

# APPLO



# STUDY CENTRE

## TNPSC GROUP I MAIN 2021

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# SUMMITS

## India-Bangladesh Virtual Summit, 2020

India-Bangladesh Virtual Summit was held on 17 December, 2020, which was addressed by the Indian PM Modi and Bangladesh PM Sheikh Hasina. Some of the highlights of this summit are ;

1. Both Prime Ministers expressed satisfaction over the current state of bilateral relations based on shared bonds of history, culture, language, and other unique commonalities that characterize the partnership.
2. Both agreed to continue cooperation in addressing the Covid pandemic challenge. India assured that vaccines would be made available to Bangladesh as and when produced in India.
3. Both countries have agreed to jointly celebrate the ongoing 'Mujib Borsho, which is the birth centenary of Bangabandhu Sheikh Mujibur Rahman, the father of Bangladesh.
4. Both leaders agreed on certain measures for effective management of border like early resolution of minor boundary disputes, completion of border fencing, better coordination between the border security forces of the two countries and facilitating people to people exchange through border areas.
5. Recognizing the immense potential of bilateral economic and commercial ties, both agreed to expeditiously conclude the proposed bilateral Comprehensive Economic Partnership Agreement (CEPA).
6. Both leaders reviewed the ongoing bilateral connectivity projects and welcomed the recent initiatives including the signing of the Protocol on Inland Water Transit and Trade (PIWTT), trial run of transshipment of Indian goods from Kolkata to Agartala via Chattogram and operationalization of Sonamura-Daudkandi Protoco route, transshipment of Indian goods through Chattogram and Mongla Ports and agreed for an early operationalization of the BBIN Motor Vehicles Agreement.
7. Both countries emphasized the need for early conclusion of Framework of Interim Agreement on sharing of waters of Teesta and six other joint rivers, namely, Manu, Muhuri, Khowai, Gomti, Dharla and Dudhkumar.
8. Both countries signed nine agreements for cooperation in various fields like hydrocarbon, elephant conservation and development of cities sand urban areas.

## Why India Opted Out of Regional Comprehensive Economic Partnership (RCEP)

### Regional Comprehensive Economic Partnership (RCEP) 2020

The RCEP was signed on November 15, 2020 at a virtual ASEAN Summit hosted by Vietnam. This is agreement between the Asian Pacific nations of 10-member ASEAN and five of its major trade partners –

- ❖ ASEAN member countries – Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, Vietnam; and other five – Australia, China, Japan New Zealand, South Korea are the member countries of RCEP.
- ❖ India is not the partner in this agreement.
- ❖ The member countries account for about 30 per cent of the world's population and 30 per cent of global GDP as of 2020 making it the biggest trade bloc.
- ❖ It is expected to eliminate about 90 per cent of the tariffs on imports and establish common rules for e-commerce, trade and intellectual property between the signatories.
- ❖ The RCEP is the first free trade agreement between China, Japan and South Korea.
- ❖ It would help stimulate the economy amid the COVID-19 pandemic.

### Why India did not Join RCEP Agreement

There are several reasons for India not to join RCEP. Prime Minister Modi has called it a decision on 'the voice of his soul'. The Prime Minister said that he has taken this decision after thinking about the impact on Indians and especially the weaker sections of the society and their livelihood. He thought of the advice of Mahatma Gandhi, in which he said that remember the face of the weakest and the poorest person and think whether the steps you are going to take will benefit him. RCEP is a trade agreement that makes it easier for its member countries to do business with each other. Under this agreement, member countries will not have to pay the tax on import-export or they will have to pay very little. In addition to 10 ASEAN countries, RCEP included India, China, Japan, South Korea, Australia and New Zealand. Now India is away from it. Concerns about RCEP were being raised in India for a long time. Farmers and merchant organizations were opposing this saying that if India joined it, the already troubled farmers and small traders would be devastated. All the farmer organizations of the country had opposed this agreement in one voice. Farmers organizations associated with BJP and RSS were also among those who opposed. Even Amul Dairy, considered close to the government, opposed it. Many state governments had raised questions on this. A few days ago, the Congress had opposed this by changing its policy. All these things were somewhere in the Prime Minister's mind and he realized that it would be better to stay away from this agreement.

## **Shanghai Cooperation Organisation (SCO) Summit 2020 Chaired by Russian President Putin**

The 20th Summit of the Shanghai Cooperation Organisation (SCO) was held virtually on November 10, 2020. Russia hosted the summit. Addressing the summit of SCO Council of Heads of State Prime Minister Modi said that India has strong cultural and historical ties with Shanghai Cooperation Organisation countries.

The 20th Summit of the SCO was attended by the Heads of States of all 8 SCO Member States – Russia, India, China, Pakistan, Kazakhstan, Tajikistan, Uzbekistan and Kyrgystan. The Heads of States of 4 Observer states of SCO – Iran, Afghanistan, Mongolia and Belarus also participated in the summit.

### **Key Highlights:**

- ❖ This was the first SCO Summit in the virtual format and the third meeting that India participated as a full member. India had become a full member of the SCO in 2017. Prior to that it had an Observer status.
- ❖ India has maintained extensive engagement in various fields under the SCO framework in the past three years.
- ❖ The Summit aims to set forth the agenda and the main directions for the next year.
- ❖ The meeting reportedly covered all key areas of the organisation's activity including political, security, trade, economic and cultural.

### **SCO Summit Adopts 16 Documents**

The summit adopted 16 documents including ones on countering spread of extremist ideologies and promoting digital economy. The following is the list of documents adopted at the SCO summit:

1. Moscow Declaration of the Council of Heads of State of the SCO Member States.
2. Decision of the Council of Heads of State of the SCO Member States approving the Action Plan for 2021-2025 to implement the SCO Development Strategy until 2025.
3. Concept of Cooperation of the SCO Member States on the Development of remote and rural areas in the digital age.
4. Comprehensive Joint Action Plan of the SCO Member States to counter threats of epidemics in the region.
5. Signing of Memorandum of Understanding (MoU) between the SCO Secretariat and the Secretariat of the United Nations Economic and Social Commission for Asia and the Pacific.
6. Signing of MoU between the SCO secretariat and the Eurasian Economic Commission.

7. Signing of MoU between SCO Secretariat and the World Health Organisation.
8. SCO Secretary-General's report on the organisation's activities over the past year.
9. SCO Regional Anti-Terrorist Structure (RATS) Council's report on the SCO RATS Activities in 2019.
10. Connection with the 75th anniversary of victory in World War II.
11. Countering the spread of terrorist, separatist and extremist ideology.
12. Cooperation in International Information Security.
13. Countering the drug threat.
14. Joint response efforts against the Coronavirus infection.
15. Cooperation in the digital economy.
16. To establish and ensure the functioning of an SCO Cultural and Integration Centre in Bishkek (Capital of Kyrgyzstan).

### **Fifteenth G20 Summit 2020, Saudi Hosts the Conference**

The 2020 G20 Riyadh Summit was the fifteenth meeting of Group of Twenty (G20). It was scheduled to take place in Riyadh, the Capital City of Saudi Arabia on 21-20 November, 2020. However due to COVID-19, it was held virtually. The Indian side was represented by Prime Minister Narendra Modi.

The summit under Saudi Arabia Presidency centred on the Theme, 'Realising opportunities of the 21st Century for All.

Agenda of the Summit': Overcoming the pandemic, economic recovery and restoring jobs, and building an inclusive, sustainable and resilient future.

The three key agenda items addressed under this theme are : 'Empowering people' by creating the conditions in which all people – especially women and youth – can live, work and thrive', safeguarding the planet, but fostering collective efforts to protect our global commons', and 'Shaping New Frontiers, by adopting long-term and bold strategies to share benefits of innovation and technological advancement.'

#### **G20 Riyadh Declaration Adopted**

During the summit the leaders adopted the G20 Riyadh Declaration to address common global challenges which consist of the following overarching points covering all sectors :

- ❖ Rising to the challenge together.
- ❖ Building a Resilient and Long-lasting Recovery

- ❖ Ensuring an Inclusive Recovery that tackles inequalities
- ❖ Ensuring a sustainable future.

The Declaration also mentioned that Italy will hold the G20 Presidency in 2021 and the meeting will be held in Italy; Indonesia will take over the G20 Presidency in 2022 and the meeting will be held in Indonesia; India will take over the Presidency in 2023 & the meeting will be held in India; and Brazil will take over the G20 Presidency in 2024 & the meeting will be held in Brazil.

## **Evolution of QUAD : Challenges and Opportunities**

The Quadrilateral Security Dialogue, popularly known as QUAD is perhaps the most significant global strategic forum of 21st century. It is a forum of strategic consultation and cooperation among its four members. It consists of four members: the US, Japan, India and Australia. It finds its origin in the background of China's economic and military rise as well as its increasing assertiveness. But QUAD officially denies that it is aligned against China. Now QUAD aims to establish an 'open and free' Indo-Pacific, managed by a rule-based order.

The QUAD has covered a long journey of 15 years to reach the present stage of development.

### **The Evolution of QUAD**

The main landmarks in the evolution of QUAD are given below :

1. It was first conceived by the then Japanese PM Shinzo Abe in 2007, but it remained in limbo for a decade due to China's reservation and hesitant attitude of countries including India which were on the way to develop-close economic ties with China.
2. But the last US President revived it in 2017 in view of China's growing assertiveness in the region. India too now came forward this time to strengthen QUAD in view of stand-off with China at DOKALM in 2017 and LAC in 2020.
3. It started as a forum of consultation between the officials of the four countries. From 2017 to 2019, QUAD was limited only to consultation among the Foreign Ministry Officials.
4. In September 2020, the QUAD leaders met at the annual session of UN General Assembly and decided to elevate its status further. Consequently, it was elevated to the level of consultation by Foreign Ministers of member countries. So far three Foreign Ministers' Meetings have been held :

The First Foreign Ministers' Meeting was held in New York in September, 2019.

The Second Meeting was held in Tokyo on 6 October, 2020. In spite of Covid Pandemic, they decided to hold face to face meeting which highlights their concern. Besides strategic issues, the meeting was dominated by the issue of Covid pandemic and its management.

The Third Foreign Ministers' Meeting was held on 18 February in virtual mode, which focused on the Covid pandemic and other strategic issues. It also discussed the issue of

elevating QUAD to the summit level, as hinted earlier by the new US President Biden on 10 February, 2021.

5. The last milestone of the QUAD is its elevation to the Summit level forum. It means now QUAD members' apex leaders will have regular meetings and consultation about the realization of the goals of the QUAD. The first summit was held on 12 March, 2021.

Now Biden Administration's proposal to hold Summit meeting (among top leadership) is the next and logical stage in the growth of QUAD.

### **The First Summit, 2021**

The first ever summit of the QUAD (officially Quadrilateral Dialogue) leaders on 12 March, 2021 was held in the virtual mode. It was hosted by the US President Biden. It is an important milestone in its evolution as a strategic platform for the Indo-Pacific region.

### **What is the Focus of the Summit?**

In the first summit, they discussed the regional and global issues of shared interest, and exchanged views on practical areas of cooperation towards maintaining a free, open and inclusive Indo-Pacific region. The Summit provided an opportunity to exchange views on contemporary challenges such as resilient supply chains, emerging and critical technologies, maritime security, and climate change. The following are the main highlights of the Summit:

- A. As expected it reiterated its avowed objective for establishing a rule-based order which ensures a free and open Indo-Pacific. This has two messages for China: First that China cannot impose restrictions on the freedom of navigation in the South China Sea and other international waters; and Second, that China's claims on the SCS would respect international law specifically the UN Law of Sea Convention. Thus, it does not recognize China's arbitrary claims on historical grounds. Since message is collective, it would have some effect on China.
- B. The leaders have operationalized cooperation in three areas :

First, the issue of management of Covid dominated the discussion. They decided to set a mechanism called Vaccine Partnership to address the challenge of supply of Covid vaccine in a fair and effective manner.

Second, the QUAD leaders decided to set up two working Groups to expedite the cooperation in the respective areas : The Working Group on climate change; and another Working Group on emerging and critical technologies.

After the meeting, the QUAD leaders also hinted about the future expansion of this forum. The new likely members are; Vietnam, South Korea, New Zealand from the East Asia and France and Britain from Europe.



## Brief Profile of the QUAD Members

The profile of the four QUAD members: America, India, Japan and Australia, is mentioned below:

America is both the largest global economy as well as preeminent Military power;

Japan is the third largest economy, but constrained to develop military power due to constitutional restriction imposed by allied powers after the WWII:

India is the fifth largest economy with well developed maritime capability and air power; and Australia is the 14th largest economy, and has advanced naval forces.

If all these four countries form a security alliance, China stands no where. This alliance can maintain strategic and military hegemony in the entire Indo-pacific including the South China Sea.

## Implications of QUAD for China

China is opposed to the QUAD as it considers this forum a tool of the US to contain China. China maintains that the cooperation among the four members should not impact the third country. China wants that her territorial sovereignty and interests should be respected. China says that QUAD may lead to a new cold war. Earlier, Russia, siding with China, has also objected to the QUAD.

If QUAD is likely to impact China in the following manner :

1. QUAD wants open and free Indo-Pacific Ocean, which spans from the Western Pacific to the African Coast of Indian Ocean. It will have the capability to enforce sea denial to China in the Indo-Pacific Region, including Malacca, Gwadar and South China Sea, if China continues with her aggressive behaviour. Thus China would face potential maritime security threats in the region.
2. China's economic growth depends upon its trade and regular supply of energy resources from middle-east through the Indo-Pacific region. In case of confrontation, QUAD would have the potential to disrupt this supply, undermining China's economic growth.
3. The strategic cooperation under the QUAD will also jeopardize Maritime route of China's BRI and CPEC. China wants to develop a series of ports and other infrastructure in the Indian Ocean under the BRI project.

Thus, QUAD has the potential to cause long-term strategic damage to China. But Chinese President is shortsighted as he is adopting aggressive policies everywhere: LAC with India in Ladakh and Sikkim, Hong Kong, Taiwan, South China Sea. China's polices have strengthened the development of QUAD. However, QUAD leaders consistently deny that it is directed against any country including China.

## Future Challenges of QUAD

Though QUAD may appear to forge ahead in future, it also faces some impediments :

1. So far QUAD is just a forum of strategic discussion and cooperation. It was proposed in 2007, but remained in limbo for a decade due to different priorities of its members. QUAD should be thankful to Chinese President Xi Jinping's aggressive, arrogant and shortsighted policies which facilitated its revival now.
2. During last decade, QUAD members have tried to develop their own economic partnership with China. While Australia was enjoying the Chinese markets for its products, Chinese students and tourists, India was trying to balance her relationship with China, US and Russia. Japan also has extensive trade and investment ties with China. The US has been opposing China in the Indo-Pacific strategically, but economically, China remained its largest trading partner. It was during Trump regime that open confrontation between the two became an enduring phenomenon.
3. The four members of QUAD are opposed to China, but in that opposition they have different strategic agenda. America would like to challenge China to maintain her global super power position, but India would like to reduce Chinese influence in South Asia and the Indian Ocean. Japan is more concerned with the East China Sea, but Australia would closely follow the US strategic lead.
4. The operational strategic mechanism of QUAD is yet to take a concrete shape. When China is threatening the region, mere messaging would be like beating around the bush, which China would not care for. Rather China would treat it as a weakness. Hence there is urgent need to set up a strategic mechanism which monitors Chinese threats on real time basis and coordinates the response of the partners to face any misadventure by China.
5. The QUAD has also ignored the highly vulnerable points of China: to put in place an alternative mechanism to China centred supply chains in the region, and second an alternative forum for investment to counter China's BRI, which has spread strong strategic networks in the entire Indo-Pacific from East to West and North to South.

The impediments on the way to QUAD may limit its effectiveness in the long run. The members need a broader strategic understanding beyond the threat posed by China for QUAD'S long term sustainability.

## Conclusion

It seems now that QUAD intends to counter Chinese threats in the region by the strategy of strong messaging, which may not be adequate without deterrence at the ground level. The apprehension is that China would try to derive a wedge among its partners with her past tactics of selective cooption. The members of QUAD should keep away their specific concerns to maintain the unity in the forum. Before it happens, QUAD members should strengthen their unity and coordination. Thus, QUAD should move faster towards its core objective, rather than just confining to strong messaging. In spite of all these problems, the evolution of QUAD is the most significant strategic development of 21st century, as it involves all the major powers of the world on either side. It has potential to contain China, but it may also lead to greater confrontation with China.

## 20th IORA Council of Ministers Meeting Held in UAE

On 17, December, 2020, the 20th edition of the IORA Council of Ministers (COM) meeting was held via video conferencing under the Chairmanship of United Arab Emirates (UAE).

