials includes barium titanate and lead zirconate titanate

#### Applications

- Piezoelectricity is exploited in a number of useful applications, such as the production and detection of sound, piezoelectric inkjet printing, generation of high voltages, electronic frequency generation, microbalances, to drive an ultrasonic nozzle, and ultrafine focusing of optical assemblies.
- It forms the basis for a number of scientific instrumental techniques with atomic resolution, the scanning probe microscopies, such as scanning tunneling microscope (STM), Atomic force microscopy (AFM)
- It also finds everyday uses such as acting as the ignition source for cigarette lighters, push-start propane barbecues, used as the time reference source in quartz watches

#### Context

- Researchers from Institute of Nano Science and Technology (INST), Mohali an autonomous institute under the Department of Science & Technology, have made computer based designs of nano-materials with superhigh piezoelectricity which can be the building blocks of futuristic nano-electronics for applications like ultrathin, next-generation nano-transistors.
- The research demonstrated induction of superhigh out-of-plane piezoelectricity via stacking one monolayer over the other in the 2D nanostructure.

#### Details

- The induction of this phenomenon is based on two-dimensional van der Waals Heterostructure (vdWH) comprising of 2D monolayers
  - \* The vdWH is a new approach in materials design where different monolayers having complimentary properties are combined together to surmount their intrinsic limitations.
  - \* When two monolayers are stacked over one another to constitute a vdWH, various factors affect the electronic properties.
- The dipoles arising at the interface due to the large charge density difference between the two constituent monolayers extend out into the interlayer region, which result in such an ultrahigh value in out-of-plane piezoelectricity.

### 4. Technology Development Board (TDB)

- The Government of India constituted the Technology Development Board (TDB) in 1996, under the Technology Development Board Act, 1995, as a statutory body.
- The TDB provides financial assistance to Indian industrial concerns and other agencies, attempting development and commercial application of indigenous technology, or adapting imported technology to wider domestic applications.

- TDB's goal is to make the weak zone of technology development and commercialization strong in selected sector by supporting technology development in the industry with short, medium and long term risk horizon
- The TDB is the first organization of its kind within the government framework with the sole objective of commercializing the fruit of indigenous research.
- The Board plays a pro-active role by encouraging enterprises to take up technology oriented products.

#### **Global Innovation & Technology Alliance (GITA)**

- In order to stimulate private sector's investment in R&D, TDB established GITA as a Section 25 Company in a Joint Venture between Confederation of Indian Industry (CII) and TDB with equity contribution of 51:49 respectively.
- The GITA will assist DST in implementing Industrial R&D Programme with different countries under bilateral & multilateral Science & Technology Cooperation agreements.

#### **Context:**

- TDB approves support for indigenous company for ramping up production of COVID-19 diagnostic kits.
- It has approved financial support to MyLab Discovery Solutions, Pune, for ramping up production of COVID-19 diagnostic kits they have developed.

## **5. Technology Information, Forecasting and Assessment**

### **Council (TIFAC)**

- TIFAC is an autonomous think tank under the Department of Science and Technology, GOI.
- In 1985, as per the recommendation of the Technology Policy Implementation Committee (TPIC), the Cabinet approved the formation of TIFAC and TIFAC was formed as a registered Society in 1988.
- It was mandated to assess the state of technology and set directions for future technological development in India in important socio-economic sectors.
- As a unique knowledge network institution in India, TIFAC activities encompass a wide array of technology areas and fill a critical gap in the overall S&T system of India.
- The organization has carried out technology foresight exercise, facilitated and supported technology development; prepared technology linked business opportunity reports and implemented mission-mode programmes.

#### **Context:**

- TIFAC explores best methods to revive Indian economy post COVID-19.
- It would mainly focus on strengthening Make in India initiatives, commercialization of Indigenous technology, developing a technology-driven transparent Public Distribution System (PDS), efficient rural health care delivery, reduction of import, adoption of emerging technology domains like AI, Machine Learning, Data Analytics and many more.

# SECURITY AND DEFENCE

## 1. Global Terrorism Index (GTI)

- It is a report published annually by the Institute for Economics and Peace (IEP)
- The GTI is based on data from the Global Terrorism Database (GTD) which is collected and collated by the National Consortium for the Study of Terrorism and Responses to Terrorism (START) at the University of Maryland.
- The aim of the report is to examine trends and to help inform a positive and practical debate about the future of terrorism and the required policy responses.
- The index provides a comprehensive summary of the key global trends and patterns in terrorism since 2000.
  - \* It produces a composite score in order to provide an ordinal ranking of countries on the impact of terrorism.

### Why it matters?

- GTI scores are directly used in the Global Peace Index, the Global Slavery Report published by the Walk Free Foundation, and indirectly used in computing country scores in the World Economic Forum's Travel and Tourism Competitiveness and Global Competitiveness Indices and compilation of Safe Cities Index by the Economist Intelligence Unit.

### Definition of Terrorism

- Defining terrorism is not a straightforward matter. There is no single internationally accepted definition of what constitutes terrorism and the terrorism literature abounds with competing definitions and typologies.
- The GTI defines terrorism as 'the threatened or actual use of illegal force and violence by a non-state actor to attain a political, economic, religious, or social goal through fear, coercion, or intimidation.'
- This definition recognises that terrorism is not only the physical act of an attack but also the psychological impact it has on a society for many years after.

### Context

- A report compiled by the NITI Aayog has questioned the methodology adopted by an Australian-based institute to rank India as the seventh worst terrorism affected country ahead of conflict-ridden countries such as the Democratic Republic of Congo, South Sudan, Sudan, Burkina Faso, Palestine and Lebanon.

### Details

- India has moved to the seventh position from the previous year's (2018) eighth in the annual Global Terrorism Index (GTI) 2019. The countries ahead of it are Afghanistan, Iraq, Nigeria, Syria, Pakistan and Somalia.

- The Cabinet Secretariat had asked NITI Aayog to track 32 such global indices to see how they could help drive reforms and growth.
- It is believed that the positioning in the global indices impacted investments and other opportunities.
- The purpose was to see which of the indices could be used to drive reforms or which of these would require some amount of engagement with the publishing agency to make the indices more relevant.
- The report also questions the opaque funding of the Institute for Economics and Peace (IEP).
- Emailed queries by the government think tank (NITI Aayog), seeking list of its donors, remained unanswered.

## 2. 'Pakistan removes names from terrorism watch list'

### Context

- According to a U.S.-based start-up that automates watchlist compliance, Pakistan has quietly removed around 1,800 terrorists from its watch list ahead of a new round of assessments by the Financial Action Task Force (FATF).

### Details

- The proscribed persons list in Pakistan is maintained by its National Counter Terrorism Authority.
  - \* The list helps institutions minimise transactions with suspected terrorists.
- The list in 2018 contained about 7,600 names. It has been reduced to under 3,800 in the past 18 months, including that of the 2008 Mumbai attack mastermind and LeT operations commander Zaki-ur-Rehman Lakhvi, according to a New York-based regulatory technology company.
- Pakistan is working to implement an action plan that has been mutually agreed to with the Paris-based FATF, part of which involves demonstrating effective implementation of targeted financial sanctions.
- It is possible that these removals are part of Pakistan's action plan to implement the FATF recommendations.
- Currently, Pakistan is placed in the FATF Grey List. The FATF will evaluate Pakistan's progress in June 2020.

## 3. Still no bullseye, in volume and value

### Context

- According to latest estimates released by the Stockholm International Peace Research Institute (SIPRI), the Indian defence exports have increased and defence imports have decreased during the period between 2009-13 and 2014-18.



### Details

This is a welcome development but the reasons for both are not identical. Broadly, two factors appear to be driving this shift.

#### 1. The first is the 'Make in India' initiative.

- The Government has prioritized this initiative and has sourced a number of components from Indian private and public sector enterprises.

#### 2. The second is due to external factors.

- Under this, India imported components from multiple countries. These components were not supplied on time leading to undue delay by vendors and in a few circumstances, there was cancellation of contracts by the Indian government as well.

#### 1. 'Make in India' initiative

Under the Narendra Modi government's 'Make in India' initiative, the Defence Procurement Procedure (DPP) lays out the terms, regulations and requirements for defence acquisitions as well as the measures necessary for building India's defence industry.

- It came into effect from 2016. It focuses on institutionalizing, streamlining and simplifying defence procurement procedure to give a boost to the "Make in India" initiative of the Government of India, by promoting indigenous design, development and manufacturing of defence equipment, platforms, systems and sub-systems.

It created a new procurement category in the revised DPP of 2016 dubbed 'Buy (Indian-IDDMM (Indigenously Designed, Developed and Manufactured))'.

- It has been accorded the topmost priority for procurement of capital equipment.
- Preference has been accorded to 'Buy (Indian)' and 'Buy and Make (Indian)' categories of capital acquisition over 'Buy (Global)' & 'Buy & Make (Global)' categories.
- Requirement of indigenous content has been enhanced/rationalized for various categories of capital acquisition.
- The 'Make' procedure has undergone simplification "earmarking projects not exceeding ten crores" that are government funded and ₹3 crore for Micro, Small and Medium Enterprises (MSMEs) that are industry funded.
- In addition, the government has also introduced provisions in the DPP that make private industry production agencies and partners for technology transfers.

#### Stats

- Small and Medium Enterprises (SMEs) until 2016 accounted for 17.5% share of the Indian defence market.
- According to government of India data for the financial year 2018-19, the three armed services for their combined capital and revenue expenditures sourced 54% of their defence equipment from Indian industry.

#### Public sector driven

- Among arms producers, India has four companies among the top 100 biggest arms producers of the world.
- It is estimated, according to SIPRI, their combined sales were \$7.5 billion in 2017, representing a 1% jump from 2016.
- The largest Indian arms producers are the Indian Ordnance Factories and the Hindustan Aeronautics Limited (HAL), which are placed 37th and 38th, respectively, followed by Bharat Electronics Limited (BEL) and Bharat Dynamics Limited (BDL). All four of these companies are public sector enterprises and account for the bulk of the domestic armament demand.

#### 2. Falling Imports

This is not due to growing indigenization and 'Make in India' initiative. Indian defence acquisitions have also fallen due to the cancellation of big-ticket items.

- For example, India-Russia joint venture for the development of the advanced Su-57 stealth Fifth Generation Fighter Aircraft (FGFA). India cancelled involvement in 2018 due to rising dissatisfaction in delays with the project as well as the absence of capabilities that would befit a fifth generation fighter jet.
- In 2015, the Modi government also reduced the size of the original acquisition of 126 Rafale Medium Multi-Role Combat Aircraft (MMRCA) from Dassault to 36 aircraft, which is also responsible for significantly driving down the import bill.
- That apart, the delays in the supplies of T-90 battle tanks, and Su-30 combat aircraft from Russia and submarines from France, in 2009-13 and 2014-18, also depressed imports.

#### India's defence model faces challenges despite the positive trends generated by 'Make in India'

- SMEs still face stunted growth because India's defence industrial model is at odds with global trends in that it tends to create disincentives for the private sector.
  - \* Governments in the past and the current regime have given importance to Defence Public Sector Units (DPSUs) over the private sector, despite 'Make in India'.
  - \* This model is highly lopsided, undermining the growth of private players and diminishes the strength of research and development.
- The other challenges are more fundamental in nature. India is not a reputed defence manufacturer producing a wide variety of military platforms. The proven military platforms that are made in India, such as the Su30 fighter or the T90 tank, are licensed productions with Intellectual Property Rights (IPR) held by foreign defence firms. India cannot export these platforms.

- \* Even in the case of joint production platforms such as the BrahMos missile, built by India and Russia, the approval of the BrahMos board is required for export.

#### **Export trends**

- In the last two fiscal years, 2017-18 and 2018-19, exports have witnessed a surge from ₹7,500 crore to ₹11,000 crore, representing a 40% increase in exports.
- While this initial increase started during the previous United Progressive Alliance (UPA) government, the sharpest rise in defence export products can be attributed to the measures introduced by the National Democratic Alliance (NDA) government under Mr. Modi, which in 2014, delisted or removed several products that were restricted from exports.
  - \* It dispensed with the erstwhile No Objection Certificate (NOC) under the DPP restricting exports of aerospace products, several dual-use items and did away with two-thirds of all products under these heads.

#### **Conclusion**

- Thus, from a volume and value standpoint, Indian defence exports, while showing a promising upward trend has failed to meet desired success globally.
- To help ideas meet action, there is a need to create an environment for greater participation of private industry.
- To ensure that 'Make in India' initiative reaches its full potential, focus should be laid on export promotion/facilitation and export regulation.

#### **Additional Information – Indian Defence Product Exports**

- Australia: 5.56x45mm Ball MK N (SS109) cartridges
- Azerbaijan: protective headgear and hard armor plates
- Germany: helmets, bomb suppression blanket and soft armor panels
- Singapore: radar parts, bullet proof vests and helmets with accessories
- South Africa: detonators
- Thailand: night vision binoculars

### **4. U.S. approves 2 missile deals with India**

#### **Context**

- The U.S. State Department has approved two potential missile deals with India, for an estimated \$92 million and \$63 million.

#### **Details:**

- Deal 1:
  - \* It is a deal for 10 AGM-84L Harpoon Block II air-launched missiles and related equipment.

- \* Boeing is the contractor.
- \* These missiles can be fitted onto Boeing's P-8I (Poseidon-Eight India) maritime patrol aircraft.
- \* They are intended to enhance India's capability in anti-surface warfare while defending its sea lanes.

#### • Deal 2:

- \* It is a deal for \$63 million and principally contracted with Raytheon Integrated Defense System.
- \* The deal includes delivery of 16 MK 54 All Up Round Lightweight Torpedoes (LWT); three MK 54 Exercise Torpedoes (MK 54 LWT Kit procurement required); and related equipment.
- \* Also included are MK 54 spare parts, torpedo containers, two Recoverable Exercise Torpedoes (REXTORP) with containers & related equipment, support from the U.S. government and contractors.
- \* The torpedoes are expected to enhance India's anti-submarine warfare capability and can be used with the P-8I.

### **5. India among top 3 military spenders: report**

#### **Context**

The annual report by a Swedish think tank, Stockholm International Peace Research Institute (SIPRI) – 'Trends in World Military Expenditure, 2019' has been released.

#### **Details:**

- According to the report, in 2019, the global military expenditure rose to \$1917 billion with India and China emerging among the top three spenders.
- In 2019, China and India were, respectively, the second- and third-largest military spenders in the world.
  - \* China's military expenditure reached \$261 billion in 2019, a 1% increase from 2018, while India's expenditure increased by 6.8% to \$71.1 billion.
- The top five largest spenders were U.S. (\$732 bn), China (\$261), India (\$71.1), Russia (\$65.1 bn) and Saudi Arabia (\$61.9 bn).
  - \* These 5 countries accounted for 62% of the global expenditure.
- Pakistan was at the 24th position in 2019 compared to 19th in 2018.

#### **Report on India:**

- India's military expenditure has risen significantly over the past few decades.
  - \* It grew by 259% over the 30-year period of 1990–2019, by 37% over the decade of 2010–19.
  - \* However, its military burden fell from 2.7% of GDP in 2010 to 2.4% in 2019.

- While India's defence spending excluding pensions, which constitute a significant part, has been growing in absolute terms, it has been going down as a percentage of its GDP as noted by the report.
- The \$71.1 billion spent by India in 2019 was 2.4% of its Gross Domestic Product (GDP).
- In 2018, India was at the fourth position with Saudi Arabia at the third.
- The report quoted that India's tensions and rivalry with both Pakistan and China are among the major drivers for its increased military spending.

# ENVIRONMENT AND ECOLOGY

## 1. Chinkara/ Indian Gazelle

- Indian gazelles, *Gazella bennettii*, are primarily found in the northwestern region of India in the state of Rajasthan.
- Their distribution extends from south of the Krishna River, as far east as central India, and into the north-central region of Iran (east of the Zagros Range and south of the Alborz).
- They are found in grasslands and desert areas in India, parts of Iran, Afghanistan and Pakistan.
- IUCN Red List Classification: Least Concerned.
- The Chinkaras are usually poached in Rajasthan, allegedly by the Bawaria community, whose traditional occupation is hunting.

### Context:

- The instances of poaching of wild animals and birds have registered a sharp increase across Rajasthan during the COVID-19 lockdown, with the hunters taking advantage of slack monitoring and sparse public movement in the remote areas.

## 2. Petersberg Climate Dialogue

### Context:

- India, along with 30 countries, deliberates on issues of Climate Change in the first ever virtual Petersberg Climate Dialogue.
- The first virtual Climate Dialogue, was the eleventh session of Petersberg Climate Dialogue

### Details

- Originally an initiative of Federal Chancellor Angela Merkel, the first Dialogue was held in May 2010 as a follow-up to the 15th session of the Conference of the Parties (COP 15) and in preparation for COP 16.
- It is a forum for informal high-level political discussions, focusing both on international climate negotiations and the advancement of climate action.
  - \* Representatives from all regions of the world gather at the Dialogue for informal discussions in support of the United Nations Framework Convention on Climate Change (UNFCCC) negotiating process.
- The Dialogue is hosted by the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety (BMUB).

### India calls for making Climate technology available at affordable cost

- Expressing solidarity with the world as it combats the COVID 19 pandemic India highlighted how COVID - 19 has taught people that they can survive on less.

- The world must think of adopting more sustainable consumption patterns in line with requirement of sustainable lifestyles

## 3. Trimeresurus salazar

- It is a new species of green pit viper found in Arunachal Pradesh.
  - \* It was discovered in the thick, evergreen forests of Pakke Tiger Reserve
- Pit vipers are venomous snakes distinguished by their heat-sensing pit organs between the eye and the nostril.
- The new species differed from its closely related species of green pit vipers in bearing a rusty red or orange lateral stripe along the head and the entire body.
- The name was inspired by Salazar Slytherin, the co-founder of J.K. Rowling's fictional Hogwarts School of Witchcraft and Wizardry.

## 4. World Earth Day

- April 22 is observed as 'World Earth Day' every year.
- 2020 is the 50th anniversary of this celebration.
- The theme for World Earth Day 2020 is "Climate Action".
- The first Earth Day, observed in 1970, was a unified response to an environment in crisis — oil spills, smog, rivers so polluted they literally caught fire.
  - \* It crystallized a growing public concern about ecological crises. Earth Day was the product of local grassroots action to increase environmental awareness but it also focused the nation's political agenda on urgent environmental issues.
- The first observance launched a wave of action, including the passage of landmark environmental laws in the United States.
- Many other countries also followed suit.

### Context:

- Vice President greets people on the occasion of World Earth Day.

## 5. Wildlife Board nod for mining in Assam elephant reserve

### Context:

- The National Board for Wild Life (NBWL) has recommended coal mining in a part of an elephant reserve in Assam.

**Details:**

- The NBWL's Standing Committee had discussed a proposal for use of 98.59 hectares of land from the Saleki proposed reserve forest land for a coal mining project by North-Easter Coal Field (NECF), a unit of Coal India Limited.
- Saleki is a part of the Dehing Patkai Elephant Reserve that includes the Dehing Patkai Wildlife Sanctuary

**Concerns:**

- There have been reports of rampant illegal coal mining in the Tikak open cast pit mining in Saleki. This has been noted from the local wildlife division's report.
- There have also been reports of illegal mining of coal, stone, sand, etc., violating all rules and regulations.

**Dehing Patkai Wildlife Sanctuary**

- The Dehing Patkai Wildlife Sanctuary, also known as the Jeypore Rainforest is a part of Dehing Patkai Elephant Reserve.

- It is located in the districts of Dibrugarh and Tinsukia.
- Dehing Patkai is a deciduous rainforest interspersed with semi-evergreen and lush green flora, the only patch of virgin rainforest in Assam.
- It comprises of Jeypore, Upper Dehing and Dirok.
- Dehing is the name of the river that flows through this forest and Patkai is the hill at the foot of which the sanctuary lies.

**National Board for Wildlife (NBWL)**

- National Board for Wildlife is a "Statutory Organization" constituted under the Wildlife Protection Act, 1972.
- The NBWL is under the Ministry of Environment, Forest and Climate Change (MoEFCC).
- The board advises the Central Government on framing policies and measures for conservation of wildlife in the country. It serves as apex body to review all wildlife-related matters and approve projects in and around national parks and sanctuaries.



# HEALTH ISSUES

## 1. Price Monitoring & Resource Unit (PMRU)

### Context:

- Jammu & Kashmir Union Territory has become 12th State/UT where the Price Monitoring & Resource Unit (PMRU) has been set up by the National Pharmaceutical Pricing Authority (NPPA).

### Other states where PMRU has been established

- PMRUs have already been set up by the NPPA in 11 States, including Kerala, Odisha, Gujarat, Rajasthan, Punjab, Haryana, Nagaland, Tripura, Uttar Pradesh, Andhra Pradesh and Mizoram.

### About NPRU

- The PMRU, a registered society, shall function under the direct control and supervision of the State Drug Controller of respective states.
- The unit shall be funded by the NPPA for its recurring and non-recurring expenses.
- PMRU Mandate: To track violation of prices of essential drugs and medical devices under the Drugs Price Control Order (DPCO).
- The PMRU is chaired by the State Health Secretary. The Member-Secretary would be Drugs Controller.

### Functions

- The PMRU shall help the NPPA and the State Drug Controller in ensuring the availability and accessibility of medicines at affordable prices.
- The PMRU will collect samples of medicines, collect and analyse data and make reports with respect to availability and over-pricing of medicines for taking action under the provisions of the Drug Price Control Order (DPCO).
- It offers technical help to the State Drug Controllers and the NPPA to –
  - \* Monitor notified prices of medicines,
  - \* Detect violation of the provisions of the DPCO,
  - \* Look at price compliance, collect test samples of medicines, and
  - \* Collect and compile market-based data of scheduled as well as non-scheduled formulations.
- It is also expected to organise seminars, training programs and other information, education and communication (IEC) activities in the areas of availability and affordability of medicines for all.

## 2. Remdesivir

### Context:

- The Cancer Patients Aid Association (CPAA) has written to the Health Ministry to revoke the Indian patent on Remdesivir.

### Details

- Remdesivir is a potential anti-viral drug under testing for COVID-19 patients.
- Remdesivir is produced by Gilead Life Sciences.
- The CPAA said the patent on the drug would make it unaffordable, and this would include cancer patients who are at heightened risk of complications from the viral infection.
- The CPAA provides for the treatment and rehabilitation of cancer patients.
- The Indian patent on Remdesivir was granted as recently as February 18, 2020.
- The Association said the patent ought to be revoked
  - \* not only on the grounds that it could incentivize other manufacturers to make the drug and offer it cheaply
  - \* But also on the grounds that the drug wasn't novel

## 3. World Health Day

- April 7 is observed as 'World Health Day' worldwide.
  - \* This was the day in 1948 when the World Health Organisation was founded.
- The theme for the World Health Day 2020 is "Support Nurses and Midwives".
  - \* WHO chose the year 2020 as the "Year of the Nurse and Midwife" because of the contribution of nurses and midwives in making the world a healthier place.
  - \* Nurses and other health workers are at the forefront of the COVID-19

## 4. Attacks on health workers

### Context:

- Union Cabinet has promulgated an ordinance to amend the Epidemic Diseases Act, 1897 to make acts of violence against medical personnel a cognisable and non-bailable offence and also provide compensation in case of injury or damage or loss to property.

**Examples**

- Healthcare personnel sent to localities to collect samples from people who are suspected to have been infected or have come in contact with those who have tested positive for the virus have been attacked.
- Some doctors returning home from duty have been prevented from entering their homes and in some cases, even asked to vacate their premises.
- In Chennai, healthcare workers were attacked and decent burial of a neurosurgeon who died of COVID-19 complications was prevented.

**Objectives:**

- The ordinance is being promulgated to protect healthcare service personnel and property, including their living/working premises, from violence during epidemics.
- The ordinance is intended to ensure zero tolerance to any form of violence against healthcare service personnel and damage to property.
- The ordinance aims at making acts of violence against medical staff a cognisable and non-bailable offence.
- It seeks to provide compensation for injury to healthcare personnel or for damage or loss to property.

**Possible reasons for attacking healthcare workers**

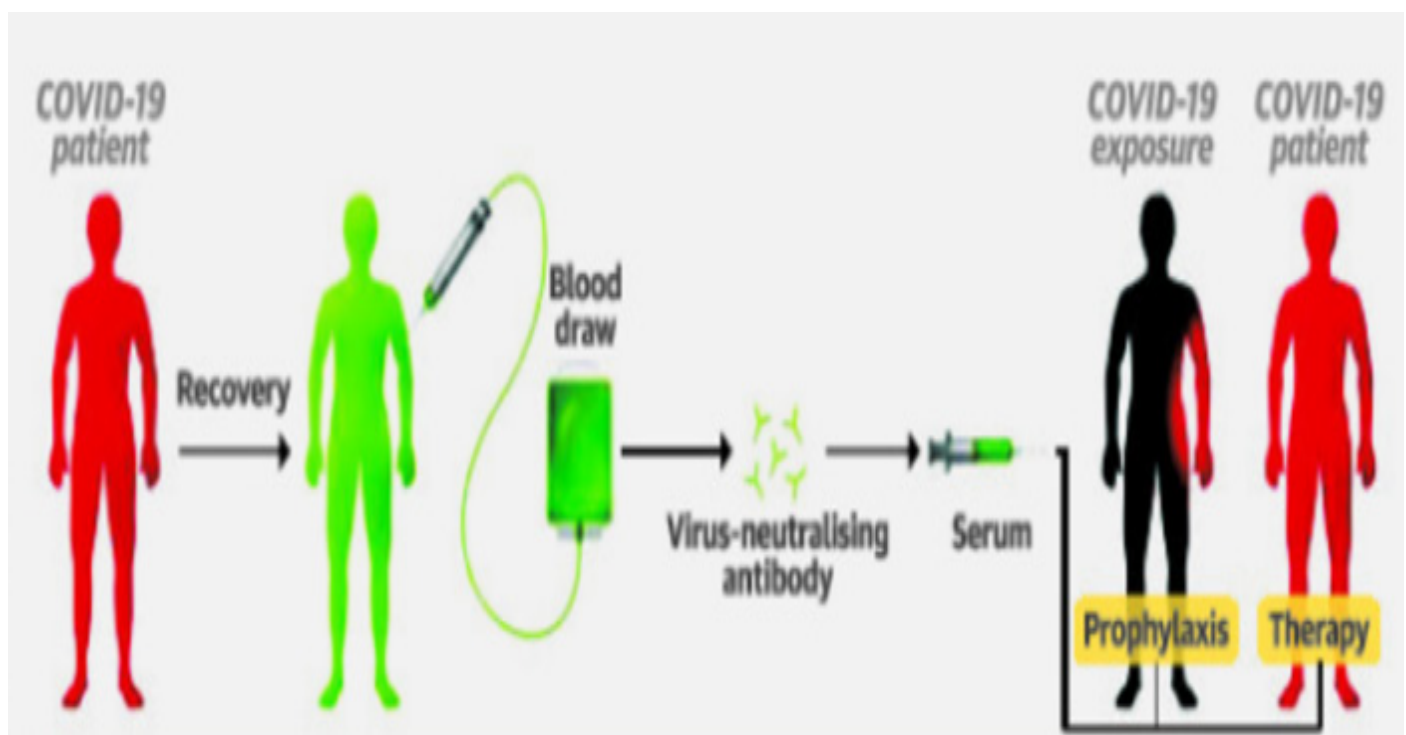
- The abuse and violence against healthcare workers after the outbreak of COVID-19 in the country has been due to fear and ignorance.
- In many cases, the fear of stigma and isolation resulted in attacks on healthcare workers who had gone to collect samples from those who were part of this congregation.

**The ordinance awards the following punishments:**

- The ordinance proposes that in cases of attacks on healthcare workers, the investigation will be completed within 30 days and the final decision arrived at within one year.
- Normal cases:
  - \* Jail term: 3 months to 5 years
  - \* Fine: Rs 50,000 to Rs 2 lakh.
- Serious cases:
  - \* Jail term: 6 months to 7 years
  - \* Fine: Rs 1 lakh to Rs 7 lakh.
- In case damage is caused to the vehicles and clinics of health workers, the guilty will be made to pay a fine which is double the market rate of the property damaged.

**5. Convalescent Plasma Therapy**

- It involves transfusing certain components from the blood of people who have recovered from a virus attack into people who are very sick with the virus or people who are at high risk of getting the virus.
- When a pathogen like novel coronavirus infects, our immune systems produce antibodies.
- The antibodies span out to identify and mark the invading virus.
- White blood cells attach the identified intruders, and the body gets rid of the infection.
- The therapy, like blood transfusion, harvests the antibody from a recovered patient and ingest into a sick person.
- Helped by the antibody, the immune system mounts robust combat on the virus.



**What are antibodies?**

- Antibodies are one of the front-line immune response to an infection by a microbe.
- They are a particular type of proteins secreted by immune cells called B lymphocytes when they encounter an invader, such as a novel coronavirus.
- The immune system designs antibodies that are highly specific to each invading pathogen. A particular antibody and its partner virus are made for each other.

