

Current Affairs

"A MONTHLY MAGAZINE FOR UPSC CIVIL SERVICES EXAMINATION"

Telecom Sector Reforms

A Step Towards India's Digital Ambitions



Emergency Declared in Srilanka:
Should India be Worried?

Judicial Reforms:
Need for Indianisation

Right to be forgotten and
Right to be Left Alone

NEXT IAS

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MESSAGE TO THE READERS

The October 2021 Issue of the Next IAS Current Affairs Magazine (hereafter called 'The Magazine'), covers news events from 1st September 2021 to 30th September 2021 (hereafter called 'Coverage Period'). The Magazine has comprehensive coverage of all the topics from current affairs neatly categorized into major sections like Economy, International Issues, Polity & Governance, and so on.

This issue of the magazine has an in-depth analysis of issues such as '**Telecom Sector Reforms: A Step Towards India's Digital Ambitions**', '**Emergency**

Declared in Srilanka: Should India be Worried?', and '**Judicial Reforms: Need for Indianisation**'. The Magazine also covers the issues of '**Right to be Forgotten and Right to be Left Alone**' and many other issues which have become relevant in the coverage period.

The Magazine is designed for the needs of the students who are preparing for UPSC Civil Services Examinations. However, it is also helpful for Engineering Services Examinations, Banking Examinations and other government or Public Sector Enterprises examinations.

Any suggestion for further improvement of the Magazine is welcome and may be e-mailed to currentaffairs@nextias.com

Team NEXTIAS

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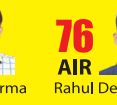
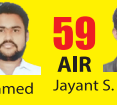
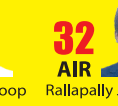
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TELECOM SECTOR REFORMS: A STEP TOWARDS INDIA'S DIGITAL AMBITIONS

The Union Cabinet approved a number of structural and process reforms in the Telecom sector.

About:

- **Aim:** The government has sought to address several issues in the policy regime, including the definition of AGR that had led to the large build-up of dues and pointless litigation.
- The reforms are expected to protect and generate employment opportunities, promote healthy competition, protect interests of consumers, infuse liquidity, encourage investment and reduce regulatory burden on Telecom Service Providers (TSPs).
- In the backdrop of the outstanding performance of the Telecom Sector in meeting COVID-19 challenges, with huge surge in data consumption, the Reform measures will further boost the proliferation and penetration of broadband and telecom connectivity.

Strengths of Telecom Sector:

- **Strong demand:** World's second largest in terms of telecom network, internet subscribers as well as app downloads; telecom sector likely to have economic value of \$217 billion by 2020
- **Increasing data usage:** India is also one of the largest data consumers (an average 1 GB data per day per user) globally
- **Good telecom infrastructure:** Large telcos have been investing on network infrastructure to improve customer experience for last few years.
- **Fast-tracked reforms provide room for growth:** National digital communications policy, 2018 aims to attract \$100 billion worth of investments in the sector by 2022.

Issues Plaguing Telecom Sector:

- **Limited Spectrum Availability:** Available spectrum is less than 40% as compared to European nations and 50% as compared to China. Hence, it is imperative that spectrum auctioning at sustainable prices is the need of the hour.
- Also, government auction spectrum at an exorbitant cost which makes it difficult for mobile operators to provide services at reasonable speeds.
- **Lack of Telecom Infrastructure in Semi-rural and Rural areas:** Service providers have to incur huge initial fixed cost to enter semi-rural and rural areas. Key reasons behind these costs are lack of basic infrastructure like power and roads, resulting in delays in rolling out the infrastructure.

- **Poor fixed line penetration:** India has very little penetration of fixed line in its network whereas, most of the developed countries have a very high penetration of fixed lines.
- **High Right-of-Way (ROW) cost:** Sometimes, states governments charge a huge amount for permitting the laying of fibre etc.
- **Lack of trained personnel** to operate and maintain the cellular infrastructure.
- **Delays in Roll Out of Innovative Products and Services:** Substantial delays in roll out of data-based products and services are hampering the progress of telecom sectors. This is primarily due to the non-conducive environment resulting out of government policies and regulations.
- **Low Broad Band Penetration:** Low broadband penetration in the country is a matter of concern and the government needs to do a lot more work in the field to go up in the global ladder.