The theme of the meeting was "Promoting a Shared Destiny and Path to Prosperity in the Indian Ocean".

### Key Points

- All 22 Member States and 10 Dialogue Partners participated to discuss ways in coordinating efforts to achieve IORA's vision for a peaceful, stable, and prosperous Indian Ocean region as outlined in the Jakarta Concord and IORA Action Plan.
- During the 2020 COM, France was inducted as the 23rd member state of IORA (on the basis of Reunion Island). Sri Lanka has assumed the charge of Vice Chair of IORA for the period 2021-23.

### Indian Ocean Rim Association (IORA)

- Previously known as Indian Ocean Rim Initiative and Indian Ocean Rim Association for Regional Cooperation for Regional Cooperation (IORARC), IORA was established in Mauritius in March 1997 with the aim of promoting economic and technical cooperation, including expansion of trade and investment.
- IORA became an observer to the UN General Assembly and the African Union in 2015.
- **Current Members:** Australia, Iran, Bangladesh, the Comoros, India, Indonesia, Kenya, Madagascar, Malaysia, Maldives, Mauritius, Mozambique, Oman, Seychelles, Singapore, Somalia, South Africa, Sri Lanka, Tanzania, Thailand, the United Arab Emirates, Yemen and France • **Dialogue Partners:** China, Egypt, Germany, Italy, Japan, Turkey, the Republic of Korea, the United Kingdom and the United States of America.

### India and IORA

- India is a founding member of IORA.
- India has contributed as Coordinating Country, in two priority areas of IORA namely. Disaster Risk Management and Academic, Science & Technology.
- During India's Chairmanship in IORA in 2011, IORA adopted its following six priority areas which are guiding principles of all its activities- maritime security, trade and investment facilitation, fisheries management, disaster risk reduction, academic and scientific cooperation and tourism promotion and cultural exchanges.
- India is the largest contributor to the IORA Special Fund.
- India views IORA as a unique platform for the promotion of peace stability and prosperity in the Indo-Pacific through greater inter-regional partnership.

### Indian Ocean Dialogue (IOD)

- The Indian Ocean Dialogue (IOD) is a flagship initiative of IORA, originated in the 13th Council of Ministers meeting held in 2013 in Perth, Australia.
- The first IOD was held in Kerala in 2014. The 6th Indian Ocean Dialogue was held in New Delhi in December 2019.

## **TREATY / AGREEMENTS**

### **Treaty on the Prohibition of Nuclear weapons Enters into Force**

On 22nd January, 2021, the Treaty on the Prohibition of Nuclear Weapons (TPNW) came into force, 90 days after the deposit of the 50\* (Honduras) instrument of ratification.

- ❖ Currently, there are 86 signatories and 52 states parties. On January 22, the Kingdom of Cambodia ratified the treaty.

#### **About Treaty on the Prohibition of Nuclear Weapons (TPNW)**

- ❖ Also known as the Nuclear Weapon Ban Treaty, it is the first legally binding international agreement to comprehensively prohibit nuclear weapons with the ultimate goal being their total elimination. It was adopted on 7 July 2017 and opened for signature on 20\* September, 2017.

#### **Need**

- ❖ Nuclear weapons - unlike chemical weapons, biological weapons, landmines and cluster munitions - are not prohibited in a comprehensive and universal manner.
- ❖ Even the Non-Proliferation Treaty (NPT) of 1968 and nuclear-weapon-free zone contains only partial prohibitions.

#### **Salient Features**

- ❖ It prohibits States Parties from developing, testing, producing, manufacturing, acquiring, possessing, or stockpiling nuclear weapons or other nuclear explosive devices.
- ❖ Signatories are barred from transferring or receiving nuclear weapons and other nuclear explosive devices, controlling such weapons, or any assistance with activities prohibited under the Treaty.
- ❖ States are also prohibited from using or threatening to use nuclear weapons and other nuclear explosive devices.
- ❖ States Parties cannot allow the stationing, installation, or deployment of nuclear weapons and other nuclear explosive devices in their territory.
- ❖ Non-nuclear-weapon states are required to have, at a minimum, a comprehensive safeguards agreement with the International Atomic Energy Agency (IAEA) "without prejudice" to any future additional agreements.

## Significance

- ❖ The Treaty is the first multilateral legally-binding instrument of the international humanitarian law to mitigate the catastrophic consequences of using and testing the nuclear weapons.

## Opposition from the Nuclear-Armed States

- ❖ The nine states known to have military nuclear programmes have not signed the TPNW. Nor have Member States of the North Atlantic Treaty Organization (NATO), which in 2016 re-confirmed its commitment to nuclear deterrence. This raises doubts about the impact of this new instrument and its ability to create normative values.
- ❖ The opponents of the treaty make two core arguments.
- ❖ First, it risks undermining the NPT, which is considered the, "cornerstone" of the nuclear weapon's legal architecture, by giving states the option to "forum shop," or choose between the two treaties.
- ❖ Second, the treaty cannot have any normative impact in any event because it has been negotiated without input from the nuclear possessor states and will not be ratified by any of them.
- ❖ Opponents have maintained that the TPNW is divisive and risks further entrenchment of divisions present in extant international non-proliferation and disarmament fora that may hinder further progress.

## Arguments for the Treaty from Proponent States

- ❖ Supporters of TPNW argue that it will close a "legal gap" that exists regarding nuclear weapons, which are not expressly outlawed by the NPT.
- ❖ It reinforces the NPT and its Article VI requirement for nuclear disarmament and that it can reduce the salience of nuclear weapons and help prompt more urgent action to reduce nuclear risk and promote disarmament.

## India's Stand

- ❖ India has not yet signed or ratified the NPTW. India said that it does not support the treaty and shall not be bound by any of the obligations that may arise from it.
- ❖ India remains committed to the policy of No First Use (NFU) against nuclear weapon states and non-use against non-nuclear-weapon states.
- ❖ India has consistently voted against an annual UN General Assembly resolution since 2018 that welcomes the adoption of the treaty and calls upon all states to sign, ratify, or accede to it "at the earliest possible date".

- ❖ India believes that the treaty does not constitute or contribute to the development of customary international law, nor does it set any new standards or norms.
- ❖ According to India, a nuclear-weapon-free world can be achieved through a step-by-step process underwritten by a universal commitment, and an agreed global and non-discriminatory multilateral framework, as outlined in the country's working paper titled 'Nuclear Disarmament', submitted to the UN General Assembly and the Conference on Disarmament.
- ❖ In this regard, India maintained that it recognises the 'Geneva-based Conference on Disarmament'-(CD) as the single multilateral disarmament negotiation forum & it is not convinced of the potential of the current treaty to address the disarmament issue.

## Conclusion

- ❖ Without the support of the nuclear armed states, it may not be possible to promote nuclear disarmament Beyond nuclear-armed states, even those states such as Japan mat are under the extended U.S. nuclear umbrella may be somewhat reluctant to support the TPNW. While prestige may remain a factor in countries' decision to pursue nuclear weapons, security considerations may not entirely be absent.
- ❖ These considerations should not be allowed to prevent progress on nuclear disarmament, of course, but treating such concerns as serious may help move the conversation in a more helpful direction than simply preaching or castigating such states.

## India and the USA Sign BECA Agreement

India and the USA have signed BECA, the last of four foundational agreements for strategic ties. BECA stands for Basic Exchange and Cooperation Agreement for Geo-Spatial Cooperation.

The previous three agreements are:

- ❖ General Security of Military Information Agreement (GSOMIA) signed in 2002. An extension - the Industrial Security Annex (ISA) was signed in 2019.
- ❖ Logistics Exchange Memorandum of Agreement (LE-MOA) signed in 2016.
- ❖ Communications Compatibility and Security Agreement (COMCASA) signed in 2018.

### Basic Exchange and Cooperation Agreement for Geo-Spatial Cooperation

- ❖ BECA is all about the exchange of Geospatial Intelligence (GEOINT) information for the military as well as the government. For the collection and processing of GEOINT information, the US shall exchange technical information related to the specifications, methods, and formats.
- ❖ BECA will allow for expanded geospatial information sharing between the armed forces.

- ❖ The spatial data will have several military applications which will help in improving the accuracy of the missile systems of India.

### **Significance of BECA**

- ❖ BECA will help India get real-time access to American geospatial intelligence that will enhance the accuracy of automated systems and weapons like missiles and armed drones. Through the sharing of information on maps and satellite images, it will help India access topographical and aeronautical data, and advanced products that will aid in navigation and targeting.
- ❖ This could be key to Air Force-to-Air Force cooperation between India and the US.
- ❖ BECA will provide Indian military systems with a high-quality GPS to navigate missiles with real-time intelligence to precisely target the adversary.
- ❖ Besides the sailing of ships, flying of aircraft, fighting of wars, and location of targets, geospatial intelligence is also critical to the response to natural disasters.
- ❖ The conversion of previously collected Geo data prior to WGS84 (World Geodetic Survey 1984) Reference Datum implementation was slow and error-prone in implementation. The GIS systems advanced at a rapid technological pace, while Military Survey General could not keep pace with such advancements, rendering their database inaccurate and bereft of correction updates. This gap shall now be filled by US GEOINT information made available under the aegis of BECA Agreement.

### **Communications Compatibility and Security Agreement (COMCASA)**

- ❖ COMCASA was signed in September 2018, after the first 2+2 dialogue.
- ❖ The pact allows the US to provide India with its encrypted communications equipment and systems so that Indian and US military commanders, and the aircraft and ships of the two countries, can communicate through secure networks during times of both peace and war.
- ❖ The signing of COMCASA paved the way for the transfer of communication security equipment from the US to India to facilitate "interoperability" between their forces – and potentially with other militaries that use US-origin systems for secure data links.

### **Logistics Exchange Memorandum of Agreement (LEMOA)**

- ❖ LEMOA was the first of the three pacts to be signed in August 2016. LEMOA allows the militaries of the US and India to replenish from each other's bases, and access supplies, spare parts and services from each other's land facilities, air bases, and ports, which can then be reimbursed.

- ❖ LEMOA is extremely useful for India-US Navy-to-Navy cooperation, since the two countries are cooperating closely in the Indo-Pacific. To put the usefulness of this agreement in simple terms, it is like being able to stop at a friend's garage or workshop to refuel your car or get it repaired when you are far away from your own home or workshop.
- ❖ The critical element that underpins LEMOA is mutual trust. Without trust, no country will be willing to expose its military and strategic assets such as warships to the facilities of another country.
- ❖ The signing of LEMOA was in itself an affirmation of the mutual trust between the two militaries, and its application enhanced the trust. It took almost a decade to negotiate LEMOA, and the exercise in a sense bridged the trust deficit between India and the US, and paved the way for the other two foundational pacts.
- ❖ While India had indeed provided ad hoc logistics support to the US in the past – such as allowing the refuelling of American aircraft in Bombay during the first Gulf War in 1991, and letting US warships visit Indian ports during the war on terror after 9/11 – the signing of LEMOA has institutionalized this process and made it smoother.

### Specific Context of these Pacts

- ❖ The strengthening of the mechanisms of cooperation between the two militaries must be seen in the context of an increasingly aggressive China, which threatens a large number of countries in its neighbourhood and beyond, and which has been challenging several established norms and aspects of international relations.
- ❖ Amid the ongoing standoff on the Line of Actual Control (LAC) in Ladakh – the longest and most serious in three decades – India and the US intensified under-the-radar intelligence and military cooperation at an unprecedented level, especially since June.
- ❖ These pacts mark, above all, the enhancement of mutual trust and a commitment to the long-term strategic relationship. With these key defence pacts in place, cooperation between the US and India can take place in a more structured and efficient way, rather than in episodic bursts.
- ❖ While LEMOA means one partner trusts the other enough to expose its valuable assets, COMCASA means one is confident that it can rely on encrypted systems to connect the two militaries. And the latest pact, BECA, means the countries can share highly classified information in real time without fear of being compromised.



## **POLICIES / BILLS / ACTS / DRAFTS**

### **Union Territory of Jammu and Kashmir Reorganisation (Adaptation of Central Laws) Third Order, 2020**

On October 26, the Ministry of Home Affairs (MHA) announced several amendments to land laws for the Union Territory of Jammu Kashmir (J&K) by notifying the Union Territory of Jammu and Kashmir Reorganization (Adaptation of Central Laws) Third Order, 2020.

- ❖ Section 96 of the J&K Reorganisation Act, 2019 empowers the MHA to adapt and modify any law by way of repeal or amendment before the expiration of one year from the appointed day of the Union Territory of J&K, which is October 31, 2019.

#### **Key Amendments**

- ❖ The MHA has amended sections of the J&K Land Revenue Act, 1996 and the J&K Development Act of 1970. The 1996 Act pertains to management of agricultural land and the 1970 Act deals with zonal development plans determining land use for public buildings, roads, housing recreation, industry, business, markets, schools, hospitals and public and private open spaces.
- ❖ According to the amendment to the Land Revenue Act, anyone from any part of the country can now buy land in J&K, including agricultural land.
- ❖ Though the amendments prohibit sale, transfer, mortgage and conversion of agricultural land to a non-agriculturist in the UT, it can still be allowed, "provided that the Government or an officer authorized by it in this behalf may grant permission to an agriculturist to alienate the land to a non-agriculturist by way of sale, gift, exchange or mortgage".
- ❖ The government can allow the transfer of agricultural land to a public trust for charitable work, healthcare, education, industrial or commercial purposes. A Board of Revenue headed by a Financial Commissioner has been constituted and a fresh clause defining "agricultural land" as land which is used or is capable of being used for agriculture and allied activities, including fallow land, has been inserted.
- ❖ The amendment deletes the "permanent resident" provision in the 1970 Act that provided housing sites within the range of 25-30 square metres to permanent residents belonging to "economically weaker section" and "low income groups". Now, economically deprived people from all parts of the country will be eligible for such housing sites.
- ❖ A fresh provision has been added, by which the government, on the written request of an Army officer not below the rank of a Corps Commander, may declare an area as a "strategic area" for direct operational and training requirements of the armed forces.
- ❖ It also creates the Jammu and Kashmir Industrial Development Corporation for establishing commercial centres and industries in the UT. The Corporation shall consist of

twelve directors, four of whom could be nominated from the private sector with experience in "industry or trade or finance". The Corporation will have the power to acquire movable and immovable property, and to lease, sell, exchange or transfer any property held by it. If the Corporation is unable to acquire land by an agreement, the government could order proceedings under the Right to Fair Compensation and Transparency in Land Acquisition Rehabilitation and Resettlement Act, 2013 and acquire the land for "public purpose".

- ❖ No court can take cognisance relating to property vested in the Corporation, except when the Corporation files a complaint. No legal suit can be filed against officials of the Corporation without a prior notice of two months and not later than six months from the date of complaint.
- ❖ The Jammu and Kashmir Land Grants Act, 1960, which regulates grant of government land on lease and earlier applied to urban areas of Jammu, Srinagar and towns, will now be extended to the entire UT. The amendment omits the permanent resident clause to get government land on lease for "residential purposes".
- ❖ The J&K Agrarian Reforms Act, 1976, which provided for transfer of land from big land owners to tillers, has been amended. The erstwhile agrarian reforms Act stated that only up to two kanals (0.25 acre) of land could be held per family for residential purposes.

### **Significance of the Amendments**

- ❖ The changes will encourage investment and advance peace and progress in J&K.
- ❖ Free movement of people, and an integrated national market can advance development.

### **Criticism**

- ❖ There is strong opposition in the Jammu and Kashmir region to opening the land market to non-residents.
- ❖ There is fear amongst people of deliberate demographic engineering
- ❖ Political parties in J&K too have opposed the changes due to lack of consultation.

## **National Fisheries Policy 2020**

- ❖ Fisheries department introduced a comprehensive and integrated 'National Fisheries Policy, 2020' by integrating the National Policy on Marine Fisheries, 2017 (NPMF), the Draft National Inland Fisheries and Aquaculture Policy (NIFAP) and the Draft National Mariculture Policy (NMP) along with the elements of Post-harvest.

## Objectives of the Policy

- ❖ Harness the capture and culture fisheries potential of the country.
- ❖ A robust management and regulatory framework with necessary legal backing for effective fisheries resource management will be required through an Ecosystem Approach of Fisheries (EAF) management.
- ❖ It is aimed at modernizing, rationalizing and diversifying fishing practices in oceans and seas with sustainability of resources as the core philosophy.
- ❖ It is focused on conserving and managing native fish genetic stocks and associated habitats and ecosystem.
- ❖ It aims to promote community partnerships, private participation and effective cooperative movement in fisheries sector.
- ❖ It will ensure food and nutritional security by increasing the per capita availability of safe, affordable and quality fish.