**How the treatment is given?**

- Blood is drawn from a person who has recovered from COVID-19 sickness.
- The serum is separated and screened for virus-neutralizing antibodies.
- Convalescent serum, that is the blood serum obtained from one who has recovered from an infectious disease and especially rich in antibodies for that pathogen, is then administered to a COVID-19 patient.
- The sick acquires passive immunisation.
- Potential donor would be examined before the blood serum is extracted and given to a sick person. First, the swab test must be negative and the potential donor has to be declared as cured. Then the recovered person has to wait for two weeks. Or else the potential donor should be asymptomatic for at least 28 days. Either of the two is mandatory.

**How is it different from vaccination?**

- This therapy is akin to passive immunization.
- When a vaccine is administered, the immune system produces the antibodies. Thus, in a later date, when the vaccinated person is infected by that pathogen, the immune system releases the antibodies and neutralises the infection.
- Vaccination provides lifelong immunity.
- In the case of passive antibody therapy, the effect lasts only up to the time the antibodies injected remain the bloodstream. The protection given is temporary.

**Significance:**

- Convalescent plasma is a time-tested strategy that has worked successfully with several other diseases.

Doctors struggling to bring relief to COVID-19 patients have turned towards using Convalescent plasma as a treatment option for COVID-19

**Challenges:**

- This therapy is not simple to harness, primarily due to the difficulty of obtaining significant amounts of plasma from survivors.
- In diseases like COVID-19, where most of the victims are aged, suffering from other medical conditions such as hypertension, diabetes, and so on, not all recovered patients can volunteer to donate blood.
- People should also be willing to donate plasma.

- Since the technique rests on blood donation, people from the more common blood groups, for instance, O+ve, will have easier access to plasma. Naturally, the pool for rare blood groups is going to be smaller.
- Whether the Convalescent plasma works or not depends on whether the disease produced a lot of antibodies in people or not. There are no commercially available assays in the market that could measure the antibody level in the plasma.
- There are several questions which would need extensive clinical trials.
  - \* There is no standardised protocol on how much of convalescent plasma or how often it must be used or when it should be used. Researchers would need enough donors who have recovered fully.
  - \* Trials are also required to examine the effect of other anti-virals or anti-inflammatory drugs on convalescent plasma, and see if there is an additive effect or take-away from the benefits.

**Conclusion:**

- There is the need for requisite resources and focus on the promising convalescent plasma method.
- Medical specialists have speculated that there will likely be concentrated immune globulin products in the near future which will likely supersede plasma technology as a way to deliver passive immunity via antibodies to both patients with active disease and to temporarily prevent disease.

**Immunocompromised during Covid-19****Context**

- US Centers for Disease Control and Prevention (CDC) issued guidelines for people who are at increased risk of getting severely ill from Covid-19.
- These include those who are 65 years or older, people with chronic lung disease or moderate to severe asthma, those with heart disease and immunocompromised people.

**Immunocompromised People**

- A person from any age group can become immunocompromised either due to certain medical treatments or due to diseases such as auto-immune diseases.
- In some people, the immune system is weakened, which means that their immune systems cannot function efficiently and therefore, make it difficult to recover or in some cases, may lead to more severe outcomes.
  - \* Such people are said to be immunocompromised and there can be various reasons for this, such as cancer treatment, existing comorbidities, age and genetics among others.

- Conversely, reports have indicated that in some Covid-19 patients, even seemingly healthy ones, death has occurred probably due to a cytokine storm.

### **Cytokine Storm**

- Cytokines are signalling proteins that are released by cells at local high concentrations —
- A cytokine storm or CSS is characterised by the overproduction of immune cells and the cytokines themselves because of a dysregulation in the process.
  - \* It is when the immune system goes into overdrive, it damages healthy tissue, leading to multiple organ failure, sepsis and potentially, even death.
- Cytokine storm can occur due to an infection, auto-immune condition, or other diseases. Signs and symptoms include high fever, inflammation (redness and swelling), severe fatigue, and nausea.
- Cytokine storms are not exclusive to coronavirus patients. It is an immune reaction that can occur during other infectious and non-infectious diseases as well.

How does CSS impact a COVID-19 patient?

- In the case of any flu infection, a cytokine storm is associated with a surge of activated immune cells into the lungs, which, instead of fighting off the antigen, leads to lung inflammation and fluid build-up, and respiratory distress.

### **Who are at high risk of being immunocompromised?**

- Those who are taking treatment for cancer, smokers, those who have undergone bone marrow and organ transplantation, have immune deficiencies, poorly controlled HIV or AIDS may be immunocompromised.

### **What does it mean to be immunocompromised?**

- Research indicates that age, people with certain comorbidities and those with weakened immune systems may be at higher risk of developing severe illness and therefore, should be more cautious.

## **6. Domestic Violence on the rise during the COVID-19**

### **Pandemic**

#### **Context**

- Increase in domestic violence cases in India and other countries since the imposition of lockdowns.
- It highlights the plight of many silent sufferers of domestic violence across the world in these times.

#### **Why increase in domestic violence cases?**

- The literature on domestic violence suggests that when men and/or women get employed, domestic violence tends to fall as interactions between couples reduce, going to work might have been the only reprieve from emotional abuse and violence.
- Under a lockdown, interaction time has increased and families have been left without access to the outside world. The literature also suggests that violence is a way for the man to assert his notion of masculinity.

- The current atmosphere of fear, uncertainty, food insecurity, and unemployment may create feelings of inadequacy in men.
- All these factors are only likely to aggravate tensions at home and make women victims of those tensions.
  - \* It is believed when people feel powerless in one area of their lives, they often seek to establish more power over other areas.
  - \* This is particularly dangerous in domestic violence situations, because domestic abuse is, at its core, an effort by one partner to dominate and establish psychological, emotional, physical and sexual control over the other partner.
- Women are also confined within the four walls of the house and they cannot share their grief with anybody.
  - \* The lack of access to friends, family and support organisations is expected to aggravate the situation for abused women further.

### **What can be done?**

- Police around the country should come up with domestic violence response plans to prepare for the expected increases and to ensure victims get help even with restrictions on public movement.
- The National Commission for Women (NCW) has appealed to women to reach out to their nearest police stations or call the State Women's Commission for support.
  - \* The NCW could increase its advertising expenditure on TV to relay messages requesting women to contact the police station for help.
  - \* The 181 helpline number set up for this reason should remain active, and women should be reminded of this number via TV ads.
- The government could also send mass SMS messages as it did during the onset of the COVID-19 crisis as most women have access to at least a basic phone.
- Mental-health organizations should issue suggestions to help families reduce uncertainty and stress in the home.
- The electronic media can help raise awareness in regional language infomercials. This could involve emphasizing the fact that domestic violence is a punishable offence under the Indian Penal Code.
- Helplines, psychosocial support and online counselling should be boosted.
- Technology-based solutions such as SMS, online tools and networks must be used to expand social support.
- Alternative arrangements must be made to reach women with no access to phones or Internet.

### **Examples from the world**

- The French government has extended monetary support to organisations fighting this crime.



- British activists have requested their government to release emergency funds to support organisations that are dealing with domestic violence-related issues.
- The Indian government should also extend monetary support to such organisations in India rather than rely entirely on ASHA workers on whom the burden of community welfare is already very high.
  - \* The staff of such organisations should be allowed to travel without being stopped by the police.

### **Conclusion**

- Lockdown has become a real nightmare for victims of domestic violence.
- Studies show that women more than men tend to be affected adversely during epidemics.
  - \* We need to take these advisories seriously to prevent further widening of the rift between men and women in our society.
- As the lockdown and limited movement outside the house appears to be a long drawn affair, the best recourse for victims of physical abuse is to report the crime and seek help.
- A crucial safety net therefore, must be offered to some of the most at-risk women, children and anyone vulnerable to abuse in order to triumph over the immediate and long-term impact of this Coronavirus crisis.

## **7. Economic liberalisation and its faults**

### **Context:**

- This article argues that the COVID-19 pandemic reveals how dependence on a more liberalized economic model has proved to be counter-productive and disastrous in the current scenario.

### **Background:**

#### ***Change in industrial model of production:***

- In the late 1980s, transnational corporations started shifting their production base to developing countries, especially Asia, in search of cheap labour and raw materials.
- Developed countries supported the move as it helped them shift the polluting and labour-intensive industries to other countries, while still retaining the ownership.
- Thus, the world witnessed the development of global supply chains in many products.

#### ***Changes in India:***

- The 1991-92 Budget speech of the then government marked the beginning of the end of the 'Licence Raj' in India. It marked a notable shift from a public sector-based economic model to a more private sector-led economic model.

- The Budget also announced the reduction of import duties and paved the way for foreign-manufactured goods to flow into India. Following this, most of the manufacturing sector was opened up to foreign direct investment.

### **Dominance of Chinese industries:**

- Though many developing countries participated in the global production/value/supply chains, the substantial value addition happened only in a few production hubs, of which China emerged to be a major one. Manufacturing shifted from a decentralised production system spread across different counties to just a few locations.
- Notably, countries like China defied the logic of supply/value chains and carried out backward integration and emerged as global manufacturing hubs for certain products.
  - \* In the case of health products, China became the global supplier of active pharmaceutical ingredients (API), personal protective equipment (PPE), and medical devices diagnostics.

### **COVID-19 response:**

- The structural changes observed have had major implications in the COVID-19 response.
- The lack of domestic manufacturing base has affected the ability of many governments, including that of developed countries, to put up an effective response against the crisis. This has led to the need for drastic measures in such countries.
  - \* The U.K. Prime Minister has asked the country's manufacturers to produce ventilators in order to provide care for critical COVID-19 patients.
  - \* The U.S. President invoked the Defence Production Act of 1950 to ramp up N95 mask production. Under this legislation, the U.S. President can direct U.S. manufacturers to shift from their normal manufacturing activities to produce goods according to the directions of the government.
  - \* The French Health Minister has stated that the country may nationalize vaccine companies if necessary.
  - \* Spain nationalized all its private hospitals.
  - \* Israel and Chile issued compulsory licences to ensure that medicines are affordable.

### **Concerns:**

#### ***For the developed economies:***

##### ***Fallacy of privatization:***

- The current state of affairs around the world including the most developed countries exposes the poor state of preparedness and dependence on imports for essential goods required to meet the challenge of any major disease outbreak.



- The lack of domestic industries and dependence on imports are a clear indication of the fact that though the evolution of global value chains has been a good development for the multinational companies, it need not be good for the country in all circumstances.
- This might indicate that the overwhelming objective of private sector-led economic growth has proved to be disastrous.

#### **For India:**

- In India, economic liberalization has limited the government's capacity in a few ways.

#### **Lack of credible information:**

- First, it incapacitated the government to respond to emergencies based on credible information.
- The dismantling of the 'Licence Raj' system resulted in the elimination of channels of information for the government, which is crucial to make informed policy choices.
- As part of the removal of the 'Licence Raj', the government stopped asking for information from the manufacturer to file the quantity of production of various products.
  - \* As a result, in the case of medicines, it took much effort and time for the government to gather information about stocks and the production capacity of pharmaceutical companies.
  - \* Similarly, there were difficulties in finding out India's production capacity of PPE, medical devices and diagnostics.

#### **Undermined manufacturing capabilities:**

- The logic and policies of economic liberalization have seriously undermined the manufacturing capabilities of health products in India.
- The short-sighted policy measures, with primary focus on enhancing profitability of the private sector, allowed the import of raw materials from the cheapest sources rather than focussing on domestic resource base development.
  - \* The API industry serves as a typical example of this mistake. China has been a dominant player in the API sector and has been able to sell its products at much lower prices owing to larger economies of scale. This has resulted in the debasing of the domestic API industry in India.
  - \* According to a report of the Confederation of Indian Industry (CII), nearly 70% of India's API import is from China. The CII report lists nearly 58 API where the dependence is 90% to 100%. The disruption in the supply of API due to the COVID-19 outbreak has impacted the production of not only medicines required for COVID-19 patients, but also of other essential medicines in India. This has also limited India's ability to export medicines which are in high demand globally.

#### **High dependency:**

- India is heavily dependent on supplies of PPE, medical devices and diagnostic kits.
  - \* The 100% dependence on reagents, an important chemical component for testing, is limiting the capacity of the government to expand testing. This dependence on imports affects the ability of Indian diagnostic companies to provide an affordable test.
  - \* There are only a few domestic manufacturers who can produce PPE and medical devices like ventilators.
- The current restrictions in place have resulted in India not being able to get required quantities of test kits, PPE and parts of ventilators through importation pointing to the inherent dangers of dependency.

#### **Effect on domestic industries:**

- Keeping in line with the spirit of Liberalization, Privatization and Globalization (LPG) reforms, India's industrial policies have largely neglected the interests of domestic production. There seems to be very little attention on the idea of self-reliance.
- Also in the name of economic efficiency, India allowed unconditional imports without sufficient attention to the development of domestic industries.
- Global supply/production chains have not only destroyed the manufacturing base in developed and developing countries but have also resulted in loss of jobs and poor working conditions in these sectors.
  - \* Big companies with massive market power dictate the terms to smaller manufacturers down the value chain to produce cheaply.
  - \* Developing countries are forced to ease their labour protection laws to facilitate investment. People are forced to work in precarious working conditions without any social security net.

#### **Conclusion:**

- The current pandemic should lead the countries to rethink and reevaluate the economic efficiency theory propounded by the LPG principle. There should be the emphasis on an industrial policy that helps maintain core capacity in essential products.

### **8. Effectiveness of available drugs**

#### **Hydroxychloroquine**

- It is an antimalarial drug option, considered less toxic than chloroquine, and prescribed in certain cases.
- Doctors also prescribe hydroxychloroquine for patients of rheumatoid arthritis and lupus.

- Hydroxychloroquine is an interferon blocker, and works by diminishing the immune system's response to viral infections

### Usage

- A study in France showed that Hydroxychloroquine alone or in combination with azithromycin appeared to reduce virus levels quicker prompting drug regulators in several countries including in India to approve the drug in restricted settings.
- The Indian Council for Medical Research has also cleared HCQ to be used as prophylaxis, or preventive medication, by doctors, nurses and other health staff.

### Side effects of hydroxychloroquine

- Hydroxychloroquine is known to have a variety of side-effects, and can in some cases harm the heart.
  - \* These dosages are also linked to instances of cardiac arrhythmia and liver damage.
- Wide usage may handicap people's ability to fight the infection.
- It also causes headache, dizziness, loss of appetite, nausea, diarrhea, stomach pain, vomiting, and skin rash.
- Its overdose can lead to seizures or the patient falling unconscious.

### Who makes this drug in India?

- Mumbai-headquartered Ipca Laboratories had nearly 82% of the market, with its brands HCQS and HYQ. Around 80% of the volumes produced by Ipca are exported.
- Ahmedabad-headquartered Cadila Healthcare (Zydus Cadila) prepares the brand Zy Q, with 8% of the market.
- Wallace Pharmaceuticals (OXCQ), Torrent Pharmaceuticals (HQTOR) and Overseas Healthcare Pvt Ltd (CARTIQUIN) have smaller shares.

### Context

- India partially lifts ban on export of hydroxychloroquine to help US, others fight Covid-19

### Details

- The export of hydroxychloroquine and paracetamol will be now taken up on a "case-to-case basis, depending on the availability of stock after meeting domestic requirements,"
- The decision means India will now honor all those orders it has received in the past few weeks from countries such as the US, Brazil, Spain, France, Germany, Israel, the UK, Australia and the Gulf countries, among others.

### So, how can India utilize this crisis as an opportunity to reorder its own global commitments and emerge as a significant actor?

India's existing advantage of large-scale pharmaceutical production allows it to significantly leverage its soft power by investing in the outward growth of the healthcare sectors of other nations by:

- ramping up exports in pharmaceuticals;
- becoming a preferred medical tourist destination for those seeking affordable treatment in quality secondary/tertiary health services,
- pursue medical diplomacy by providing medical training and technical expertise to many other developing nations whose healthcare systems are much worse than India.

### Concerns

- Initially no proper human trials were conducted to determine its efficacy.
- The heart issues associated with use of hydroxychloroquine in COVID-19 patients are highlighted in a study published in JAMA Network Open. The findings are from one of the many clinical trials being conducted to determine the safety and efficacy of the drugs in treating COVID-19.
  - \* JAMA Network Open is a monthly open access medical journal published by the American Medical Association covering all aspects of the biomedical science

### Conclusion

- In conclusion, India has shown tremendous far-sightedness and a vision of a stronger diplomatic bond with nations across the globe by helping other countries in their fight against Covid-19 by providing them with the crucial Hydroxychloroquine drug.
- This will earn India permanent gratitude from not only governments across the globe but most importantly people of all our friendly nations, PM Modi rightly summarised India's duty towards humanity when he tweeted in response to President Trump that , "Times like these bring friends closer. The India-US partnership is stronger than ever. India shall do everything possible to help humanity's fight against Covid-19. We shall win this together."
- India truly is the friend in need of humanity.

### **BCG vaccine**

### What's in News?

Doctors and scientists in India have expressed caution on a study which argues that countries that have deployed the BCG-tuberculosis vaccine in their immunisation programmes have seen fewer deaths from COVID-19.

- The study argues that 55 middle and high-income countries chosen for the analysis that have a current universal BCG policy had 0.78 deaths per million people, whereas middle and high income countries that never had a universal BCG policy (five countries) had a larger mortality rate, with 16.39 deaths per million people, a significant variation.

- The BCG vaccine is known to confer a strong immune response that have protective effects beyond just staving off a tuberculosis infection and because COVID-19 was particularly lethal to the elderly, those countries where the elderly were likely to have had a BCG shot in their childhood were likely to be better protected against the coronavirus, the authors argue.

#### **Findings:**

- Italy, where the COVID-19 mortality is very high, never implemented universal BCG vaccination.
- On the other hand, Japan [and which has a BCG policy since 1947] has maintained a low mortality rate despite not implementing the most strict forms of social isolation.

#### **Note:**

- Low and middle-income countries, even if they had universal immunisation policies, were excluded from the analysis because they were also likely to have low testing rates for COVID-19 infection and therefore fewer reported deaths.
- India wasn't included in the analysis.

#### **Sepsis Drug to be tested for COVID-19**

##### **Context:**

- In a race for cure, existing drugs are being used in trials to fight COVID-19.
- Sepsivac – a drug jointly developed by the Ahmedabad-based Cadilla Pharmaceuticals and the Council for Scientific and Industrial Research (CSIR), will be tested in 50 COVID-19 patients at the All-India Institute of Medical Sciences in Delhi and Bhopal, and Post Graduate Institute of Medical Education and Research, Chandigarh.

##### **Details:**

- Sepsivac was originally developed for treating sepsis by a class of pathogens called gram negative bacteria.
  - \* Gram negative bacteria are known to cause life-threatening infections.
  - \* Given the similarities in the immune-system response in critically ill COVID-19 patients, it is theorised, the therapy could stimulate a benign response.
- A large quantity of cytokines – chemicals signalling the presence of an infection are produced in the early stages of the body's response against an infection to stimulate the production of antibodies.
- However, cytokines also cause inflammation of organs and can be counter-productive in protecting the body.
- Keeping them in check is the goal of the so called immuno-modulators, or medicines like Sepsivac.
- The drug uses the Mycobacterium w (formally known as mycobacterium indicus pranii) as it produces a different immune-system response.

##### **Advantages:**

- The advantage is that there is a readymade product that can be put into trials. It has already got an approval for phase-3 [large trials] and can be scaled up if needed.
- Previous randomised trials in sepsis patients showed 11% absolute reduction and 55.5% relative reduction in mortality.
- It is claimed that Sepsivac reduces the days on ventilator, in ICU and hospitals and incidence of secondary infection.

#### **Study lists 69 existing drugs to target novel coronavirus**

##### **Context:**

- Study of the novel coronavirus (SARS-CoV-2) and effectiveness of available drugs.

##### **Background:**

- When virus invades human cells, it takes over the cells' molecular machinery to replicate itself because it cannot do this on its own.
- If these molecular machines of the viruses can be inhibited, Viruses cannot survive.

##### **Details:**

- In an unprecedented move nearly 100 scientists from across the globe worked together to study the genes of the novel coronavirus (SARS-CoV-2).
- The team identified and studied 26 coronavirus genes that help in the production of proteins that help the virus attach to the human proteins.
  - \* The proteins of the virus must attach to the human proteins to cause the infection.
- The team also studied human proteins and found 332 SARS-CoV-2 and human protein interactions.
- The team has listed the human proteins that can be targeted by drugs to fight the infection. This study has helped publish a list of drugs that can be repurposed to treat COVID-19.
- The suggested drugs include some common in use drugs.
  - \* Entacapone used to treat Parkinson's disease
  - \* Antiviral medication named ribavirin, which was administered to Nipah patients in Kerala during the 2018 outbreak
  - \* Chloroquine, an antimalarial drug
  - \* Metformin, used to treat diabetes.

## 9. International Coordination

### COVID-19 Active Response and Expenditure Support Programme (CARES Programme)

#### Context

- The Government of India and the Asian Development Bank (ADB) today signed a \$1.5 billion loan that will support the government's response to the novel coronavirus disease (COVID-19) pandemic, focusing on immediate priorities such as disease containment and prevention, as well as social protection for the poor and economically vulnerable sections of the society, especially women and disadvantaged groups.

#### Details

- The Asian Development Bank had started the 'CARES Programme' to provide immediate requirements to governments in the face of this global crisis.
- It will help the Government mitigate the severe health, social, and economic impact caused by the COVID-19 pandemic.
- The loan, approved by the ADB under its CARES Programme, is the bank's largest ever to India.

#### ADB's timely assistance for the government's immediate response measures to the coronavirus pandemic to implement

- Covid-19 containment plan to rapidly ramp up test-track-treatment capacity
- Social protection for the poor, vulnerable, women, and disadvantaged groups to protect more than 800 million people over the next three months.

### GISAID

- Global Initiative on Sharing All Influenza Data (GISAID)
- It is a public platform started by the WHO in 2008 for countries to share genome sequences.
- It is a collaboration involving representatives of Member States, scientists of the Global Influenza Surveillance and Response System (GISRS) and Global Influenza Programme (GIP) of the WHO, and experts in licensing intellectual property.
  - \* GISRS monitors which influenza viruses are circulating in humans around the world throughout the year.
  - \* GISRS is a unique worldwide network able to rapidly identify and respond to influenza outbreaks including those with pandemic potential.
- The Initiative promotes the international sharing of all influenza virus sequences, related clinical and epidemiological data associated with human viruses, and geographical as well as species-specific data associated with avian and other animal viruses, to help researchers understand how the viruses evolve, spread and potentially become pandemics.

- The Federal Republic of Germany is the official host of the GISAID platform and database in a public-private partnership.

### Indo-U.S. Science and Technology Forum (IUSSTF)

#### Context

- The Indo-U.S. Science and Technology Forum (IUSSTF), has invited Proposals for 'COVID-19 Indo-U.S. Virtual Networks' that would allow Indian and U.S. scientists and engineers currently engaged in COVID-related research to carry out joint research activities through a virtual mechanism, leveraging existing infrastructure and funding.

#### The Indo-U.S. Science and Technology Forum (IUSSTF):

- The IUSSTF was established under an agreement between the Governments of India and the United States of America in 2000.
- It is an autonomous bilateral organization jointly funded by both the Governments that promotes Science, Technology, Engineering, and Innovation through substantive interaction among government, academia, and industry.
- The Department of Science and Technology, Governments of India, and the U.S. Department of State are respective nodal departments.
- Its mission is to act as a catalyst to promote long-term scientific collaborations between India and the U.S. through partnerships amongst individual scientists, scientific institutions and the scientific community at large.

#### Significance:

- As the world battles the COVID-19 pandemic, it is imperative that the S&T communities work together and share resources to address this global challenge.
- Science, Engineering, and Technology will play a critical role in finding solutions through the development of new vaccines, devices, diagnostic tools, and information systems, as well as strategies to help communities and nations manage and deploy resources to combat this pandemic.
- Collaboration across nations and organizations can leverage and share expertise across S&T communities and facilitate the development of a diverse, globally-engaged science, engineering, and technology-abled workforce, which can proactively work towards solutions for the Pandemic.

### Ventilator Intervention Technology Accessible Locally (VITAL)

#### Context

- NASA develops high-pressure ventilator to fight COVID-19



### Details

- VITAL is designed to treat patients with milder symptoms, thereby keeping country's limited supply of traditional ventilators available for patients with more severe COVID-19 symptoms
- VITAL can be built faster and maintained more easily than a traditional ventilator, and is composed of far fewer parts, many of which are currently available to potential manufacturers through existing supply chain
- Its flexible design means it also can be modified for use in field hospitals being set up in convention centres, hotels, and other high-capacity facilities across the country and around the globe
- Like all ventilators, VITAL requires patients to be sedated and an oxygen tube inserted into their airway to breathe.

### Will COVID-19 affect the course of Globalisation?

#### Globalisation

- It is the accelerated flow of goods, people, capital, information, and energy across borders, often enabled by technological developments. Over the past three decades, globalising trends were assumed to be the new normal.

#### 1. Globalisation has two sides

- On the positive side, the cross-border flow of people, goods, money and information creates new wealth and opportunity.
- On the negative side, though, it can exacerbate global disparities, enable international terrorism and cross-border crime, and allow for the rapid spread of disease.
  - \* SARS outbreak in 2003
  - \* But compared to the start of this century, the cross-border movement of people has increased dramatically, and the speed of the spread of this novel coronavirus has been of an entirely different order.

#### 2. Stagnation in the Globalisation of goods and capital

- With time, it has become increasingly apparent that not all countries, societies, and people were benefitting equally from globalisation, and that soon began to be reflected in national and international politics.
- The United States' (US) sub-prime mortgage crisis of 2007-08, and its spillover to the eurozone, exacerbated national sentiment in Europe, which had previously been a model of international integration.
- The assumption that China's rise would result in similar development opportunities for others proved unfounded. As one business leader cynically put it, "China, after climbing up the ladder, is kicking it out from under everyone else."

- \* In hindsight, the economically nationalist impulses of countries as different as the US ("America First") and India ("Make in India") were a natural consequence.

#### Slowbalisation

- A defining feature of the global economy since at least the 1970s has been globalisation—the bringing together of economies predominantly via more liberal trade flows.
- With time, the global volume of merchandise trade has slowed down dramatically.
- This means globalisation has given way to 'slowbalisation'
  - \* It is the continued integration of the global economy via trade, financial and other flows but albeit at a significantly slower pace.
  - \* Globalisation has given way to a new era of sluggishness.

'The Economist' identified several key indicators of what it calls "slowbalisation."

- The portion of trade as part of global GDP has fallen.
- Multinationals have seen a drop in their share of global profits.
- Foreign direct investment tumbled from 3.5 percent of global GDP in 2007 to 1.3 percent in 2018.

Thus, the coronavirus pandemic may further slowdown (or possibly even reverse) certain globalizing trends that had already decelerated.

#### Reorganization of the economy

- Add to slowbalisation, the trade wars and the WTO talks process coming to a grinding halt has shown that globalisation might be on the fall. Now, with this pandemic, there is another recognition of the vulnerability that global economic interdependence creates.
- So some countries are facing difficulties in getting medical supplies, some find their manufacturing can't run as value chains are linked with China.
- Countries will reconfigure their economies to look at import substitution with a greater clarity now, as the perils and pitfalls of over-dependence on foreign supplies become clear.
- Import substitution, that had become a bad word, may be back in currency.

#### China's manufacturing sector is back on track despite COVID-19

- Despite the coronavirus pandemic, manufacturing in China is showing an upward trend and factory activity has expanded.
- Other countries will remain in a lockdown phase for at least another two months.
- So, if the Chinese get this sort of a lead in getting their act together, they are going to consolidate their position in the global economy further.



- \* One needs to look at two major events that took place in the last 20 years — the 9/11 attacks (which coincided with China joining the WTO) and the 2008-09 global recession.
- \* After each of these episodes, China came out stronger and acted with alacrity, did all the pump-priming to stimulate the economy and enhance their global heft.
- Therefore countries are going to be extremely wary of the superpower that China will become and would like to disengage. India will disengage too.

#### World Trade Organisation

- There are worse days ahead for the WTO. Trade rules have worked best when the global economy is booming and isn't facing a crisis. The last time serious discussions took place at WTO was in 2008.
- It's only going to get worse, because if countries need to bring their domestic industries back, they would need space for policy flexibility.
- And WTO will be redundant there — for instance, on the issue of subsidies for small industries, no country will like the WTO to be telling them what to do or what not to do.
- But if the WTO rules are junked, then it's a free-for-all situation. That's the problem. Then we go back to the situation of the 1930s when it was just brute economic strength that determined the economics.