Need of Reforms:

- **Debt accumulation:** The real trouble for the telecom operators began when the government decided to price the 3G spectrum at a very high rate, which eventually gave it a windfall gain of Rs 67,719 crore.
 - ♦ At that time, this helped the govt of the day to bridge the fiscal deficit, but it resulted in a massive debt accumulation by telcos in the coming years.
 - ♦ To upgrade their 3G infrastructure, the telecom companies were required to invest heavily in the coming years. The cumulative debt of the companies rose from Rs 82,726 crore in 2008-09 to Rs 2.5 lakh crore in 2012-13. Over the years, this high debt burden only worsened.
- **Spectrum payment obligations and AGR liabilities** in excess of ₹1.68-lakh crore as of June 30 need to be cleared by telcos.
- **Entry of Jio:** Financial constraints coupled with the high debt burden and the disruption caused by the entry of Reliance Jio meant that the telecom sector, once a pillar of India's modern economy post-liberalization, was in dire need of life support.
- **Intense competition:** Cut-throat price war among telcos has led to consolidation in the industry as well as declining overall profits for last couple of years.
- **Lot of freebies** were added which cannot be taken back.

RESPITE FOR TELCOS | A look at some of the relief measures announced by the Union government for telecom companies

Four-year moratorium for dues of telecom service providers. However, they will have to pay interest

100% foreign direct investment through automatic route in the sector, from the existing limit of 49%

For customers, shifting from prepaid to postpaid and vice-versa will not require fresh KYC

Spectrum auctions to be normally held in the last quarter of every financial year

Further measures will be added when the 5G spectrum is auctioned, said Telecom Minister



Structural Reform:

- **Rationalization of Adjusted Gross Revenue:** Non-telecom revenue will be excluded on prospective basis from the definition of AGR.
- **Bank Guarantees (BGs) rationalized:** Huge reduction in BG requirements (80%) against License Fee (LF) and other similar Levies. No requirements for multiple BGs in different Licensed Service Areas (LSAs) regions in the country. Instead, One BG will be enough.
- **Interest rates rationalized/ Penalties removed:** From 1st October, 2021, Delayed payments of License Fee (LF)/ Spectrum Usage Charge (SUC) will attract interest rate of SBI's

MCLR plus 2% instead of MCLR plus 4%; interest compounded annually instead of monthly; penalty and interest on penalty removed.

- **No BG Required:** For Auctions held henceforth, no BGs will be required to **secure instalment payments**. Industry has matured and the past practice of BG is no longer required.
- **Spectrum Tenure:** In future Auctions, tenure of spectrum increased from 20 to 30 years.
- **Surrender of spectrum** will be permitted after 10 years for spectrum acquired in the future auctions.
- **No Spectrum Usage Charge (SUC)** for spectrum acquired in future spectrum auctions.
- **Spectrum sharing encouraged-** additional SUC of 0.5% for spectrum sharing removed.
- **FDI Reforms:** To encourage investment, 100% Foreign Direct Investment (FDI) under automatic route permitted in Telecom Sector.

Procedural Reforms:

- **Auction calendar fixed** - Spectrum auctions to be normally held in the last quarter of every financial year.
- **Ease of doing business promoted** - cumbersome requirement of licenses under 1953 Customs Notification for wireless equipment removed. Replaced with self-declaration.
- **Know Your Customers (KYC) reforms:** Self-KYC (App based) permitted. E-KYC rate revised to only One Rupee. Shifting from Prepaid to Post-paid and vice-versa will not require fresh KYC.