## Concerns

- ❖ The policy seems to be export-oriented, production-driven and based on capital investments. This might lead to small fishers being denied to their rights of access to commons.
- ❖ The policy does not talk about women, classes and castes associated with the fisheries sector in India.
- ❖ The policy seems to be silent on protecting the fishing communities according to the National Fish workers Forum (NFF), which is a trade union of small-scale fishers.
- ❖ Integrating all the sectors of fishing into one is not a good idea as the marine fishing is quite different from inland fishing.
- ❖ Some of the strategies included in the sector require capital-intensive technologies and can also be ecologically hazardous.
- ❖ Regarding inland fisheries, idea of leasing out these water bodies to private entrepreneurs will lead to traditional fishers being adversely affected. They will lose their rights to these water bodies and become contract labourers.
- ❖ Another criticism is that the language of the draft policy is about resource exploitation rather than management. It focuses more on the technological and economic dimensions and ignores the other important dimensions of the fisheries sector, ecological, social, ethical and institutional.

## Draft Electricity (amendment) Bill 2020

It was introduced in April, 2020, which proposes many critical changes to the existing Electricity Act, 2003.

### Need of Amendment

- ❖ The amendment bill has been brought to deal with the current challenges plaguing the Indian power sector seem to be derived from a long-drawn history of structural issues being sub-optimally addressed.
- ❖ These include operational and financial inefficiencies of generation, transmission and distribution utilities, access and quality of power supply, political interference, lack of private investments, inadequate public infrastructure and lack of consumer participation

### Objectives

- ❖ Ensure consumer centricity
- ❖ Promote Ease of Doing Business
- ❖ Enhance sustainability of the power sector
- ❖ Promote green power

### Salient Features

- ❖ It delegates the Central Government with the power to prepare and notify a National Renewable Energy Policy "for promotion of generation of electricity from renewable source.
- ❖ It seeks to establish an Electricity Contract Enforcement Authority (ECEA), which will enforce a performance of contracts in sale, purchase and transmission of power, and proposes Direct Benefit Transfer (DBT).
- ❖ Instead of the separate Selection Committee (for appointment of Chairperson and members of State Electricity Regulatory Commissions-SERCs), there is a proposal to. set up a National Selection Committee.
- ❖ To ease the burden of distribution licensees and in order to promote some form of demographic specialization, the distribution licensees, can appoint another entity for distribution of electricity on its behalf, within its area of supply.
- ❖ Appellate Tribunal of Electricity (APTEL) is proposed to have the powers of a High Court to deal with willful disobedience of persons and entities under the Contempt of Courts Act, 1971.

### Impact

- ❖ Reviving Entire Power Sector: The proposed amendments have the potential to revive demand by reducing unscheduled power cuts by discoms due to their inability to pay for power procurement, revive the capex cycle especially in distribution, comfort investors in the sector. Thus, the Bill has the potential to rerate the sector in a major way

## Facts related to the Citizenship Amendment Act

- ✓ The Parliament passed the Citizenship (Amendment) Bill 2019 which received the President's assent to become an Act.
- ✓ The Citizenship (Amendment) Act, 2019 seeks to amend the Citizenship Act, 1955.
- ✓ The Citizenship Act, 1955 provides various ways in which citizenship may be acquired.
- ✓ It provides for citizenship by birth, descent, registration, and naturalisation and by incorporation of the territory into India.
  - In addition, it regulates the registration of Overseas Citizen of India Cardholders (OCIs) and their rights.
  - An OCI is entitled to some benefits such as a multiple-entry, multipurpose lifelong visa to visit India.
- ✓ An illegal migrant is prohibited from acquiring Indian citizenship. An illegal immigrant is a foreigner who either enters India illegally, i.e., without valid travel documents, like a visa and passport, or enters India legally, but stays beyond the time period permitted in their travel documents.
- ✓ An illegal migrant can be prosecuted in India and deported or imprisoned.
- ✓ In September 2015 and July 2016, the government exempted certain groups of illegal migrants from being imprisoned or deported.
- ✓ These are illegal migrants who came into India from Afghanistan, Bangladesh, or Pakistan on or before Dec 31, 2014, and belong to the Hindu, Sikh, Buddhist, Jain, Parsi, or Christian religious communities.

### Provisions of the Amendment Act

- ✓ The Bill amends the Act to provide that the Hindus, Sikhs, Buddhists, Jains, Parsis and Christians from Afghanistan, Bangladesh and Pakistan, who entered India on or before Dec 31, 2014, will not be treated as illegal migrants.
  - In order to get this benefit, they must have also been exempted from the **Foreigners Act, 1946** and the **Passport (Entry into India) Act, 1920** by the central government.
  - The 1920 Act mandates foreigners to carry passport, while the 1946 Act regulates the entry and departure of foreigners in India.
- ✓ **Citizenship by registration or naturalisation:**

- The Act allows a person to apply for citizenship by registration or naturalisation if the person meets certain qualifications.
- For instance, if a person resides in India for a year and if one of his parents is a former Indian citizen, he may apply for citizenship by registration.
- To obtain citizenship by naturalisation, one of the qualifications is that the person must have resided in India or have been in the service of the central government for at least 11 years before applying for citizenship.
- The Bill creates an exception for Hindus, Sikhs, Buddhists, Jains, Parsis and Christians from Afghanistan, Bangladesh and Pakistan, with regard to this qualification.
- For these groups of persons, the 11 years' requirement will be reduced to five years.
- On acquiring citizenship:
  - (i) Such persons will be deemed to be citizens of India from the date of their entry into India.
  - (ii) All legal proceedings against them in respect of their illegal migration or citizenship will be closed.

✓ **Applicability of the Amended Act**

- These provisions on citizenship for illegal migrants will **not apply to the tribal areas of Assam, Meghalaya, Mizoram, and Tripura, included in the Sixth Schedule to the Constitution.**
- These tribal areas include Karbi Anglong (in Assam), Garo Hills (in Meghalaya), Chakma District (in Mizoram), and Tripura Tribal Areas District.
- Further, it will not apply to the "Inner Line" areas notified under the Bengal Eastern Frontier Regulation, 1873. In these areas, visits by Indians are regulated through the Inner Line Permit.
- Currently, this permit system is applicable to **Arunachal Pradesh, Mizoram, and Nagaland.** Manipur has also been brought under the Inner Line Permit (ILP) regime through a Gazette Notification on the same day the bill was passed in the parliament.

✓ **Cancellation of registration of OCIs:**

- The Act provides that the central government may cancel the registration of OCIs on certain grounds.
- These include:
  - (i) If the OCI has registered through fraud, or
  - (ii) If within five years of registration, the OCI has been sentenced to imprisonment for two years or more, or
  - (iii) If it becomes necessary in the interest of sovereignty and security of India.
- The Bill adds one more ground for cancelling the registration that is if the OCI has violated the provisions of the Act or of any other law as notified by the central government.
- The orders for cancellation of OCI should not be passed till the OCI cardholder is given an opportunity to be heard.

### **Concerns against the Amendment Act**

#### ✓ **Issues in the North-East:**

- It contradicts the **Assam Accord of 1985**, which states that illegal migrants, irrespective of religion, heading in from Bangladesh after March 25, 1971, would be deported.
- Critics further argue that the extensive exercise of updating the National Register of Citizens (NRC) will become Null and Void due to this Amendment act.
- There are an estimated 20 million illegal Bangladeshi migrants in Assam and they have inalienably altered the demography of the state, besides putting a severe strain on the state's resources and economy.
- Critics argue that it is **violative of Article 14** of the Constitution (which guarantees the right to equality and applicable to both the citizens and foreigners) **and the principle of secularism enshrined in the preamble of the constitution.**
- India has several other refugees that include Tamils from Sri Lanka and Hindu Rohingya from Myanmar. They are not covered under the Act.
- It will be difficult for the government to differentiate between illegal migrants and those persecuted.
- The Bill throws the light on the religious oppression that has happened and is happening in these three countries and thus, may worsen our bilateral ties with them.

- It provides wide discretion to the government to cancel OCI registrations for both major offences like murder, as well as minor offences like parking in a no-parking zone or jumping a red light.

### **Government's Stand**

- ✓ The government has clarified that **Pakistan, Afghanistan and Bangladesh are Islamic republics** where Muslims are in majority hence they cannot be treated as persecuted minorities.
  - According to the government, this Bill aims at granting rather than taking away someone's citizenship.
  - It has assured that the government will examine the application from any other community on a case to case basis.
- ✓ This Bill will come as a big boon to all those people who have been the victims of Partition and the subsequent conversion of the three countries into theocratic Islamic republics.
- ✓ Government has cited that the partition of India on religious lines and subsequent failure of the **Nehru-Liaquat pact of 1950** in protecting the rights and dignity of the minorities in Pakistan and Bangladesh as the reasons for bringing this Bill.
- ✓ After Independence, not once but twice, **India conceded that the minorities in its neighbourhood are its responsibility.**
- ✓ First, immediately after Partition and again during the **Indira-Mujib Pact in 1972** when India had agreed to absorb over 1.2 million refugees.
- ✓ It is a historical fact that on both occasions, it was only the Hindus, Sikhs, Buddhists and Christians who had come over to Indian side.
- ✓ Regarding questions of not including minorities from Sri Lanka, Myanmar, etc., the Government clarified that the process of awarding citizenship to refugees has been undertaken by different governments in the past on case to case basis from time to time, on "reasonable qualifications to Article 14".
- ✓ This time the case of refugees fleeing religious persecution from these three countries has been considered through this Bill.
- ✓ In January 2019, Government had notified the High-Level Committee (HLC) for implementation of Clause 6 of Assam Accord and urged the Committee to submit its



report at the earliest to the Central Government for effective steps to be taken to fulfil the provisions of the Accord.

- The government thus has assured the people of Assam that their linguistic, cultural and social identity would be preserved.

### **Conclusion**

- ✓ The onus is now on the Supreme Court, being the Guardian of the Constitution, to interpret the provisions of the Act and test its Constitutionality that whether the "classification" done in the Act is "reasonable" or not if tested against Article 14.
- ✓ India has a **civilization duty to protect those who are prosecuted** in its neighbourhood. But, the methods must be in accordance with the spirit of the Constitution.
- ✓ Further, the people of the North-East should be engaged more constructively to convince them that the linguistic, cultural and social identity of the people of the region would be preserved.

## **Implications of J & K reorganization Act, 2019**

- ✓ A major decision to scrap Article 370 and Article 35 was passed in the parliament of India last year.
- ✓ Along with this the Jammu and Kashmir Reorganisation Bill, 2019 was introduced in Rajya Sabha on August 5, 2019, by the Minister of Home Affairs.
- ✓ The Bill provided for the reorganisation of the state of Jammu and Kashmir into the Union Territory of Jammu and Kashmir and Union Territory of Ladakh.
- ✓ Splitting and carving new states has been common in India but changing the status of an erstwhile state to a Union Territory is something that has happened for the first time.
- ✓ The scrapping of the said article has long been in the manifesto of the BJP Party, yet, the sudden decision came as a major shock to political observers as well as to the opposition parties.
- ✓ Though the bill received near-unanimous support in the parliament, the decision to put the leading politicians of the valley under house arrest and to shut down communication networks in the entire valley was heavily criticised.

- ✓ There was also a flagrant tossing away of rules and procedures in introducing the bill in the Rajya Sabha.
- ✓ The bill was not mentioned in the list of the business for the day. It was tabled and passed without any deliberation and discussion on the matter.
- ✓ The move is highly consequential in both symbolism and substance.
- ✓ Let's try and understand what the potential change of the status of a state to UT means and what its implications are going to be.

### **India: A Federation with a Unitary Bias**

- ✓ States are India's building blocks.
- ✓ Each state has an elected assembly and a government to legislate on administrative matters including levying taxes and maintaining law and order.
- ✓ The seventh schedule of the Constitution demarcates the power of the centre and the states in separate lists, namely, Union List, State List, and the Concurrent List.
- ✓ All residual powers have been given to the center.
- ✓ Deciding on which form of government will India follow as an independent state, was a matter of much thought and deliberation among the constituent assembly members.
- ✓ There were some in the constituent assembly who argued for an independent autonomous provincial legislature and believed that a departure from provincial autonomy will in principle result in totalitarianism.
- ✓ In November 1946, at the 54<sup>th</sup> Annual Congress Session, the then president, J.B. Kriplani spoke in favour of maximum autonomy to the states and regarded centralisation as inimical to liberty.
- ✓ However, these ideas took a hit post-partition as concerns rose about the territorial integrity of the nation.
- ✓ The country subsequently decided to go with a parliamentary system of governance with some devolution of power to the states, held together by a strong center.
- ✓ Such a federal structure was thought to be conducive to preserve the idea of India and its plurality while holding the country united.

### **The Territories of the Union**

- ✓ Union Territories are governed directly by the Union. Part VIII of the Constitution is concerned with the administration of the Union Territories.

- ✓ The President of India appoints an administrator or Lieutenant Governor for each UT.
- ✓ The parties ruling at the central and state level elect the President, who in turn appoints Lieutenant Governors to UTs.
- ✓ In practice, this means that the Union Territories follow the central government's will.
- ✓ The concept of Union Territories was not in the original version of the Constitution but was added by the Constitution (Seventh Amendment) Act, 1956.
- ✓ There are differences in the governing of UTs depending upon whether they have a legislative assembly or not.
- ✓ The smaller ones are governed directly by the center, for example, Chandigarh, Daman and Diu, and Dadar and Nagar Haveli are UTs with no elected assemblies.
- ✓ But on the other hand, Puducherry is a UT with a legislative assembly and government, along with an LG. Delhi is altogether different and its status lies between a UT and a state.

### **Special Status of J&K**

- ✓ The state of Jammu and Kashmir was a special case in the history of India with its own mini-constitution and separate land inheritance laws.
- ✓ Article 370 of the Indian constitution, granted autonomous status to the state of Jammu and Kashmir and gave the state some immunity from the applicability of the complete Constitution of India.
- ✓ This article aimed to provide space, in matters of governance, to the people of Jammu and Kashmir who have always felt vulnerable about their identity and insecure about the future.
- ✓ However, successive governments have extended the bulk of Constitutional Acts and amendments to the state diluting Article 370 over the years.
- ✓ More than 40 subsequent presidential orders have been issued by successive central governments (as amendments to the original order) to make various provisions of the Indian Constitution applicable to J&K.
- ✓ A total of 94 out of the 97 items in the Union List had already been made applicable to J&K before the Reorganisation Act was passed.

### **The Reorganisation Bill**

- ✓ With the new reforms, Ladakh has been formulated into a separate Union Territory without a legislative assembly while Jammu and Kashmir will become a Union Territory with an assembly.
- ✓ Jammu and Kashmir will also retain its High Court.
- ✓ The abrogation of Article 370 already means that all Central laws will apply to the new Union Territory going forward.
- ✓ The fifth schedule to the Act also lists 106 Central Acts which will now be applicable in the new Union Territory, while 153 State Acts will be repealed.
- ✓ With these reforms, the competence field of Jammu and Kashmir has been substantially reduced. It has lost control over the state police.
- ✓ The region has now become more dependent on the Center for the devolution of funds as it no longer has the financial autonomy it had as a state.
- ✓ The Assembly will have the ability to frame laws on issues in the State and Concurrent Lists, though this is restricted – no power over public order, police, and much of trade and commerce.
- ✓ For Ladakh, it may be a welcome move as the region has suffered for the last seven decades due to neglect.
- ✓ Its new status as a Union territory might not only boost development but also create jobs in the region.

### **Argument for Equality**

- ✓ There will be, for the first time, reservations for Scheduled Castes and Scheduled Tribes, in Jammu and Kashmir, part of a broader scheme of extending national reservations and progressive amendments applicable to the region.
- ✓ For example, the 2005 Hindu Succession Act amendments that gave women equal inheritance rights as men, will now apply.
- ✓ The restrictions on the transfer of property under Section 139 of the J&K Transfer of Property Act are also gone now.
- ✓ All the center's scholarship schemes shall also be applicable to the region.
- ✓ The emphasis on schemes that touch individual beneficiaries comes from the belief that this will have a perceptible impact on the ground and highlight the government's intent to residents, on the development front.