#### Future course of action

- The first thing that will happen is countries will try to build themselves up
  - \* In India, for instance, we can see the disruption that is taking place — almost 50% of our trade is directly linked with the Micro, Small and Medium Enterprises (MSMEs) sector as even large players have sub-contracted to the smaller producers.
- There will almost certainly be calls for the re-nationalization of manufacturing, particularly for what are considered critical or essential goods.
- This crisis has exposed the gaps in the health sector and social protection and the stimulus packages should focus on closing these gaps which will also help in achieving sustainable development goals. The priority will be to create jobs for those rendered jobless.
- National governments will weigh the risks of contagious diseases against the benefits of ease of travel or may consider stronger safeguards.
  - \* At the personal level, this new awareness of the risks associated with the free movement of people, there are some who may avoid future life, business or leisure plans that require crossing borders.

#### Conclusion

- Going forward, most economies, with the exception of China, are going to see a very different kind of dynamic as they will try to build up from where

they would be in a few months' time and then think in terms of how to integrate themselves again with other countries.

- The project of globalisation is going to settle at a new normal and it will be a very different WTO and trade governance framework, with different kinds of regional and bilateral engagements.

#### **It's time for the Red Berets**

##### Context

- The World Health Organisation (WHO)'s responsibility is to monitor threats to public health and inform and advise the member states.
- In the present scenario, however, they were not equipped to fight a pandemic of this proportion.

##### How is the WHO funded?

There are four kinds of contributions that make up funding for the WHO. These are assessed contributions, specified voluntary contributions, core voluntary contributions, and PIP contributions.

- According to the WHO website, Assessed Contributions are the dues countries pay in order to be a member of the organisation. The amount each Member State must pay is calculated relative to the country's wealth and population.
- Voluntary contributions come from Member States (in addition to their assessed contribution) or from other partners. They can range from flexible to highly earmarked.
- Core voluntary contributions allow less well-funded activities to benefit from a better flow of resources and ease implementation bottlenecks that arise when immediate financing is lacking.
- Pandemic Influenza Preparedness (PIP) Contributions were started in 2011 to improve and strengthen the sharing of influenza viruses with human pandemic potential, and to increase the access of developing countries to vaccines and other pandemic related supplies.

Since the WHO is not able to fight the pandemic effectively we need a composite force that has the capabilities of massive sanitisation, testing, hospitalisation and providing support systems. The only UN body which has the training for assembling fighting forces for emergencies is the Department of Peace Operations.

##### A force under Chapter VII

The UN Security Council (UNSC) stands paralysed because of petty battles on the name of the pandemic, its origin and the need for transparency. It should hold an emergency meeting and authorize the UN Secretary General to put together a force under Chapter VII of the UN Charter.

- Most Chapter VII resolutions determine the existence of a threat to the peace, a breach of the peace, or an act of aggression in accordance with Article 39.
  - \* The mandate of the Charter should be

interpreted to emphasise that this is the greatest threat to international peace and security.

- A UNSC Resolution is considered to be 'a Chapter VII resolution' if it makes an explicit determination that the situation under consideration constitutes a threat to the peace, a breach of the peace, or an act of aggression, and/or explicitly/implicitly states that the UNSC is acting under Chapter VII.
- Moreover, conflicts are possible on account of the fragility of the international system. Member states should be requested to send not only troops, but also police, health workers and equipment.
- Only a UN force which can enforce social distancing and lockdowns can prevent a catastrophe.

#### Steps to be taken

- Chapter VII resolutions are very rarely isolated measures. Often the first response to a crisis is a resolution demanding the crisis be ended and authorizing the Secretary General to request member states to make personnel available.
  - \* This is later followed by an actual resolution detailing the measures required to secure compliance with the first resolution.
  - \* Sometimes dozens of resolutions are passed over time to modify and extend the mandate.
- The UN peacekeeping forces are called Blue Berets because of the colour of the caps they wear. The health force can have caps of another colour, probably red.
- The launch of the Red Berets will be a historic action to be taken at a critical moment.

#### Conclusion

- As for the cost, the responsibility for the deployment of forces for peacekeeping, peace building and peace enforcement is that of the permanent members. Instead of competing with each other for leadership of the post-COVID-19 world, let them help create a post-COVID-19 world.
- If an action plan is initiated, the UN's relevance will be established and there will be a concrete act taken to end the pandemic.

### **A time for planetary solidarity**

#### Introduction

- This article discusses cooperation beyond the national boundaries at the time of crisis. It looks at contributions made by individuals, communities, and nations to respond to a planetary crisis within days.
- Global solutions to the pandemic will need helping hands from strong leadership at the national level, resources deployed to reduce the spread, bringing behavioural changes in the people and strengthening local institutions.
- Added to this, responsible civil society and non-state actors should show compassion towards the vulnerable sections.

#### Lessons from the COVID-19 pandemic

- The Internet has been used extensively for learning and work previously. Now, the scale of international video meetings and virtual classes taking place is unprecedented.
- In certain sectors such as accounting, desk-based research and software development, working remotely turns out to be profitable to companies.
- Climate change and COVID-19 are two very different challenges, but they do have some key things in common. Both are global – they do not respect national boundaries – and both require countries to work together to find solutions.
  - \* The drastic reduction in flights, for instance, has affected the airline industry adversely but also highlighted the fact that many flight trips during 'normal' times are in fact unnecessary.
  - \* For example, a return flight, economy class, from Delhi to New York releases about 0.9 tonnes of carbon dioxide (it is twice as much in premium economy). This is half of India's per capita annual emissions.
- Industrial production and electricity generation also do not have to go back to pre-COVID-19 levels.
  - \* Life under lockdown has already demonstrated that there are essentials, superfluous items and luxuries.
  - \* Responsible consumer action and new social norms to limit the last two can make a dent on greenhouse gas emissions while promoting simpler and potentially happier ways of life.

#### Green Growth

The focus of green growth strategies is ensuring that natural assets can deliver their full economic potential on a sustainable basis.

- Unfortunately, the popular version of 'green growth' is flawed because it assumes that normal business activity can be made more sustainable merely by adding renewable technology and trees to it.

#### Changes that can be introduced in the post COVID-19 World

- For a sizeable fraction of the workforce, work from home has to be encouraged, better organised and provide enhanced freedom.
  - \* It should be the norm in many sectors and people could work from home at least half the time, thus reducing travel needs, reducing greenhouse gas emissions, and simplifying child care and other domestic services.
- An even more revolutionary approach to education and learning is conceivable. Online schooling and college education without paywalls is already available, but if it were expanded to develop open access schools and universities, the scam of high admissions fees can be altogether eliminated.
- A transformation of work is also needed for the

entrepreneurial class, where greater flexibility, coordination and access to markets are made easier.


- In addition, social measures must be strengthened to protect the health and safety of the poorest.
  - \* Public hospitals need to be improved and have the capacity to respond to pandemics and related crises.
  - \* Access to care during emergency and beyond should be equally available to all.

### Conclusion


- The global community has shown that it can act to address a crisis, with governments, businesses and individuals taking measures and changing behaviours in response to the pandemic. When we work together, even small personal actions when put together, can make a big difference, helping us to overcome huge challenges.

## 10. Key Initiatives

### AYUSH reiterates immunity boosting measures



# COVID-19 Crisis



**Ministry of AYUSH recommendations, based on Ayurvedic literature and scientific publications, for preventive health measures and boosting immunity with special reference to respiratory health.**

### Measures for Enhancing Immunity

- Drink warm water throughout the day.
- Daily practice of Yogasana, Pranayama and Meditation for at least 30 minutes.
- Spices like Haldi (Turmeric), Jeera (Cumin), Dhaniya (Coriander) and Lahsun (Garlic) recommended in cooking.

### Ayurvedic Immunity Enhancing Tips

- Take Chyavanprash 10gm (1tsf) in the morning. Diabetics should take sugar free Chyavanprash.
- Drink Herbal Tea/Decoction (Kadha) made from Tulsi (Basil), Dalchini (Cinnamon), Kalimirch (Black Pepper), Shunthi (Dry Ginger) and Munakka (Raisin) - once or twice a day. Add jaggery (Natural Sugar) and/or fresh Lemon Juice to your taste, if needed.
- Golden Milk- half tea spoon Haldi (Turmeric) powder in 150 ml Hot Milk - once or twice a day.

## Immunity Boosting Measures for Self-Care

### Simple Ayurvedic Procedures

- **Nasal Application**– Apply Sesame Oil/Coconut oil or Ghee in both the nostrils (Pratimarsh Nasya) in morning and evening.
- **Oil Pulling Therapy**– Take 1 table spoon Sesame or Coconut Oil in mouth. Do not drink, swish in the mouth for 2 to 3 minutes and spit it off followed by warm water rinse. This can be done once or twice a day.

### Actions During Dry Cough/Sore Throat

- Steam inhalation with fresh Pudina (Mint) leaves or Ajwain (Caraway Seeds) can be practiced once in a day.
- Lavang (Clove) powder mixed with Natural Sugar/Honey can be taken 2-3 times a day in case of cough or throat irritation.
- These measures generally treat normal dry cough and sore throat. However, it is best to consult doctors if these symptoms persist.



**Background**

- In the wake of the COVID 19 outbreak, entire mankind across the globe is suffering. Enhancing the body's natural defence system (immunity) plays an important role in maintaining optimum health.
- We all know that prevention is better than cure. While there is no medicine for COVID-19 as of now, it will be good to take preventive measures which boost our immunity in these times.
- Ayurveda's extensive knowledge base on preventive care, derives from the concepts of "Dinacharya" – daily regimes and "Ritucharya" – seasonal regimes to maintain a healthy life.

**Challenge COVID - 19 Competition (C3)****Conclusion**

- The National Innovation Foundation (NIF) has invited citizens to participate in Challenge COVID-19 Competition (C3).
  - \* National Innovation Foundation is an autonomous institute under the Department of Science and Technology, Govt. of India.

**Objective:**

- The initiative has been launched to create awareness and also intimately engage a wide cross-section of society with diverse backgrounds in providing and implementing solutions against COVID-19 pandemic.

**Details:**

- The NIF has invited interested innovators to send in their creative ideas and innovations for problems or issues like reducing transmission of Coronavirus. This will help supplement the efforts of the government in slowing or eliminating the spread further.
- Ideas are also invited for:
  - \* Gainful engagement of people at home
  - \* Ensuring healthy food for nutrition and boosting immunity, especially, at the time of lockdown when raw materials are limited,
  - \* Personal Protective Equipment (PPE)
  - \* Rapid diagnostic testing facilities for capacity building of healthcare.
  - \* Solutions for the problems focusing on the varying needs of the differently-abled, people with special needs.
- The selected technological ideas and innovations will be supported through incubation and dissemination support from the governmental agencies.

**COVID India Seva**

- This is a Twitter handle which can serve as an interactive platform to establish a direct channel of communication with millions of Indians amid the pandemic.
- This initiative is aimed at enabling transparent

e-governance delivery in real-time and answering citizen queries swiftly, at scale, especially in crisis situations like the ongoing COVID-19 pandemic.

- Through this, people can pose queries @ CovidIndiaSeva and get them responded to in almost real time.
- @CovidIndiaSeva works off a dashboard at the backend that helps process large volumes of tweets, converts them into resolvable tickets, and assigns them to the relevant authority for real-time resolution.
- As these responses are transparent and public, everyone can benefit from the responses received around common queries.
- It is important to note that the Ministry will respond to broader queries and public health information. This does not require the public to share personal contact details or health record details.

**Context:**

- The Union Minister of Health & Family Welfare launched the COVID India Seva.

**COVID Sample Collection Kiosk (COVSACK)****Context:**

- Defence Research & Development Laboratory (DRDL), Hyderabad has added another product to the portfolio of the Defence Research and Development Organisation (DRDO) to combat COVID-19 by developing COVID Sample Collection Kiosk (COVSACK).

**About COVSACK:**

- The COVSACK is a kiosk for use by healthcare workers for taking COVID-19 samples from suspected infected patients.
- Patient under test walks into the kiosk and a nasal or oral swab is taken by a health care professional from outside through the built-in gloves.
- The kiosk is automatically disinfected without the need for human involvement, making the process free of infection spread.
- The shielding screen of the kiosk cabin protects the health care worker from aerosols/droplet transmission while taking the sample. This reduces the requirements of PPE change by health care workers.
- After the patient leaves the kiosk, four nozzle sprayers mounted in the kiosk cabin disinfect the empty chamber by spraying disinfectant mist for a period of 70 seconds.
  - \* It is further flushed with water & UV light disinfection.
  - \* The system is ready for next use in less than two minutes.
  - \* Voice command can be given through two-way communication system integrated with the COVSACK.
  - \* It is possible to configure COVSACK to be used

either from inside or outside as required by the medical professionals.

### **COVID-19 Quarantine Alert System (CQAS)**

#### **Context**

- The Centre is using powers under the Indian Telegraph Act to fetch information from telecom companies every 15 minutes to track COVID-19 cases across the country.

#### **Details**

- The Department of Telecommunications (DoT) has shared a Standard Operating Procedure (SOP) with all telecom service providers regarding the application called CQAS.
- The government has tested this application which triggers e-mails and SMS alerts to an authorized government agency if a person has jumped quarantine or escaped from isolation, based on the person's mobile phone's cell tower location.
  - \* The Department of Telecommunication and C-DOT in coordination with Telecom Service Providers have developed and tested this application
- The CQAS will prepare a list of mobile numbers, segregating them on the basis of telecom service providers, and the location data provided by the companies will be run on the application to create geo-fencing.
- The "geo-fencing" is accurate by up to 300 m.

#### **What is Geo-fencing?**

- A geofence is a virtual perimeter for a real-world geographic area.
- Geofencing is a location-based service in which an app or other software uses GPS, RFID, Wi-Fi or cellular data to trigger a pre-programmed action when a mobile device or RFID tag enters or exits a virtual boundary set up around a geographical location, known as a geofence.

#### **How does the application work?**

- The system will collate phone data, including the device's location, on a common secured platform and alert the local agencies in case of a violation by COVID-19 patients under watch or in isolation.
- It is said that the location information is received periodically over a secure network for the authorised cases with due protection of the data received.

#### **Permission from Govt authorities must**

- The States have been asked to seek the approval of their Home Secretaries under the provisions of Section 5(2) of the Indian Telegraph Act, 1885, for the specified mobile phone numbers to request the DoT to provide information by email or SMS in case of violation of "geo-fencing".
- The particular provision under the Act, amended

multiple times since 1885, authorizes the State or the Centre to access information of a user's phone data in case of "occurrence of any public emergency or in the interest of the public safety."

- Kerala was one of the first States to use geo-fencing to track COVID-19 cases.

#### **Significance**

- The CQAS is assisting the State governments, Local governments and police for ground level enforcement of quarantine.
- It can prove to be a tech-savvy solution to monitor the movements especially in hotspot areas, without requiring physical presence of enforcement teams in every nook and corner, thereby effectively utilizing the human resources in the fight against covid-19 pandemic.

#### **Addressing the privacy concerns**

- It said that the phone number should be deleted from the system after the period for which location monitoring is required is over.
- The data would be deleted four weeks from thereon.
- The data collected shall be used only for the purpose of Health Management in the context of COVID-19 and is strictly not for any other purposes. Any violation in this regard would attract penal provisions under the relevant laws.

#### **Issues**

- The geo-fencing will only work if the quarantined person has a mobile phone from Airtel, Vodafone-Idea or Reliance Jio.
- "BSNL/MTNL" do not support location based services.

### **iGOT e-learning Platform**

#### **Context:**

- The Department of Personnel and Training, under the Government of India, launches a digital platform to train all healthcare and COVID-19 warriors of India.

#### **Details:**

- The e-learning platform is for all front-line workers to equip them with the training and updates in coping with the coronavirus pandemic.
- Appropriate training will also prepare them for the subsequent stages of the pandemic.
- The target group is Doctors, Nurses, Paramedics, Hygiene Workers, Technicians, Auxiliary Nursing Midwives (ANMs), Central & State Govt. Officers, Civil Defence Officials, various Police Organisations, National Cadet Corps (NCC), Nehru Yuva Kendra Sangathan (NYKS), National Service Scheme (NSS), Indian Red Cross Society (IRCS), Bharat Scouts & Guides (BSG) and other volunteers.



**About iGOT Platform:**

- The platform delivers curated, role-specific content to each learner at his place of work or home and to any device of his choice.
- iGOT platform is designed to population scale, and will provide training to around 1.50 crore workers and volunteers in the coming weeks.
- To begin with, nine courses on iGOT have been launched on topics like Basics of COVID, ICU Care and Ventilation Management, Clinical Management, Infection Prevention through PPE, Infection Control and Prevention, Quarantine and Isolation, Laboratory Sample Collection and Testing, Management of COVID 19 Cases, COVID 19 Training.
- Through its customized approach COVID warriors can learn about critical areas from this one-stop source and respond to the prevailing and emergent situations, by keeping themselves updated in a real-time manner.
- The platform is well equipped to cater to the demands of unlimited requests of learning at any time anywhere.
- The platform can be accessed by following an easy to use manual for desktop and mobile versions, thereby making it accessible for all.

**India Post Delivers hope and essential items in far flung areas****Context**

- The Postal Department during this time of Covid-19 crisis, has risen to the occasion in helping people of the country through its vast network of post offices across the country.
- India Post continues to be a deliverer of hope and essential items to millions of people in far flung areas.

**Details:**

- Instructions have been issued to specially focus on helping the downtrodden and needy people in urgent need of food items.
  - \* The employees of Department of Posts (DoP) have pooled their savings to distribute food, dry rations and even masks to the needy in slums, migrant labourers and daily wage earners.
  - \* Punjab Postal Circle started "Food on Wheels" for construction workers, hawkers, rickshaw pullers, attendants of patients of PGI and migrant labourers stuck in various parts of Chandigarh.
- Minister has issued directions to Department of Posts to utilize speed post through post office and postmen as a last mile connectivity to deliver these lifesaving medicines for cancer, kidney treatment and other life threatening diseases.
- Postal network is also offering facilities for bank account opening and most importantly cash withdrawal at the doorstep of the poor people using

Aadhar Enabled Payment System (AEPS).

- This has helped people in withdrawing Direct Benefit Transfer amounts sent to them under various pension schemes, MGNREGA and recently announced relief measures under PM Garib Kalyan Package.
  - \* Widow, disabled and old aged pensioners have been specially benefited by these payments at their doorsteps.

**Kisan Rath Mobile App**

In a bid to facilitate transportation of foodgrain and perishables during lockdown in India, Government has launched the 'Kisan Rath' App

- The app will facilitate farmers & traders in searching for transport vehicles for Primary and Secondary transportation for movement of Agriculture & Horticulture produce.
  - \* Primary transportation would include movement from Farm to Mandis, Farmer Producer Organisation (FPO) Collection Centre and Warehouses etc.
  - \* Secondary Transportation would include movement from Mandis to Intra-state & Inter-state mandis, Processing units, Railway station, Warehouses and Wholesalers etc.
- This mobile application is developed by the National Informatics Centre (NIC).
  - \* It will bring together 5 lakh trucks and 20,000 tractors on the mobile platform for transporting farm produce to markets from the farm gate.

**Significance:**

- The Mobile Application named "Kisan Rath" facilitates Farmers and Traders in identifying the right mode of transportation for movement of farm produce ranging from foodgrain (cereal, coarse cereal, pulses etc), Fruits & Vegetables, oil seeds, spices, fiber crops, flowers, bamboo, log & minor forest produce, coconuts etc.
- This App also facilitates traders in the transportation of perishable commodities by Reefer (Refrigerated) vehicles during the lockdown.

**Context**

- Agriculture Minister has launched the Kisan Rath Mobile App.
- Kisan Rath Mobile App will be made available in 8 languages

**MyGov Corona Helpdesk**

- It is the official WhatsApp chatbot by the Central Government that was aimed to eradicate fake news and spread awareness about COVID-19.
- An individual is required to text +919013151515 to connect to the bot.

- \* The chatbot answers to their coronavirus queries such as the symptoms, professional advice from AIIMS-Director, and basic knowledge about the coronavirus outbreak and how they could seek help.
- All this helps to understand the disease without relying on any unverified information received through social media platforms.
- The service was initially launched in English, and Hindi language was added later

#### Significance

- Users can share the information directly from the bot by copying the text or forwarding the messages it sends over WhatsApp.
- It will help us to fight rumors, educate the masses and bring a sense of calm to the current chaos-like situation.

#### **NCC Yogdan**

##### Context:

- NCC cadets start serving people during COVID-19 pandemic under Exercise NCC Yogdan.

##### Details:

- Civil and police administration have started requisitioning for services of senior division National Cadet Corps (NCC) cadets in the fight against the Coronavirus pandemic.
- The Ministry of Defence (MoD) had allowed temporary employment of NCC cadets under 'Exercise NCC Yogdan' and guidelines were also issued in this regard.
- These cadets will give a helping hand to state and municipal authorities to augment relief efforts.
- The types of tasks envisaged for cadets include manning of helpline/call centres; distribution of relief materials, medicines, food/essential commodities; community assistance; data management and queue & traffic management and manning of CCTV control rooms.

#### **Project Praana**

##### Context

- The Scientists and Students in Indian Institute of Science have developed a prototype of an indigenous ventilator under project Praana.

##### Details:

- It makes use of sensors and parts sourced from the local automotive and RO water filter industries.
  - \* The prototype has mass flow sensors and controllers which accurately tell how much oxygen is flowing and what volume the patient is inhaling in one breath.
- Pneumatics is built around mass produced water filter hardware.
- The control system is built around open source industrial controller.

- The project is a voluntary effort to help the nation at the time of crisis

#### Significance

- The idea is to circumvent a shortfall of internationally imported components which are holding up the mass manufacture of ventilators in the country

#### **Samadhan**

##### Context:

- The Ministry of Human Resources Development launches "Samadhan", a challenge to fight Covid-19 and future challenges.

##### Details:

- The Innovation Cell of the Ministry of Human Resources Development and the All India Council for Technical Education (AICTE) in collaboration with Forge and InnovatioCuris launched a mega online challenge – SAMADHAN – to test the ability of students to innovate.
- The students participating in this challenge will search and develop such measures that can be made available to the government agencies, health services, hospitals and other services for quick solutions to the Coronavirus epidemic and other such calamities.
- Apart from this, through this "Samadhan" challenge, work will be done to make citizens aware, to motivate them to face any challenge, to prevent any crisis and to help people get livelihood.
- Under the "Samadhan" challenge, students and faculty will be motivated for conducting new experiments and new discoveries and providing them with a strong base leading to a spirit of experimentation and discovery.

#### **Swachhata App**

##### Context

- The Ministry of Housing and Urban Affairs (MoHUA) launches revised version of Swachhata App to handle queries specific to COVID-19.

##### Details:

- The Swachhata – MoHUA App, a popular grievance redressal tool for citizens under the ambit of the Swachh Bharat Mission (Urban) already has over 1.7 Crore+ urban users across the country.
  - \* Swachhata App serves as an effective digital tool enabling citizens to play an active role in the Swachhata of their cities and increase accountability on the part of Urban Local Bodies (ULBs).
  - \* Urban Local Bodies (ULBs) are responsible to resolve all complaints posted on Swachhata-MoHUA App.
- This App has now been modified and strengthened further in order to enable citizens to get their COVID-related complaints also redressed by their respective Urban Local Bodies (ULBs).

- Nine additional categories have added to the App:
  - \* Request for Fogging/Sanitation during COVID-19
  - \* Violation of Quarantine during COVID-19
  - \* Violation of Lockdown during COVID-19
  - \* Report Suspected case of COVID-19
  - \* Request Food during COVID-19
  - \* Request Shelter during COVID-19
  - \* Request Medicine during COVID-19
  - \* Request assistance for COVID-19 patient Transport
  - \* Request Waste Pickup from Quarantine Area

## Telemedicine

### Context

- The unprecedented COVID-19 outbreak created utter challenges on traditional healthcare systems in India.
- Due to countrywide lockdown, citizens have not been able to consult with doctors physically.
- This situation led the government to change the regulations around remote delivery of healthcare services and allow telemedicine via video, audio or text.

### TELEMEDICINE

- World Health Organization defines telemedicine as "The delivery of health-care services, where distance is a critical factor, by all health-care professionals using information and communications technologies for the exchange of valid information for diagnosis, treatment and prevention of disease and injuries, research and evaluation, and the continuing education of health-care workers, with the aim of advancing the health of individuals and communities."
- \* Telemedicine is a term encompassing methods used to examine, investigate, monitor and treat, with the patient and doctor located in different places.
- \* Unnecessary travelling is eliminated
- 'A Registered Medical Practitioner [RMP] is a person who is enrolled in the State Medical Register or the Indian Medical Register under the Indian Medical Council Act 1956.' [IMC Act, 1956]

### Mode of Communication

- Video (Telemedicine facility, Apps, Video on chat platforms, Skype/Face time etc.)
- Audio (Phone, VOIP, Apps etc.)
- Text Based:
  - \* General messaging/ text/ chat platforms (WhatsApp, Google Hangouts, Facebook Messenger etc.)
  - \* Asynchronous (email/ Fax etc.)

### India has a shortage of Doctors

It was way back in 2000 that telemedicine was first employed in India, but the progress has been excruciatingly slow, until the pandemic

- India only has one government doctor for every 1,139 people, whereas the World Health Organization (WHO) recommends a ratio of 1:1,000. The shortage of doctors is limiting face-to-face consultations among patients.
- Secondly, India also has a shortage of hospital beds, which makes hospitalisation tricky, and there needs to be better facilities and infrastructure for cases where patients can be attended to via teleconsultation.

### The telemedicine guidelines have added the following provisions:

- Telemedicine consultations should not be anonymous, both patient and doctor should know each other's identity.
- RMPs have to verify the patient's identity by name, age, address, email ID, phone number, registered ID or any other identification.
  - \* RMPs need to be sure about the patient's age before prescribing any medication.
  - \* The practitioner can ask for the patient's age proof if in doubt.
- If the patient initiates the telemedicine consultation then their consent is implied.
- If a physical examination is critical information for consultation, the RMPs should not proceed until a physical examination can be arranged.
- Ban on Advertisements: RMPs are not permitted to solicit patients for telemedicine through any advertisements or inducements.

### Significance

- Telemedicine will reduce the time of consultations and improve the quality of healthcare services in rural areas, removing many of infrastructural challenges.
- It increases timely access to appropriate interventions including faster access and access to services that may not otherwise be available.
- The advancement of telecommunication capabilities over the years has made the transmission of images and sound files (heart and lung sounds, coughs) faster and simpler.
- Pilot telemedicine experiments in ophthalmology and psychiatry have proven to be of immense benefit to the communities.

### Concerns

- Virtual clinical treatment decreases human interaction among the healthcare professionals and patients that increases the risk of error in clinical services
- Low quality of health informatics records, like, X-ray or other images, clinical progress reports, etc. run the risk of faulty clinical treatment.

- Doctors have been made responsible for privacy, and protection of patient data

### Conclusion

- Telemedicine cannot be the answer to all problems, but it can be very important in addressing a vast range of problems.

### **YUKTI (Young India Combating COVID with Knowledge, Technology and Innovation)**

- It is a unique web portal and dashboard to monitor and record the efforts and initiatives of the Ministry of Human Resource Development (MHRD).
- The portal intends to cover the different dimensions of COVID-19 challenges in a very holistic and comprehensive way.
- The portal will cover the various initiatives and efforts of the institutions in academics, research especially related to COVID, social initiatives by institutions and the measures taken for the betterment of the total wellbeing of students.
- The portal will cover both qualitative and quantitative parameters for effective delivery of services to the academic community at large.
- The portal will also allow various institutions to share their strategies for various challenges which are there because of the unprecedented situation of COVID-19 and other future initiatives.
- The portal will also establish a two-way communication channel between the Ministry and the institutions so that the Ministry can provide the necessary support system to the institutions.

### Context:

- The Union HRD Minister launched YUKTI.

## **11. Migrant Workers**

### Context:

- The migrant workers' plight during the lockdown has exposed the inadequacies of the Inter-State Migrant Workmen Act, 1979.

### Inter-State Migrant Workmen Act, 1979:

- Inter-State Migrant Workmen Act, 1979 (ISMW Act) was drawn up after repealing the Orissa Dadan Labour Act, 1975.
- The ISMW Act defines inter-State migrant workman as any person who is recruited by or through a contractor.

### Concerns:

- The definition of a migrant as per the ISMW Act keeps away any migrant workman out of the ambit if he is not brought in through a licensed contractor.
  - \* It is common knowledge that most of the migrant workmen are not routed through licensed contractors.

- \* This small catch, in the definition, has been sufficient to exclude bulk of the migrant workmen from getting any benefit out of the Act.

- Furthermore, the Act is only applicable to any establishment in which five or more inter-State migrant workmen are employed.

- \* In reality, only a minuscule proportion of migrant workmen are placed under such establishments these days.
- \* So, if the establishment doesn't come under the purview of the Act, its migrant employees, numbering less than five, cease to be migrants, legally, even though they may actually be one.