THE ISSUE OF ADJUSTED GROSS REVENUE (AGR)

- **National Telecom Policy:** The telecom sector was liberalised under the National Telecom Policy, 1994 after which licenses were issued to companies in return for a fixed license fee.
- To provide relief from the steep fixed license fee, the government in 1999 gave an option to the licensees to migrate to the revenue sharing fee model.
- This revolutionized telecom services over the next two decades. But, while the government allowed private sector participation in the telecom sector, its policies over time, like charging high spectrum prices, AGR dispute, etc., resulted in a situation where the telecom market is now headed towards a potential duopoly.
- **Vodafone's Case:** The recent news of Vodafone Idea Limited's (VIL) near-bankruptcy situation sent shockwaves across the telecom sector.
- **Sharing Percentage of AGR:** Under this, mobile telephone operators were required to share a percentage of their AGR with the government as annual **License Fee (LF)** and **Spectrum Usage Charges (SUC)**.
- **Calculation of AGR:** License agreements between the Department of Telecommunications (DoT) and the telecom companies define the gross revenues of the latter.
- The LF and SUC were set at 8 percent and between 3-5 percent of AGR respectively, based on the agreement.
- **Dispute:** The dispute between DoT and the mobile operators was mainly on the definition of AGR.
 - ♦ The DoT argued that AGR includes all revenues (before discounts) from both telecom and non-telecom services.
 - ♦ The companies claimed that AGR should comprise just the revenue accrued from core services and not dividend, interest income or profit on sale of any investment or fixed assets.
- **2019:** Setting aside TDSAT's order, the Supreme Court on October 24, 2019 upheld the definition of AGR as stipulated by the DoT.

- **Paper Customer Acquisition Forms (CAF)** will be replaced by digital storage of data. Nearly 300-400 crore paper CAFs lying in various warehouses of TSPs will not be required. Warehouse audits of CAF will not be required.
- **SACFA clearance for telecom towers eased.** DOT will accept data on a portal based on self-declaration basis.

Addressing Liquidity requirements of Telecom Service Providers:

The Cabinet approved the following for all the Telecom Service Providers (TSPs):

- **Moratorium/Deferment** of upto four years in annual payments of dues arising out of the AGR judgement
- **Payment by way of Equity:** Option to the TSPs to pay the interest amount arising due to the said deferment of payment by way of equity.
- At the option of the Government, to convert the due amount pertaining to the said deferred payment by way of equity at the end of the Moratorium/Deferment period, guidelines for which will be finalized by the Ministry of Finance.

Concerns Associated with Reforms:

- **Non-telecom revenue will be excluded only prospectively** from the definition of AGR. Hence, the past dues of Rs 1.6 Lakh crores still remain payable.
- **Deferment, not waiver:** The deferment for AGR dues cannot be construed as waiver since the package only envisages a moratorium of four years on such AGR dues from 1st October 2021 (appointed date) with the interest and penalties accruing for such deferral. This will provide only temporary relief, since the dues will ultimately have to be paid with interest.
- **Rise in tariffs:** As the overall liability does not come down, so ultimately companies will have to raise tariffs to generate sufficient cash flows.
- **Demand for setting floor tariff ignored:** A long-standing demand for the government's intervention in setting telecom floor tariffs, as it has done in the civil aviation sector to protect competition, did not find a place in the relief package.

Significance:

- **More Competition:** With competition and customer choice, antyodaya for inclusive development and bringing the marginalized areas into the mainstream and universal broadband access to connect the unconnected.
- **Faster infusion of 4G and 5G:** The package is also expected to boost 4G proliferation, infuse liquidity and create an enabling environment for investment in 5G networks.

- **More Fiscal space to telcos:** Telcos have to pay huge BGs; however, this provision has been done away with for future auctions. This will allow greater financial space to telecom operators.
- **More investment and innovation:** 100% FDI through the automatic route will encourage investment in the country and push India's rankings on the innovation index
- **Relief to Banks:** The telecom package comes as a relief to the banks, as it mitigates the imminent possibility of default by vulnerable operators. This would help in stabilizing and reducing the non-performing assets in the sector.
- **More consumer centric:** App-based know-your-customer (KYC) process, will allow users to validate their credentials remotely, followed by contact-less delivery of SIMs at their premises. This will empower consumers and ensure faster onboarding.