### **International Reaction**

- ✓ The Home Minister had implied that all the measures including the shutdown of communication services and the downgrade to the status of Union Territory, were temporary measures and will soon be lifted.
- ✓ However, even after nearly a year, the assembly elections are yet to be announced.
- ✓ Most of the international community, with the exception of China and Pakistan, had initially supported India's stance on the J&K Reorganisation Act, identifying it as an internal matter.
- ✓ However a few months down the line, criticism began to mount as the state continued to infringe upon the basic rights of people to Internet and cellular network connectivity.
- ✓ The internet blackout which was imposed in the region by the government in August went on to become the longest on record leaving people's lives, jobs, and the economy in tatters.
- ✓ There has also been widespread criticism of the government by International Rights organisations over the lockdown in Kashmir and the house arrest of mainstream political leaders.
- ✓ Human rights organisation, Amnesty International, urged the government to ease restrictions on communication channels and the media in the state, and to release political leaders.
- ✓ It further noted that the SC's refusal to pass any orders on lifting the restrictions placed in Jammu and Kashmir was a big blow to the people of the state.
- ✓ The United Nations Security Council (UNSC), for the first time in decades, also held a closed door meeting on Jammu and Kashmir on August 16, two weeks after the Indian parliament voted to revoke the special autonomous status provided to the state and to split the province into two separate territories.

### **Conclusion**

- ✓ The foremost challenge for New Delhi is rebuilding trust.
- ✓ The way New Delhi annulled Article 370 has created an impact on Kashmiris of all persuasions, including the pro-India voices who have always remained neutral in this conflict.

- ✓ The Centre must now work more on perception management through soft measures instead of adopting a hard-line approach.
- ✓ The Union government must also sharply focus on the government schemes aimed at individuals, such as scholarships or houses, in the Union territories of Jammu & Kashmir and Ladakh, in an effort to push its development narrative in the region.
- ✓ The downgrading of the state of Jammu & Kashmir to the status of UT has been challenged in the Supreme Court, including by National Conference MPs and other public figures like Shah Faesal and Shehla Rashid.
- ✓ The basic argument is that this is a violation of the principle of federalism and of Article 3 of the Constitution.
- ✓ If the government is serious about its argument of economic development as the rationale behind this decision, it must aggressively work to put this message through.
- ✓ It would be even better if the government can announce the time period for the restoration of Jammu & Kashmir's status back to that of a state.

## **SCIENCE AND TECHNOLOGY**

### **Draft 5th National Science, Technology and Innovation Policy**

Recently government released the draft of the 5<sup>th</sup> National Science Technology and Innovation Policy for public feedback.

- ❖ It aims to foster, develop, and nurture a robust system for evidence and stakeholder-driven STI planning, information, evaluation, and policy research in India.
- ❖ The objective of the policy is to identify and address strengths and weaknesses of the Indian STI ecosystem to catalyse socio-economic development of the country and also make the Indian STI ecosystem globally competitive.

#### **Vision of the STI Policy**

- i. To achieve technological self-reliance and position India among the top three scientific superpowers in the decade to come.
- ii. To attract, nurture, strengthen and retain critical human capital through a 'people centric' science, technology and innovation (STI) ecosystem.
- iii. To double the number of Full-Time Equivalent (FTE) researchers, Gross Domestic Expenditure on R&D (GERD) and private sector contribution to the GERD every 5 years.
- iv. To build individual and institutional excellence in STI with the aspiration to achieve the highest level of global recognitions and awards in the coming decade.
- v. To capture the aspirations of a new, future-ready India, by ensuring active participation, shared responsibility and equitable ownership of all stakeholders; transforming the national STI landscape maintaining the delicate balance between fortifying India's indigenous capacity and nurturing meaningful global interconnectedness.

#### **Key Provisions**

1. **National STI Observatory:** STIP will lead to the establishment of a National STI Observatory that will act as a central repository for all kinds of data related to and generated from the STI ecosystem. It will encompass an open centralised database platform for all financial schemes, programmes, grants and incentives existing in the ecosystem. The Observatory will be centrally coordinated and organized in distributed, networked and interoperable manner among relevant stakeholders.

2. **Open Science Framework:** It provides a forward-looking, all-encompassing Open Science Framework to provide access to scientific data, information, knowledge, and resources to everyone in the country, and to all who are engaging with the Indian STI ecosystem on an equal partnership basis. Output from research that is not funded by the government will be outside the purview of this framework. However, they will be encouraged to participate in this framework.
3. **STI Education:** Strategies to improve STI education making it inclusive at all levels and more connected with the economy and society will be developed through processes of skill building, training and infrastructure development. Higher Education Research Centres (HERC) and Collaborative Research Centres (CRC) will be established to provide research inputs to policymakers and bring together stakeholders. Online learning platforms will be developed using Information and Communication Technology (ICT) to address the issue of accessibility and to promote research and innovation at all levels. Teaching-learning centres (TLCs) will be established to upskill faculty members which in turn will improve the quality of education.
4. **STI Finance:** It envisions expansion of the STI funding landscape at the central and state levels; enhanced incentivization mechanisms for leveraging the private sector's R&D participation through boosting financial support and fiscal incentives for industry and flexible mechanisms for public procurement; and creative avenues for collaborative STI funding through a portfolio-based funding mechanism called the Advanced Missions in Innovative Research Ecosystem (ADMIRE) programme to support distributed and localised collaborative mission-oriented projects through a long-term investment strategy. STI Development Bank will be set up to facilitate a corpus fund for investing in direct long term investments in select strategic areas. Also, General Financial Rules (GFR) will be suitably amended for large scale mission mode programmes and projects of national importance and to facilitate ease of doing research.
5. **Research and Innovation Excellence Frameworks (RIEF):** RIEF will be developed to enhance the quality of research along with promotion of engagements with relevant stakeholders.
6. **Integration of Traditional Knowledge:** An institutional architecture to integrate Traditional Knowledge Systems (TKS) and grassroots innovation into the overall education, research and innovation system will be established.
7. **Promotion of Self-Reliance:** To promote technology self-reliance and indigenization, a two-way approach of indigenous development of technology as well as technology indigenization will be adopted and focused upon in alignment with national priorities, like sustainability and social benefit, and resources. A Strategic Technology Board (STB) will be constituted to act as a link connecting different strategic departments. A Strategic Technology Development Fund (STDF) will be created to incentivize the private sector and HEIs. Spin-off technologies resulting from the larger projects will be commercialized and used for civilian purposes.



8. **Equity and Inclusion Charter:** An India-centric Equity & Inclusion (E&I) charter will be developed for tackling all forms of discrimination, exclusions and inequalities in STI leading to the development of an institutional mechanism. An inclusive culture will be facilitated through equal opportunity for women along with candidates from rural remote areas, marginalized communities, differently-abled individuals including Divyangjans and members of LG-BTQ+ community, proportionate representation of women in selection/ evaluation committees, addressing of ageism related issues and consideration of experienced women scientists for leadership roles and regular gender and social audits in academic and professional organizations.
9. **Diaspora Engagement:** Engagement with the Diaspora will be intensified- 'SAT for Diplomacy' will be complemented with Diplomacy for S&T

## DNA Technology Regulation Bill

Recently, the Parliamentary Standing Committee on Science and Technology, Environment, Forests and Climate Change has recommended that the government assuage concerns raised over the DNA Technology (Use and Application) Regulation Bill, 2019, including over creation of a national databank of crime scene DNA profiles and fears of communities being targeted.

- ❖ The bill aims to establish a database of "certain category of persons" such as victims of crimes, missing persons and children, unidentified bodies, as well as offenders, suspects and undertrials in cases.
- ❖ Such a data base would help trace repeat offenders of heinous crimes such as rape and murder through DNA profiling.

### Key Concerns

- ❖ **Fear of Misuse:** While recognising the importance of DNA technology in criminal investigation, the committee, said that the risk with a national databank of crime scene DNA profiles is that it will likely include virtually everyone since DNA is left at the 'crime scene' before and after the crime by several persons who may have nothing to do with the crime being investigated.
- ❖ **Lack of Enabling Ecosystem:** The Committee is of the strong opinion that an enabling ecosystem must be created soon to ensure that DNA profiling is done in a manner that is fully consistent with the letter and spirit of various Supreme Court judgments and with the Constitution.
- ❖ **Possible Misuse of Regional Databank:** While the Bill speaks of regional databanks apart from a central one, the Parliamentary Standing Committee strongly recommends only one National Data Bank, to minimise chances of misuse of data.
- ❖ **Violation of Privacy:** Some members have raised concerns about violations of the right to privacy. Without adequate statutory safeguards, the Bill could prove problematic par-

ticularly for marginalised communities, including Dalits, Adivasis and religious and gender minorities.

- ❖ Caste Profiling: Some members have also raised concerns regarding caste profiling as well as the use of collected information "for targeted discrimination of specific groups".

### Counter Arguments

- ❖ The Department of Biotechnology has argued that nearly 60 countries have enacted similar legislation, and that all important matters related to privacy, confidentiality and data protection have been taken into account.
- ❖ The Bill talks of a DNA Regulatory Board that would advise the Centre and state governments on issues such as setting up of DNA laboratories and databanks; and laying down of guidelines, standards and procedures for the same.

### Recommendations

- ❖ These fears that the Bill could be misused to target segments of society based on religion, caste or political views, are not entirely unfounded and have to be recognized and addressed by the government and by Parliament as well.
- ❖ The Parliamentary Standing Committee recommends that this DNA Regulatory Board be independent and not comprise wholly of serving government officials.
- ❖ It further says that DNA samples be taken only with the consent of an individual and no person be forced to provide evidence that may incriminate him/her in any crime.
- ❖ About a national databank, the committee points out that a crime scene could also hold DNA of someone who was nowhere near it at the time. Noting that bodily material like hair may have been transported to the crime scene inadvertently by a variety of ways, the panel suggests that these be used only for investigation but not put in a databank. And that these DNA profiles be destroyed once a trial is over, barring those of the convicted.

## Draft National Strategy on Blockchain

Recently, the Ministry of Electronics and Information Technology (MeitY) has prepared a draft framework for the use of blockchain technology in government services. It intends to use it in the areas of property record keeping, digital certificates, power distribution, health records as well as supply chain management.

### Salient Features

- ❖ All the applications of blockchain technology are likely to be explored by the government under the leadership of the IT ministry.

- ❖ The draft, called the National Strategy on Blockchain, is also likely to explore the possibility of use of the technology for vaccine and medical supplies logistics management for future purposes.
- ❖ Virtual and digital currencies such as bitcoin, however, have been kept out of the ambit of this framework and are unlikely to be included in the near future as digitisation of the banking and currency system has picked up only of late and they still have non-repudiation requirements through in-person verification. Therefore, this is a challenge to implement technological solutions for such requirements especially for crypto-currencies.
- ❖ Since the blockchain technology operates on a distributed ledger system which is owned by everyone, participants can read, write, or make changes to the ledger.
- ❖ In order to make the technology better suited to the needs of the government and that of India, the national framework has therefore suggested that blockchain could be set up in one of the four architectures.
- ❖ Public and Permission less: A public and permission less architecture would mean that anyone can join, read, write and commit changes to the blockchain, would be hosted on publicly available servers but would have low scalability.
- ❖ Public but with Permissions: A public architecture with permissions would allow only authorised persons to write and commit changes to the architecture.
- ❖ Private and Permission less: A private and permission less architecture would mean that though only authorised persons would be allowed to make changes to the distributed ledger, there would be no bar on the number of number of participants that can operate on the technology.
- ❖ Private and with Permissions: A private and with permission architecture would mean that though only authorised persons can join and read and only network manager can write and commit.

#### **Blockchain Technology**

- ❖ Blockchain Technology is a distributed ledger technology suitable for decentralized and transactional data shared across a large network of untrusted entities.
- ❖ This technology allows new type of distributed software architecture capable of finding concurrence on their shared states without need to establish online twist with any central entity/participant.
- ❖ All the transactions shared across entities along with the timestamp are maintained as records and placed in blocks, these blocks are further linked as Blockchain and stored in a distributed manner across various nodes of the network. '
- ❖ Copy of each transaction along with its hash is stored in the ledger shared across' all participants of the network.

- ❖ Salient properties of the Blockchain technology are pseudonymity, cryptographic guarantees, immutability, shared read & write, accountability, transparency and "distributed ownership. This technology eliminates the requirement of central entity/ third party to validate the transactions over the peer-to-peer network transactions are validated by considering the history of transactions stored at each node of the network and the Consensus of the participants, as shown in figure below.

### Importance of Blockchain Technology

- ❖ Blockchain uses a unique data structure where verification data related to the transactional records is cryptographically secured against tampering and stored in blocks. Each block contains details of transactions, hash of the previous block, timestamp etc.
- ❖ Blocks are linked with each other, leading to a Blockchain. Linkage across Blocks is also cryptographically secured and this is stored at every node in the network. This makes it a unique solution to the problem of trust in the digital world, leading towards decentralized trust.
- ❖ Anything of value can be tracked and traded on a Blockchain network, reducing risk and cutting costs for all involved. Contracts can be automated through Smart Contracts.

### Government Initiatives

Ministry of Electronics and Information Technology (MeitY) has identified Blockchain Technology as one of the important research areas having application potential in different domains such as Governance, Banking & Finance, Cyber Security and so on.

- ❖ Blockchain Technology based solution for property registration has been successfully developed and is piloted at Shamshabad District, Telangana.
- ❖ C-DAC's mission in Blockchain Technology is categorized in the following top-level components:
  - ❖ Unified Blockchain Framework: Unified Blockchain Platform for cross domain applications addressing the performance, scalability, interoperability, security and privacy challenges.
  - ❖ Blockchain Services: eSign integrated with Blockchain based Proof-of-Existence (PoE).
  - ❖ Blockchain Applications for different domains: Blockchain for Track and Trace, Blockchain for Electronic Health Record (EHR), Blockchain based Digital Evidence Management System, Security for IoT Deployment, Blockchain for Self-Sovereign Identity, Blockchain Technology for APEDA TraceNet, Blockchain Technology for Government e-Marketplace (GeM) Platform, Blockchain Technology for Voting and Blockchain based Property Record Management System.
- ❖ Reserve Bank of India (RBI) is exploring on applying Blockchain Technology in banking domain.

# National Supercomputing Mission

The Centre for Development of Advanced Computing (C-DAC) has launched the second phase of the ambitious National Supercomputing Mission.

## National Supercomputing Mission (NSM)

- ❖ It was launched in 2015 and is jointly funded by the Department of Science and Technology (DST) and Ministry of Electronics and Information Technology (MeitY).
- ❖ It aims at establishing supercomputer facilities across 70 national research and academic institutions and connecting them onto a National Knowledge Network (NKN).
- ❖ The mission was set up to provide the country with super-computing infrastructure to meet the increased computational demands of academia, researchers, MSMEs, and start-ups by creating the capability design, manufacturing, of supercomputers indigenously in India.
- ❖ In April 2015 the government approved the NSM with a total outlay of Rs.4500 crore for a period of 7 years and envisages nearly 50 supercomputers across the country in three phases.
- ❖ The target of the mission was set to establish a network of supercomputers ranging from a few Tera Flops (TF) to Hundreds of Tera Flops (TF) and three systems with greater than or equal to 3 Peta Flops (PF) in academic and research institutions of National importance across the country by 2022.

## Current Status

- ❖ The NSM is rapidly boosting high power computing in the country through its various phases to meet the increasing computational demands of academia, researchers, medium, small and micro enterprises and start-ups in areas like oil exploration, flood prediction as also genomics, and drug discovery.
- ❖ As the infrastructure planned in NSM phase I has already been installed and much of Phase II is in place, the speed of supercomputers in the country will soon reach to around 16 PF.
- ❖ Phase III, is to be initiated in January 2021, and it will take the computing speed to around 45 petaflops

## Impact

- ❖ Socio-economic Development: Sectors like health, climate modelling, oil explorations and more will enjoy benefits of supercomputers, which will in turn contribute towards the socio-economic upliftment of the nation.

- ❖ **Tackle New Social Problems:** Developed and almost-developed countries have begun ensuring high investments in supercomputers to boost their economies and tackle new social problems.
- ❖ **Promote Research and Innovation:** Supercomputers will be a common facility available for all researchers in the country.
- ❖ **Safety and Green Technologies:** These high-performance computers can simulate the real world, by processing massive amounts of data, making cars and planes safer, and more fuel-efficient and environment-friendly.
- ❖ **Industrial Development:** They also aid in the extraction of new sources of oil and gas, development of alternative energy sources, and advancement in medical sciences. They are also used by financial services, manufacturing and internet companies and infrastructure systems like water-supply networks, energy grids, and transportation.
- ❖ **Disaster Management:** Supercomputers have also helped weather forecasters to accurately predict severe storms, enable better mitigation planning and warning systems.

## Conclusion

Future applications of supercomputing technology also include artificial intelligence (AI). Therefore, due to its vast potential for future applications, countries like the US, China, France, Germany, Japan, and Russia have created national-level supercomputing strategies and are investing substantially in this technology.