### Details:

- The Unorganised Workers' Social Security (UWSS) Act, 2008 was enacted to provide for social security and welfare of unorganised workers.
  - \* The Act defines unorganised workers as home-based worker, self-employed worker or wage worker in the unorganised sector.
- The Government of India has, in the recent past, introduced a host of social security schemes.
  - \* Pradhan Mantri Shram Yogi Maan-dhan Yojana is meant to ensure old age protection for unorganised workers.
  - \* Atal Pension Yojana has been launched under the National Pension System.
  - \* Pradhan Mantri Jeevan Jyoti Bima Yojana is a life insurance scheme.
  - \* Pradhan Mantri Suraksha Bima Yojana is an accident insurance scheme.
  - \* Pradhan Mantri Jan Arogya Yojana aims at providing health cover.
  - \* The UWSS Act itself has two very vitally useful features, viz., (a) Registration of unorganised workers, and (b) Portable smart I-card with a Unique Worker's Identification Number.
- The coverage of these useful provisions and schemes, however, is still sub-optimal thereby making the need for legal safeguards and welfare measures for migrants has become pressing and urgent.

### Way forward:

### **The following suggestions may require urgent consideration:**

- Repealing of the ISMW Act, 1979 forthwith and replacing it with a new act, or alternatively, enlarging the scope of the UWSS Act to include legal entitlements, to define the migrant workman as a subset, to provide for contingencies of livelihood loss and to make the Act legally enforceable.
- Universalisation of registration and issuance of Aadhaar-based UWIN (Unique Worker's Identification No.) would serve multiple objectives.



- Schemes like MNREGA, PDS and Ujjwala need to be made portable.
  - \* Geofencing of different benefits can be done so that a migrant workman can choose location-wise benefits for himself and his family from a matrix available.
- A comprehensive database must be created, of the migrant workers' source and destination, demography, employment patterns and skill sets.
  - \* It would help in skill development and providing for social security benefits.
  - \* It would also be useful in planning for mass transit of migrant labour, and preparing for any contingency plan in abnormal situations.

### **Conclusion:**

- Issues related to migrant workmen have complex Centre-State and inter-State dimensions.
- The Inter-State Council, set up under Article 263 of the Constitution, may be a more appropriate forum to effectively and comprehensively deal with larger issues related to migrant workmen.
- It's time to initiate a legal platform that means business to the migrant workmen, and replace the antiquated law of 1979 that seems to have outlived its utility.
- The entitlements and benefits for the migrant workers have an unquestionable economic, legal and moral basis.
- There is a need for the policymakers to ensure a better legal framework which doesn't leave the migrant workers high and dry yet again during tough situations.

### **A change in migrant policy**

#### **Concerns**

- Internal migration in India.

#### **Details:**

- Seasonal migration is an important issue of our time and the COVID-19 crisis has brought the issue of migration to the centre stage of public discourse due to the following reasons:

#### **1. High number of migrants:**

- The numbers of internal migrants are high.
  - \* The number of internal migrants in India was 450 million as per the most recent 2011 census. This marks an increase of 45% over the 309 million recorded in 2001. This far exceeds the population growth rate of 18% across 2001-2011. Internal migrants as a percentage of population increased from 30% in 2001 to 37% in 2011.
- About 12% of internal migration in India is inter-state.
  - \* The source states for these migrants are the states with relatively low economic and social development. The four states, Uttar Pradesh, Bihar, Rajasthan and Madhya Pradesh accounted for 50% of India's total inter-state migrants.

- \* The destination states are the relatively developed states. Maharashtra, Delhi, Gujarat, Kerala house a large number of the country's inter-state migrants.

- Bihar with a population of about 123 million has an estimated 10 million migrants, with 3 million of them being inter-State migrants. It also involves a substantial number of seasonal migrants.
- Ensuring the return of such a large number of migrants during a crisis can be a logistical improbability.

#### **2. Public health:**

- In the case of epidemics, the exodus of seasonal migrants creates apprehensions about the spread of the disease and runs counterproductive to the very purpose of a lockdown.

#### **3. Impact on destination centres:**

- India's economy, particularly of the growth centres, depends on the services of migrant workers. Sectors such as construction, garment manufacturing, mining, and agriculture would come to a standstill without them.
- One of the biggest challenges after the lockdown is lifted will be to bring back the migrants to restart these sectors.

#### **4. Impact on source states:**

- The return of migrants to their home states leads to an economic shock in the source States.
- Given the lack of compensatory sources of livelihood in these source states, the poor States may find it difficult to sustain themselves without the remittances. This will not only cause demand side setbacks but also impact nutrition, health, education and the well-being of the older population.

#### **5. Vulnerability of the migrants:**

##### **Subsistence living:**

- Most of the migrant labourers are dependent on daily wages. Working from home or getting paid leave is not an option for such labourers.
- A substantial proportion of these internal migrants involve the seasonal migrants who move in search of jobs during the lean activity period in their home states.
- The low wages they earn for their work and also the family's dependency on the daily income does not allow these daily-wage earners to stay at a destination without work.

##### **Lifestyle:**

- The harsh working and living conditions of migrants defy the very idea of decent work and general security that these migrants come seeking. Lack of sanitation, hygiene, safe drinking water, health services, social security measures, and affordable housing have resulted in a low quality of life.



- \* A considerable number of workers live within the manufacturing units or at work sites. Any lockdown results in loss of their accommodation too.
- \* Slums and slum-like colonies are breeding grounds of ailments and communicable diseases.
- \* The cramped living and working spaces do not allow the people living in these areas to practise social distancing.

#### **Limitations of the relief package:**

- The 1.70 lakh crore relief package announced by the Central government comes as a welcome relief. However, despite the government's good intentions, the package may not benefit seasonal migrants.
  - \* Those migrants who are unable to return home and are not ration cardholders in the cities where they are stationed will not benefit from additional free foodgrains under the PDS.
  - \* They cannot avail of increased MGNREGA wages until they go back home.
  - \* As many seasonal migrants are landless or marginal farmers, they will not benefit from the grant to landholders.
- The seasonal migrant workforce may remain largely deprived of the benefits under the present package at their destination places.

#### **Way forward:**

- The state could work out a strategy of addressing immediate distress conditions and simultaneously initiating long-term measures to bring structural changes in the policy towards migrants and the informal sector.
- The aim should not focus on limiting migration but should focus on limiting push migration and encouraging pull migration.
  - \* Pull factors attract migrants to an area (area of destination) like, employment and higher educational opportunities, higher wages and better working conditions and facilities.
  - \* The push factors are poverty, lack of work opportunities, unemployment and underdevelopment, poor economic conditions, lack of opportunities, exhaustion of natural resources and natural calamities, scarcity of cultivated land, inequitable land distribution, low agricultural productivity, etc.
- The government policy measures should also focus towards the social inclusion of internal migrants in India.

- It was developed by the National Informatics Centre under the Ministry of Electronics & Information Technology
- The new app is available for both Android and iOS users.

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

- Once a user sets up their account on the application, the app asks for continuous Bluetooth access and even location data.
- The app then asks for some basic info that will help build data about the users.
  - \* The information includes age, gender, name, health status and also asks for the countries that the user has been to in the past few weeks.
- In the next step, a self-assessment test is put forward where the user is asked about their current health and whether they are showing any of the symptoms of Covid-19. The user will also have to declare their travel history.

#### **How does contact tracing work?**

- Access to Bluetooth is key for the app to establish close range proximity between two people.
- When two smartphones with Aarogya Setu installed come in each other's Bluetooth range the app will collect information.
- If one of the two people have already tested positive, the app will alert the other person and in the process allow the government to trace potential cases.
- The alerts are accompanied by instructions to help self-isolate and even provide support if you develop symptoms.

#### **Uses**

- The application acts as a one-stop solution for spreading awareness about Covid-19, helping self-diagnose users, provide latest updates and even to store and display e-pass.
- However, the biggest function is to trace contacts and create a reliable network for the government to identify potential Covid-19 victims.

#### **Has it been effective?**

- One reason for this could be that for the app to successfully undertake contact tracing for Covid-19, at least 50% of India's population needs to download the app. That in itself may prove a challenge given that only over 500 million people among India's 1.3 billion have smartphones.
- The AarogyaSetu app faces the same issue as every other contact tracing technology that has come up during the pandemic period — it is people dependent.
- It needs widespread usage and self-reporting to be effective.

## **12. Privacy and Stigma**

### **Aarogya Setu app**

- It is government-owned application which is being used as the primary contact tracing tool.
- It is for pan-India use and available in 11 languages.

- Given that any number of total users will be a subset of smartphone owners in India, and there are bound to be variations in the levels of self-reporting, the efficacy is not bulletproof.

### **Concerns**

- With no legislation that spells out in detail how the online privacy of Indians is to be protected, AarogyaSetu users have little choice but to accept the privacy policy provided by the government.
  - \* The app has been criticized for not complying with data protection principles of data minimisation, purpose limitation, transparency and accountability, all of which are crucial to protecting the privacy of its users.
- The policy goes into some detail on where and how long the data will be retained, but it leaves the language around who will have access to it vague.
- As per the policy, “persons carrying out medical and administrative interventions necessary in relation to COVID-19” will have access to the data.
  - \* The app’s privacy policy does not specify which departments or ministry or officials will have access to data. This lack of specificity adds to the concerns of overreach.
- According to the privacy policy, the government is at a liberty to revise the terms of the privacy policy at its discretion without notifying its users. The existing users of the app could be subject to changed service terms without their informed consent.
  - \* The fluid terms of service affects the transparency and accountability of the system.

### **State surveillance**

- Given the fundamental transformation in the role of the state in regulating society in the present crisis situation, there are concerns that the app could lead to an increased risk of institutionalised surveillance of individuals.
- The design of the app raises concerns of the dangers of its misuse to carry out surveillance of users.
- India lacks a comprehensive data protection or surveillance law.

### **Arguments in favor of the app:**

#### **International experience:**

- Similar contact tracing apps in countries such as China, Singapore and Taiwan have been a major contributing factor in their success in limiting the spread of the coronavirus pandemic.
- The utility of such contact tracing has been proved beyond doubt by the experience in these nations.

#### **Safety features:**

- The app’s privacy policy says that the data would be used by the Government of India in anonymized, aggregated datasets as per international best practices.

- The government has repeatedly insisted that all the data collected by the app would reside within the device locally and only in certain conditions (exceptions) the information could be uploaded to a cloud server.

#### **Unprecedented situation:**

- The world is passing through an unprecedented public health emergency – the spread of the novel coronavirus has infected more than 2 million people and claimed more than 1,50,00 lives.
- The rapid spread and severity of the coronavirus have shattered our assumptions about politics, society, economics and international relations. It has raised certain ethical and philosophical questions. These unprecedented times require changed perspectives with respect to privacy norms as well.

#### **Post lockdown phase:**

- Once the lockdown is lifted, the risk of increased infections will increase exponentially and the app could not only help its users plan their commute, route of travel or place of travel as per the risk involved but also help the government in contact tracing.

#### **Utility of the app:**

- The data generated by the app’s users (in aggregated, anonymized form) would play a role in aiding the government make policy interventions: specifically, managing the eventual removal of the ongoing lockdown.
- These datasets could help generate reports, heat maps, and other statistical visualisations for the purpose of monitoring the pandemic.

### **Way forward:**

#### **Statutory backing:**

- The concerns of mass surveillance, disproportionate restrictions of fundamental rights, and privacy concerns impose several limitations on fundamental rights.
- As per the settled legal principle that any limitation of fundamental rights must be implemented only through a law pursuing legitimate state interest, it is imperative that the Aarogya Setu app is implemented only through law.
- Such a law will not only subject government actions to limitations but will also facilitate its constitutional scrutiny.

#### **Adopting international best practice:**

- The TraceTogether app framework (Singapore) is touted as being a fine balance between privacy rights and public health needs and could act as a guiding light to India’s own efforts in this direction.
  - \* In Singapore, the ministry of health has access to data of its contact-tracing app and decision-making powers. The law also clearly states the purpose of the data as directed towards disease control and spread.

## **Anonymise data before handover, HC tells Kerala govt.**

### **Context:**

- Directions by the Division bench of the Kerala High Court.

### **Background:**

- The Kerala state government had entered into a contract with Sprinklr, the U.S.-based analytics firm to help the government analyze the available information of COVID-19 infections in the state to aid in its efforts to contain the spread of the infection.
- A batch of public interest litigations were filed challenging the agreement.

### **Concerns with the agreement:**

- The petitioners have argued that sensitive personal data, such as those pertaining to health, should not have been shared with a U.S. based firm.
- The petitioners have argued that the state government could have used the services of National Informatics Centre (NIC) for data analysis.

### **Government's argument:**

- The Kerala government had argued that the government institutions in the State were presently not capable of big data analysis in a short time, which was the need of the hour.
- The State government has argued that the privacy policy of the company and international data protection norms ensured a high level of confidence.
- The data is stored in an encrypted form in Amazon Cloud and hence its confidentiality is guaranteed.
- In case of misuse of data by the company, criminal prosecution could be initiated under the provisions of Information Technology Act 2000 for breach of confidentiality.

### **High Court directions:**

- Upholding some of the concerns raised by the petitioners, the High Court bench has come out with some specific directions aimed at protecting the privacy of the individuals whose data has been collected.

### **Anonymize data:**

- The Kerala High Court has directed the State government to anonymise the data of COVID-19 patients and those under home quarantine.
- The High Court has stated that Sprinklr be allowed to access the data only after the process of anonymizing data is complete.

### **Consent:**

- The High Court has directed the State government to obtain the consent of the citizens before collecting data.

### **Confidentiality of data:**

- Sprinklr has been asked not to hand over the data to a third party and to return the same after the contractual obligations are over.

- The Bench has also restrained Sprinklr from committing any act that will breach the confidentiality of the data entrusted with it.

## **Social Stigma Associated with COVID-19**

### **Background**

- When an infectious disease outbreak becomes a pandemic — as with coronavirus disease 2019 (COVID-19) — people are understandably frightened and concerned.
- When the outbreak is caused by a new virus, rumors and misinformation run rampant. Stereotypes quickly arise about people who have or may have the disease.

### **Groups most vulnerable to stigma related to COVID-19:**

- Those in quarantine, whether they have tested positive or not — many State governments are violating medical ethics codes by publicizing address details, marking doors of their homes with stickers and even large posters, stamping them with indelible ink — and stories are coming in of people being thrown out of their homes, shunned, etc.
- Health workers from doctors down to the frontline workers are facing stigma and discrimination including losing their homes because their landlords somehow think they will be contagious.
- Those who traditionally face discrimination like migrant workers, people from the northeast, victims of religious or other persecution.

### **Concerns**

- Blaming and shaming groups in this way can be hurtful and dangerous.
- Many people who have it, non-medical individuals too, are scared to talk about it for fear of persecution and harm.
- It makes people targets for misplaced anger and hostility.
- It also creates hardships and divisions that hamper the response to the pandemic.
- Stigma can make people feel isolated and even abandoned. They may feel depressed, hurt and angry when friends and others in their community avoid them for fear of getting COVID-19.

### **What happens to groups that are stigmatized?**

- They may be excluded or shunned in social situations.
- They may be denied job and educational opportunities.
- They may be denied access to adequate housing and health care.
- They may be targets of verbal, emotional and physical abuse

### **Root cause of the issue**

- Stigma and fear are the result of people's poor knowledge about COVID-19 and how it spreads.

- This is compounded by the large amount of fake news and false information being generated today.
- The most vulnerable groups to the virus are the poor in urban slums, migrant workers with no homes, people living in close proximity with little possibility of social distancing or even hand-washing.

#### Way forward:

- Preventing stigma requires a full-throated campaign of public information.
- It would be good if the Union Health Minister were to give a daily briefing to let people know what is happening, together with creative social media campaigns about the virus itself that gets rid of the stigma.
- It would be valuable, if the Prime Minister spoke against stigma, on behalf of health workers, on behalf of migrant workers and those suffering discrimination, in support of women.
- What is needed is clear, informative and fun messages of the kind that our social marketers surely know how to produce.
- People also need to understand that the same health worker that you stigmatise today may be the one who you may have to turn to tomorrow.

### **13. Quarantine and the law**

#### Meaning

Quarantine is considered the oldest mechanism to reduce the rapid spread of bacterial infections and viral onslaughts. It has been legally sanctioned by all jurisdictions in the world for the maintenance of public health and to control the transmission of diseases.

- Quarantine is imposed to separate and restrict the movement of persons, who may have been exposed to infectious disease, but not yet known to be ill.
- But, isolation is a complete separation from others of a person known or reasonably believed to be infected with communicable diseases.

#### Quarantine Settings

- As per the WHO guidelines, possible quarantine settings are:
  - \* Hotels or dormitories and well-ventilated single rooms or homes, where a distance of at least one metre can be maintained from other members.

#### Balancing individual rights with public interest

- In the year 1990, an employee of the World Wildlife Federation was diagnosed with Human Immunodeficiency Virus.
  - \* He was terminated from service and detained for 64 days in quarantine-like isolation under Goa Public Health (Amendment) Act, 1957 (GPH).

- The Bombay High Court (1990) felt that solitary detention was a serious infringement of basic human rights guaranteed to the individual, but held that under unusual situations and exceptional exigencies, such isolated detentions are justifiable for the cause of public health.

- \* Such isolation, undoubtedly, has several serious consequences. It is an invasion upon the liberty of a person. It can affect a person very adversely in many matters, including economic condition.
- \* But in matters involving a threat to the health of the community, individual rights have to be balanced with public interest. In fact, individual liberty and public health are not opposed to each other but are well in accord.

The reason assigned by the High Court to uphold the quarantine was that even if there was a conflict between the right of an individual and public interest, the former must yield to the latter.

#### **Laws that come into play**

##### For disobedience:

- During the lockdown, Section 188 of the Indian Penal Code (IPC) has been widely invoked against those not following it.
- In a communication to the states, the Home Ministry said persons violating the containment measures will be liable to be punished under provisions of the Disaster Management Act 2005, besides Section 188 IPC.
- Section 188 IPC deals with those disobeying an order passed by a public servant, and provides for imprisonment ranging from one to six months.
- Section 51 of the Disaster Management Act, 2005 provides for punishment for two kinds of offences:
  - \* Obstructing any officer or employee of the government or person authorised by any disaster management authority for discharge of a function.
  - \* Refusing to comply with any direction given by the authorities under the Act.
- Punishment can extend to one year on conviction, or two years if the refusal leads to loss of lives or any imminent danger.

##### For spreading fear:

- Section 505 of IPC provides for imprisonment of three years or fine, or both, for those who publish or circulate anything which is likely to cause fear or alarm.
- Section 54 of the Disaster Management Act provides for imprisonment, extending to one year, of those who make or circulate a false alarm or warning regarding a disaster or its severity or magnitude.



**For false claim to aid:**

- Under Section 52, Disaster Management Act, whoever makes a false claim for obtaining “any relief, assistance, repair, reconstruction or other benefits” from any official authority can be sentenced to a maximum of two years imprisonment and a fine will be imposed on the person.

**For refusing to do duties:**

- In case of refusal or withdrawal of any officer who has been tasked with any duty under the Act, the officer can be sentenced to imprisonment extending to one year.
- However, those who have written permission of the superior or any lawful ground are exempt from such punishment.
- A case cannot be initiated without the explicit sanction from the state or central government.

**For refusing to help:**

- Any authorised authority under the Act can requisite resources like persons and material resources, premises like land or building, or sheds and vehicles for rescue operations.
- Though there is a provision for compensation under the Act, any person who disobeys such an order can be sentenced to imprisonment up to one year.

**Legal shield:**

- For any offence under the Disaster Management Act, a court will take cognisance only if the complaint is filed by the national or state or district authority, or the central or state government.
- However, there is another provision: if a person has given notice of 30 days or more about an alleged offence, and about his intention to file a complaint, he or she can approach the court which can then take cognisance.
- The Act protects government officers and employees from any legal process for actions they took “in good faith”.
- Under the Epidemic Diseases Act too, no suit or other legal proceedings can lie against any person for anything done or intended to be done under good faith.

**Epidemic Diseases Act, 1897**

- In India, the Epidemic Diseases Act, 1897, a law of colonial vintage, empowers the state to take special measures, including inspection of passengers, segregation of people and other special steps for the better prevention of the spread of dangerous diseases.
- It was amended in 1956 to confer powers upon the Central government to prescribe regulations or impose restrictions in the whole or any parts of India to control and prevent the outbreak of hazardous diseases.

**Needed, greater decentralisation of power****Introduction**

- The COVID- 19 pandemic has hit humanity very badly leading to a health and economic crisis in India. At this juncture, managing the pandemic is very crucial to avert casualties. In India we have a federal setup where the onus is on both the central and state Governments to take brisk measures.
- The state Governments in particular, have installed a series of measures to combat the onslaught of COVID-19.
  - \* The delivery of health care largely rests with the States, health being a state subject.
  - \* Even before the Union government invoked the Disaster Management Act, 2005, many State governments triggered the Epidemic Diseases Act, 1897.
- These actions may not be perfect but the start has been made.
  - \* Some of them have even disproportionately trampled upon basic civil liberties.
- But these decisions were communicated to the public with clarity and consideration, helping, in the process, to lay out a broad framework for the nation.

In doing so, they have acted not merely as “laboratories of democracy”, to paraphrase the former U.S. Supreme Court Justice Louis Brandeis, but also as founts of reasoned authority.

Equally, though, as much as State governments have taken up positions of leadership, they have repeatedly found themselves throttled by the limitations.

**Stifled by limitations**

- One, they are not able to structure their welfare packages due to limited access to funds.
- Two, the states are unable to make swift payments for the purchase of health-care apparatus such as ventilators and personal protective equipment because of red tape.
- Three, the immense disruption of supply chains not only of essential goods and services but also of other systems of production and distribution, which has placed States in a position of grave economic uncertainty.

**Division of powers**

The Seventh Schedule to the Constitution divides responsibilities between Centre and the states.

- The Union government is tasked with matters of national importance, such as foreign affairs, defence, and airways.
- States take the responsibilities concerning public health and sanitation, agriculture, public order, and police. In these domains, the States’ power is plenary.



This federal architecture is fortified by a bicameral Parliament.

- A House of the People [Lok Sabha] comprising directly elected representatives and
- A Council of States [Rajya Sabha] comprising members elected by the legislatures of the States.

### **Financial Autonomy**

In formulating this scheme of equal partnership, the framers were conscious of a need to make States financially autonomous. To that end they divided the power to tax between the two layers of government to ensure that the authority of the Union and the States did not overlap.

- Therefore, the Centre, for example, was accorded the power to tax all income other than agricultural income and to levy indirect taxes in the form of customs and excise duties.
- The sole power to tax the sale of goods and the entry of goods into a State was vested in the State governments.
- The underlying rationale was simple: States had to be guaranteed fiscal dominion to enable them to mould their policies according to the needs of their people.

Despite this plainly drawn arrangement, the Union has repeatedly displayed a desire to treat States, as the Supreme Court said in *S.R. Bommai v. Union of India*, as mere “appendages of the Centre”.

- Time and again, efforts have been made to centralize financial and administrative power, to take away from the States their ability to act independently and freely.

### **Attempts to provide more funds to the states**

- The Central Govt. accepted the recommendations of the 14th Finance Commission to increase the share of the States in total tax revenues from 32% to 42%.
- But gains made by the States have been entirely offset by a simultaneous decline in share of grants and by a concomitant increase in the States’ own contribution towards expenditures on centrally sponsored schemes.

### **Other measures that have proved to be damaging**

- The creation of a Goods and Services Tax regime which, far from achieving its core purpose of uniformity, has made the very survival of the States dependent on the grace of the Union.
- The Union government has also introduced a slew of legislation as money bills, in a bid to bypass the Rajya Sabha’s sanction.
- Similarly, the role of the Governors has been weaponized to consolidate political power.
- The most egregious among the moves made is the gutting of Article 370 and the division of Jammu and Kashmir into two Union Territories without securing consent from the State Legislative Assembly.

### **Conclusion**

- These limitations demonstrate an urgent need to decentralize administration, where States — and local bodies are allowed greater managerial freedom and the Union government will command less but coordinate more.
- Thus, a crisis of the kind that COVID-19 has wrought will show us that India needs greater decentralisation of power; that administration through a single central executive unit is unsuited to its diverse and heterogeneous polity.

## **14. Social Vaccine**

- A social vaccine is a metaphor for a series of social and behavioral measures that governments can use to raise public consciousness about unhealthy situations through social mobilization.
- Social mobilization can empower populations to resist unhealthy practices, increase resilience, and foster advocacy for change.
- This can drive political will to take action in the interests of society and hold governments accountable to address the social determinants of health by adopting progressive socio-economic policies and regulatory mechanisms that promote health equity and reduce vulnerability to disease.

### **How it helps?**

- When applied to pandemics, the effectiveness of a social vaccine is determined by the extent of dissemination and uptake of accurate information about personal infection risk and methods to reduce the risk through consistent core messages disseminated through a variety of means.
- A social vaccine addresses barriers and facilitators of behaviour change, whether attitudinal, social, cultural, or economic, and supplements Information, Education, and Communication (IEC) with targeted Social and Behaviour Change Communication (SBCC) strategies.

### **Example**

- Uganda and Thailand used these strategies effectively during the HIV/AIDS pandemic to bring down the incidence of HIV infection, before Highly Active Anti-Retroviral Treatment (HAART) was introduced in 1995.
- They demonstrated how an effective social vaccine helped “flatten the curve” till effective treatments were discovered that dramatically reduced mortality, viral loads and infection transmission.

### **Lessons from the HIV pandemic**

#### **1. Timeline of HIV/AIDS**

- The Human Immunodeficiency Virus (HIV) that causes the Acquired Immune Deficiency Syndrome (AIDS) is believed to have made the zoonotic jump from monkeys through chimpanzees to humans in Africa as early as the 1920s, but the HIV/AIDS epidemic was detected in 1981 and was a pandemic by 1985.

- From 1981 till 2018, around 74.9 (range: 58.3 to 98.1) million people worldwide were HIV-infected, and around 32.0 (range: 23.6 to 43.8) million died (43%, range: 41 to 45%) from AIDS-related illnesses.
- The early years of the HIV/AIDS pandemic were also a time of global panic. The cause was unknown (till 1984) and diagnostic tests were unavailable (till 1985). Since there was no treatment, a diagnosis of HIV infection was a death sentence.

## 2. The stigma of HIV/AIDS

- Widespread fears of contagion rendered many infected people homeless and unemployed. Many were denied access to care.
- Shame, discrimination and violence towards infected individuals, their families, social groups (sex-workers, gay men, drug users, truck drivers, migrants), and even health workers, were common.
- Criminalising sex-work and injecting drug use followed.
- Conspiracy theories, misinformation and unproven remedies were widely propagated.
- The blame game targeted world leaders and international agencies. The preparedness of health systems, societal prejudices and socio-economic inequities were starkly exposed.

## 3. Preventive strategy

- The core preventive messages involved being faithful to one sexual partner or 100% condom use during sexual intercourse outside stable relationships; resisting peer-pressure for risky behaviours, and harm reduction for intravenous drug use.
- These measures conflicted with prevailing cultural, social, religious, behavioural and legal norms.
- IEC and SBCC activities targeted (and partnered) individuals, families, community leaders, peer-led community networks and social and health systems to change attitudes and behaviours. Religious and community leaders were key change agents.
  - \* For example, the Catholic Church in Uganda did not initially support promoting condoms for safe sex since its use prevents life.
  - \* After large numbers of people died of AIDS, their tacit acknowledgment that their religion did not preclude the use of condoms to prevent death was an important turning point.
- Thailand pioneered the effective use of social marketing of condoms for safe sex and used humour to defuse social taboos about publicly discussing sex.

These strategies and advocacy against stigma and discrimination were successfully adapted in India.

### How it can work in the present scenario?

- The core infection-control messages are available from official sources.
  - \* Maintaining physical distancing in social situations (unless impossible) and

- \* Wearing cloth masks or facial coverings in public (especially where distancing is impossible) by 100% of the people (and 100% of the time) is key to preventing infection along with regular disinfection of oneself and one's surroundings.

- People are more likely to practise these behaviours if all leaders (without exception) promote them publicly and consistently, the whole community believes in their importance, and if proper information, support, and materials are available and accessible.
- A social vaccine also requires people to hold leaders accountable to invest in:
  - \* rapidly scaling-up testing;
  - \* meeting the basic and economic needs of vulnerable sections;
  - \* providing psychological support where needed;
  - \* not communalising or politicising the pandemic;
  - \* providing adequate Personal Protective Equipment (PPE) to front-line workers in health, sanitation, transport and other essential services; and
  - \* not compromising the privacy and dignity of infected individuals and their families in the interest of public health.

## Conclusion

- Coercive or punitive methods are invariably counter-productive, as was seen with HIV/AIDS.
- There is still no biomedical vaccine for HIV/AIDS. Considering the limited efficacy and uptake of influenza vaccines, vaccines for SARS-CoV-2/COVID-19 may not provide a panacea.
- Thus, the components of the social vaccine should be in place before relaxing or lifting the lockdown.