## Supercomputers Help Fight COVID-19

In their fight against COVID-19, many countries have been utilizing the prowess of supercomputers to expedite research and information processing in order to consolidate their efforts.

### Role of Supercomputers

- ❖ One of the basic premises as to how supercomputers are helpful in fighting COVID-19 is the huge volume of data that is generated with millions having been infected with the novel coronavirus (SARS-CoV-2).
- ❖ Given their exceptional speed in processing data, these supercomputers are using available data to develop models and in analysing them.
- ❖ Some of the ways in which supercomputers are helping include the study of the structure and origin of the SARS-CoV-2, analysis of the spread of the virus among populations, and modes of interactions of the virus with cells in the human body.

- ❖ Supercomputers are looking for antiviral drugs that could bind with the spikes of novel coronavirus, thus preventing human infections. Efforts are being made to identify drug compounds and molecules which have the highest binding affinity so that they can show optimal efficacy.
- ❖ They are sifting through databases of existing drug compounds in order to be able to find a suitable drug candidate for COVID-19.
- ❖ These computers can also help in developing a vaccine for the novel coronavirus, by identifying the virus proteins that can help create immunity among humans.
- ❖ The significance of supercomputers lies in their ability to perform numerous challenging tasks in the context of the COVID-19 pandemic completing which would have taken months for regular computers.
- ❖ In the United States, a large scale public-private effort called the 'COVID-19 High Performance Computing Consortium' has been launched, in which government laboratories and agencies including NASA and private players such as IBM, Google, Amazon, academic institutions such as MIT and Carnegie Mellon, etc. are collaborating.
- ❖ In Japan, the Fugaku supercomputer, a successor to the 'K' computer, is being used by the government and the country's research laboratories.
- ❖ Tianhe-1 supercomputer was used in China which applied Artificial Intelligence to diagnose COVID-19 patients from chest scans.
- ❖ In India, Centre for Development of Advanced Computing (C-DAC), under the aegis of the National Supercomputing Mission (NSM), has initiated a programme SAMHAR-COVID19 Hackathon (Supercomputing using AI, ML, Healthcare Analytics based Research for combating COVID 19).
- ❖ It will provide opportunities for researchers to find solutions for identifying, tracking and forecasting outbreaks of COVID19 and facilitating drug discovery.
- ❖ Specific aspects of COVID-19 that SAMHAR-COVID19 will be addressing include drug discovery and genome sequencing, medical imaging, contactless monitoring, surveillance, forecasting, and data mining.

## **ENVIRONMENT**

### **Climate Ambition Summit 2020**

On December 12, 2020, the virtual Climate Ambition Summit 2020 was held to provide a platform for government and non-governmental leaders to demonstrate their commitment to the Paris Agreement and the multilateral process. It was co-hosted by the United Kingdom (UK), the United Nations (UN) and France, in partnership with Chile and Italy.

- ❖ The date also marked the 5th anniversary of the Paris Agreement.
- ❖ This summit is also regarded as a 'sprint to Glasgow' as the 26th session of the Conference of Parties (COP26) to the UN Framework Convention on Climate Change (UNFCCC) is scheduled to take place during November 1-12, 2021 in Glasgow, Scotland. It will be hosted by the UK in partnership with Italy.

#### **Aim of the Summit**

The aim of the summit was to make a call for much greater climate action and ambition.

India also succeeded in expanding her forest cover and safeguard its biodiversity. India is also leading two major initiatives viz., International Solar Alliance (ISA) and Coalition for Disaster Resilient Infrastructure (DRI).

#### **Main Topics of Discussion at the Summit**

1. New more ambitious nationally determined contributions (NDCs).
2. Long term net-zero emission strategies.
3. Climate finance commitments to support the most vulnerable, and
4. Ambitious adaptation plans and policies.

### **Green Hydrogen: Fuel of the Hour**

In the budget 2021, finance minister proposed to launch a 'Hydrogen Energy Mission' in 2021-22 for generating hydrogen from green power sources.

#### **Green Hydrogen Fuel**

- ❖ Hydrogen generated from water using renewable clean electricity (solar, wind or water) is called green hydrogen. This implies greenhouse gases like Carbon-dioxide are not a by-product at any stage making it a clean burning fuel.
- ❖ Electricity and pure water is provided to an electrolyser and green hydrogen and oxygen are produced.



## Challenges

- ❖ Processes involved in generation of green hydrogen are energy intensive. It requires very large amounts of cheap renewable electricity because a fair amount is lost in electrolysis. Electrolyser efficiencies range from around 60 percent to 80 percent.
- ❖ It is expensive to produce green hydrogen. Its generation cost falls in the range \$2.5-4.5 per kg.
- ❖ Low density of hydrogen makes it difficult to store and transport it without a pipeline. Its storage requires compression to 700 times atmospheric pressure, refrigeration to 253 degrees Celsius.
- ❖ It can embrittle metal, it escapes through the tiniest leaks and is highly flammable.

## Significance

- ❖ Hydrogen is a 100 % sustainable energy source which has limitless supply. In fact, Green Hydrogen energy production does not emit polluting gases like carbon dioxide in the production processes.
- ❖ It can be mixed with the natural gas, up to a maximum of 20 %. It can also be transported through the same pipes and in the same infrastructure as natural gas. This also implies economic use of money invested in development.
- ❖ Transport and mobility is a key use of Green Hydrogen, be it in heavy transportation, or aviation and maritime transport.
- ❖ This gas can also be used to provide water to the crew members in space stations.
- ❖ Solar and wind energy experience fluctuation based on local weather and global climate. Green Hydrogen as a fuel can serve as a buffer and shield against these fluctuations.
- ❖ It can help in reducing dependence on fossil fuels.
- ❖ It can also potentially replace coal and coking coal in steel production as well as coal and gas in the production of petrochemicals such as methanol.
- ❖ Certain forecasts say Hydrogen will be the choice of fuel across one fourth of the energy domain by 2030.

## Initiatives in India

- ❖ In India, National Thermal Power Corporation (NTPC) is considering setting up a green hydrogen production facility in Andhra Pradesh.

- ❖ The ministry of Road Transport and Highways has issued a notification proposing amendments to the Central Motor Vehicles Rules (1989) to incorporate safety standards for hydrogen fuel cell technology vehicles.
- ❖ Reliance industries has declared it will become carbon neutral by 2035, by replacing transportation fuels with Hydrogen and clean electricity.
- ❖ India is one of the participants, among 16 nations or group-ings, in the Mission Innovation Renewable and Clean Hydrogen Challenge. Mission Innovation (MI) is a global initiative of 24 countries and the European Commission (on behalf of the European Union) working to accelerate clean energy innovation

### Types of hydrogen

- ❖ Though hydrogen is a colourless gas, it has been codified based on the generation technologies as follows:
- ❖ Grey / Brown / Black Hydrogen: Produced by fossil fuels mostly natural gas / methane.
- ❖ Blue Hydrogen - Produced from fossil fuels and uses carbon capture and storage technologies.
- ❖ Turquoise Hydrogen: Produced when natural gas is broken down with the help of methane pyrolysis into hydrogen and solid carbon.
- ❖ Yellow (or purple) Hydrogen: Produced using nuclear energy.

### Conclusion

- ❖ Green Hydrogen is an upcoming technology, which can function as a viable alternative for an ever-expanding population dependent mainly on non-renewable energy.
- ❖ It is vital for India to meet its Nationally Determined Contributions and ensure regional and national energy security, access and availability.
- ❖ It can help in decarbonising the economy and in reducing emissions and climate change threats.

## Draft Blue Economy Policy

On 17th February, 2021, the government rolled out the Draft Blue Economy policy for India in the public domain inviting suggestions and inputs from various stakeholders including industry, NGOs, academia, and citizens.

- ❖ The Ministry of Earth Sciences prepared the draft blue economy policy framework in line with the Government of India's Vision of New India by 2030.

## Blue Economy

- ❖ The economic philosophy of the Blue Economy was first introduced in 1994 by Professor Gunter Pauli at the United Nations University (UNU) to reflect the needs of future growth and prosperity, along with the threats posed by global warming.
- ❖ The term 'Blue Economy' was first coined by representatives of Small Island Developing States (SIDS) and other coastal countries during the 2012 Rio Summit.
- ❖ The concept received a fillip when the United Nations' Sustainable Development Goal 14 sought to "conserve and sustainably use the oceans, seas and marine resources for sustainable development" as a guiding principle for global governance and use of ocean resources.

### Need

- ❖ **Untapped Marine Potential:** Despite being surrounded by water on three sides, India is unable to utilise its marine resources due to lack technological advancement and skilled manpower.

### Key Points of Draft Policy

- ❖ It aims to enhance contribution of the blue economy to India's GDP, improve lives of coastal communities, preserve marine biodiversity, and maintain the national security of marine areas and resources.
- ❖ It highlighted the blue economy as one of the ten core dimensions for national growth.
- ❖ The draft policy framework emphasizes policies across several key sectors to achieve holistic growth of India's economy.

### Seven Thematic Areas

- ❖ National accounting framework for the blue economy and ocean governance.
- ❖ Coastal marine spatial planning and tourism.
- ❖ Marine fisheries, aquaculture, and fish processing.
- ❖ Manufacturing, emerging industries, trade, technology, services, and skill development.
- ❖ Logistics, infrastructure and shipping, including trans-shipments.
- ❖ Coastal and deep-sea mining and offshore energy.
- ❖ Security, strategic dimensions, and international engagements.

## Carbon Tax and India

### What is Carbon Pricing?

- ❖ The phrase 'put a price on carbon' has now become well known with momentum growing among countries and businesses to put a price on carbon pollution as a means of bringing down emissions and drive investment into cleaner options.
- ❖ There are several paths governments can take to price carbon, all leading to the same result. They begin to capture what are known as the external costs of carbon emissions - costs that the public pays for in other ways, such as damage to crops and health care costs from heat waves and droughts or to property from flooding and sea level rise - and tie them to their sources through a price on carbon.
- ❖ A price on carbon helps shift the burden for the damage back to those who are responsible for it, and who can reduce it. Instead of dictating who should reduce emissions where and how, a carbon price gives an economic signal and polluters decide for themselves whether to discontinue their polluting activity, reduce emissions, or continue polluting and pay for it. In this way, the overall environmental goal is achieved in the most flexible and least-cost way to society. The carbon price also stimulates clean technology and market innovation, fuelling new, low-carbon drivers of economic growth.

### There are two main types of carbon pricing

- i) Emissions Trading Systems (ETS)
- ii) Carbon Taxes

### Emissions Trading Systems (ETS)

- ❖ ETS sometimes referred to as a cap-and-trade system - caps the total level of greenhouse gas emissions and allows those industries with low emissions to sell their extra allowances to larger emitters. By creating supply and demand for emissions allowances, an ETS establishes a market price for greenhouse gas emissions. The cap helps ensure that the required emission reductions will take place to keep the emitters (in aggregate) within their pre-allocated carbon budget.

### Carbon Tax

- ❖ A carbon tax is a fee on the carbon content of fossil fuels. Though levied "upstream" where the coal, oil or gas is extracted or imported, it charges fossil fuel users for the climate damage their fuel use causes by releasing heat-trapping carbon dioxide into the atmosphere.
- ❖ Carbon taxes, levied on coal, oil products, and natural gas in proportion to their carbon content, can be collected from fuel suppliers. They in turn will pass on the tax in the form of higher prices for electricity, gasoline, heating oil, and so on, as well as for the products and services that depend on them. This provides incentives for producers and consumers

alike to reduce energy use and shift to lower-carbon fuels or renewable energy sources through investment or behaviour.

- ❖ A carbon tax directly sets a price on carbon by defining a tax rate on greenhouse gas emissions or - more commonly - on the carbon content of fossil fuels. It is different from an ETS in that the emission reduction outcome of a carbon tax is not pre-defined but the carbon price is.

### Need for Carbon Tax

- ❖ **To Address Climate Change:** While addressing climate change by reducing greenhouse gases, carbon taxes can also generate more immediate environmental and health benefits, particularly by reducing deaths that result from local air pollution.
- ❖ **Revenue Generation:** They can also raise significant revenue for governments, revenue they can use to counteract economic harm caused by higher fuel prices. For example, governments could use carbon tax revenue to ease the burden of taxation on workers by lowering personal income and payroll taxes.
- ❖ **To Fund Productive Investments:** Carbon tax revenue could also fund productive investments to help achieve the United Nations Sustainable Development Goals, including reducing hunger, poverty, inequality, and environmental degradation.

### Mechanisms in India

- ❖ Although India does not have an explicit carbon tax till date, it has an implicit or de facto carbon tax in the form of a coal cess since 2010. The reason for preferring a coal cess over a direct carbon tax is not explicitly stated in the policy documents of Government of India (GoI).
- ❖ It is not likely that the implicit carbon tax through cesses and excise duties on fossil fuels will produce better results in terms of reduction in carbon emissions and changes in GDP than an explicit carbon tax. Indeed, the reverse is likely to be true. The real reason for the adoption of an indirect carbon tax in the form of cesses and excise duties seems to be the ease in their collection.
- ❖ If coal cess is a de facto carbon tax, then quantitatively speaking, coal cess should be translatable into an equivalent carbon tax. Economic Survey 2014 converts the specific coal cess into equivalent carbon tax (using standard carbon emission factors and net calorific values of coal). In 2015, GoI revised its coal cess from Rs 50 per ton to Rs 100 per ton. Presently, it is Rs 400 per tonne.
- ❖ Coal cess penalizes the carbon emitted from coal, but spares that from other fossil fuels – e.g. oil and natural gas. Thus, an indirect carbon tax cannot induce efficient fuel-switching away from fossil fuels towards cleaner sources of energy. The transition to a direct carbon tax linked to declared carbon emission targets is the next step in the evolution of an emission control policy in India.

## Impact of Carbon Tax on India

In India, the impact of introducing carbon taxes, can be viewed from multiple dimensions:

- ❖ **Impact on Revenue:** Taxing fossil fuels is one of the larger contributors to exchequers globally and India is no exception. A shift to clean energy would mean significant loss of revenue for Governments.
- ❖ **Impact on Innovation:** Carbon taxes accelerate the development of innovative business models around clean energy like solar powered automobiles, solar drones, zero energy buildings, super grids, utility scale battery production etc. Multiple startups have already raised hundreds of millions of dollars in venture investments.
- ❖ **Impact on Investment and Employment:** Given the scale and magnitude of change desired, the scale of investment needed is substantial. Successive Governments have consistently pursued a stable renewable energy policy with strong results. FDI inflow in the Indian non-conventional energy sector stood at US\$ 9.22 billion between April 2000 and March 2020 (DPIIT). More than US\$ 42 billion has been invested in India's renewable energy sector since 2014 and India rank's third globally in the EY Renewable Energy Country Attractive Index 2019. Investments in excess of \$500 billion are required over the next decade to meet our energy targets. Utility-scale renewables sector have already created 100,000 jobs (2020), and the current targets are likely to generate another 1.3 million direct jobs.
- ❖ **Impact on Health Care Infrastructure:** India is also exploring the case for ensuring universal rural healthcare through a sustainable energy path. A CEEW study (June, 2020) has shown that primary healthcare centres in Chhattisgarh with battery supported solar PV systems (costing just Rs 28/ person) have better outcomes, especially in maternal and neonatal cases, due to power supply for medical equipment and storage of drugs. Expanding the application across a fractured health care system can have far reaching benefits at affordable costs.
- ❖ **Impact on Pollution:** Pollution is bad for both health and economy. India losses a significant \$150 billion per annum owing to just air pollution (Green Peace 2020). Studies by acclaimed institutions have established that the use of solar and wind energy reduces pollution levels by as much 80-97%. India's total renewable capacity was around 35.7% (Sep 19) of the total installed generation capacity consequent to which CO<sub>2</sub> emissions fell by around 1% in FY 20. India aims to have 175 GW by 2022 from renewable/clean energy, and has pledged a 33-35% reduction in the emissions intensity of its economy by 2030, compared to 2005 levels. This is expected to have far-reaching impact across sectors like health care, urbanisation, transportation, power, etc.

## Challenges of Taxing Carbon

- ❖ Carbon tax is regressive in nature -it affects the poor more than the rich. The highest rise in price will be in fuel and energy which affects the poor.

- ❖ Inflation: High transportation cost will lead to inflation and affect the informal sector.
- ❖ Insufficient: increasing carbon taxes is alone insufficient to reduce emissions as income levels rise.

## Conclusion

India is among the nations that are hardest hit by climate impacts. There is growing public support for climate action, but we need solutions that are seen to be in India's interest. A market-oriented approach to tax and trade carbon domestically and to induce similar action by others through international trade and diplomacy offers a way forward.