## 15. Successful Models

### **Bhilwara model of COVID-19 containment**

- The Bhilwara COVID-19 containment "model" refers to the steps taken by the administration in Rajasthan's Bhilwara district to contain the disease, after it emerged as a hotspot for coronavirus positive cases.
- Bhilwara district was among the most-affected places in India during the first phase of the COVID-19 outbreak.

### How did it spread?

- The first known case of coronavirus in Bhilwara was that of a doctor at a private hospital who tested positive.
- Most of those tested positive included other doctors of the private hospital, the hospital staff, along with both IPD and OPD patients who had come in contact with the infected doctors.

### What were the challenges the administration faced in imposing these extraordinary measures?

- The biggest challenge that the administration faced was containing the rising number of cases after the

initial outbreak.

- The doctors of the private hospital who had tested positive had come into contact with numerous people including the staff and patients who visited the private hospital during the period when the doctors were already infected.
- The doctors had seen thousands of patients, and there was no means of tracking them down.

#### Measures taken by the administration

- It includes imposing a curfew in the district which also barred essential services, extensive screening and house-to-house surveys to check for possible cases, and detailed contact tracing of each positive case so as to create a dossier on everybody they met ever since they got infected.
- The state Health Department also took the help of technology, using an app to monitor the conditions of those under home quarantine on a daily basis along with keeping a tab on them through Geographical Information System (GIS).
- The administration backed up the surveys by imposing a total lockdown on the district, with the local police ensuring strict implementation of the curfew.
  - \* The police ensured supplies to the public by delivering the essentials on their doorstep.
- The borders of Bhilwara were sealed for private vehicles. Trains passed through, but did not stop in the district. Bus services were not allowed to function. Instructions were given to close all establishments employing more than 10 people. So, everything from industries to offices and brick kilns were shut down.

#### **Kerala Model**

##### Context:

- A range of responses in battling the COVID-19 pandemic, being seen at the national and subnational levels reveal not only existing inequalities but also the political and institutional capacity of governments to respond.
- In case of India, the Central government ordered a lockdown but it is States that are actually implementing measures, both in containing the spread and addressing the welfare consequences of the lockdown.
- A government's capacity to respond to a cascading crisis such as the COVID-19 pandemic relies on a very fragile chain of mobilising financial and societal resources, getting state actors to fulfil directives, coordinating across multiple authorities and jurisdictions and maybe, most importantly, getting citizens to comply.
- An effective response begins with programmatic decision-making.
- The editorial talks about Kerala's response in battling the COVID-19 Pandemic.

##### Details:

- Kerala was primed to be a hotspot owing to its:
  - \* Population density.
  - \* Deep connections to the global economy.
  - \* High international mobility of its citizens.
- It was the first state with a recorded case of coronavirus.
- Though Kerala once led the country in active cases, it now ranks 10th of all States and the total number of active cases has been declining and is below the number of recovered cases.
  - \* It is also worth noting that it is the state that has done the most aggressive testing in India.

##### Flattening the curve – Why does Kerala stand out in India and internationally?

- Kerala has not only flattened the curve but also has rolled out a comprehensive economic package before the Centre even declared the lockdown.
- The current crisis underscores the comparative advantages of social democracy.
  - \* Taming a pandemic and rapidly building out a massive and tailored safety net is fundamentally about the relation of the state to its citizens.
  - \* From its first Assembly election in 1957, through alternating coalitions of Communist and Congress-led governments, iterated cycles of social mobilisation and state responses have forged what is in effect a robust social democracy.
  - \* Social democracies are built on an encompassing social pact with a political commitment to providing basic welfare and broad-based opportunity to all citizens.
- In Kerala, various movements not only nurtured a strong sense of social citizenship but also drove reforms that have incrementally strengthened the legal and institutional capacity for public action.
  - \* The social pact itself emerged from recurrent episodes of popular mobilisation — from the temple entry movement of the 1930s, to the peasant and workers' movements in the 1950s and 1960s, a mass literacy movement in the 1980s, the Kerala Sasthra Sahithya Parishad (KSSP)-led movement for people's decentralised planning in the 1990s, and, most recently, various gender and environmental movements.
- The emphasis on rights-based welfare has been driven by and in turn has reinforced a vibrant, organised civil society which demands continuous accountability from front-line state actors.
- Constant demand-side pressure of a highly mobilised civil society and a competitive party system has pressured all governments in Kerala, regardless of the party in power, to deliver public services and to constantly expand the social safety net, in particular a public health system that is the best in India.
- The pressure has also fueled Kerala's push over the last two decades to empower local government.

\* Nowhere in India are local governments as resourced and as capable as in Kerala.

- Finally, all of this ties into the greatest asset of any deep democracy that is the generalised trust that comes from a State that has a wide and deep institutional surface area, and that on balance treats people not as subjects or clients, but as rights-bearing citizens.

So how has this built-up capacity translated into both flattening the curve and putting broad and effective welfare measures in place?

- From the moment of the first reported case in Kerala, Chief Minister convened a State response team that coordinated 18 different functional teams, held daily press conferences and communicated constantly with the public. Kerala's social compact demanded no less.
- Not only did the CM directly appeal to Malayalees' sense of citizenship by declaring that the response was less an enforcement issue than about people's participation, but also pointedly reminded the public that the virus does not discriminate, destigmatising the pandemic.
- The government was able to leverage a broad and dense health-care system that despite the recent growth of private health services, has maintained a robust public presence.
  - \* Kerala's public health-care workers are also of course highly unionised and organised.
  - \* From the outset the government lay emphasis on protecting the health of first responders.
- The government activated an already highly mobilised civil society. As the cases multiplied, the government called on two lakh volunteers to go door to door, identifying those at risk and those in need.
  - \* A State embedded in civil society — the women's empowerment Kudumbasree movement being a case in point — was in a good position to co-produce effective interventions, from organising contact tracing to delivering three lakh meals a day through Kudumbasree community kitchens.
- In the given situation, the key has been the capacity of state actors and civil society partners to coordinate their efforts at the level of panchayats, districts and municipalities.
- A recent survey in 10 Indian cities by Bengaluru non-governmental organisation Janaagraha, shows that Malayalees have extremely high levels of trust in both their institutions and locally elected local representatives.
- This, more than anything, points to the robust nature of Kerala's social compact.

### Conclusion

- This brutal, unpredictable, external shock is laying bare the most essential as well as the most complicated challenges of democratic citizenship. In moments like these, the authoritarian temptation for some is irresistible.

- At a time when questions were being raised about India's democracy, it is important to be reminded that Kerala has managed the crisis with the most resolve, the most compassion and the best results of any large State in India.
- The state has done it precisely, by building on legacies of egalitarianism, social rights and public trust.

## **16. Testing Systems**

### **Disinfectant tunnels**

#### Context

- The Postgraduate Institute of Medical Education and Research (PGIMER), Chandigarh, has said the use of a disinfectant tunnel, in which sodium hypochlorite is sprayed to prevent the spread of COVID-19, may give a false sense of security and cause harmful side effects.

#### Details

- The tunnels are being set up at crowded places like malls, markets and offices and it was initially believed that the tunnel would work as a mass disinfectant.
- It is found that the use of these tunnels may give a false sense of security and may have adverse health effects as sodium hypochlorite has a lot of harmful effects on the human body.
- It has been advised that the use of disinfection tunnels not be recommended as a prevention measure.



### Sodium Hypochlorite

- Sodium hypochlorite is most often encountered as a pale greenish-yellow dilute solution commonly known as liquid bleach or simply bleach, a household chemical widely used as a disinfectant or a bleaching agent.
  - \* Sodium hypochlorite, when dissolved in water, forms hypochlorous acid.



- \* The chemical in powder form and in liquid form is popularly referred to as bleaching powder or liquid bleach and is a powerful oxidizing agent.
- It is used for a variety of cleaning and disinfecting purposes.
- The concentration of the chemical in the solution varies according to the purpose it is meant for.
- A normal household bleach usually is a 2-10% sodium hypochlorite solution.
- At a much lower 0.25-0.5%, this chemical is used to treat skin wounds like cuts or scrapes. An even weaker solution (0.05%) is sometimes used as a hand wash.
- It releases chlorine, which is a disinfectant. Large quantities of chlorine can be harmful.

#### Concerns

- A 0.5% solution of hypochlorite, which is known as Dakin solution, is used for disinfecting areas contaminated with bodily fluids, including large blood spills.
- However, higher concentrations of sodium hypochlorite (5%) exposure may cause nasal and ocular irritation, sore throat and coughing.
- Exposure to stronger concentration (10-15%) of hypochlorite can cause serious damage to multiple organs, including burning pain, redness, swelling and blisters, damage to the respiratory tract as well as the oesophagus, serious eye damage, stomach ache, a burning sensation, diarrhoea and vomiting.
- According to the World Health Organisation (WHO), too, disinfectants will work on surfaces, but not on the human body, and can also harm people.

#### **Electrostatic Disinfection Technology**

##### Context:

- Electrostatic Disinfection Technology transferred for commercialization.

##### Details:

- CSIR-Central Scientific Instruments Organisation (CSIR-CSIO), Chandigarh, has designed and developed an innovative technology for effective disinfection and sanitization to fight the coronavirus pandemic.
- CSIR-CSIO has transferred this technology to a Nagpur-based company, Rite Water Solutions Pvt. Ltd., for commercialization and large-scale production.
- This technology has been found very efficient and effective to stop the spread of coronavirus and pathogens.
- Electrostatic Disinfection Machine is developed based on the electrostatic principle.
- It produces uniform and fine spray droplets of disinfectants in the size range of 10-20 micrometre to kill microorganisms and viruses.

#### Significance

- Due to the small size of droplets, the surface area of spray droplets increases thereby enhancing the interaction with harmful microorganisms and coronavirus.
- The machine uses very less disinfection material as compared to conventional methods, which helps to save natural resources with negligible increase of chemical waste in the environment.

#### **nCoVSENSEs (TM)**

- It is a rapid test device for detection of antibodies that have been generated against the COVID 19 in the human body.
- The nCoVSENSe test is aimed at detecting the IgG and IgM antibodies generated in the human body upon the onset of viral infection and is targeted against the Spike proteins making it specific for COVID 19.
- The current confirmatory method of Real-Time Reverse Transcription Polymerase Chain Reaction (RT-PCR) though a gold standard is costly, takes longer time and needs trained manpower. This new rapid test will help manage the problem in a more efficient way at a lesser cost

#### Context

- The Department of Science & Technology has funded 'Module Innovations'
- It is a Pune based healthcare startup working on point of care diagnostics to build up on its platform technology for rapid diagnosis of diseases to develop a product for detecting COVID 19 with a 10 to 15 minute test.

#### **Reverse Vaccinology**

- Vaccinomics is a new branch of bioinformatics that deals with designing a candidate vaccine against a pathogen that can be used for production of the vaccine in less time as that of conventional vaccinology.
  - \* The conventional way of vaccine development includes culturing of pathogens in laboratory but this is not possible in case of highly infectious pathogens that are hazardous to culture in laboratory.
  - \* The only requirement of Reverse vaccinology is the availability of whole genome sequence of the organism.
- Reverse vaccinology is a part of vaccinomics which starts with the genome of pathogen and is used for the predicting the epitope.
  - \* It is thus examination of the genome of an organism in order to identify novel antigens and epitopes that might constitute vaccine candidates.
  - \* 1. Antigen, substance that is capable of stimulating an immune response, specifically activating lymphocytes, which are the body's infection-fighting white blood cells.



- \* 2. Epitope, also called antigenic determinant, portion of a foreign protein, or antigen that is capable of stimulating an immune response.

- The use of genomic information with aid of computer for the preparation of vaccines without culturing microorganism is known as reverse vaccinology.

#### **Comparison between Traditional and Reverse Vaccinology**

	<u>Traditional Vaccinology</u>	<u>Reverse Vaccinology</u>
Antigens available	10-25 identified by biochemical or genetic tools.	Virtually all antigens encoded by the genome are available
Property of antigens	The most abundant antigens, the most immunogenic during disease, only from cultivable microorganisms.	All antigens are available, even if not highly immunogenic during disease. Antigens from noncultivable microorganisms can be identified.
Immunology of the antigens	Highly immunogenic antigens, often variable in sequence, because of immune selective pressure. Some may contain domains mimicking self-antigens and may induce autoimmunity.	The most conserved protective antigens can be identified. Usually these are not the most immunogenic during infection. The novel antigens are screened against the human genome, and antigens with homology to self-antigens are removed upfront

#### **Applications of Reverse Vaccinology**

- Reverse vaccinology was used for designing vaccines against some diseases eg. Malaria, Anthrax, Endocarditis, Meningitidis etc

#### **Pros**

- The major advantage for reverse vaccinology is finding vaccine targets quickly and efficiently.
  - \* Traditional methods may take decades to unravel pathogens and antigens, diseases and immunity.
- In addition to the discovery of many previously unknown antigens which have led to successful vaccine development in several instances, reverse vaccinology has made possible studies on antigen function, leading to an understanding of the biology of the pathogen.

#### **Cons**

- The downside is that only proteins can be targeted using this process.
- Whereas, conventional vaccinology approaches can find other biomolecular targets such as polysaccharides.

#### **Context**

- The Tamil Nadu Dr. MGR Medical University has developed a vaccine candidate against SARS-CoV-2 through reverse vaccinology.

### **Silver-based disinfectant to fight COVID 19**

#### **Context:**

- A Department of Science and Technology funded startup has developed chemical free silver based disinfectant to fight the COVID 19 pandemic.

#### **Details:**

- Weinnovate Biosolutions, a Pune based startup supported jointly by the Department of Science and Technology (DST) and Department of Biotechnology (DBT), has come up with a non-alcoholic aqueous-based Colloidal Silver solution for disinfecting hands and environmental surfaces.
- This liquid is nonflammable and free of hazardous chemicals and can be an effective sanitizer to prevent the spread of the COVID-19 infection.
- It has been developed through the NanoAgCide technology
- This sanitizer is based on the ability of the silver nanoparticles to prevent the synthesis of viral negative-strand RNA and viral budding.
- An Indian patent has been filed for the process of making colloidal silver, and a test license for making hand sanitizers and disinfectants has been granted.

#### **Nanoparticles:**

- Nanoparticles are rapidly emerging as effective solutions to a variety of issues related to COVID-19, from theranostics (therapy plus diagnostics) to disinfection and imaging.
- The relevance of nanoparticles is owing to their size (less than 100 nm), which is comparable to that of COVID-19 virus, and a plethora of functionalities such as targeting and drug delivery that can be tailored to match the needs.

## **17. WHO funding halted**

#### **Context**

- US President Donald Trump has instructed his administration to halt funding to the World Health Organization (WHO) over its handling of the coronavirus pandemic.

#### **Where does WHO get its funding from?**

It is funded by a large number of countries, philanthropic organisations, United Nations organisations, etc.

- According to information uploaded by WHO,
  - \* voluntary donations from member states (such as the US) contribute 35.41%,
  - \* assessed contributions are 15.66%,
  - \* philanthropic organisations account for 9.33%,
  - \* UN organisations contribute about 8.1%; the rest comes from myriad sources.
- The US contributes almost 15% of the WHO's total funding and almost 31% of the member states' donations, the largest chunk in both cases.
- India contributes 1% of member states' donations.

- Countries decide how much they pay and may also choose not to.

#### **What does the WHO do with its funds?**

The WHO is involved in various programmes.

- For example, in 2018-19, 19.36% (about \$1 bn) was spent on polio eradication, 8.77% on increasing access to essential health and nutrition services, 7% on vaccine preventable diseases and about 4.36% on prevention and control of outbreaks.
- The African countries received \$1.6 bn for WHO projects; and South East Asia (including India) received \$375 mn.
- India is a member state of the WHO South East Asia Region. The Americas received \$62.2 mn for WHO projects. That is where most of WHO funding comes from and the least of it goes.

#### **How does WHO prioritize spending?**

- The annual programme of work is passed by WHO's decision-making body, the World Health Assembly.
- It is attended by delegates from all member states and focuses on a specific health agenda prepared by the Executive Board.
- The main functions of the Assembly, held annually in Geneva, are to determine WHO policies, appoint the Director-General, supervise financial policies, and review and approve the proposed programme budget.
- The decision on which country gets how much depends on the situation in the countries.

#### **What is the basis of criticism the WHO faces from various countries?**

- While most countries closed down air travel at the first stage, the WHO for a long time took a stand against travel and trade restrictions on China. On January 30, WHO Director General Dr Tedros Adhanom Ghebreyesus said the WHO opposed such an idea.
- The International Health Regulations (2005) Emergency Committee urged countries to be prepared, but the Committee did not recommend any travel or trade restriction based on the current information available.
- According to senior officials in the National Centre for Disease Control, in January when cases were piling up in China, there was a meeting in Delhi in which WHO officials brushed aside government concerns saying "there is no human to human transmission".

Trump, at a White House news conference, said the WHO had "failed in its basic duty and it must be held accountable." He said the group had promoted China's "disinformation" about the virus that likely led to a wider outbreak of the virus than otherwise would have occurred.

#### **Concerns**

- Halting funding at a crucial time will not only impact the functioning of the global body but also hurt humanity.

- Many low and middle-income countries that look up to WHO for guidance and advice, and even for essentials such as testing kits and masks, will be badly hit for no fault of theirs.
- When solidarity and unmitigated support from every member-state is necessary to win the war against the virus, withholding funding will not be in the best interest of any country, the U.S. included.

#### **WHO has guided the immunization programmes in several countries**

- It has been at the forefront of the fight against several diseases, with notable successes such as eradicating smallpox globally and eliminating polio in several parts of the world.
- It has helped draw up agendas on mental health.
- It has persuaded its members to sign landmark conventions on tobacco-control.
- In the past three decades, the WHO has helped nations frame strategies during outbreaks such as Zika, Ebola and HIV/AIDS.
- The agency's role in developing a vaccine against Ebola, in fact, illuminates one of its key advantages – no other health outfit can bring together scientists, industry, regulators and governments during a public health emergency as rapidly as the WHO.

This means the global agency's decades-long work in low and middle-income countries and its robust understanding of a variety of cultural contexts mean that an empowered WHO holds the key to protecting the interests of the poor and most vulnerable countries during the pandemic.

#### **Limitations of a multilateral body**

- WHO is a multilateral body charged with global health. It is only as good as its member nations.
- Some countries are stepping back from responsibility under the WHO framework.
- A few governments have also reduced their budgetary support to the WHO, which has forced the WHO to mobilize private contributions to support its activities. This is not a good development for a multilateral organization mandated to play a crucial role.
- WHO is dependent on countries for giving information. It is possible that China could have given wrong information to WHO.

#### **Lack of autonomy:**

- One of the institutional challenges for a UN body like WHO is that it tends to be obliged to its most powerful member states due to the following reasons:
  - \* The head of the organization of most UN agencies is elected with the support of powerful member states. As a result he/she does not enjoy independence and autonomy.
  - \* 1. The present Director General of WHO is a former Ethiopian health minister. Generally, the WHO Director General used to be someone from

the medical community, but this time around, a politician helped by Chinese support, has been selected to the top post of the WHO.

- \* The powerful member states contribute a major share of the organization's budget.

- The powerful member states expect UN agencies to be bound to their interests for the most part. This leads to a lack of enough independence and autonomy for these agencies and thus impacts their functionality and effectiveness.

#### **Reforms:**

##### ***Increased autonomy:***

- The world needs institutions of greater independence for everyone's collective interest. There is a need to reform the existing institutions, to give them that independence.
- The policy to have a single, non-renewable term for maybe six or seven years, rather than two terms of five which is the normal practice, might give the elected leaders of these organizations the authority to take certain independent actions.

##### ***Increased transparency:***

- There is a need for increased transparency in its functioning.
- There should be better information flow between the WHO and its member nations. All members should have access to authentic and timely information.

##### ***Increased funding:***

- Given the inadequate budgetary support, there is a need for increased funding. This can come through compulsory state support or could come through private sector funding. International institutions, like the World Bank, need to support WHO through sufficient budgets.

##### ***Involving experts:***

- The specialized agencies of the UN like WHO should have a higher representation of the medical community. They should also involve scientists and experts across disciplines to work together.

#### **Conclusion**

- Therefore, blaming and withholding WHO funding can have disastrous outcomes.
- The right step would be to address failures due to lapse or other reasons, not in the mid of the pandemic but once the issue settles.

## **18. Zoonosis**

- A zoonosis is any disease or infection that is naturally transmissible from vertebrate animals to humans.
- It may be bacterial, viral, or parasitic, or may involve unconventional agents.

#### **Stats**

- According to the World Health Organization (WHO), the world sees an estimated one billion cases of illness and millions of deaths every year from zoonotic diseases.
- Around 60% of the emerging infectious diseases, or EIDs, are zoonotic.

#### **How do germs spread between animals and people?**

- Direct contact: Coming into contact with the saliva, blood, urine, mucous, feces, or other body fluids of an infected animal. Examples include petting or touching animals, and bites or scratches.
- Indirect contact: Coming into contact with areas where animals live and roam, or objects or surfaces that have been contaminated with germs
- Foodborne: Eating or drinking something unsafe, such as unpasteurized (raw) milk, undercooked meat or eggs, or raw fruits and vegetables that are contaminated with feces from an infected animal.

#### **But why is this happening? Why are viruses making the jump from animals to humans more frequently?**

Each time there is a disease, it is a sign that deep down the relationship between man and microbe has changed in some fundamental way.

- Human populations have grown at an unprecedented rate since the 1900s.
- Forests are being cut, lakes are being drained, the environment is changing, and we are also coming into contact with new forms of animal life.
- The UNEP is very clear that the drivers of zoonotic disease emergence are changes in the environment, usually as a result of human activities ranging from land use change; changes in animals or human hosts; and changes in pathogens, which are programmed to survive, and in the process exploit multiple hosts.
  - \* Wild Animals are hunted for food
  - \* The wild species which harbored viruses came closer to domestic animals and humans

#### **What has aggravated this?**

- Changes in weather patterns, and extreme weather events affect the distribution areas of disease, pathogens and pests.
- Also, changes in human behaviour, including travel, conflicts, migration, wildlife trade, urbanisation, and dietary and medical preferences, can result in disease emergence, according to researchers at the UNEP.

#### **Deforestation a strong driver of infectious disease transmission**

- There is concern about rising economic activity, such as road building and mining, cutting through forests, bringing more people in close contact with animals.
  - \* This means that infectious diseases which were once confined to wildlife have now spilled over to people in areas undergoing rapid forest clearing.

\* Biodiversity in forests harmlessly retains dangerous viruses and other pathogens among a vast pool of wild animals, away from people.

- Many viruses exist harmlessly with their host animals in forests, because the animals have co-evolved with them. But humans can become unwitting hosts for pathogens when they venture into or change forest habitat.

### Examples

- Bat-associated viruses emerged due to the loss of habitats
- The Ebola outbreak in West Africa was reportedly the result of forest losses leading to closer contacts between wildlife and human settlements;
- The emergence of Avian Influenza was linked to intensive poultry farming;
- Nipah virus was linked to the intensification of pig farming and fruit production in Malaysia.
- The Kyasanur Forest disease outbreak came after the encroachment of cattle and farms into Indian forests.
- Virus-carrying rodents can be spotted in deforested areas.

### What Government can and should learn?

Governments should stop viewing undisturbed landscapes as an impediment to economic growth.

- This should serve as a dire warning to the government that hasty permissions granted for new roads, dams, mines and power projects in already weakened forests can unleash more scourges.
- It would do well to roll back its dilution of the environmental clearance system, strengthen it with a mandate to the States, and leave protected areas to scientific experts.
- There is mounting evidence that environmental protection confers health protection.
- Pristine forests with diverse species keep viruses virtually bottled up, out of man's way. They should be left undisturbed.

### Way forward

- Consequently, preserving ecosystem integrity can actually help regulate diseases by supporting a diversity of species so that it is more difficult for one pathogen to spill over, amplify or dominate.
- According to the World Health Organisation, 'One Health' is an approach to designing and implementing programmes, policies, legislation and research in which multiple sectors communicate and work together to achieve better public health outcomes.
- It is clear that it will be difficult to predict, with current tools, where the next outbreak will come from or when it will be.

- The UNEP calls for strong global stewardship of nature and bio-diversity. Additionally, developing sharper, reliable early warning systems (for diseases), and a 'One Health' approach may be the guides for the road ahead.

### Conclusion

- To protect national and global biosecurity, it is imperative that we protect our forests and keep forests intact.
- Therefore, the goal now is to deal with the trade in wildlife and deforestation which would help in arresting future outbreaks and also to better understand how these viruses might spread, and to potentially develop vaccines.

### **Stop villainising bats, say scientists, conservationists**

#### Context:

- Speculations over the animal origin of n-CoV19.

#### Background:

- Unverified news and social media posts linking bats to the COVID-19 outbreak have led to widespread antipathy and increasing incidents of the public destroying bat roosts and smoking them out.

#### Details:

#### Origin of n-CoV-19:

- The exact origin of SARS-CoV-2 is still unknown.
- The recent Indian Council of Medical Research study has conclusively affirmed that the bat coronaviruses (BtCoV) found in two species of Indian bats are not the same as SARS-CoV-2 and cannot cause COVID-19.

#### Concerns:

#### Human activities:

- All wild animals harbour viruses.
- Humans encroaching upon wildlife habitats put humans at risk of encountering new viruses. The destruction of wildlife habitats and the subsequent movement of animals out of their habitats lead to the spread of viruses from animals to humans.
- The ongoing ecological destruction, increasing intensification of livestock farming and wildlife trade can all contribute to such pandemics.

#### Targeting bats:

- Bats are believed to host a number of viruses.
- Killing bats and destroying their habitats can be more harmful as this can lead to bats spreading out their habitat and spreading the viruses.

#### Significance of bats:

- Bats perform vital ecosystem services such as pollination, pest control, and hence provide intangible economic benefits.



**Way forward:****Conservation efforts:**

- Conservationists have been urging the governments to strengthen the legal framework to protect bats. The government needs to reconsider and reinforce the laws governing bat conservation.

\* India is home to 128 bat species and only 2 of these are protected by law in India.

**Recognizing human factor:**

- There is a need to emphasise the role of human activities in disease outbreaks. There is a need to modify human practices to prevent the emergence of new pathogens.

**Additional information:**

- Chiropterologists are people involved in the scientific study of bats.

**19. Related issues****Community Engagement****Community Health Workers (CHWs)**

- They are frontline public health workers who are trusted members of and/or have an unusually close understanding of the community served.
  - \* They might be from community or have significant familiarity with the community
- Among other roles, they are effective in closing critical communication gap between healthcare providers and patients as they possess key abilities to overcome cultural barriers, minimize disparities, and maximize adherence to clinical directions.

Thus a cadre of health workers recruited by and from within the community, and also accountable to the community, would have greater affinity with people, thus ensuring greater community participation in care delivery.

**Why is this important?**

- There was an attack recently on an ASHA worker. She was conducting a COVID-19 survey. It was assumed that she was not a health worker but a government National Register of Citizens agent who had come to collect information with respect to NRC.
- Then there are sporadic incidents of non-cooperation from the people associated with Tablighi Jamaat migrants escaping quarantine and allegedly unleashing violence against the police
- In the past there has also been a cultural gap that existed between health-care personnel such as auxiliary nurse midwives and rural and tribal beneficiaries.

What this signifies is that government messaging of the coronavirus threat will alone not suffice, and that a willingness to cooperate can only be engendered from deep within the community.

**Why does this happen?**

- First, a mixture of local culture, values and beliefs can lead to blithe disregard of the coronavirus threat and gravely endanger containment and mitigation efforts.
- Second, threatened livelihoods due to lockdowns and a resultant downplaying of the coronavirus risk can instill indignation and non-cooperation, as witnessed in the case of many migrants.
- Third, there is increased likelihood of repeat lockdowns due to the virus likely to bounce back, which will greatly test public patience and co-operation.
- Fourth, government's machinery to communicate risk has served a thin upper- and middle-class segment quite well, but has not convinced the lower strata of the society due to cultural differences, lack of education and knowledge.

**Key strategy**

- Community engagement is a pre-requisite for risk communication, which entails effectively communicating the threat due to the virus, instilling the right practices and etiquette, and combating rumours and stigma.
- Rural awareness generation and community engagement has unto now comprised mainly of engaging with local panchayats, disseminating publicity material in local vernacular, and calling on the participation of civil society organisations.
- Contact tracing activities can be enhanced with active community participation at every step

**Disease Cluster**

- Sometimes a greater than expected number of cases of a disease occur in a group of people living or working in the same area. This is called a disease cluster.
- A disease cluster is defined as "an aggregation of cases in an identifiable subpopulation."
  - \* Dr. Daniel Wartenberg, who spent more than a quarter century investigating such clusters in the United States, coined this definition in a research paper he wrote for the Journal of the Royal Statistical Society.
  - \* The word 'cases' in the definition stands for people with similar symptoms or a medical condition and 'subpopulation' points to those who share or belong to the same space, time, family, workplaces, etc.

Thus, when people congregate in a place — typically for worship/shopping/commute — the chance of a disease spread multiplies, resulting in a cluster of cases.

- The size of a disease cluster could vary widely from just four cases to as many as 5,000 depending on the place visited by the infected individuals.



**What are the challenges?**

- Discovering a cluster is akin to a fire alarm going off. Every moment wasted will spread the fire further.
- In such large clusters, identifying the participants will be challenging.
- As those who were infected respond differently in each State, a common protocol cannot be followed and this has pushed the States to adopt various uncharted methods making the process challenging.

**Disabled People have special issues during virus outbreak****Context:**

- Issues faced by people with disabilities during the pandemic.

**Background:**

- India is home to nearly 150 million people with some degree of disability. Nearly 25-30 million have severe disability.
- Most of the people live as part of their families and are dependent on a carer to take care of their daily essential needs.

**Unique challenges faced by people with disabilities:**

- People with disabilities have unique issues in a situation like the spread of the novel coronavirus (SARS-CoV-2).
- They would be experiencing hardships in accessing information on prevention and risk of infection and find it hard to maintain personal hygiene and social distancing.
  - \* People with visual impairment and blindness cannot read the messages that the rest of the population can see. They often need handholding to move around thus negating the possibility of maintaining physical distancing.
  - \* The hearing impaired, especially those who are not literate, cannot hear the message or read it. Since many depend on lip-reading, they are compromised when the person giving a message is wearing a mask. None of the messages in the media is using sign language interpreters.
  - \* The physically disabled cannot reach a wash basin or may not be able to wash their hands vigorously.
  - \* Children and adolescents with conditions like cerebral palsy or Down's Syndrome need to be assisted in feeding.
  - \* People with mental health issues cannot comprehend the messages. They may experience higher stress because they are unable to understand what is happening all around them.

- \* People with disabilities have a higher risk of conditions such as diabetes and hypertension, which are high-risk factors for COVID-19 mortality. Routine health needs that they have are also not provided as health centres or transportation facilities are not accessible.

**Concerns:**

- Given their unique issues and vulnerability, people with disabilities need much more support than the rest of the population in the face of a pandemic.
- There is very little attention being given to addressing the special needs of people with disabilities and making efforts at reaching out to them.
- The need for the disabled and their carers for special support are not routinely forthcoming.

**Way forward:****Government's role:**

- The government and its organisations working with people with disabilities have to make efforts to convert prevention and care messages on COVID-19 into an accessible format.
- Health facilities should prioritize the needs of people with disabilities. Their medicine needs have to be provided for.
- Mobile health teams can help provide services at homes. A dedicated helpline can be set up for this so that the medical teams can reach them.

**Public's role:**

- The general public needs to be educated on the need for special support for people with disabilities.
- Technology-savvy professionals can help to make information available in an accessible format for people with disabilities.
- Civil society should volunteer their time to provide support for this section.

**Conclusion:**

- A country's development is measured by its social support and inclusive policies for the most vulnerable. Inclusive society is the need of the hour.
- There is the need for a humane response with affirmative action for people with disabilities.

# SOCIAL ISSUES

## 1. Van Dhan Samajik Doori Jagrookta Abhiyaan

### Context

- Initiatives of TRIFED in view of the COVID-19 situation.

### Details:

- The current situation due to COVID-19 has dealt a serious blow to the livelihoods of the poor and marginalized communities including the tribal artisans and gatherers, being the most vulnerable people in the country.
- This is the peak season for harvesting and gathering of forest produce in many regions, which will lead to engagement of tribal gatherers and endanger their safety.
- TRIFED, under the Ministry of Tribal Affairs, is addressing the situation by:
  - \* Publicity and Awareness Generation
  - \* Personal Protective Healthcare
  - \* NTFP (Non-timber forest products) Procurement

### About the Van Dhan Samajik Doori Jagrookta Abhiyaan:

- This scheme is intended to educate the tribals through the almost 15000 SHGs under the Pradhan Mantri Van Dhan Yojana spread across 28 States/UTs.
- TRIFED teamed up with UNICEF and WHO for launching a digital campaign spreading awareness about the importance of social distancing amid the coronavirus crisis in India.
- UNICEF is providing the necessary IEC materials (posters, flyers, leaflets, brochures, booklets, messages for health education sessions, radio broadcast or TV spots, etc.) for the campaign christened as "Van Dhan Samajik Doori Jagrookta Abhiyaan OR Van Dhan Social Distancing Awareness Movement".
- Extensive outreach through Train of Trainer Programs and Webinars focused on basic orientation on COVID-19 response, key preventive behaviour, social media campaigns on social distancing, home quarantine has been initiated.

## 2. Yanomami

- The Yanomami are the largest relatively isolated tribe in South America.
- They live in the remote forest of the Orinoco River basin in southern Venezuela and the northernmost reaches of the Amazon River basin in northern Brazil.
- They are known for their face paint and intricate piercings, number about 27,000.

### Context

- Coronavirus reaches Amazon's isolated Yanomami tribe

## 3. 'Online child porn traffic rises by 95%'

### Context

The India Child Protection Fund (ICPF) said that millions of paedophiles had migrated online, making the Internet extremely unsafe for children.

- The ICPF was set up in January 2020 and aims to support NGOs with funding resources for curbing the exploitation of children.

### Concerns:

- Online child pornography traffic after the lockdown in the country has gone up by 95% with online data monitoring websites showing an increase in demand for searches for child pornographic content.
  - \* Traffic from India increased by 95% as compared to average traffic before the lockdown.
- The spike in consumption indicates millions of paedophiles, child rapists and child pornography addicts have migrated online, making the Internet extremely unsafe for children.
- Without stringent action, this could result in a drastic rise in sexual crimes against children.
- Also, as children spend more time online during the lockdown, international agencies like Europol, the United Nations and ECPAT (End Child Prostitution and Trafficking) have reported that paedophiles and child pornography addicts have increased activity to target children online to 'groom' them — befriending them on social media, building an emotional connection and luring them to perform sexual activities through photos and videos.

### Way forward:

- Protection Of Children from Sexual Offences Act (POCSO) has several provisions to safeguard and protect children from sexual predators.
- Under Section 15 of the POCSO Act, a person who stores child porn for commercial purposes shall face imprisonment for up to 3 years or will have to pay a fine or face both the punishments.
- ICPF demands an urgent crackdown on child pornography through a pan-India tracker through the use of artificial intelligence which can monitor hosting, sharing, viewing and downloading of child sexual abuse material and provide the information to the government agencies.

## 4. No 100% quota for tribal teachers: SC

### Context

- A five-judge Constitution Bench of the Supreme Court held it unconstitutional to provide 100% reservation for tribal teachers in schools located in Scheduled Areas across the country.

**Background:**

- The five-judge Bench was answering a reference made to it in 2016 on whether 100% reservation is permissible under the Constitution.
- The case stemmed from a legal challenge to an order issued by the erstwhile State of Andhra Pradesh Bench providing 100% reservation to the Scheduled Tribe candidates, out of whom 33.13% shall be women, for the post of teachers in schools located in the Scheduled Areas of the State.
- The court said the 2000 notification was “unreasonable and arbitrary”.

**Judgement:**

- The court held that 100% reservation is discriminatory and impermissible.
- It asserted that the opportunity of public employment is not the prerogative of a few.
- A 100% reservation to the Scheduled Tribes has deprived Scheduled Castes and Other Backward Classes also of their due representation.
- The court referred to the Indira Sawhney judgment, which caps reservation at 50%.
- The judgment by the Bench led by Justice Arun Mishra said it was an obnoxious idea to have only tribals teach tribals.
  - \* “It is an obnoxious idea that tribals only should teach the tribals. When there are other local residents, why they cannot teach is not understandable. The action defies logic and is arbitrary. Merit cannot be denied in toto by providing reservation,” the bench observed.
  - \* “Citizens have equal rights, and the total exclusion of others by creating an opportunity for one class is not contemplated by the founding fathers of the Constitution of India,” Justice Mishra wrote.

**Significance of the Judgement:**

- The SC is right in considering cent per cent reservation as anathema to the constitutional scheme of equality even if it is for the objective of providing representation to historically deprived sections.
- The verdict must not be considered as against affirmative programmes as such, but as a caution against implementing them in a manner detrimental to the rest of society.
  - \* 100% reservations is arbitrary and violative of provisions of Articles 14 (equality before law), 15(1) (discrimination against citizens) and 16 (equal opportunity) of the Constitution.
  - \* Equality of opportunity and pursuit of choice under Article 51A cannot be deprived of unjustly and arbitrarily.

**Conclusion:**

- Affirmative action loses its meaning if it does not leave the door slightly ajar for open competition.
- Dr. B.R. Ambedkar observed during the debate in the Constituent Assembly on the equality clause, that any reservation normally ought to be for a minority of seats. This is one of the points often urged in favour of the 50% cap imposed by the Court on total reservation, albeit with some allowance for relaxation in special circumstances.

# GEOGRAPHY

## 1. Ambukuthy Hills

- Ambukuthi Mala, also called as Ambukuthy Hills is a beautiful hill range in Kerala located in the Wayanad district.
- Pre-historic caves (Edakkal Caves) are located at a height of 1,000 metres on Ambukuthi Mala.
  - \* The name 'Edakkal' literally means 'a stone in between'.
  - \* The Edakkal caves are believed to be camping shelters of the Neolithic community
  - \* The cave walls contain a collection of Neolithic rock engravings and images.

## 2. Srinagar-Leh highway

### Context

- The Border Roads Organisation (BRO) opened the strategic Srinagar-Leh highway that connects Ladakh with the rest of the world.

### Details:

- The highway (425 km road) was closed for four months due to heavy snowfall at Zojila Pass.
  - \* This pass is located in the Kargil district of Ladakh.
  - \* It connects Leh and Kashmir, and is important since it links the UTs of Jammu & Kashmir and Ladakh.
  - \* It runs at an altitude of approximately 3,528 metres (11,575 ft), Zoji La pass is the second highest pass after Fotu La on the Leh - Srinagar National Highway.
  - \* During winters, the pass remains closed due to heavy snowfall, cutting off the region of Ladakh during this period.
- The snow clearance operations were undertaken by Project Beacon of BRO from Gagangir to zero point and the same was done by Project Vijayak from Drass towards zero point.

## 3. A season of change

### Context

- In the season of the abnormal, the India Meteorological Department (IMD) has announced that the monsoon this year would likely be normal.

### Forecast System:

- The agency follows a two-stage forecast system:
  - \* Indicating in April whether there are chances of drought or any other anomaly.

- \* Then a second update, in late June, with a more granular look at how the monsoon will likely distribute over the country and whether danger signs are imminent.

- 'Normal' means India will get 100% of its long period average, with a potential 5% error margin.

### Issues:

- The IMD's April forecast is not much to go by especially if the agency declares it 'normal' as rarely do weather models catch signs of an impending shortfall or a large excess in April.
- Also being a part of a hierarchical government set-up, the agency defaults to being conservative.
  - \* For example: In April last year (2019), it said the monsoon would be near normal, an arbitrary category.
  - \* Private forecasters expected a shortfall, predicated on the development of a future El Niño.
  - \* The IMD did account for this but said it was unlikely El Niño would strengthen enough to dampen the monsoon. It however kept its estimate on the lower side of 'normal'. In the end, India received excess rains, the highest in a quarter century.
- The April forecast is a vestige of the agency's reliance on the 'statistical forecast system' where values of selected meteorological parameters are recorded until March 31 and permutations of these are computed and compared to the IMD's archive of weather data.
- It is also reflective of an era when landline telephones were the state-of-the-art in personal communication.

### Way forward:

- Along with connectedness, weather forecasting has metamorphosed.
- Climate, as well as technological change, allows new weather variables — such as surface temperatures from as remote as the southern Indian Ocean and regular updates from the Pacific Ocean — to be mapped.
- Powerful computers mathematically simulate the weather based on these variables and extrapolate onto desired time frames. IMD can incorporate these learning.
- Using these dynamical models is a change the IMD has incorporated and experimented with for years.
- It made two key changes this year:
  - \* Reducing the definition of 'normal' rainfall by 1 cm, to 88 cm

- \* Officially updating monsoon onset and arrival dates for many States.
- This was long due and constituted acknowledgement of the accumulated impact that global warming has been having on monsoon patterns, particularly for cities and States.
- \* The monsoon was arriving later in many places, had long weak spells, and lingered longer.

**Conclusion:**

- These points have already heralded thinking, in the agency, on whether India should move to a new monsoon-accounting calendar instead of the century-long tradition of June-September.
- This would signal a truly momentous break from the past. It is time for the IMD to incorporate the lessons from the new normals.

**4. Solar Faculae**

- Th Solar Faculae (Latin for "small torches") are the bright extended structures seen in visible light near the limb of the sun around sunspot active regions.
- After sunspots they are the most obvious structures in the solar photosphere.
- Faculae are about 1000K hotter than average photosphere & emit about 15% more energy.
- As the number of sunspot increases, faculae also increases, which is responsible for increase of "Solar Irradiance" on Earth.



# EDUCATION

## 1. Bharat Padhe Online

### Context

- Union HRD Minister launches 'Bharat Padhe Online' campaign to invite ideas to improve online education ecosystem

### Details

- The campaign aims to invite the best brains in the country to share suggestions/solutions directly with the HRD Ministry to overcome constraints of online education.
- Further educators across the country can also come forward to contribute with their expertise and experience in the field of education.
- Thus limitations of the current online education scenario of India and challenges they face in traditional classrooms can be addressed through online education.

## 2. CollabCAD

### Context

- Atal Innovation Mission (AIM), NITI Aayog and National Informatics Centre (NIC) have jointly launched CollabCAD.

### Details

- CollabCAD is a collaborative network, computer enabled software system, providing a total engineering solution from 2D drafting & detailing to 3D product design.
- The aim of this initiative is to provide a great platform to students of Atal Tinkering Labs (ATLs) across country to create and modify 3d designs with free flow of creativity and imagination.
- This software would also enable students to create data across the network and concurrently access the same design data for storage and visualization.
- A customized version of CollabCAD for ATLs with features that are most relevant to school students to materialize their ideas and creativity into physical solutions has been developed to enable designing without constraints and, thus, allowing creativity and innovation to thrive.
- AIM's collaboration with NIC's CollabCAD is a great platform for students to utilize indigenous, state-of-the-art made-in-India software for 3D modeling/slicing to use 3D Printing.

## 'Tinker from Home' campaign

- ATL program has launched a 'Tinker from Home' campaign to ensure that the children across the country have access to useful easy-to-learn online resources to keep themselves fruitfully occupied.
- The objective of the initiative is to harness the creativity and innovativeness of children by encouraging learning through self-initiation.

## Game Development module

- AIM also launched the Game Development module in partnership with DELL Technologies and Learning Links Foundation.
- It is an online platform where students can start their learning journey while tinkering from home. Through the platform they can learn to create their own games and also share it with others.
- This platform envisages to make students transition from 'game players' to 'game makers'

## 3. SWAYAM Prabha and SWAYAM

- SWAYAMPARBHA is an effective tool of learning for those who do not have internet access at their home.
- The SWAYAM PRABHA is a group of 32 DTH channels devoted to the telecasting of high-quality educational programmes on a 24X7 basis using the GSAT-15 satellite.
- The channels are uplinked from BISAG, Gandhinagar.
  - \* BISAG is a State level nodal agency to facilitate the use of spatial and geo-spatial technologies for the planning and developmental activities pertaining to Agriculture, Land and Water Resource Management, Wasteland/Watershed Development, Forestry, Disaster Management, Infrastructure and Education.
  - \* The Institute started its operations in 1997 and was renamed as the "Bhaskaracharya Institute for Space Applications and Geo-informatics" in 2003.
  - \* It was formerly known as Remote Sensing and Communication Centre (RESECO).

### Context:

- The NIOS (National Institute of Open Schooling) of HRD Ministry initiates a unique method to ensure effective schooling to reach the unreached directly at door step.

### Details:

- Content is being made available online through 'SWAYAM' MOOC platform of the MHRD for various subjects from class 9th to 12th.

- \* Along with Self Learning Material, 'SWAYAM' portal provides video lectures and facility for self-assessment.
- \* The questions and queries of the learners are also being resolved through discussion forums.
- For those who do not have much access to the internet, these video lectures are telecast on the MHRD SWAYAMPRAKHA TV channels with live sessions for students to interact with their teachers and subject experts.
- Learners can watch the lesson-based educational programs on three DTH Channels and the NIOS YouTube channel.
- Learners can ask questions directly to the subject experts from their home through phone call on the number displayed during live sessions and through 'Student Portal' of NIOS web site directly in live telecast.
- A few private DTH operators have also agreed to air three Swayam Prabhā DTH channels on their DTH platform.

#### 4. VidyaDaan 2.0

##### Context:

- Union HRD Minister launches national program VidyaDaan 2.0 for inviting e-learning content contributions.

##### Details:

- VidyaDaan is a common national programme to develop and contribute e-learning content and a chance to be recognized nationally.
- VidyaDaan has a content contribution tool that provides a structured interface for the contributors to register and contribute different types of content (such as, explanation videos, presentations, competency-based items, quizzes, etc.), for any grade (from grade 1 to 12), for any subject as specified by the states/UTs.
- The contributions can be made by educationists, subject experts, schools, colleges, universities, institutes, government and non-government organisations, individuals, etc
- The content will be monitored by a panel of academic experts and released for use on the DIKSHA app to help millions of children across the country continue learning anytime and anywhere.

#### 5. Bihar launches app for govt. school students

##### Context:

- Government efforts to ensure access to learning opportunities for children during the lockdown phase.

##### Background:

- Schools and colleges have been shut due to the COVID-19 lockdown. They had closed even before the national lockdown was imposed. It is possible that the reopening of schools and colleges might take more time given the difficulty in ensuring physical distancing norms in schools and colleges.
- The prolonged shut down can affect the educational outcomes of children.
- There has been a spurt of edu-tech companies offering online courses for students.

##### Details:

- The Bihar Education Project Council (BEPC), a wing of the State Education Department, has launched a mobile application "Unnayan: Mera Mobile, Mera Vidyalaya" for Class VI to XII of over 70,000 government-run schools.
  - \* The app was jointly developed by the United Nations Children's Fund (UNICEF), the Bihar government and Eckovation, a social learning platform.
- Class-wise and subject-wise study materials are being prepared for access under this app. The efforts are oriented towards the needs of government school students.
- Given the deep penetration of radios into villages and the relative simplicity of its operation via basic phone or smartphones, BEPC plans to book a slot with the All India Radio for the audio broadcast of study materials.

##### Concerns:

- An independent research by an alumna of the London School of Economics has flagged some fundamental challenges in the present approach.
- The research calls into question the viability of viewing technology-enabled education as a solution in a state like Bihar which has a huge digital divide and socio-economic inequalities.
- Given the deprivation, the research notes that it would be highly unlikely that the children would be able to digitally connect with schools and teachers or participate in online classes.

##### Way forward:

##### Ensuring universal access:

- Though there is a good usage of mobiles in rural areas, there might still be lack of access in some parts, where the government will need to step in with state support.
- Common service centres might act as a resource for digital access to the underprivileged.
- Community support would help reduce the disparities in access to digital resources.

***Ensuring digital literacy:***

- The civil society and NGOs can play an important role in increasing digital literacy among the masses. Government schemes like Pradhan Mantri Gramin Digital Saksharta Abhiyan can be utilized.
- The user interface should be made as easy and simple as possible to ease the user experience.

***Involving parents:***

- Parents should be made to realize the importance of education for the development of their children. This could push the parents to ensure adequate learning opportunities for their children despite any economic hardships.

**6. Limitations of online learning*****Context:***

- With India under lockdown in its desperate attempt to contain the COVID-19 pandemic, there is anxiety with respect to academics particularly among the graduating batches of students.
- This editorial analyses whether digital forms of learning are effective for Higher Educational Institutions and courses.

***Details:***

- With universities and colleges in the middle of the second semester of their academic year, there have been attempts from individual teachers to keep their students engaged.
  - \* A few universities made arrangements for teachers to hold their classes virtually through video conferencing services such as Zoom.
- The transition to virtual modes was relatively less difficult for those institutions that had, even prior to the lockdown, adopted learning management system platforms.

***Concerns:***

- A recent report quoted the UGC Chairman saying that, in order to maintain social distancing, e-education was the only way out.
  - \* This was clearly meant to prepare the higher education community for the exigencies of an extended period of closure of campuses.
  - \* Even when the lockdown gets lifted eventually, it is not likely that the government would allow large congregations in restricted physical spaces, including campuses.
- He was also quoted as saying that online education was likely to be adopted as a strategy to enhance the gross enrolment ratio in higher education.
- This prompts many questions about the appropriateness of the contingency measure being deployed as a long-term strategy for enhancing enrolment in higher education.

- \* How far will online education help support greater access to and success in higher education among those who are on the margins?
- \* How equipped are digital forms of education to support the depth and diversity of learning in higher education?
- \* Is there an unstated motivation for this shift in strategy?

- Institutions of Open and Distance Learning (ODL), established during the mid-1960s to 1980s, were a consequence of explorations for less expensive models for provisioning access to higher education.
  - \* ODL may also have been considered by governments at that time as a safe strategy (in the light of instances of campus turbulence) for managing mass aspirations for higher education without necessarily effecting large congregations on campuses.
- It is worth pondering upon whether there is a similar motivation behind the enthusiasm for online education.

***Limitations of online learning with respect to Higher Education:***

- Access is not merely enrolment. Higher education has an influx of students who are first-generation aspirants. For them, access also includes effective participation in curricular processes, which includes negotiating through language and social barriers.
- A number of students are also from the other side of the digital divide which makes them vulnerable to a double disadvantage if digital modes become the mainstay of education.
- Unless consistent hand-holding and backstopping is ensured, there could be a tendency to remain on the margins and eventually drop out or fail.

***What learning involves?***

- Learning, in higher education means much more than acquisition of given knowledge that can be transmitted didactically by a teacher or a text. It constitutes only one minor segment of curricular content.
- Learning involves development of analytical and other intellectual skills, the ability to critically deconstruct and evaluate given knowledge, and the creativity to make new connections and syntheses.
- It also means to acquire practical skills, inquire, seek solutions to complex problems, and learn to work in teams.
- All these assume direct human engagement – not just teacher-student interaction, but also peer interactions.
- Arguably, some of this can, to some extent, be built on to a digital platform.
- However, deconstructing given knowledge in relative isolation is never the same as doing it in a group.

**Conclusion:**

- Curricular knowledge has a tendency to adjust its own contours according to the mode of transaction and the focus of evaluation.
- It gets collapsed into largely information-based content when transacted through standard structures of teaching-learning and examination.
- While digital forms of learning have the potential to enable students to pursue independent learning, conventional and digital forms of education should not be considered mutually exclusive.
- Online learning needs to be understood as one strand in a complex tapestry of curricular communication that may still assign an important central role to direct human engagement and social learning.
- It is therefore necessary to think deeply and gather research-based evidence on the extent to which online education can be deployed to help enhance the access and success rates.

# HISTORY

## 1. How pandemics have changed the world

### Context:

- Pandemics have had great influence in shaping human society and politics throughout history. From the Justinian Plague of the sixth century to the Spanish flu of the last century, pandemics have triggered the collapse of empires, weakened pre-eminent institutions, created social upheavals and brought down wars.

### Which are the deadliest pandemics and how have they influenced the course of human history?

#### **Justinian Plague**

- One of the deadliest pandemics in recorded history broke out in the sixth century in Egypt and spread fast to Constantinople, which was the capital of the Eastern Roman (Byzantine) Empire.
- The plague was named after the then Byzantine Emperor Justinian.
- The outbreak, which spread from Constantinople to both the West and the East, had killed up to 25 to 100 million people.
- The plague hit Constantinople when the Byzantine Empire was at the pinnacle of its power under Justinian's reign. The Empire had conquered much of the historically Roman Mediterranean coast, including Italy, Rome and North Africa.
- The plague would come back in different waves, finally disappearing in AD 750, after weakening the empire substantially.
- As the Byzantine Army failed to recruit new soldiers and ensure military supplies to battlegrounds in the wake of the spread of the illness, their provinces came under attack. By the time the plague disappeared, the Empire had lost territories in Europe to the Germanic-speaking Franks and Egypt and Syria to the Arabs.

#### **Black Death**

- The Black Death, or pestilence, that hit Europe and Asia in the 14th century was the deadliest pandemic recorded in human history.
- It killed some 75 to 200 million people.
- The plague arrived in Europe in 1347, where up to 50% of the population died of the disease.
- In the words of Stanford historian Walter Scheidel, pandemics are one of the "four horsemen" that have flattened inequality. The other three are wars, revolutions and state failures.
- Black Death led to improved wages for serfs and agricultural labourers. Land became more abundant relative to labour [after the death of millions of working people].

- In parts of Europe, wages tripled as labour demand rose.
- The most significant impact of the Black Death was perhaps the weakening of the Catholic Church.
- The Church was as helpless as any other institution as the plague spread like wildfire across the continent, and this shook the people's faith in the Church and the clergy. While the Church would continue to remain as a powerful institution, it would never regain the power and influence it had enjoyed before the outbreak of the plague.
- The Protestant Reformation in the 16th century would further weaken the Church.

#### **Spanish Flu**

- The Spanish Flu, which broke out during the last phase of the First World War, was the deadliest pandemic of the last century that killed up to 50 million people.
- One of the major impacts of the outbreak was on the result of the war.
- Though the flu hit both sides, the Germans and Austrians were affected so badly that the outbreak derailed their offensives.
- German General Erich Ludendorff in his memoir, wrote that the flu was one of the reasons for Germany's defeat.
- Germany launched its Spring Offensive on the western front in March 1918. By June and July, the disease had weakened the German units. The Armistice, signed on November 11, 1918, ended the War. But the flu continued to ravage parts of the world for many more months.

#### **COVID-19**

- Despite it being too early to say how COVID-19 would change the world, the outbreak has seen countries, both democratic and dictatorial, imposing drastic restrictions on people's movements.
- The western world lies exposed to the attack of the virus.
- Unemployment rate in the U.S. has shot up to the levels not seen since the end of the Second World War.
- Governments across the world, including the U.S. administration, are beefing up spending to stimulate an economy that shows signs of depression.
- Radical changes, good and bad, are already unfolding



# GOVERNANCE

## 1. 'Anti-graft law covers deemed universities'

### Context:

- The Supreme Court has held that bribery and corruption in a deemed university can be tried under the Prevention of Corruption Act.

### Details:

- The three-judge Bench has said that individuals, authorities or officials connected to a deemed university, whatever be their role or designation, come under the definition of a 'public servant'.
- They can be tried and punished under the anti-corruption law.
- As per the judgement, officials of a deemed varsity, though not seen as public servants in the conventional sense, perform duties in the discharge of which the State, the public and the community at large has an interest.
- Deemed universities come within the ambit of the term 'university' in Section 2(c)(xi) of the Prevention of Corruption (PC) Act, 1988.
  - \* A deemed institution under the University Grants Commission Act of 1956 has the same common public duty like a university to confer academic degrees, which are recognised in the society.
- "The object of the PC Act was not only to prevent the social evil of bribery and corruption, but also to make the same applicable to individuals who might conventionally not be considered public servants. The purpose under the PC Act was to shift focus from those who are traditionally called public officials, to those individuals who perform public duties. Keeping the same in mind, it cannot be stated that a deemed university and the officials therein, perform any less or any different a public duty," the judgement said.

# MISCELLANEOUS

## 1. Anthurium

### Context:

- A woman innovator from Thiruvananthapuram, Kerala, has developed ten varieties of Anthurium, a flower with high market value, by cross-pollination.

### Details:

- Anthurium is a vast group of beautiful blooming plants available in a wide range of colours.
- The plants of the varieties have a high demand due to its use as indoor decorative plants.
- During the last year (2019), over 8500 plants as well as flowers, have been sold in the market mainly in Pune and Thiruvananthapuram.
- The innovator has been propagating it through cuttings & seeds and supplying some plants and flowers throughout the country, but she was unable to meet the demand due to the time-consuming technique of propagation method.
- Therefore, the National Innovation Foundation – India (an autonomous body under the Department of Science and Technology) has facilitated mass multiplication and large scale production of four highly demanded varieties through tissue culture technique at the Indian Institute of Horticultural Research (IIHR), Bangalore, for the diffusion of the varieties in similar agroclimatic zones of the country.
- Salient features of the new varieties of anthurium are:
  - \* Large beautiful flowers
  - \* Different colours of spathe and spadix
  - \* Long stalks
  - \* Better shelf life
  - \* Good market value
- Anthurium:
  - \* Anthurium is one of the best domestic flowering plants in the world.
  - \* They are beautiful but also purify the surrounding air and remove harmful airborne chemicals like formaldehyde, ammonia, toluene, xylene, and allergens.
  - \* Because of its importance in removing toxic substances from the air, NASA has placed it in the list of air purifier plants.
  - \* Anthurium has larger economic importance because of its eye-catching and beautiful inflorescence and fetches a good market price.