## Cyclone Amphan

- ✓ The **National Crisis Management Committee** reviewed the preparedness for the impending cyclone **Amphan**.
  - At the national level, Cabinet Committee on Security (CCS) and National Crisis Management Committee (NCCM) are the key committees involved in the top-level decision-making related to Disaster Management.

### Importance of Cyclone

- ✓ Cyclone Amphan (**pronounced as UM-PUN**) is a **tropical cyclone** formed over Bay of Bengal that has intensified and likely to turn into a “super cyclonic storm (maximum wind speed is 120 knots)”.
- ✓ According to the **India Meteorological Department** forecast, it will make landfall as a very severe cyclone between the **Sagar islands of West Bengal** and the **Hatiya islands of Bangladesh**.
- ✓ It has been named by **Thailand**.
- ✓ **Affected Regions:**
  - West Bengal, Odisha and Bangladesh.
- ✓ Amphan is the second pre-monsoon cyclone to form in the Bay of Bengal in two years.
- ✓ The first one was **Cyclone Fani**.
  - The pre-monsoon period is generally considered to be unsupportive for the formation of tropical cyclones.

## Cyclone Nisarga

- ✓ A fast-moving **depression in the Arabian Sea** is predicted to be intensified **into a severe cyclone named 'Nisarga'**.
  - The name 'Nisarga' has **been suggested by Bangladesh**.

### Importance of Cyclone

- ✓ As per the **India Meteorological Department**, the impact of the cyclone is likely to be felt in **Maharashtra and Gujarat**.
- ✓ There is a **concern about the impact of the cyclonic storm on the battle against Covid-19**, as the rain and flooding may set back social distancing and other necessary measures at evacuation centres, and even at some Covid-19 facilities located in low-lying areas.
- ✓ Few days back, **super cyclone Amphan** - one of the strongest cyclones the country has seen in the last few decades - hit West Bengal, Odisha and Bangladesh.
  - **Cyclone Nisarga is expected to be weaker than Cyclone Amphan** in strength and intensity.
  - However in case of both the cyclones, the **exceptional warm ocean temperatures** seem to be behind the intense storms.

### Cyclones in Arabian Sea

- ✓ While cyclones have always been more frequent in Bay of Bengal, they have been **less frequent off of India's western coast** - a trend that has been gradually changing, according to scientists.
- ✓ Further, cyclones formed in the Bay of Bengal are stronger than those on the Arabian Sea side.
- ✓ The **relatively cold waters of the Arabian Sea discourage the kind of very strong cyclones** that are formed on the Bay of Bengal side.
- ✓ The **year 2019 was slightly unusual** as the Arabian Sea saw the most frequent and intense cyclonic activity in more than 100 years.
- ✓ Five cyclones originated in the area in 2019 **Vayu, Hikka, Kyarr, Maha** and Pavan - when normally only one or two are formed.
  - The Arabian Sea saw more cyclonic storms than the Bay of Bengal during 2019.
  - The Bay of Bengal reported less than normal number of cyclones.



- The three cyclones formed were Cyclones **Pabuk**, **Fani**, **Bulbul**.
- ✓ Post-monsoon cyclones have been seen in Arabian Sea. However, pre-monsoon cyclones, such as Nisarga, have so far been rare.



# ECONOMY

## K-shaped Economic Recovery

The prospects of a K-shaped recovery from COVID are increasing both in India and across the world.

### K-shaped Recovery

- ❖ The "K-shaped" economic recovery is characterized by a stark split in the recovery pace of the economy – some sectors are bouncing back ahead of the rest at a much faster pace, while others are continuing a downward trajectory.
- ❖ The industries that are on the upper curve are technology-based companies, large corporations, governments, and public utilities. While these are industries that may bounce back faster than the rest, the industries on the lower curve, / who are suffering the fallout from the COVID-19 pandemic, are the travel, entertainment, hospitality and food services industries.

### Macro Implications of a K-shaped Recovery

- ❖ Upper-income households have benefitted from higher savings for two quarters.
- ❖ Households at the bottom have experienced a permanent loss of income in the forms of jobs and wage cuts; this will be a recurring drag on demand, if the labour market does not heal faster.
- ❖ To the extent that COVID has triggered an effective income transfer from the poor to the rich, this will be demand-impeding because the poor have a higher marginal propensity to consume (i.e. they tend to spend (instead of saving) a much higher proportion of their income.
- ❖ If COVID-19 reduces competition or increases the inequality of incomes and opportunities, it could impinge on trend growth in developing economies by hurting productivity and tightening political economy constraint.

### Other types of Recovery

- ❖ **V-shaped Recovery:** A sharp decline followed by a rapid recovery, with very little time spent at the trough, or low point of the recession.
- ❖ **U-shaped Recovery:** A steep decline followed by a period of time in which the economy sits at the low point of the recession before finally recovering.
- ❖ **W-shaped Recovery:** Also known as a double-dip recession, this is a scenario when the economy experiences a steep decline, followed by a small and temporary recovery and (then a second decline,

- ❖ **L-shaped Recovery:** A severe recession in which the economy declines and doesn't recover for years, if ever.

## Report of Fifteenth Finance Commission

The final report of the Fifteenth Finance Commission of India for FY 2021-22 to FY 2025-26 was tabled in the Parliament on 1st February, 2021 alongside the Union Budget 2021-22.

The 15th Finance Commission was constituted by the President of India in November 2017, under the chairmanship of NK Singh. Its recommendations will cover a period of five years from the year 2021-22 to 2025-26.

### Key Recommendations

#### 1. Vertical Devolution (Devolution of Taxes of the Union to States)

- ❖ It has recommended maintaining the vertical devolution at 41% - the same as in its interim report for 2020-21.
- ❖ It is at the same level of 42% of the divisible pool as recommended by the 14th Finance Commission.
- ❖ It has made the required adjustment of about 1% due to the changed status of the erstwhile State of Jammu and Kashmir into the new Union Territories of Ladakh and Jammu and Kashmir.

#### 2. Horizontal Devolution (Allocation Between the States)

- ❖ For horizontal devolution, it has suggested 12.5% weightage to demographic performance, 45% to income, 15% each to population and area, 10% to forest and ecology and 2.5% to tax and fiscal efforts.

#### 3. Fiscal Deficit

- ❖ **Target for Centre:** It recommended that the Centre brings down its fiscal deficit to 4% of Gross Domestic Product GDP by 2025-26 against 6.8% in FY22.
- ❖ **Target for States:** For states, it recommended fiscal deficit at 4% of Gross State Domestic Product (GSDP) in 2021 -22, 3.5% in the following year and 3% for the next three years. Grants in Aid
- ❖ **Revenue Deficit Grants:** 14 states are estimated to face a revenue deficit post-devolution. The Commission has recommended revenue deficit grants worth Rs 74,341 crore to these 14 states. Furthermore, the three states of Karnataka, Mizoram, and Telangana received special grants to make up the shortfall between untied transfers received by these States

in the form of tax devolution plus revenue deficit grant in 2020-21 visa-vis the corresponding amount in 2019-20.

- ❖ Sectoral Grants: The XV-FC is considering recommending sectoral grants for nutrition, health, pre-primary education, judiciary, rural connectivity, railways, statistics and police training, and housing during its tenure. Of these, grants for nutrition, to augment the efforts of the States towards reducing and ultimately eliminating malnutrition, is specifically recommended even in 2020-21.

#### **5. Performance-based Incentives: Six broad areas are identified to provide performance-based incentives to States.**

- ❖ Implementation of Agriculture Reforms
- ❖ Development of Aspirational Districts and Aspirational Blocks
- ❖ Power Sector Reforms
- ❖ Enhancing Trade including Exports
- ❖ Incentives for Education
- ❖ Promotion of Domestic and International Tourism

#### **6. Empowering Local Bodies**

- ❖ Recommended grants to all tiers of the Panchayati Raj to enable pooling of resources to create durable community assets and improve their functional viability.
- ❖ To give grants to the Fifth and Sixth Schedule areas and Cantonment Boards.
- ❖ To provide for tied grants in the critical sectors of sanitation and drinking water to ensure additional funds to the local bodies over and above the funds allocated for these purposes under the centrally sponsored schemes (CSS), Swachh Bharat and Jal Jeevan Missions.
- ❖ To account for increasing urbanization the share of urban local bodies in Finance Commission grants to local bodies should be gradually increased to 40 per cent over the medium term.
- ❖ Since larger cities will tend to grow faster with the agglomeration effect, the fifty Million-Plus cities in the country need differentiated treatment, with special emphasis on meeting the challenges of bad ambient air quality, groundwater depletion and sanitation.

#### **7. GST**

- ❖ The inverted duty structure between intermediate inputs and final outputs present in GST needs to be resolved.
- ❖ Revenue neutrality of GST rate should be restored which has been compromised by multiple rate structure and several downward adjustments.

#### **8. Disaster Risk Management**

- ❖ It recommended retaining the existing cost-sharing patterns between the centre and states for disaster management funds.
- ❖ The cost-sharing pattern between centre and states is:
  - i. 90:10 for north-eastern and Himalayan states, and
  - ii. 75:25 for all other states.
- ❖ State disaster management funds will have a corpus of Rs 1.6 lakh crore (centre's share is Rs 1.2 lakh crore).

## 9. Health

- ❖ It has suggested increasing the state expenditure on health by 8 percent by 2022
- ❖ Suggested prioritizing the creation of All India Health Services/ All India Medical Services on the pattern of the UPSC Civil Services.

## 10. Higher Education

- ❖ Promotion of online education - Rs. 5,078 crore is a total sum of grant for the promotion of online education.
- ❖ Development of professional courses in regional languages: The commission's recommendation is in line with the New Education Policy 2020. Rs. 1,065 crore has been allocated for the development of these courses from 2021-26.
- ❖ Two colleges in each state should convert their learning material and pedagogy into the recognized regional language.

## 11. Defence

- ❖ Recommendation to create a non-lapsable pool for the defence and internal security sector under the Public Accounts of India.

## 12. New FRBM Framework

- ❖ The Fiscal Responsibility and Budget Management Act (FRBM Act, 2003) needs a major restructuring and recommended that the time-table for defining and achieving debt sustainability may be examined by a High-powered Inter-governmental Group.

## 13. Centrally-sponsored schemes (CSS)

- ❖ A threshold should be fixed for annual allocation to CSS below which the funding for a CSS should be stopped (to phase out CSS which outlived its utility or has insignificant outlay).
- ❖ Third-party evaluation of all CSS should be completed within a stipulated timeframe.

## Criticism

- ❖ Progressive states would lose heavily if the population-based on the 2011 census was considered for the devolution of central funds. States that have performed well on population control would be penalized as previous FCs used 1971 Census numbers while the 14th commission had given weight to both the 1971 (17.5%) and 2011 (10%) censuses
- ❖ Some states have a higher potential in expanding the GST tax base while others do not. Hence, the performance on this parameter cannot be a basis for fund devolution.
- ❖ Many states run social sector schemes which are welfare-oriented. If these schemes are considered populist, these States will be penalized.
- ❖ States are already under the burden of GST and devolution based on the 2011 Census will further constrain the fund position of the States.
- ❖ States resent a devolution criterion that considers the implementation of Central schemes, as tax devolution is their constitutional right and not a largesse of the Central government.
- ❖ Since revenue deficit grants are proposed to be re-looked, there may be a reduction in the fiscal autonomy of the States and conditions for borrowing from external sources will also be reviewed.

## **OTHER AREAS**

### **India at The United Nations Security Council**

The United Nations Security Council (UNSC) comprises fifteen members, of which five are permanent: China, France, Russia, UK, and USA. The UNSC has 10 non-permanent members. Originally, there were 11 members of the UNSC: 5 permanent and 6 non-permanent. In 1963, the United Nations General Assembly (UNGA) recommended an amendment to the Charter to increase the membership of the UNSC with a set pattern for geographic representation. Five non-permanent UNSC members are from African and Asian States, one from Eastern European States, two from Latin American States, and two from Western European and other States. In accordance with Rule 142 of the UN Rules of Procedure, the UNGA elects each year five non-permanent members of the UNSC. UN Charter Article 27(3) states that votes in the UNSC on substantive matters 'shall be made by an affirmative vote of nine members including the concurring votes of the permanent members' – this is often called the veto power of permanent members.

India has been elected eight times to the UNSC, most recently from 2021 to 2022 after receiving 184 of 192 votes. It is one of the leading global powers and has been one of the foremost proponents of the long-standing diplomatic campaign to reform the UN and bring the organization more in tune with the times. The five permanent members of the UNSC – known as the P5 – include the People's Republic of China (which won recognition from its predecessor known as the Republic of China in 1971) and the other four winners of the Second World War – which ended in 1945. These four winners are the USA, UK, France and the USSR which is now represented by its successor state Russia after the disintegration of the USSR in 1991. The Republic of China (ROC) was a charter member of the UN and one of the five permanent members of the UNSC till 1971. One of the victorious Allies of the Second World War (locally known as the Second Sino-Japanese War), the Republic of China (ROC) joined the UN upon its founding in 1945. The subsequent resumption of the Chinese Civil War led to the establishment of the People's Republic of China (PRC) in 1949. Mainland China was soon under the control of the PRC. The ROC retreated to the island refuge of Taiwan. The US opposed the replacement of the ROC at the UN till 1971. On October 25, 1971, Albania's motion to recognize the PRC was passed as the UNGA Resolution 2758. It was supported by many communist states, non-aligned countries led by India, and by some North Atlantic Treaty Organization (NATO countries) like the UK and France.

India's position is that it is high time that the UNSC should be more representative of the world of 2021 and not the world as it existed in 1945, or in 1971. The PRC has been stonewalling India's efforts to become a permanent member of the UN's most powerful body for years, pointing to the lack of consensus even though the other four permanent members – the US, the UK, France and Russia – have expressed backing for New Delhi's membership.

India assumes its seat in the UNSC at a time when the US has gone through a chaotic transition in leadership with the supporters of a defeated incumbent rioting on Capitol Hill when the legislators were in session on January 6, 2021. China wants to become a pre-eminent global power

and has behaved in a very belligerent manner in the South China Sea and on land in Ladakh. Pakistan -cants the world to focus on the abrogation of Article 370 in Constitution as well as the human rights situations in India.

India has served on the UNSC seven times before 2021. In 1950-1951, India, as President of UNSC, presided over the adoption of resolutions calling for cessation of hostilities during the Korean War and for assistance to Republic of Korea. In 1967-1968, India co-sponsored.

During this current stint beginning in January 2021, India has plans to focus on UN reforms. New Delhi has said it is essential that the UNSC is expanded in both the permanent and non-permanent categories. It says India is eminently suited for permanent UNSC membership by any objective criterion like population, territorial size, GDP, economic potential, civilisational legacy, cultural diversity, democratic political system, military power, and past and ongoing contributions to UN activities – especially to UN peacekeeping missions.

## Analyse the need of reforms of the United Nations as it celebrates its 75th anniversary in 2020.

**Introduction:** Introduce with the historical evolution of UN.

**Body:** Enumerate all the possible reasons in detail which warrant reforms in the UN. **Conclusion:** Conclude with a way forward. The United Nations was founded in the aftermath of Second World War on October 24, 1945, with two major objectives: to secure and to sustain international peace and security. As the UN commemorates the 75th anniversary of its establishment in 2020, it is apparent that the implementation of this holistic vision of the UN Charter has been fragmented. This calls for reform of the UN.

### Need of Reforms

**Inadequacy of Peace Keeping Objective:** UN's primary goal is ensuring global peace and security. However on many counts it has been seen wanting in this regard like in the disastrous failures in Mogadishu (1993), Rwanda (1994), Somalia etc. There is a need to redress the growing expectations of UN peacekeeping with its growing inadequacies. Additionally, there is a need to improve the security of UN peacekeepers.

**Financial Constraints:** UN's major chunk of funding comes from United States. However, in recent years US President's America First Stance, suspension of all funding for the UN Population Fund; and the recent termination of US membership of WHO (US is its largest single contributor, providing more than \$400mn 2019) amid coronavirus pandemic has put significant financial constraints on UN.

**Primacy of Permanent Members:** There is increased recourse to unilateral policies by its five permanent members (USA, China, France, Britain and Russia-P5). The P5 have consistently leveraged their 'veto' power to pursue their increasingly narrow self-interest. Most recently, China used this power during its Presidency of the UNSC in March 2020 to prevent any discussion on the impact of Covid-19 on international peace, security, and sustainable development.



**Security Council Reforms:** The composition of UNSC with five permanent and ten non-permanent members does not reflect the current realities after manifold increase in the membership of the UN and with veto powers to P5 only. Additionally, the regions like Far East Asia, South America, and Africa have no representation in the permanent membership of the council.