## 2. Central Institute of Plastics Engineering & Technology (CIPET)

- It was established in 1968 by Government of India with the assistance of United Nations Development Programme (UNDP) at Chennai.
- The main objective of setting up of the institute was to develop manpower in different disciplines of Plastics Engineering & Technology as no similar institute was in existence in the country.
- International Labour Organization (ILO) served as the executing agency.
- CIPET is a premier national institution under the Ministry of Chemicals & Fertilizers, Govt. of India fully devoted to Skill Development, Technology Support Services, Academic and Research (STAR) in all the domains of plastics

### Objectives

- To provide qualified plastics professionals at various skill levels through academic Long term, short term, Skill Development & Entrepreneurship development programs in the field of Polymer Science & Technology.
- To offer Technology Support & Consultancy Services in the areas of Plastics Processing, Testing, Quality Control, Inspection, Design, Tool Room, CAD/CAM/CAE, Calibration & Application Development.

### Context

- CIPET Institutes/Centres contribute Rs 86.5 lakh to local authorities/governments for COVID-19 relief work

## 3. KARMI-Bot robot

- ASIMOV Robotics, a start-up based in Kerala, has developed KARMI-Bot robot.
- KARMI-Bot robot could be deployed at the isolation ward for COVID-19 patients.
  - \* Deployed at the hospital isolation ward, the robot performs a slew of activities from dispensing food and medicines and collection of trash left behind by patients to initiating a video call between doctors and patients. Besides, it can perform ultraviolet-based disinfection and also spray detergents at targets.
- Its main goal is to limit the interaction between patients and health workers.
  - \* This would help minimize the use of personal protective equipment (PPE) kits and also help reduce the risk of disease transmission.

#### 4. **Madhuban Gajar**

- Madhuban Gajar, a biofortified carrot variety with high  $\beta$ -carotene and iron content developed by a farmer scientist was developed by farmer-scientist Shri Vallabhhai Vasrambhai Marvaniya from Junagadh district, Gujarat
  - \* Shri Marvaniya was conferred with a National Award by the President of India during the Festival of Innovation (FOIN) – 2017.
  - \* He was also conferred with Padma Shri in the year 2019 for his extraordinary work.
- The Madhuban Gajar is a highly nutritious carrot variety developed through the selection method with higher  $\beta$ -carotene content (277.75 mg/kg) and iron content (276.7 mg/kg) dry basis and is used for various value-added products like carrot chips, juices, and pickles.
- Among all the varieties tested, beta-carotene and iron content were found to be superior.
- In trials conducted by the National Innovation Foundation, it was found that the Madhuban Gajar carrot variety possesses a significantly higher root yield (74.2 t/ha) and plant biomass (275 gm per plant).

##### **Biofortified carrot variety benefits local farmers**

- It is being planted in an area of over 200 hectares in Junagadh, and the average yield, which is 40-50 t/ha, has become the main source of income to the local farmers.

#### 5. **Nightingale-19**

- The district COVID centre at Kannur in Kerala is making news for deploying robots to fight COVID-19.
- The robot named 'Nightingale-19' has been designed by the students of Vimal Jyoti Engineering College.
- The robot assists health workers in caring for patients, taking food and medicines to them and aiding interaction between the patients and the staff.

#### 6. **Forest department comes to the rescue of tribals**

In Thiruvananthapuram, Kerala, the Forest Department has bought tribal products collected by the tribespeople of the Agasthyavanam Biological Park (ABP) and the Neyyar and Peppara forest ranges as part of a market intervention initiative to soften the lockdown impact.

- The ambitious Project Vanika, formally launched by the Chief Wildlife Warden is being undertaken by procuring perishables above the prevailing market rates.
- Buoyed by the initial response, the Department is toying with the idea of extending the scheme to other tribal regions in the State.

# PRACTICE QUESTIONS

## 1. Arrange the following from North to South:

1. Spratly Islands
2. Paracel Islands
3. Scarborough shoal
4. Natuna Islands

Choose the correct option:

- A. 2, 3, 1, 4
- B. 2, 1, 3, 4
- C. 3, 2, 1, 4
- D. 1, 2, 3, 4

## 2. Consider the following statements with respect to Members of Parliament Local Area Development Scheme (MPLADS):

1. MPLADS is a Central Sector scheme fully funded by the government of India.
2. Ministry of Statistics and Programme Implementation is responsible for the policy formulation, release of funds and prescribing monitoring mechanism for implementation of the Scheme.
3. The funds released under the scheme are non-lapsable.

Which of the given statement/s is/are incorrect?

- A. 1 only
- B. 1 and 3 only
- C. All of the above
- D. None of the above

## 3. Consider the following statements:

1. India is the largest producer of pulses in the world.
2. India has the world's largest area under cultivation of pulses.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

## 4. Which of the following tribes belong to the Andaman and Nicobar Islands?

1. Onge
2. Toto
3. Shompen
4. Jarawa

## 5. Sentinelese

Choose the correct option:

- A. 1, 2 and 3 only
- B. 1, 2, 3 and 5 only
- C. 1, 3, 4 and 5 only
- D. 1, 2, 3, 4 and 5

## 5. The Nord Stream twin pipeline system route crosses through the Exclusive Economic Zones of which of the following countries?

1. Russia
2. Finland
3. Sweden
4. Denmark
5. Germany

Choose the correct option:

- A. 1, 4 and 5 only
- B. 1, 2, 4 and 5 only
- C. 1, 3 and 5 only
- D. 1, 2, 3, 4 and 5

## 6. Consider the following statements with respect to National Investigation Agency (NIA):

1. The NIA can investigate terror cases across the country without having to get permission from the states.
2. NIA is not empowered to investigate terror attacks committed outside India.
3. NIA is headquartered in Hyderabad, Telangana.

Which of the given statement/s is/are incorrect?

- A. 1 only
- B. 2 and 3 only
- C. 1 and 2 only
- D. 3 only

## 7. Consider the following statements with respect to Counter Cyclical Capital Buffer (CCCB):

1. The CCCB aims to ensure that banking sector capital requirements take account of the macro-financial environment in which banks operate.
2. It is intended to protect the banking sector against losses that could be caused by cyclical systemic risks.
3. It requires banks to add capital at times when credit is growing rapidly so that the buffer can be reduced when the financial cycle turns.

Which of the given statement/s is/are correct?

- A. 1 and 2 only
- B. 1 and 3 only
- C. 1, 2 and 3
- D. 3 only

**8. Consider the following statements with respect to "Ways and Means Advances" (WMA):**

1. It is a loan facility given by the Reserve Bank of India to the Centre and State governments.
2. Interest rate for WMA for the Government of India is charged at the repo rate.

Which of the given statement/s is/are incorrect?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**9. Which of the following countries are currently under FATF "Grey List":**

1. Iran
  2. Pakistan
  3. Yemen
  4. Zimbabwe
  5. North Korea
- A. 1, 2, 3 and 4 only
  - B. 2, 3, and 4 only
  - C. 1, 2, 4 and 5 only
  - D. 2, 3, 4 and 5

**10. Recently, tonnes of essential medicines and hospital consumables were airlifted by the Indian Air Force to Maldives under:**

- A. Operation Sanjeevani
- B. Operation Amrut
- C. Operation Sahyog
- D. Operation Vanilla

**11. "BCG vaccine" or "Bacille Calmette-Guérin vaccine" is administered to children to prevent:**

1. Measles
2. Tuberculous Meningitis
3. Miliary Tuberculosis
4. Leprosy

- A. 1 and 2 only
- B. 2 and 3 only
- C. 2, 3 and 4 only
- D. 1, 2, 3 and 4

**12. Consider the following statements with respect to Agasthyamala Biosphere Reserve:**

1. It is a protected area in the Eastern Ghats.
2. It is a part of the World Network of Biosphere Reserves under the UNESCO Man and the Biosphere (MAB) Programme.
3. Shendurney, Peppara and Neyyar wildlife sanctuaries are located in Agasthyamala Biosphere Reserve.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 2 only
- C. 2 and 3 only
- D. 1, 2 and 3

**13. Which of the following statement/s is/are correct with respect to 'Voluntary Retention Route'**

1. It deals with Foreign Investments in India.
2. It is applicable to both equities and debt market transactions.

Options:

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**14. In which of the following agricultural products, is India both the largest producer and the largest exporter in the world?**

1. Rice
2. Cotton
3. Mango

Options:

- A. 1 only
- B. 1 and 2
- C. 1, 2 and 3
- D. None of the above

**15. The Energy Statistics 2019 document is published by:**

- A. Ministry of Power
- B. Ministry of New and renewable energy



- C. Ministry of Statistics and Programme Implementation
- D. Ministry of Commerce and industry

**16. Which of the following statement/s is/are incorrect with respect to Minimum support price Based procurement for Minor Forest Produce?**

1. The Scheme has been implemented in eight States having Scheduled Areas as listed in the Fifth Schedule of the Constitution of India.
2. The Ministry of Tribal affairs will directly undertake the purchasing of Minor Forest Produce at Minimum Support Price.

Options:

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**17. The National Strategy for Artificial Intelligence report has been prepared by:**

- A. NITI Aayog
- B. Ministry of Electronics & Information Technology
- C. Ministry of Science and Technology
- D. PM scientific advisory council

**18. Which of the following types of power plants are capable of handling sudden changes in demand loads?**

1. Coal based power plants
2. Wind turbine power plant
3. Gas fired power plants
4. Hydropower based plants
5. Nuclear power plants
6. Solar photovoltaic based plants

Options:

- A. 1, 3 and 5
- B. 2, 3, 4 and 6
- C. 3 and 4
- D. 1 and 5

**19. Which of the following constitutes the largest share among the renewable energy capacity in India?**

- A. Hydroelectricity
- B. Solar power
- C. Wind power
- D. Bio energy

**20. Which of the following states has the largest percentage of forest cover with respect to its total geographical area?**

- A. Madhya Pradesh
- B. Arunachal Pradesh
- C. Mizoram
- D. Assam

**21. Which of the following statement/s is/are correct?**

1. The Real-Time Reverse Transcription Polymerase Chain Reaction (RT-PCR) method helps measure the amount of a specific RNA in a sample.
2. RT-PCR method can identify both active cases as well as identify people with previous exposure to virus.

Options:

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**22. Which of the following statement/s is/are incorrect?**

1. The AarogyaSetu App has been developed by the Ministry of Health and Family Welfare.
2. The AarogyaSetu App will help assess the risk of being infected by Coronavirus.

Options:

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**23. Which of the following statement/s is/are correct with respect to the Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB PM-JAY)?**

1. It provides free health coverage at the primary, secondary and tertiary level to the poor and vulnerable population.
2. The scheme provides a cover of 5 lakh per individual per year for medical treatment in empanelled hospitals, both public and private.
3. The National Health Authority is the apex body responsible for implementing AB PM-JAY.
4. All the states and union territories have adopted the scheme.

Options:

- A. 1 and 4 only
- B. 1, 2, 3 and 4
- C. 3 only
- D. None of the above

**24. Which of the following Indian Biosphere Reserves is not part of the UNESCO's World Network of Biospheres?**

- A. Great Nicobar
- B. Nokrek
- C. Nilgiri
- D. Manas

**25. Consider the following statements:**

- 1. Madhya Pradesh has the highest number of tigers and Uttarakhand, the second highest.
- 2. Madhya Pradesh has the highest number of Tiger Reserves in India.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**26. Which of the following countries border the Red Sea?**

- 1. Egypt
- 2. Libya
- 3. Saudi Arabia
- 4. Sudan
- 5. Djibouti

**Options:**

- A. 1, 2 and 5 only
- B. 1, 2, 4 and 5 only
- C. 1, 3, 4 and 5 only
- D. 1, 3 and 4 only

**27. Consider the following statements with respect to BIMSTEC:**

- 1. It came into force through the Bangkok Declaration.
- 2. BIMSTEC does not have a permanent secretariat.
- 3. The regional multilateral organisation has members from South Asia and Southeast Asia only.

Choose the correct option:

- A. 1 and 2 only
- B. 1 only
- C. 1, 2 and 3 only
- D. 1 and 3 only

**28. Consider the following statements:**

- 1. Parambikulam Tiger Reserve is a protected area located in Tamil Nadu.
- 2. Parambikulam Tiger Reserve implements the Participatory Forest Management Scheme (PFMS).

Which of the given statement/s is/are incorrect?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**29. Consider the following statements with respect to Interpol:**

- 1. Interpol is global police co-operation agency and a non-governmental organization (NGO).
- 2. It is headquartered at Geneva, Switzerland.
- 3. Interpol Purple Notice is issued to locate, identify or obtain information on a person of interest in a criminal investigation.

Which of the given statement/s is/are correct?

- A. 1 and 2 only
- B. 1 and 3 only
- C. 1, 2 and 3 only
- D. 1 only

**30. Which of these South Indian state/s share boundaries with the maximum number of states?**

- A. Karnataka only
- B. Andhra Pradesh and Karnataka
- C. Karnataka and Telangana
- D. Andhra Pradesh only

**31. Consider the following statements:**

- 1. Global Initiative on Sharing All Influenza Data (GISAID) is a public platform started by India in 2008.
- 2. It is headquartered in New Delhi, India.

Which of the given statement/s is/are incorrect?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**32. Consider the following statements:**

- 1. Gaganyaan is an Indian human space flight programme.
- 2. GSLV Mk III will be used to launch Gaganyaan.

3. India has its own Cryogenic engine technology.

Which of the given statement/s is/are correct?

- A. 1 and 2 only
- B. 2 only
- C. 1 and 3 only
- D. 1, 2 and 3

**33. Consider the following statements with respect to the National Board for Wildlife (NBWL):**

- 1. It is chaired by the Prime Minister.
- 2. It is a statutory organisation.
- 3. No alternation of boundaries in national parks and wildlife sanctuaries can be done without approval of the NBWL.
- 4. Its recommendations are binding on the Central Government while framing policies and measures for conservation of wildlife in the country.

Which of the given statement/s is/are correct?

- A. 2 and 3 only
- B. 1, 2 and 3 only
- C. 2, 3 and 4 only
- D. 1, 2, 3 and 4

**34. Arrange the following water bodies in South East Asia from North to South:**

- 1. South China Sea
- 2. East China Sea
- 3. Yellow Sea
- 4. Bohai Sea

Choose the correct option:

- A. 4, 3, 2, 1
- B. 4, 2, 3, 1
- C. 4, 1, 2, 3
- D. 3, 4, 2, 1

**35. Consider the following statements about Maulana Abul Kalam Azad :**

- 1. He was the youngest person to serve as President of Indian National Congress.
- 2. He founded the Indian Council for Cultural Relations.
- 3. He was independent India's first Education Minister.

Which of the given statement/s is/are correct?

- A. 2 and 3 only
- B. 3 only
- C. 1 and 2 only
- D. 1, 2 and 3

**36. Consider the following statements with respect to National Tiger Conservation Authority (NTCA):**

- 1. NTCA is a statutory body under the Union Ministry of Environment, Forest and Climate change.
- 2. The Annual Report prepared by NTCA has to be laid in the Parliament along with the Audit Report.
- 3. NTCA is chaired by the Minister of Environment, Forest and Climate Change.

Which of the given statement/s is/are incorrect?

- A. 1 only
- B. 2 only
- C. 1 and 3 only
- D. None of the above

**37. The National Health Mission aims to reduce:**

- 1. Total Fertility Rate (TFR) to 2.1.
- 2. Infant Mortality Rate (IMR) to 25 per 1000 live births.
- 3. Maternal Mortality Rate (MMR) to 1 per 1000 live births.

Which of the given statement/s is/are correct?

- A. 2 and 3 only
- B. 2 only
- C. 1, 2 and 3
- D. 3 only

**38. Consider the following statements:**

- 1. Inter-State migration and quarantine fall under the Union List.
- 2. Prevention of infectious diseases moving from one State to another is under the State List.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**39. Consider the following statements:**

- 1. In the blood, apart from RBC, WBC and platelets, all the other fluid content is known as Plasma.
- 2. The main role of plasma is to carry hormones, nutrients and proteins to different parts of the body.
- 3. Plasma constitutes 30% of the total blood volume.

Which of the given statement/s is/are incorrect?

- A. 1 only
- B. 3 only
- C. 1 and 3 only
- D. 2 and 3 only

**40. Consider the following statements with respect to the Strait of Hormuz:**

1. It is a strait between the Persian Gulf and the Gulf of Oman.
2. About half of the global oil consumption passes through the Strait.
3. It provides the only sea passage from the Persian Gulf to the open ocean.

**Which of the given statement/s is/are correct?**

- A. 1, 2 and 3
- B. 1 and 2 only
- C. 1 and 3 only
- D. 2 and 3 only

**41. Which of the following statement/s is/are correct for the 2018-2019 fiscal year?**

1. India imports the largest value of goods and services from China.
2. India exports the largest value of goods and services to the U.S.
3. Mineral fuels account for the largest share of exports from India.

**Options:**

- A. 1 only
- B. 1 and 2
- C. 1, 2 and 3
- D. 2 only

**42. Which of the following statement/s is/are correct?**

1. India through its Intended Nationally Determined Contribution (INDC), has pledged to increase the share of non-fossil fuels-based electricity to 40 per cent by 2030.
2. India has set itself a domestic target of installing 175 GW of renewable power capacity by 2030.

**Options**

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**43. Which of the following countries is not part of the OPEC+ framework?**

- A. Mexico
- B. U.S.
- C. Azerbaijan
- D. Kazakhstan

**44. Which of the following statement/s is/are incorrect regarding the National Human rights Commission (NHRC)?**

1. The NHRC is a statutory body.
2. Chairpersons of NHRC (except those appointed as acting chairperson) have always been a Retired Chief Justice of India.
3. The home minister and chairman of the Rajya Sabha are part of the committee which recommends the members of the NHRC to the president.

**Options:**

- A. 1 only
- B. 1 and 2
- C. 1, 2 and 3
- D. 3 only

**45. Which of the following statement/s is/are correct?**

1. Enforcement Directorate is part of the department of economic affairs, Ministry of Finance.
2. Enforcement Directorate is responsible for enforcement of the Foreign Exchange Management Act, 1999 (FEMA) and certain provisions under the Prevention of Money Laundering Act.

**Options:**

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**46. Which of the following is/are not a predominant kharif crop/s?**

1. Rice
2. Maize
3. wheat
4. Mustard
5. Barley
6. Ragi
7. Cotton
8. Groundnut

**Options**

- A. 1, 2, 6 and 7
- B. 1, 3, 6 and 7
- C. 3, 4 and 5
- D. 3, 4, 7 and 8

**47. Which of the following statement/s is/are correct?**

1. The State election commissioner is appointed by the Governor.
2. The state election commissioner can be removed by the Governor.

**Options:**

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**48. The largest expatriate Indian population is based in which of the following country?**

- A. United States of America
- B. Kuwait
- C. United Arab Emirates
- D. United Kingdom

**49. Which of the following pairs of cyclones and the affected regions is/are correctly matched?**

1. Ciara: Western Europe
2. Fani: Eastern India
3. Ava: Madagascar
4. Kyarr: Western coast of India and West Asia

**Options:**

- A. 2 only
- B. 2 and 3 only
- C. 1 and 4 only
- D. 1, 2, 3 and 4

**50. Which of the following pairs of martial arts and associated states is wrongly matched?**

- A. Kalaripayattu: Kerala
- B. Sqay: Jammu and Kashmir
- C. Cheibi gad-ga: Sikkim
- D. Thangta: Manipur

**51. Which of the following pairs of art forms and associated regions is wrongly matched?**

- A. Pattachitra: Odisha
- B. Manoti: Rajasthan
- C. Chikankari: Lucknow
- D. Rabari: Himachal Pradesh

**52. The Directorate General of Foreign Trade comes under which of the following Ministries?**

- A. Ministry of Commerce and Industry
- B. Ministry of Finance
- C. Ministry of External Affairs
- D. Ministry of Corporate Affairs

**53. Consider the following statements with respect to Poona Pact of 1932:**

1. Poona Pact followed the communal award made by the British Prime Minister Ramsay MacDonald.
2. It was signed by Dr. B.R. Ambedkar and M.K. Gandhi.
3. As per the pact, depressed class candidates were to be elected by a joint electorate instead of the separate electorate.

Which of the given statement/s is/are incorrect?

- A. 1 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. 2 only

**54. Consider the following statements with respect to Organization of the Petroleum Exporting Countries (OPEC):**

1. OPEC is a permanent, intergovernmental organization, created at the Baghdad Conference.
2. It is headquartered in Vienna, Austria.
3. Gabon is no longer a member of the OPEC.

Which of the given statement/s is/are incorrect?

- A. 2 and 3 only
- B. 3 only
- C. 1 and 2 only
- D. 2 only

**55. Consider the following statements:**

1. The Governor of a State has emergency powers to meet the situation arising from external aggression.
2. The Governor can summon, prorogue and dissolve the State Assembly.
3. The Governor addresses the first session of the Legislative Assembly after elections.

Which of the given statement/s is/are incorrect?

- A. 1 only
- B. 1 and 2 only
- C. 1 and 3 only
- D. 2 and 3 only



**56. Which of the following magazines were started by Dr. B.R.Ambedkar?**

1. Mooknayak
2. Equality Janta
3. Rast Goftar
4. Bahishkrit Bharat

**Choose the correct option:**

- A. 1 and 3 only
- B. 1, 3 and 4 only
- C. 1, 2 and 4 only
- D. 1 and 4 only

**57. Consider the following statements:**

1. River Yamuna originates in the Banderpooch peak in the Lower Himalayas.
2. The river flows through the states of Haryana, Uttar Pradesh, Uttarakhand and Himachal Pradesh.

Which of the given statement/s is/are incorrect?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**58. In the IUCN Red List, Greater One-Horned Rhino is classified as:**

- A. Endangered
- B. Vulnerable
- C. Critically Endangered
- D. Near Threatened

**59. Which of the following is/are correctly matched?**

1. Global Financial Stability Report – World Bank
2. The World Economic Outlook – International Monetary Fund
3. Global Competitiveness Report – World Economic Forum

Options:

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. 1, 2 and 3

**60. Consider the following statements:**

1. Measles is a highly contagious bacterial disease.
2. Bhutan, Maldives and Sri Lanka have eliminated Measles.

3. Vaccine for Measles is covered under Mission Indradhanush of the Ministry of Health and Family Welfare.

Which of the given statement/s is/are incorrect?

- A. 2 only
- B. 1 and 2 only
- C. 1 and 3 only
- D. 1 only

**61. Consider the following statements with respect to Indian Monsoons:**

1. South-west Monsoons are formed due to intense low pressure system formed over the Tibetan Plateau.
2. North-east Monsoons are associated with high pressure cells over Tibetan and Siberian plateaus.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**62. Consider the following statements:**

1. Antibodies are proteins produced and secreted by B cells.
2. Antibodies bind to foreign substances that invade the body, such as pathogens.
3. ELISA is carried out to detect and measure antibodies in the blood.

Which of the given statement/s is/are incorrect?

- A. 3 only
- B. 1 and 2 only
- C. 1 and 3 only
- D. None of the above

**63. Consider the following statements with respect to the National Food Security Act, 2013:**

1. NFSA gives legal entitlement to 67% of the population to receive highly subsidized food grains.
2. NFSA provides for the payment of food security allowance to entitled persons by the Central Government in case of non-supply of entitled quantities of food grains.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**64. Consider the following statements with respect to the World Health Organisation (WHO):**

1. WHO membership is free for all the countries.
2. China is the single-biggest contributor to the WHO, followed by the U.S.
3. Voluntary contributions are the biggest category of funding that the WHO receives.

Which of the given statement/s is/are incorrect?

- A. 1 only
- B. 1 and 2 only
- C. 1 and 3 only
- D. 2 and 3 only

**65. Consider the following statements with respect to New START Treaty:**

1. New START is a nuclear arms reduction treaty between the United States and China.
2. New START restricts both the parties from deploying not more than 1,550 strategic nuclear warheads and bombs.
3. The Treaty's duration is fifty years, unless superseded by a subsequent agreement.

Which of the given statement/s is/are incorrect?

- A. 2 only
- B. 1 and 3 only
- C. 1 only
- D. 1 and 2 only

**66. Arrange the following from North to South:**

1. Golan Heights
2. Gaza Strip
3. West Bank
4. Dead Sea

Options:

- A. 1, 4, 3, 2
- B. 1, 2, 3, 4
- C. 1, 3, 4, 2
- D. 2, 4, 1, 3

**67. Consider the following statements:**

1. Ethanol can be produced from sugarcane, maize, wheat.
2. At 95% purity, ethanol is used for blending with petrol as it allows the engine to more completely combust the fuel resulting in fewer emissions.
3. Once blended, Ethanol cannot be separated from Petrol.

Which of the given statement/s is/are correct?

- A. 2 and 3 only
- B. 1, 2 and 3
- C. 1 and 2 only
- D. 1 and 3 only

**68. Which of the following countries have signed and ratified the Comprehensive Test Ban Treaty?**

1. Russia
2. U.S.A
3. France
4. China
5. Britain

Options:

- A. 1, 2 and 3 only
- B. 1, 3 and 5 only
- C. 1, 3, 4 and 5 only
- D. 1, 2 and 4 only

**69. Special Drawing Rights (SDR) is associated with which of the following?**

- A. World Bank
- B. International Monetary Fund
- C. G-20
- D. Asia development Bank

**70. Which of the following statement/s is/are correct?**

1. The Ministry of Consumer Affairs, Food and Public Distribution is in charge of the central sector scheme for marketing of Minor forest produce through the Minimum Support Price mechanism.
2. The Minimum Support Price for Minor forest produce is decided by the Commission for agricultural costs and prices.

Options:

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**71. Which of the following statement/s is/are correct?**

1. The International Development Association (IDA) is an international financial institution which offers concessional loans and grants to the world's poorest developing countries.
2. The International Development Association is part of the World Bank.
3. India is not eligible for IDA support.

**Options:**

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1, 2 and 3
- D. 1 only

**72. Which of the following statement/s is/are correct?**

- 1. Ways and Means Advances option can be exercised only by the central government.
- 2. The interest rate for Ways and Means advances is aligned with the reverse repo rate.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**73. Which of the following is wrongly matched?**

- A. Ravanchhaya: Odisha
- B. Tolpava Kuthu: Kerala
- C. Togalu Gombeyatta: Andhra Pradesh
- D. Chamadyacha Bahulya: Maharashtra

**74. Which of the following statement/s is/are correct with respect to the traditional practice of Pachoti?**

- 1. It is a folk festival which celebrates the birth of a baby, particularly a male infant, with relatives and neighbours.
- 2. It is practised in the state of Assam.

Options:

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**75. Which of the following place/s is/are housing the strategic oil reserve facility in India?**

- 1. Mangaluru
- 2. Padur
- 3. Chandikhole
- 4. Visakhapatnam
- 5. Barmer

Options:

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1, 2, 3 and 4
- D. 1, 2, 3, 4 and 5

**76. Select the right option:**

- 1. Assertion (statement A): Unlike antibiotics for Bacterial infections, there are no antiviral drugs for Viruses and the treatment for viral disease involves treatment for the symptoms of the disease.
- 2. Reason (statement B): Unlike Bacterium Viruses remain inactive outside a host organism.

Options:

- A. Both statement A and B are true and statement B is the correct explanation for A.
- B. Both Statement a and B are true and statement B is not the correct explanation for A.
- C. Statement A is true, Statement B is false
- D. Statement B is true, Statement A is false.

**77. Which of the following countries is/are member/observers of the Organization of Islamic Cooperation?**

- 1. Syria
- 2. Russia
- 3. Thailand
- 4. India
- 5. China

Options:

- A. 1 only
- B. 1 and 4 only
- C. 2 and 3 only
- D. All of the above

**78. Which of the following pairs is wrongly matched?**

- A. Tulaipanji rice: West Bengal
- B. Nilambur teak: Tamil Nadu
- C. Sirsi supari: Karnataka
- D. Araku valley Arabica coffee: Andhra Pradesh

**79. Which of the following statement/s is/are correct?**

- 1. The World Health Organization is a specialized agency of the United Nations.
- 2. World Health Report is a publication of the World Health Organization.

Options:

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**80. Which of the following is/are part of the UNESCO's List of Intangible Cultural Heritage for India?**

1. Mudi yettu
2. Chhau
3. Kolam
4. Yoga
5. Pachoti
6. Sankirtan
7. Nawrouz

**Options:**

- A. 1, 2, 3 and 5 only
- B. 3, 5 and 6 only
- C. 1, 2, 4, 6 and 7 only
- D. All of the above

**81. Consider the following statements with respect to Adilabad Dokra:**

1. It is a form of ancient bell metal craft practiced by the Woj community native to Andhra Pradesh.
2. It is a technique where duplicate metal sculpture is cast from an original sculpture.
3. It has been awarded Geographical Indication (GI) Tag.