**Intra-State Conflicts:** The increasing failure of UN to handle number of intra-state conflicts like in Somalia, Yemen, Afghanistan etc makes it imperative to expand the UN charter which only regulates the use of military force in inter-state conflicts.

**Inability to Check Terrorism:** The unfettered activities of designated terrorist entities and individuals remain a sign of UN's failure to counter terrorism effectively.

**Global Challenges:** The lack of effective UN response to global challenges, including the current Covid-19 pandemic, climate-change, sustainable development, poverty, refugees, gender equality etc makes it imperative to refurbish UN with a renewed mandate, better resources and robust infrastructure.

## Conclusion

The world body has fallen short of its many objectives, but without it conflicts would have been more intense, frequent, and longer. Moreover, some superpower confrontations have certainly been averted. Also, significant achievements have been made in the betterment of the social, economic and human rights of people throughout the world; decolonisation and integration of newly independent nations, acceleration of environmental efforts through SDGs etc. However, the time is ripe for UN to undertake structural as well as policy reforms for effective implementation of its stated goals by giving primacy to responsive operations; stronger partnerships, especially with the African Union; field-focused and people-oriented operations etc.

## **Examine how Covid-19 crisis offers a window to restructure and strengthen the country's health policy, and reduce dependency on imports of medical devices.**

**Introduction:** Introduce with the current situation which warrants a relook.

**Body:** Examine the need for strengthening health infrastructure.

**Conclusion:** Conclude with a way forward.

The country has been under lockdown since March 24, and given India's inadequate health infrastructure, a stringent response had to be undertaken to contain the virus. With the spotlight currently on India's indigenous innovative capabilities in the fight against COVID-19, the time has come to boost India's healthcare infrastructure and push for greater technology deepening in the healthcare sector.

## Current Status of Health Care Infrastructure

As per a recent study based on data from the National Health Profile-2019, the total number of hospital beds in the country was 7,13,986 – which translates to 0.55 beds per 1,000 population. Furthermore, twelve states that account for 70 per cent of India's 1.3 billion populations were found to have hospital beds per 1,000 populations below the national average of 0.55 beds. In terms of access and quality of health services, India was ranked 145 out of 195 countries in a Lancet study published in 2018, below countries like China (48), Sri Lanka (71) Bhutan (134) and Bangladesh (132).

- ❖ India's general government expenditure on healthcare as a percentage of GDP was just 1.0 per cent in 2017 according to WHO data, placing it at number 165 out of 186 countries in terms of government expenditure on healthcare.
- ❖ Another glaring issue is India's dependence on medical devices imports. According to the Association of Indian Medical Device Industry (AiMeD), India's medical devices imports were around Rs 39,000 crore in FY2019, having seen a growth of 24 per cent from the previous year. These imports were said to account for around 80 per cent of India's medical devices requirements, with the bulk of the devices coming from the US, China, Germany and Singapore.
- ❖ India's expenditure on R&D as a per cent of GDP has continued to remain stagnant at 0.7 per cent of GDP for three decades, with the public sector accounting for 51.8 per cent of the national R&D expenditure. Furthermore, while India's public R&D expenditure on healthcare as a share of central government spending on R&D has increased to 5.5 per cent, a figure that is now comparable to that in Germany, it remains low compared to over 25 per cent in the US and around 9 per cent in Korea.

## Suggestions for Improving the Health Care Infrastructure

- ❖ India now should build on its competitive position in the pharmaceutical and biotechnology sector, where it has resilience in delivering low-cost drugs and vaccines.
- ❖ Given the massive industrial base and demand for healthcare in India, ramping up the spending on health infrastructure and healthcare R&D – with a focus on healthcare equipment and services – would surely aid in India's economic recovery, by not only protecting the well-being of its citizens but also providing access to high quality and affordable healthcare equipment globally.
- ❖ To build a robust health system for the future, focusing on India's infrastructure and technology needs would require emphasising the triple helix model of innovation that is, bringing together the government, academia and industry, now more than ever. To this end, the government of India has established a "COVID-19 Taskforce" with the objective of mapping together various technological advancements related to COVID-19 in public R&D labs, academia, startups, and industries. Better coordination of the various technological developments through greater synergy between the government, academia and industry concerning research and manufacturing, could help minimise the duplication of efforts.

- ❖ Although government is providing grants and financial support via various channels like department of science and technology's CAWACH- Centre for Augmenting WAR with COVID-19 Health Crisis - to provide support to 50 innovations and startups addressing various challenges posed by the pandemic; it is also imperative to support open innovation models. The open innovation model allows for the integration of an external knowledge talent pool with the in-built capabilities of a firm, thereby bringing together a network of collaborators involved in biomedical research and drug discovery.

## Conclusion

- ❖ COVID-19 is a health crisis that is expected to stay with us for some time to come. The response to the pandemic offers an opportunity to bring about structural changes in India's health policy, see greater technology deepening in the healthcare sector with a focus on healthcare equipment, reduce India's dependence on imports of medical devices, and aid in India's economic recovery.

## Mission Karmayogi – Major Focus Areas

There would be four major points of focus under the mission.

- Supporting Transition from 'Rule-based' to 'Role-based' HR Management.
- iGOT-Karmayogi Digital Platform.
- Continuous Performance Analysis.
- Strategic HR management to deliver the right competencies.

### About Mission Karmayogi

Mission Karmayogi will be a new capacity building paradigm for training civil servants. The following are the agenda of this programme:

- Prescribe Annual Capacity Building Plan for all departments and services.
- Monitoring and implementation of Capacity Building Plan.
- Massive capacity building initiative to ensure efficient service delivery.
- To promote technology-driven learning pedagogy.
- To strengthen common foundations and remove the departmental silos.
- Setting benchmarks in learning for public servants.
- Democratization of learning to cover all categories.

### iGOT-Karmayogi Platform

iGOT-Karmayogi platform will be equipped to become a world-class market place for content, where carefully curated and scrutinised digital e-learning material will be made available. The officials can opt for either the self-driven learning path, where they can choose their field of interest, or go for the guided learning path, where they will be provided with the necessary skills and tools to perform their jobs efficiently and effectively.

- ❖ iGOT-Karmayog platform brings the scale and state-of-the-art infrastructure to augment the capacities of over two crore officials in India.
- ❖ The platform is expected to evolve into a vibrant and world-class market place for content where carefully curated and vetted digital e-learning material will be made available.
- ❖ Besides capacity building, service matters like confirmation after probation period, deployment, work assignment and notification of vacancies etc. would eventually be integrated with the proposed competency framework.
- ❖ Mission Karmayogi aims to prepare the Indian Civil Servant for the future by making him more creative, constructive, imaginative, innovative, proactive, professional, progressive, energetic, enabling, transparent and technology enabled. Empowered with specific role-competencies, the civil servant will be able to ensure efficient service delivery of the highest quality standards.

### **Public Human Resources Council**

A Public Human Resources Council comprising select Union Ministers, Chief Ministers, eminent public HR practitioners, thinkers, global thought leaders and Public Service functionaries under the Chairmanship of Hon'ble Prime Minister will serve as the apex body for providing strategic direction to the task of Civil Services Reform and capacity building.

### **Capacity Building Commission**

The Capacity Building Commission has been proposed with a view to ensuring a uniform approach in managing and regulating the capacity building ecosystem on collaborative and co-sharing basis.

#### **The role of Commission will be as under:**

- ❖ To assist the PM Public Human Resources Council in approving the Annual Capacity Building Plans.
- ❖ To exercise functional supervision over all Central Training Institutions dealing with civil services capacity building.
- ❖ To create shared learning resources, including internal and external faculty and resource centers.
- ❖ To coordinate and supervise the implementation of the Capacity Building Plans with the stakeholder Departments.
- ❖ To make recommendations on standardization of training and capacity building, pedagogy and methodology.
- ❖ To set norms for common mid-career training programmes across all civil services.

- ❖ To suggest policy interventions required in the areas of HR Management and Capacity Building to the Government.

## A Landmark Reform for the 21st Century

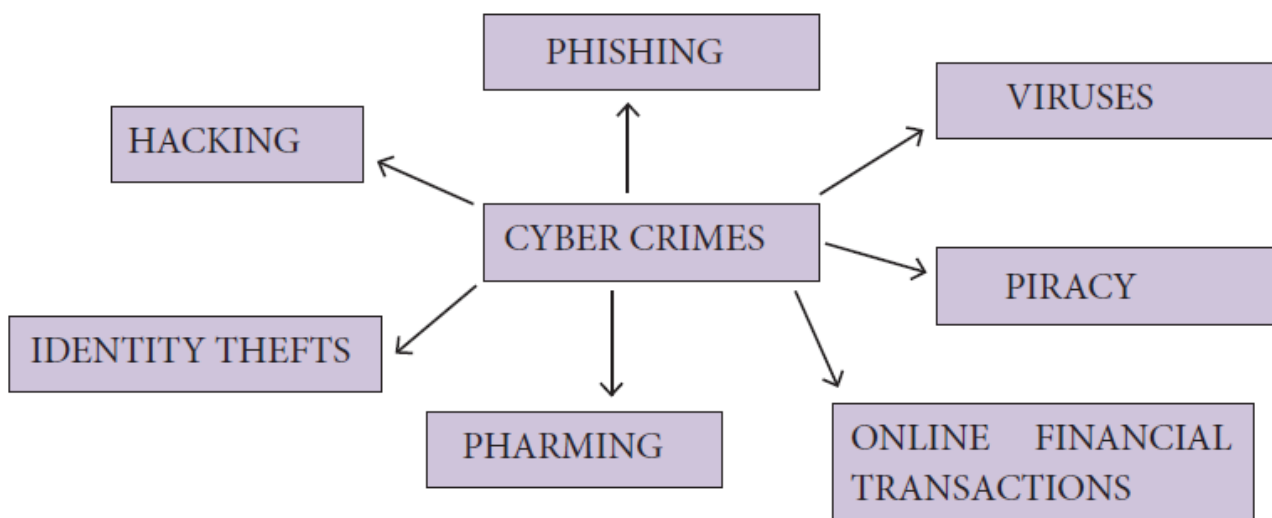
Mission Karmayogi is a landmark reform for the 21st century which will end the culture of working in silos and bring out a new work culture. It will radically improve the Human Resource management practices in the Government. The Mission will use scale and state of the art infrastructure to augment the capacity of Civil Servants. This holistic and comprehensive scheme will focus on individual as well as institutional capacity building.

The Karmayogi Mission seeks to transform Human Resource Management from rules-based to roles-based. It also aims to prepare the bureaucrats of India for the future and bring post-recruitment reforms. The schemes will be accessible for all, from section officers to secretaries. It will have two paths, self-driven, where the official can choose the field of interest, and guided, where an official will be provided with the wherewithal to perform their jobs effectively. A civil servant should be imaginative and innovative, proactive and polite, professional & progressive, energetic and enabling, transparent and tech-enabled, constructive and creative in order to meet the challenges of the society.

## Cyber Security

A cyber-crime is a crime which involves computer and network. This is becoming a growing threat to society and is caused by criminals or irresponsible action of individuals who are exploiting the widespread use of Internet. It presents a major challenge to the ethical use of information technologies. Cyber-crime also poses threats to the integrity, safety and survival of most business systems.

### TYPES OF CYBER CRIMES



## ETHICAL ISSUES

An Ethical issue is a problem or issue that requires a person or organization to choose between alternatives that must be evaluated as right (ethical) or wrong (unethical). These issues must be addressed and resolved to have a positive influence in society.

Some of the common ethical issues are listed below:

- ❖ Cyber crime
- ❖ Software Piracy
- ❖ Unauthorized Access
- ❖ Hacking
- ❖ Use of computers to commit fraud
- ❖ Sabotage in the form of viruses
- ❖ Making false claims using computers

## CYBER CRIME

Cybercrime is an intellectual, white-collar crime. Those who commit such crimes generally manipulate the computer system in an intelligent manner.

For example - illegal money transfer via internet.

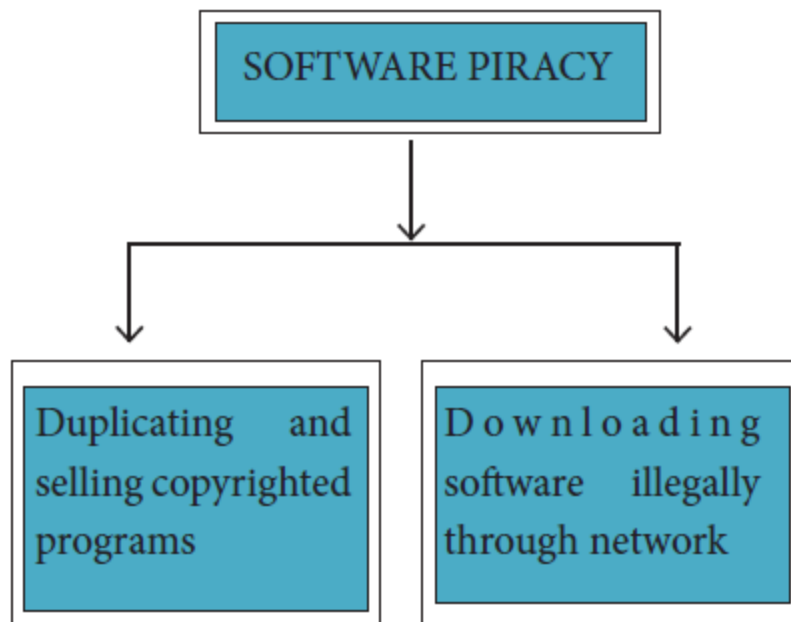
Examples of some Computer crimes and their functions are listed below

Crime	Function
Cyber Terrorism	Hacking, threats, and blackmailing towards a business or a person.
Cyber stalking	Harassing through online.
Malware	Malicious programs that can perform a variety of functions including stealing, encrypting or deleting sensitive data, altering or hijacking core computing functions and monitoring user's computer activity without their permission.
Denial of service attack	Overloading a system with fake requests so that it cannot serve normal legitimate requests.
Fraud	Manipulating data, for example changing the banking records to transfer money to an unauthorized account.
Harvesting	A person or program collects login and password information from a legitimate user to illegally gain access to others' account(s).
Identity theft	It is a crime where the criminals impersonate individuals, usually for financial gain.
Intellectual property theft	Stealing practical or conceptual information developed by another person or company.
Salami slicing	Stealing tiny amounts of money from each transaction.
Scam	Tricking people into believing something that is not true.
Spam	Distribute unwanted e-mail to a large number of internet users.
Spoofing	It is a malicious practice in which communication is sent from unknown source disguised as a source known to the receiver.

## SOFTWARE PIRACY

Software Piracy is about the copyright violation of software created originally by an individual or an institution. It includes stealing of codes / programs and other information illegally and creating duplicate copies by unauthorized means and utilizing this data either for one's own benefit or for commercial profit.

In simple words, Software Piracy is “unauthorized copying of software”. Figure 17.2 shows a diagrammatical representation of software piracy.



Diagrammatic representation of Software piracy

An entirely different approach to software piracy is called Shareware, this acknowledges the futility of trying to stop people from copying software and instead relies on people’s honesty. Shareware publishers encourage users to give copies of programs to friends and colleagues but ask everyone who uses that program regularly to pay a registration fee to the program’s author directly. Commercial programs that are made available to the public illegally are often called Warez.

## UNAUTHORIZED ACCESS

Unauthorized access is when someone gains access to a website, program, server, service, or other system by breaking into a legitimate user account. For example, if someone tries guessing a password or username for an account that was not theirs until they gained access, it is considered an unauthorized access.