Which of the given statement/s is/are incorrect?

- A. 2 and 3 only
- B. 1 only
- C. 1 and 2 only
- D. 3 only

**82. Consider the following statements with respect to Fugitive Economic Offenders Act:**

1. Only those economic offences involving at least Rs. 500 crore or more will come under this Act.
2. Upon declaration as a Fugitive Economic Offender, properties of the person will be confiscated and vested in the central government, free of rights and claims in the property.
3. No appeals are allowed before any court against the orders of the special court.

Which of the given statement/s is/are correct?

- A. 2 only
- B. 1 and 2 only
- C. 2 and 3 only
- D. 1 and 3 only

**83. Consider the following statements:**

1. As per the WTO rules, a member country cannot discriminate between its trade partners.
2. Special status granted to a trade partner must be extended to all members of the WTO.
3. While India had granted MFN status to Pakistan in 1996, Pakistan hasn't accorded MFN status to India.

Which of the given statement/s is/are correct?

- A. 1 and 2 only
- B. 1 and 3 only
- C. 1, 2 and 3 only
- D. 1 only

**84. Consider the following statements with respect to Amir Khusrau:**

1. He invented the Sitar.
2. His work, Khaliq-e-bari, is the oldest known printed dictionary.
3. He was known as Tuti-e-Hind.

Which of the given statement/s is/are incorrect?

- A. 1 only
- B. 1 and 3 only
- C. 2 only
- D. None of the above

**85. Consider the following statements with respect to Indian Ocean Commission (IOC):**

1. It is an intergovernmental organisation headquartered in Seychelles.
2. India has recently been accepted as a member of IOC.
3. China and Pakistan are observers of IOC.

Which of the given statement/s is/are incorrect?

- A. 2 only
- B. 3 only
- C. 1 and 2 only
- D. 1, 2 and 3

**86. Which of the following are Zoonotic diseases?**

1. Ebola
  2. Rabies
  3. Toxoplasmosis
  4. Malaria
- A. 2 and 4 only
  - B. 2, 3 and 4 only
  - C. 1, 2, 3 and 4
  - D. 1, 2 and 4 only

**87. Consider the following statements with respect to South China Sea:**

1. It is an arm of the Western Pacific Ocean in Southeast Asia.
2. It is to the west of the Philippines and east of Vietnam.
3. It is to the south of the island of Borneo.

Which of the above is/are correct?

- A. 1 only
- B. 1 and 2 only
- C. 2 and 3 only
- D. 1 and 3 only

**88. Consider the following statements with respect to the Financial Action Task Force (FATF):**

1. FATF is an international organization developed to combat terrorism and money laundering.
2. FATF also deals with issues related to low tax jurisdiction or tax competition.
3. It was established at Group of Seven (G-7) Summit in Paris.

Which of the given statement/s is/are incorrect?

- A. 1 only
- B. 1 and 2 only
- C. 2 only
- D. 1, 2 and 3

**89. Consider the following statements:**

1. Earth Bio-Genome Project will sequence and catalog the DNA of all of Earth's eukaryotic biodiversity.
2. Eukaryotic species include all plants, animals, fungi and other organisms whose cells have a clearly defined nucleus surrounded by a membrane.
3. Eukaryotic cells are typically much larger than those of prokaryotes.

Which of the given statement/s is/are incorrect?

- A. 1 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. None of the above

**90. Consider the following statements with respect to Nutrient Based Subsidy (NBS) Scheme:**

1. Under the Scheme, a fixed amount of subsidy is decided by the government on an annual basis and is provided on each grade of subsidized Phosphatic and Potassic (P&K) fertilizers, including Urea.
2. In India, urea is the only controlled fertilizer and is sold at a statutory notified uniform sale price.

Which of the given statement/s is/are incorrect?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**91. Consider the following statements**

1. Both the Central and State governments have the power to fix the price of sugarcane under the Concurrent List of the Constitution.
2. The Centre has complete authority to set the statutory minimum price for Sugarcane.
3. States can't fix sugarcane price higher than the statutory minimum price fixed by the Centre.

Which of the given statement/s is/are incorrect?

- A. 3 only
- B. 1 only
- C. 1 and 3 only
- D. 1 and 2 only

**92. Consider the following statements with respect to Reverse Vaccinology:**

1. It is the technique of identifying the proteins that are exposed on the surface by using genome sequence instead of the microorganism.
2. Reverse vaccinology employs bioinformatics.
3. It has been used on several bacterial vaccines.

Which of the given statement/s is/are correct?

- A. 1 and 2 only
- B. 2 and 3 only
- C. 1, 2 and 3
- D. 1 only

**93. The annual Hindu festival held at Kamakhya Temple in Guwahati symbolising the fertility cult of goddess is called:**

- A. Tuloni Biya
- B. Ambubachi Mela
- C. Dehing Patkai Festival
- D. Majuli Festival

**94. Consider the following statements with respect to Wayanad Wildlife Sanctuary:**

1. Wayanad Wildlife Sanctuary is part of the Nilgiri Biosphere Reserve.
2. It is contiguous to the protected areas of Nagarhole and Bandipur of Karnataka and Mudumalai of Tamil Nadu.



Which of the given statement/s is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

95. Arrange the following from South to North:

- 1. Paracel Islands
- 2. Spratly Islands
- 3. Senkaku Islands
- 4. Pratas Islands

Options:

- A. 1, 4, 2, 3
- B. 1, 2, 4, 3
- C. 2, 1, 3, 4
- D. 2, 1, 4, 3

96. Which of the following Geographical Tags are credited to the state of Karnataka?

- 1. Devanahalli Pomelo
- 2. Appemidi mango
- 3. Kinhal toys
- 4. Gulegudd Khana fabric

Choose the correct option:

- A. 1 and 2 only
- B. 1, 2 and 3 only
- C. 1, 2, 3 and 4
- D. 1 only

97. Which of the following statement/s is/are correct?

- 1. The National Board for Wildlife is a statutory body under the Environment Protection Act, 1986.
- 2. The National Board for Wildlife is chaired by the Minister of Environment, Forest and Climate Change.
- 3. No alteration of boundaries in national parks and wildlife sanctuaries can be done without the approval of the NBWL.

Options:

- A. 1 and 2
- B. 1, 2 and 3
- C. 2 and 3
- D. 3 only

98. The Tadoba Andhari tiger reserve is located in which of the following states?

- A. Maharashtra
- B. Madhya Pradesh
- C. Chattisgarh
- D. Jharkhand

99. Which of the following pairs is/are correctly matched?

- 1. Ajrakh textiles: Kutch
- 2. Sanjhi paper art: Mathura
- 3. Madhubani art: Bihar

Options:

- A. 3 only
- B. 2 and 3 only
- C. 1, 2 and 3
- D. 1 and 2 only

100. Which of the following pairs is/are wrongly matched?

- 1. Leather footwear industry: Agra and Kanpur, Uttar Pradesh
- 2. Non-leather footwear industry: Bahadurgarh, Haryana
- 3. Sports articles and surgical goods: Jalandhar, Punjab

Options:

- A. 1 only
- B. 1 and 2 only
- C. 3 only
- D. None of the above

101. Which of the following statement/s is/are correct?

- 1. Asia is the most affected region due to malaria.
- 2. India has set 2030 as the target year for eliminating malaria.

Options:

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**102. Which of the following statements with respect to National Agricultural Cooperative Marketing Federation of India Limited (NAFED) is/are correct?**

1. It functions under the Ministry of Consumer Affairs, Food and Public Distribution.
2. It is the nodal agency to implement price stabilization measures under "Operation Greens".

Options:

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**103. The Rohtang Pass is located in which of the following state/UT?**

- A. Himachal Pradesh
- B. Jammu and Kashmir
- C. Ladakh
- D. Uttarakhand

**104. Which of the following is widely used in the process of desulphurisation of flue gases?**

- A. Acidic substances
- B. Alkaline substances
- C. Neutral substances
- D. Both a and c

**105. Which of the following statement/s is/are correct?**

1. The sixth Schedule of the Indian Constitution contains provisions relating to the administration of tribal areas in the state of Assam, Meghalaya, Tripura and Mizoram only.
2. The tribal areas listed under the sixth Schedule are constituted as Scheduled Areas.
3. Governors can direct the manner in which acts of the State Legislature and Parliament apply to the sixth Schedule areas.

Options:

- A. 1 only
- B. 2 and 3 only
- C. 1, 2 and 3
- D. 3 only

**106. Which of the following pair/s is/are correctly matched?**

1. Exercise Pitch Black: Australia
2. Exercise Red Flag: China
3. Blue Flag Exercise: United States of America

4. Samvedna Exercise: India

Options:

- A. 1, 2 and 4 only
- B. 1 and 4 only
- C. 3 and 4 only
- D. 1, 2, 3 and 4

**107. Arrange the following cities from east to west:**

1. Aden
2. Muscat
3. Jeddah
4. Abu Dhabi
5. Tehran
6. Doha

Options:

- A. 2, 4, 6, 5, 1, 3
- B. 4, 2, 5, 6, 1, 3
- C. 2, 4, 6, 5, 3, 1
- D. 5, 2, 4, 6, 1, 3

**108. Which of the following statement/s is/are correct?**

1. Cotton is predominantly a Kharif crop in India.
2. Indigenous variety of cotton accounts for the largest share of cotton cultivation in India.
3. India is the largest producer and exporter of cotton in the world.
4. Cotton is part of the Minimum Support Price Mechanism procurement system.

Options:

- A. 1, 2, 3 and 4
- B. 1 and 2 only
- C. 1 and 4 only
- D. 1 and 3 only

**109. Consider the following statements:**

1. Chakmas are Buddhists, while Hajongs are Hindus.
2. Chakmas and Hajongs lost their homes and land to the Kaptai dam project.
3. Chakmas and Hajongs are both identified as Particularly Vulnerable Tribal Groups (PVTGs) by the Ministry of Home Affairs.

**Which of the given statement/s is/are incorrect?**

- A. 1 only
- B. 1 and 3 only
- C. 3 only
- D. 2 only

**110. Consider the following statements with respect to SVAMITVA scheme:**

1. The scheme aims to provide an integrated property validation solution for rural India only.
2. The scheme will be implemented with the collaborated efforts of the Ministry of Panchayati Raj, State Panchayati Raj Departments, State Revenue Departments and Survey of India.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

**111. Consider the following statements:**

1. Bodo people are recognized as a plains tribe in the Sixth Schedule of the Indian Constitution.
2. Bodoland Territorial Area District comprises five districts of Assam only.
3. Bodo language is included in the 8th Schedule of Indian Constitution.

Which of the given statement/s is/are incorrect?

- A. 2 only
- B. 1 and 2 only
- C. 1, 2 and 3
- D. None of the above

**112. Consider the following statements:**

1. Money market deals with short-term funds, the period of maturity of which is up to one year.
2. Call money market is the market where overnight loans can be availed by banks to meet liquidity.
3. Money market in India is regulated by the Securities and Exchange Board of India (SEBI).

Which of the given statement/s is/are correct?

- A. 1 only
- B. 1 and 2 only
- C. 1 and 3 only
- D. 1, 2 and 3

**113. The Kumbh Mela is organised on the banks of:**

1. Ganges in Haridwar
2. Gomti in Ujjain
3. Godavari in Nashik
4. Confluence of the Ganges, the Yamuna, and the mythical Sarasvati in Prayagraj

Which of the locations of Kumbh Mela are correct?

- A. 1, 2 and 4 only
- B. 1, 2 and 3 only
- C. 1, 3 and 4 only
- D. 1, 2, 3 and 4

**114. Consider the following statements with respect to Chinkaras:**

1. Chinkaras can be found in India, Afghanistan, Iran and Pakistan.
2. It is the state animal of Rajasthan.
3. It is classified as endangered in the IUCN Red List.

Which of the following statement/s is/are correct?

- A. 1, 2 and 3
- B. 2 and 3 only
- C. 1 and 3 only
- D. 1 and 2 only

**115. Consider the following statements:**

1. Biological Oxygen Demand is the amount of dissolved oxygen needed by bacteria in decomposing the organic wastes present in water.
2. A high value of dissolved oxygen (DO), BOD (Biological Oxygen Demand) and COD (Chemical Oxygen Demand) are all indicators of good river health.
3. A low value of Biological Oxygen Demand indicates low Dissolved Oxygen content of water.

Which of the given statement/s is/are correct?

- A. 1 only
- B. 1 and 2 only
- C. 2 and 3 only
- D. 1, 2 and 3

**116. Consider the following statements with respect to Asian Development Bank:**

1. India is a founding member of Asian Development Bank.
2. India and China hold the largest share in the bank.
3. It is headquartered in Manila, Philippines.

Which of the given statement/s is/are correct?

- A. 1 and 2 only
- B. 1 only
- C. 1 and 3 only
- D. 1, 2 and 3

**117. On which of the following rivers has China built dams?**

1. Mekong
2. Brahmaputra
3. Indus
4. Irtysh

Choose the correct option:

- A. 1, 2, 3, and 4
- B. 1, 2 and 3 only
- C. 1 and 2 only
- D. 2, 3 and 4 only

Which of the given statement/s is/are INCORRECT?

Choose the correct option:

- A. 1 only
- B. 2 and 3 only
- C. 1 and 3 only
- D. 2 only

**118. Consider the following statements:**

1. The Special 301 Report is a biennial report published by the Office of the United States Trade Representative (USTR).
2. India has been classified as "Priority Foreign Country" in the Special 301 Report, 2020.
3. China, Indonesia, Russia are on the Priority Watch List of Special 301 Report, 2020.

Which of the given statement/s is/are INCORRECT?

Options:

- A. 1 only
- B. 1 and 2 only
- C. 1 and 3 only
- D. 2 and 3 only

**119. Arrange the following rivers in ascending order of their length:**

1. Mekong
2. Yangtze
3. Brahmaputra
4. Yellow River

Options:

- A. 3, 1, 4, 2
- B. 4, 3, 1, 2
- C. 3, 4, 2, 1
- D. 3, 1, 2, 4

**120. Consider the following statements:**

1. Article 30 is called a Charter of Education Rights.
2. While all religious minorities have the right to establish and administer educational institutions of their choice, linguistic minorities do not enjoy such a right.
3. The term "Minorities" has been defined in the Constitution.

# ANSWER KEYS

1	A
2	D
3	C
4	C
5	D
6	B
7	C
8	D
9	B
10	A
11	C
12	C
13	A
14	D
15	C
16	C
17	A
18	C
19	A
20	C

21	A
22	A
23	C
24	D
25	B
26	C
27	D
28	A
29	D
30	A
31	C
32	D
33	B
34	A
35	D
36	D
37	C
38	A
39	B
40	C



41	C
42	A
43	B
44	D
45	B
46	C
47	A
48	C
49	D
50	C
51	D
52	A
53	D
54	B
55	A
56	C
57	D
58	B
59	B
60	D

61	C
62	D
63	A
64	B
65	B
66	C
67	D
68	B
69	B
70	D
71	C
72	D
73	C
74	C
75	C
76	D
77	C
78	B
79	C
80	C

81	B
82	A
83	C
84	D
85	D
86	C
87	B
88	C
89	D
90	A
91	A
92	C
93	B
94	C
95	D
96	C
97	D
98	A
99	C
100	D

101	B
102	B
103	A
104	B
105	A
106	B
107	A
108	C
109	C
110	C
111	A
112	B
113	C
114	D
115	A
116	C
117	A
118	B
119	A
120	B

# MAINS PRACTICE QUESTIONS

1. Discuss the major aspects of India's National Intellectual Property Rights (IPR) policy, 2016. Examine the need to balance the often contradicting objectives of encouraging innovation and protecting the rights of innovators versus the need to ensure public good, with suitable examples. (15 marks, 250 words)
2. Analyze how India's poor are likely to overwhelmingly bear the burden of the COVID-19 pandemic and the measures being taken to limit its spread. Suggest suitable measures to lessen this impact. (10 marks, 150 words)
3. Despite increase in exports and decrease in imports of defence equipment, India's defence sector remains uncompetitive globally. Suggest measures that should be taken to address the key challenges in the sector. (10 marks, 150 words)
4. What is the National Investigation Agency (NIA) Act? Does the NIA have powers to investigate offences committed outside India? (10 Marks, 150 Words)
5. Preventing the loss of forests could reduce the likelihood of future virus outbreaks. Analyze. (10 Marks, 150 Words)
6. What are some of the innovative ideas and technological tools employed in India to help tackle COVID-19? (10 Marks, 150 Words)
7. The recognition of tribal rights over non-timber forest products (NTFPs) and the MSP based procurement of these would aid the empowerment of forest-dependent communities. Analyze. Enumerate government measures in this direction. (15 marks, 250 words)
8. Discuss the significance of foreign investment in the development of India. Also analyze the concerns associated with foreign investments and suggest remedial measures. (10 marks, 150 words)
9. As against the unfounded fear of Artificial intelligence leading to job losses, this emerging technology can create better job opportunities and increase productivity. Analyze. Discuss the steps being taken by the government to mainstream Artificial intelligence technology in India. (15 marks, 250 words)
10. India's efforts to meet the growing demand for energy, should be accompanied with India's commitment to achieving universal access to modern, affordable, cleaner and sustainable energy. Comment. (10 marks, 150 words)
11. In the light of the Karnataka state sealing its border for movement from Kerala to avoid the spread of COVID-19 and the subsequent challenge by Kerala of this move in the Judiciary, analyze the associated legal questions and concerns. (10 marks, 150 words)
12. Discuss the effect of the national lockdown on the agricultural sector and suggest suitable remedial measures to be taken. (15 marks, 250 words)
13. In the light of the recent cooperation seen among the SAARC member nations against the COVID-19 pandemic, analyze the relevance of a more informal, decentralized and need-based cooperation mechanism for the revival of SAARC. (10 marks, 150 words)
14. Given the increasing shift towards industrial livestock production, discuss the associated concerns and suggest suitable alternatives. (15 marks, 250 words)
15. Given the need to protect economic health while balancing public health needs in the fight against the pandemic, discuss the limitations of the present policies being adopted and suggest suitable measures and policy changes. (10 marks, 150 words)
16. The COVID-19 pandemic is reopening several questions that were considered settled by the end of the last century. This involves questions over the prevailing organizing principles of humankind in the social, political and economic spheres. Analyze. (15 marks, 250 words)
17. The COVID-19 pandemic has had a huge impact on domestic violence and has increased the threat women face at home. What can be done to alleviate the burden women bear in this regard?

18. Is it time to think about a new organisation, as the World Health Organisation (WHO) has been inept to control the spread of the COVID 19 pandemic? Critically examine.
19. Will the coronavirus outbreak bring a gradual end to the spirit of globalization? Critically analyze.
20. India's relationship with the Gulf will require a transformation moving beyond the narrow confines of oil and diaspora. Elaborate.
21. Given the gloomy forecasts for global trade in the face of the COVID-19 pandemic, discuss the associated concerns from the Indian perspective and suggest suitable policy measures to mitigate the risks involved (10 marks, 150 words)
22. India's commitments on renewable energy capacity building under its Intended Nationally Determined Contributions though well intended are facing implementational challenges. Comment. (10 marks, 150 words)
23. Elaborate the significance of Science and technology especially the relatively new frontiers of biotechnology, Artificial intelligence, big data and Quantum mechanics in the fight against the COVID-19 pandemic. (10 marks, 150 words)
24. Discuss the prominent emigration phases of the Indian Diaspora. Also discuss the contribution and significance of the Diaspora to India. (10 marks, 150 words)
25. Given the unique issues faced by people with disabilities and their heightened vulnerability, they need much more support in the face of the pandemic. Comment. (10 marks, 150 words)
26. In the light of recent reports on increased instances of domestic violence during the lockdown period, analyze the reasons for increased domestic violence and the associated concerns. Suggest suitable policy measures to address this shadow pandemic. (15 marks, 250 words)
27. The e-Court system, apart from dealing with the present crisis posed by the pandemic, can provide the judiciary with an avenue to address the problem of delayed justice too. Comment. Discuss the necessary steps to institutionalize the e-court system. (15 marks, 250 words)
28. Discuss the major provisions of the Poona pact of 1932. Analyze its significance. (10 marks, 150 words)
29. There is a need for a planned public health approach involving prevention, care and support systems along with community participation to mitigate the COVID-19 crisis. Comment. (10 marks, 150 words)
30. Discuss, in the light of the COVID-19 pandemic, how the dependence on a more liberalized economic model has proved to be counter-productive and disastrous in the current scenario. (15 marks, 250 words)
31. The balance of power between the legislature and the executive has broken down leading to a lack of accountability during the coronavirus pandemic. Illustrate with examples how ICTs will help in empowering and increasing the credibility of parliamentary institutions. (10 Marks, 150 Words)
32. The WHO is coordinating and assisting poor nations in their fight against the coronavirus pandemic. Is it right for the USA to suspend aid to WHO amidst the crisis? Discuss. (15 Marks, 250 Words)
33. Comment on the recent developments with respect to Telemedicine in India. Examine the possible inadequacies of the medium. (10 Marks, 150 Words)
34. Discuss the immediate measures to be taken by India in confronting the humanitarian and economic crisis it is facing in the backdrop of the COVID-19 pandemic. (15 Marks, 250 Words)
35. Discuss the significance of the activities of the Indian Meteorological Department and suggest the necessary changes for the organisation to remain relevant in the current times. (15 Marks, 250 Words)
36. With legislators circumventing the provisions of the Tenth Schedule of the Constitution with novel methods, is it time to overhaul the Anti-defection Law? Comment. (15 Marks, 250 Words).
37. In the light of the criticism of the World Health Organization's handling of the COVID-19 pandemic, discuss the role of WHO in global health efforts and the inherent challenges faced by it. Suggest suitable measures to empower the WHO. (15 marks, 250 words)

38. What is meant by convalescent plasma? Discuss its potential in the fight against the COVID-19 pandemic. What are the challenges in adopting this method? (15 marks, 250 words)
39. A recent World Bank report predicts dire economic and social consequences for the South Asian region due to the novel coronavirus pandemic. Discuss the challenges faced and suggest suitable remedial measures to be taken. (15 marks, 250 words)
40. What is meant by Social Vaccine? What skills and experiences from the handling of the HIV epidemic can be innovatively adapted to the current COVID-19 pandemic? (15 marks, 250 words)
41. Evaluate the concerns being expressed against the Aarogya Setu app and also the arguments in favour of its usage. Suggest the necessary safeguards to address the concerns. (15 marks, 250 words)
42. The government's decision to ban Foreign Direct Investments (FDI) through the automatic route from neighbouring countries that share a land border with India, though well-intended, the policy provisions may have some unintended consequences. Discuss. (15 marks, 250 words)
43. The granting of the observer status to India in the Indian Ocean Commission (IOC) is a welcome move which offers ample opportunities for a mutually beneficial relationship between the IOC member nations and India. Comment. (10 marks, 150 words)
44. Discuss the major aspects and concerns of the migrant crisis in India brought to light during the COVID-19 pandemic. Suggest suitable policy measures to address these concerns. (15 marks, 250 words)
45. Multilevel governance and multilateralism will help in stabilizing the post COVID-19 world. Elaborate. (10 marks, 150 words)
46. Post-retirement appointment of judges undermines confidence in the judiciary and in constitutional democracy. Suggest alternatives to guarantee clear cut separation of powers and impartiality in the dispensation of justice. (15 marks, 250 words)
47. Could China's aggressive moves in the South China Sea region, despite the pandemic, lead to enhanced cooperation between the U.S. and affected countries? Critically analyze.
48. Attacks on healthcare workers deprive people of urgently needed care, endanger health care providers, and undermine health systems. Comment.
49. The COVID-19 pandemic presents an opportunity to bring in virtual technologies, innovations and new paradigms in the administration of justice in India. Discuss. (15 Marks, 250 Words).
50. For achieving the goals of affirmative action, should economic criteria be introduced in reservations for the SC/ST community and modified from time to time in line with the changing social and economic conditions? Critically Examine. (15 Marks, 250 Words).
51. Discuss the increasing risk posed by zoonotic diseases to the world. Analyze the causes for the increased frequency and intensity of these zoonotic diseases and suggest necessary actions to mitigate such risks. (15 marks, 250 words)
52. BRICS can and should emerge as an important global governance institution, in the light of the crisis in global governance unfolding during the COVID pandemic. Comment. (10 marks, 150 words)
53. Discuss the major aspects of India's Nuclear Doctrine and evaluate its suitability in the present context. (10 marks, 150 words)
54. Analyze India's stand with respect to the Nuclear Proliferation Treaty (NPT) and the Comprehensive Test Ban Treaty (CTBT). (10 marks, 150 words)
55. Resumption of nuclear testing may signal the end of the ineffective and defective CTBT arrangement, marking the beginnings of a new nuclear arms race. Comment. (15 marks, 250 words)
56. Analyze how the COVID-19 pandemic would alter existing international relations and geopolitical systems. What should be India's response to such changes? (15 marks, 250 words)
57. Evaluate the significance and concerns regarding the Judiciary's move to hold virtual judicial proceedings during the lockdown phase and suggest necessary changes. (10 marks, 150 words)



58. The landmark Judgment of the Supreme Court in the K.S. Puttaswamy v/s Union of India case upholds right to privacy as a fundamental right but also notes that this right is not absolute. Comment. (10 marks, 150 words)
59. Article 21 of the Indian Constitution has been the fountain head of many human rights. Comment. (10 marks, 150 words)
60. Examine the health and economic challenges for the South Asian region from the COVID-19 pandemic. Suggest both short and long term measures to mitigate the risks involved. (15 marks, 250 words)
61. Can online education replace conventional classroom teaching and ensure greater access and success in higher education? Critically analyse. (15 Marks, 250 Words)
62. The evolving geopolitical situation in Afghanistan holds significant economic, security and strategic implications for India. Suggest the future course of action for India to regain the upper hand in the narrative in Afghanistan.(15 Marks, 250 Words)

# INTERVIEW TRANSCRIPT

## Candidate Details:

- Name: Keerthi Vasan V
- Rank: 29 (CSE-2017)
- Chairman of the Interview Board: Air Marshal A. S. Bhonsle (Retd.)

## Personal Details:

- Education: B.Tech (Civil Engineering), National Institute of Technology, Tiruchirappalli.
- Home town: Dharmapuri, Tamil Nadu
- Hobbies: Digital Poster designing, Watching English web series

## Air Marshal A. S. Bhonsle (Retd.):

- Air Marshal Ajit Bhonsle was commissioned into the Indian Air Force in 1978.
- He is an alumnus of Bhonsala Military School, National Defence Academy, Defence Services Staff College, College of Defence Management and National Institute of Defence Studies, Japan.
- He holds the degrees of M.Sc. Defence Studies from University of Madras, Masters in Business Management from IGNOU and Osmania University, and M.Phil from Tokyo.
- Prior to joining UPSC, he held the Office of Chief of HQ, Integrated Defence Staff (IDS) and also as Deputy Chief of Joint Operations, Doctrines, Organization & Training. During this period, Air Marshal Bhonsle oversaw capacity building of the Armed Forces through the formulation of Defence Procurement Procedures to encourage 'Make in India' in the Defence Sector.
- Air Marshal Bhonsle has participated in the Sri Lanka Indian Peace Keeping Force Operations, Siachen operations and Kargil operations and has 5200 hours of flying experience.

## QUESTIONS ASKED BY THE INTERVIEW BOARD

### Economy based

- What are the major functions of the RBI?
- Is the Monetary Policy Committee's (MPC) mandate implementable in the longer run?
- Don't you think government appointees to MPC affect its independence?
- Is the RBI really independent today?

### IR based

- How has India-Nepal relations evolved in the recent past?
- Do you think China has overshadowed India in an economic cooperation between India, Nepal and China?
- Is the current Nepal PM pro-China or pro-India?
- Do you think morality is relevant in domestic as well as international administration?
- Why do you think the Indian government had to interfere in the domestic issue of Sri Lanka during the civil war?
- Was there any pressure from the state government?

### State based Questions

- Most of the states perform well at the level of policy formulation, but fail at policy implementation. But in TN, we are able to see

good performance at both levels. What could be the reasons behind this?

- Can you name a few schemes whose implementation has been good?
- The TN farmers' protest in Delhi was unique in its own way. What made it unique?
- Why do you think they approached the central government?

### **Hobbies Based Questions**

- What is this 'web series'?
- What is your favorite genre?
- Which one is your favorite series?

### **Questions based on Academics**

- You studied in Maharishi International School. What is 'International' about this school?
- What was the proportion of foreign students in your class?
- I have seen pictures of 10 pointers (Class X CGPA) only in flex boards of various institutes. This is the first time I am meeting one in person. Does any institute have your photograph printed on a flex board?
- I feel people who are good in academics are generally 'dull' when it comes to social or administrative responsibilities. What about you?

### **General Questions**

- The training process would make you a good administrator. But, what qualities of a good administrator do you think you already have?