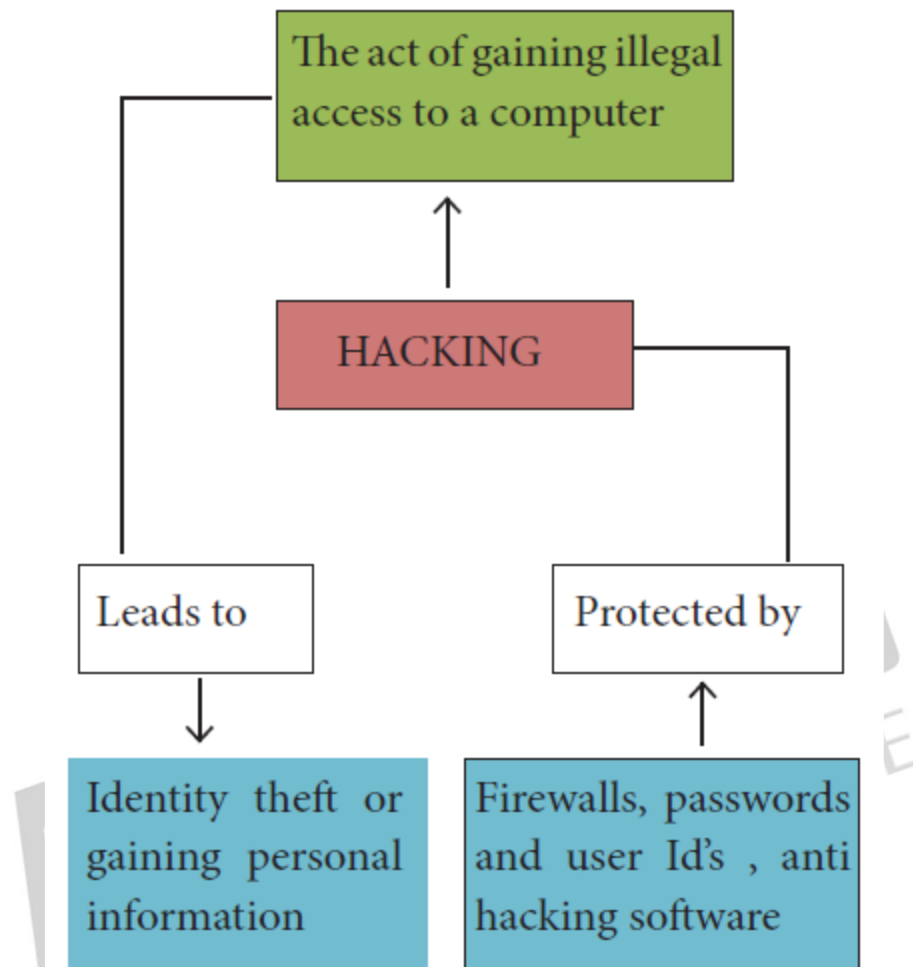
To prevent unauthorized access, Firewalls, **Intrusion Detection Systems (IDS)**, Virus and Content Scanners, Patches and Hot fixes are used.

## HACKING

Hacking is intruding into a computer system to steal personal data without the owner’s permission or knowledge (like to steal a password). It is also gaining unauthorized access to a computer system, and altering its contents. It may be done in pursuit of a criminal activity or it may be a hobby. Hacking may be harmless if the hacker is only enjoying the challenge of breaking



systems' defenses, but such ethical hacking should be practiced only as controlled experiments. Figure shows a diagrammatic representation of Hacking.



Diagrammatic representation of Hacking

## CRACKING

Cracking is where someone edits a program source so that the code can be exploited or modified. A cracker (also called a black hat or dark side hacker) is a malicious or criminal hacker. "Cracking" means trying to get into computer systems in order to steal, corrupt, or illegitimately view data.

A cracker is someone who breaks into someone else's computer system, often on a network, bypassing passwords or licenses in computer programs.

They may send official e-mail requesting some sensitive information. It may look like a legitimate e-mail from bank or other official institution.

## Cyber Security and Threats

Cyber attacks are launched primarily for causing significant damage to a computer system or for stealing important information from an individual or from an organization. Cyber security is a collection of various technologies, processes and measures that reduces the risk of cyber attacks and protects organizations and individuals from computer based threats.

### TYPES OF CYBER ATTACKS

Malware is a type of software designed through which the criminals gain illegal access.

#### Pharming

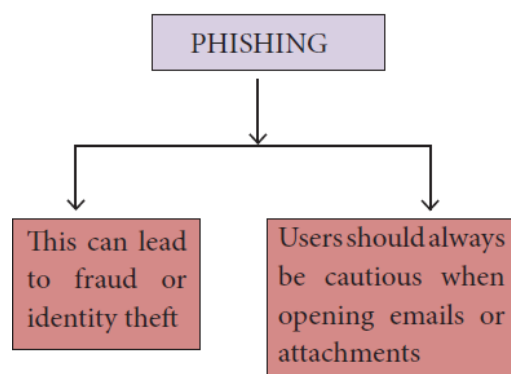
Pharming is a scamming practice in which malicious code is installed on a personal computer or server, misdirecting users to fraudulent web sites without their knowledge or permission. Pharming has been called "phishing without a trap". It is another way hackers attempt to manipulate users on the Internet. It is a cyber-attack intended to redirect a website's traffic to a fake site.

#### Cyber Security Threats

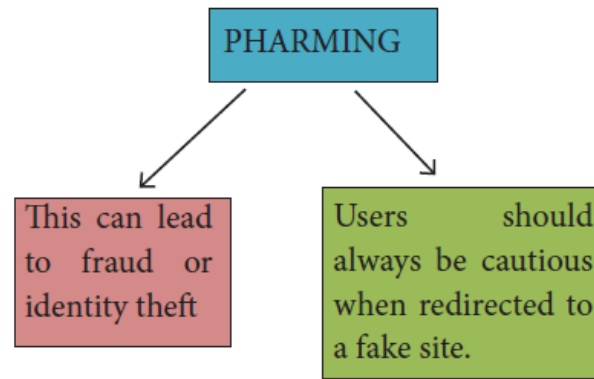
In recent years, most of the individuals and enterprises are facing problems due to the weaknesses inherent in security systems and compromised organizational infrastructures. Different types of Cyber Security Threats are categorized as below:

#### Phishing

Phishing is a type of computer crime used to attack, steal user data, including login name, password and credit card numbers. It occurs when an attacker targets a victim into opening an e-mail or an instant text message. The attacker uses phishing to distribute malicious links or attachments that can perform a variety of functions, including the extraction of sensitive login credentials from victims.



Diagrammatic representation of Phishing

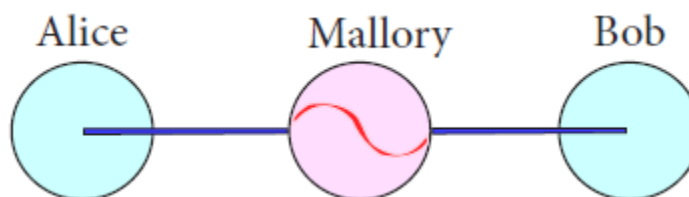


**Diagrammatic representation of Pharming**

### Man In The Middle (MITM)

Man-in-the-middle attack (MITM; also Janus attack) is an attack where the attacker secretly relays and possibly alters the communication between two parties who believe they are directly communicating with each other.

Example: Suppose Alice wishes to communicate with Bob. Meanwhile, Mallory wishes to intercept the conversation to overhear and optionally to deliver a false message to Bob.



**An illustration of the Man-In-The-Middle attack**

### Cookies

A cookie (also called HTTP cookie, web cookie, Internet cookie, browser cookie, or simply cookie) is a small piece of data sent from a website and stored on the user's computer memory (Hard drive) by the user's web browser while the user is browsing internet.

Cookies were designed to be a reliable mechanism for websites to remember stateful information (such as items added in the shopping cart in an online store) or to record the user's browsing activity (including clicking particular buttons, logging in etc.). They can also be used to remember arbitrary pieces of information that the user previously entered into form fields such as names, addresses, passwords, and credit card numbers. From the security point of view, if cookie data is not encrypted, any anonymous user (hacker) can access the cookie information and misuse it.

Web sites typically use cookies for the following reasons:

- ❖ To collect demographic information about who has visited the Web site.
- ❖ Sites often use this information to track how often visitors come to the site and how long they remain on the site.
- ❖ It helps to personalize the user's experience on the Web site.
- ❖ Cookies can help store personal information about users so that when a user subsequently returns to the site, a more personalized experience is provided.

If you ever returned to a site and have seen your name mysteriously appear on the screen, it is because on a previous visit, you gave your name to the site and it was stored in a cookie. A good example of this is the way some online shopping sites will make recommendations to users based on their previous purchases. It helps to monitor advertisements. Cookies do not act maliciously on computer system. They are merely text files that can be deleted at any time.

Cookies cannot be used to spread viruses and they cannot access your hard drive. However, any personal information that you provide to a Web site, including credit card information, will most likely be stored in a cookie unless the cookie feature is explicitly turned off in your browser. This is the way in which cookies threaten privacy.

### **Firewall and Proxy Servers**

A firewall is a computer network security based system that monitors and controls incoming and outgoing network traffic based on predefined security rules. A firewall commonly establishes a block between a trusted internal computer network and entrusted computer outside the network. Figure 17.7 shows the working of firewall server.

A proxy server acts as an intermediary between the end users and a web server. A client connects to the proxy server, requesting some service, such as a file, connection, web page, or other resources available from a different server. The proxy server examines the request, checks authenticity and grants the request based on that. Proxy servers typically keep the frequently visited site addresses in its cache which leads to improved response time.

### **Encryption and Decryption**

Encryption and decryption are processes that ensure confidentiality that only authorized persons can access the information.

Encryption is the process of translating the plain text data (plaintext) into random and mangled data (called cipher-text).

Decryption is the reverse process of converting the cipher-text back to plaintext. Encryption and decryption are done by cryptography. In cryptography a key is a piece of information (parameter) that determines the functional output of a cryptographic algorithm.

Encryption has been used by militaries and governments to facilitate secret communication. It is now commonly used in protecting information within many kinds of civilian systems. It is also used to protect data in communication system, for example data being transferred via networks (e.g. the Internet, ecommerce), mobile telephones, wireless microphones, wireless intercom

systems, Bluetooth devices and bank automatic teller machines. There have been numerous reports of data in communication being intercepted in recent years. Data should also be encrypted when transmitted across networks in order to protect against the network traffic by unauthorized users.

## INTRODUCTION TO INFORMATION TECHNOLOGY ACT

In the 21st century, Computer, Internet and ICT or e-revolution has changed the life style of the people. Today paper based communication has been substituted by e-communication. Accordingly we have new terminologies like cyber world, e-transaction, e-banking, e-return and e-contracts. Apart from positive side of e-revolution there is also negative side of computer, that is, the internet and ICT in the hands of criminals which has become a weapon of offence. Accordingly a new panel of members emerged to tackle the problems of cyber crimes in cyber space i.e. Cyber Law or Cyber Space Law or Information Technology Law or Internet Law.

In India Cyber law and IT Act 2000, modified in 2008 are being articulated to prevent computer crimes. IT Act 2000 is an act to provide legal recognition for transactions carried out by means of Electronic Data Interchange (EDI) and other means of electronic communication. It is the primary law in India dealing with cybercrime and electronic commerce(e-Commerce). e-Commerce is electronic data exchange or electronic filing of information.

## PREVENTION

25% of cyber crime remains unsolved. To protect the information the following points are to be noted:

- ❖ Complex password setting can make your surfing secured.
- ❖ When the internet is not in use, disconnect it.
- ❖ Do NOT open spam mail or emails that have an unfamiliar sender.
- ❖ When using anti-virus software, keep it up-to-date.

## Tamil in Internet

In 2017 a study conducted by KPMG a Singapore based organization along with google, reported that, Tamil topped the list, among the most widely used languages in India, where 42% are using the Internet in Tamil

68% Internet users consider local language digital content to be more reliable than English

Currently Tamil (42%) has the highest Internet adoption levels followed by Hindi and Kannada among the Indian language users.

As per study, by 2021, 74% of people in India will access internet using Tamil and it will be in the top usage of Internet in India.

## Search Engines in Tamil

The “Search Engines” are used to search any information from the cyber space. Although there are many search engines, but only a few of them are frequently in use. In the top ten search engines, Google, Bing and Yahoo take first three places respectively. Google and Bing provide searching facilities in Tamil, which means you can search everything through Tamil. The Google search engine gives you an inbuilt Tamil virtual keyboard.

### e - Governance:

Getting Government services through internet is known as e-Governance. Govt. of Tamilnadu has been giving its services through Internet. One can communicate with Govt. of Tamilnadu from any corner of the World. One can get important announcements, government orders, and government welfare schemes from the web portal of Govt. of Tamilnadu.

### e-Library

E-Libraries are portal or website of collection of e-books. Tamil e-Library services provide thousands of Tamil Books as ebooks mostly at free of cost. It is the most useful service to Tamil people who live far away from their home land.

### Tamil Typing and Interface software

Tamil is mostly used to type documents in word processors and search information on the internet. Typing Tamil using Tamil interface software is a familiar one among the different methods of typing. This is the simplest method of typing Tamil in both Computer and Smart phones.

#### Familiar Tamil Keyboard Interface:

NHM Writer, E-Kalappai and Lippikar – are familiar Tamil keyboard interfaces software that is used for Tamil typing which works on Tamil Unicode, using phonetics.

Sellinam and Ponmadal – are familiar Tamil keyboard layouts that works on Android operating system in Smart phone using phonetics.

### Tamil Office Automation Applications

Famous Office automation software like Microsoft Office, Open Office etc., provides complete Tamil interface facility. These softwares are downloadable and installed in your computer. After installation, your office automation software environment will completely change to Tamil. Menu bars, names of icons, dialog boxes will be shown in Tamil. Moreover, you can save files with Tamil names and create folders with Tamil names.

Apart from that Tamil Libra Office, Tamil Open Office, Azhagi Unicode Editor, Ponmozhi, Menthamiz, Kamban, Vani are office automation software working exclusively for Tamil. You can use these applications to work completely in Tamil.

## Tamil Translation Applications

Thamizpori (தமிழ்ப்பொறி) is a Tamil translation application having more than 30000 Tamil words equalent to English words. Using this application, we can translate small english sentences into Tamil. Google also gives an online translation facility, using this online facility we can translate from Tamil to any other language and vice versa.

## Tamil Programming Language

Programming languages to develop software in computers and smart phones are available only in English. Now, efforts are taken to develop programming languages in Tamil. Based on Python programming language, the first Tamil programming language “Ezhil” (எழில்) is designed. With the help of this programming language, you can write simple programs in Tamil.

## Tamil Information Interchange Coding Systems

### TSCII (Tamil Script Code for Information Interchange)

Computers handle data and information as binary system. Every data should be converted into binary when it is fed into a computer system. You have learnt about all these things in the first unit of this text book. Computers use ASCII encoding system to handle data and information. The ASCII encoding system is applicable only for handling English language.

Therefore, TSCII (Tamil Script Code for Information Interchange) is the first coding system to handle our Tamil language in an analysis of an encoding scheme that is easily handled in electronic devices, including non-English computers. This encoding scheme was registered in IANA (Internet Assigned Numbers Authority) a unit of ICANN.

### ISCII (Indian Script Code for Information Interchange)

This is one of the encoding schemes specially designed for Indian languages including Tamil. It was unified with Unicode.

### Unicode:

Unicode is an encoding system, designed to handle various world languages, including Tamil. Its first version 1.0.0 was introduced in October 1991. When Unicode was introduced it could handle nearly 23 languages including Tamil. Among the various encoding scheme, Unicode is the best suitable to handle Tamil.

## Tamil Operating System

An operating system is needed to access electronic systems such as computer and smart phone. Microsoft Windows is very popular operating system for personal computers. Linux is another popular open source operating system. Operating systems are used to access a computer easily. An operating system should be easy to work and its environment should be in an understandable form. Thus, all operating systems used in computers and smart phones are offered in Tamil environment.

Windows Tamil Environment interface should be downloaded and installed from the internet. It displays all window elements such as Taskbar, desktop elements, names of icons, commands in Tamil.

## **Organisation and projects to develop Tamil**

### **Tamil Virtual Academy:**

With the objectives of spreading Tamil to the entire world through internet, Tamil Virtual University was established on 17th February 2001 by the Govt. of Tamilnadu. Now, this organisation functions with the name of "Tamil Virtual Academy". It offers different courses in Tamil language, Culture, heritage etc., from kindergarten to under graduation level.

Website: <http://www.tamilvu.org/index.php>

### **Tamil Language Council, Singapore**

With the objectives of promoting the awareness and greater use of Tamil among the Singaporeans, in 2001 the council of Tamil Language was formed by the ministry of Information Communications and Arts, Govt. of Singapore. The council is called as "வளர்தமிழ்இயக்கம்".  
Website: <http://tamil.org.sg/ta>

### **Madurai Project**

Project Madurai is an open and voluntary initiative to collect and publish free electronic editions of ancient tamil literary classics. This means either typing-in or scanning old books and archiving the text is one of the most readily accessible formats for use on all popular computer platforms. Since its launch in 1998, Project Madurai etexts released are in Tamil script form as per TSCII encoding. Since 2004 we have started releasing etexts in Tamil unicode as well.

Web Site: <http://www.projectmadurai.org/>

### **Tamil Wikipedia:**

Wikipedia is a open source encyclopedia where any person can write an article about any subject. There are more than One lakh articles in Tamil Wikipedia.

**Web Site:** <https://ta.wikipedia.org/>

In order to make Tamil as a living language, it is the duty of every Tamilian to actively use Tamil in the development of technology.