Way Forward:

- **Infrastructure Sharing:** Since telecom business is heavy on capex and as much as 40%– 60% of the Capex is utilized for setting up and managing the Telecom infrastructure. By sharing infrastructure, operators can optimize their capex, and focus on providing new and innovative services to their subscribers.
- **Availability of Affordable Smart Phones and Lower Tariff Rates:** This would increase tele penetration in rural areas.
- **Curb on predatory pricing:** Government should fix a minimum price to save the industry from price war
- **Lower License fee:** The license fee of eight per cent of the Adjusted Gross Revenue including five per cent as Universal Service Levy (USL) is one of the highest in the world.
- **Reduce reserve price for spectrum auction:** In the past, some of the operators participated recklessly in these auctions leading to exaggerated prices — much above their true valuations. Reasonable reserve prices for the market mechanisms induce "truthful bidding", and not leading to "winners' curse" as witnessed in some of the previous auctions.
- The government should increase the network area through optical fibre instead of copper which is expensive. This is necessary to ensure last mile connectivity.
- The government needs to prepare a ground for easy right-of-way permissions and lower cost of right-of-ways.
- **The government should spend large on R&D** and create an environment that makes India capable of manufacturing and even exporting hardware components like mobile handsets, CCTV Cameras, touch screen monitors etc.

EMERGENCY DECLARED IN SRILANKA: SHOULD INDIA BE WORRIED?

Sri Lankan President has declared an economic emergency to contain soaring inflation in the country's currency

About:

- **Background:** President Rajapaksa declared the state of emergency under the **Public Security Ordinance (PSO)** to prevent the hoarding of essential items, including rice and sugar.
 - ♦ **Section 2 of the PSO** empowers the President to declare a State of Emergency in two situations: when the President is of the opinion that it is expedient to do so
 - in the interest of public security and the preservation of public order, or
 - for the maintenance of supplies and services essential to the life of the community.

Why the crisis has occurred?

- **Low foreign exchange:**
 - ♦ **Huge foreign Debt:** Sri Lanka is bent by a huge foreign debt burden. It is unable to repay these loans because of critically low foreign exchange reserves.
 - The country's debt burden has also been growing - from 39% of Gross National Income (GNI) in 2010 to 69% in 2019, according to the World Bank.
 - Its foreign reserves stood at \$2.8bn (£2bn) at the end of July, down from \$7.5bn in November 2019, when the government took office.
 - ♦ With the tourism industry destroyed since the 2019 Easter attacks, Sri Lanka had lost one of its top foreign exchange pullers even before the pandemic struck.
 - ♦ The tea and garment industries have also been hit by the pandemic, affecting exports.
 - ♦ Remittances increased in 2020, but are not sufficient to pull Sri Lanka out of its crisis.
 - ♦ At the end of July, the country's foreign exchange reserves were \$ 2.7 billion, while it needs to repay foreign debts of about \$ 4 billion.
- **Import dependence:**
 - ♦ Sri Lanka imports many of its essential food items, including pulses, sugar, wheat flour, vegetables, and cooking oil.
 - ♦ Earlier this year, it stopped imports of vehicles and several other items, including edible oils, turmeric, and even toothbrushes, in a bid to save precious foreign exchange.
- **Demand side issues:**
 - ♦ Central Bank of Sri Lanka has printed currency worth Rs 800 billion over the last 18 months to ease the economic crisis and that has led to increased liquidity in the economy.

- ♦ But this infusion of money, and the consequent increase in demand without a corresponding increase in supply, has led to a **sharp spike in inflation**.
- ♦ This in turn **has devalued the currency**, made imports costlier, added to the debt and put the forex reserves under more pressure.
- **Price regulation by the government:**
 - ♦ The government's decision, under the emergency, to fix prices of all essential items has further hit imports, as traders are reluctant to buy at high prices internationally without a promise of returns from sales in the markets at home.
 - ♦ In addition, there is a restrictive import licensing regime.
- **Organic farming:**
 - ♦ In April, the government banned imports of chemical fertilisers, pesticides and herbicides, to encourage organic farming.

Criticism of the emergency regulations:

- **Social Revolution:** The current crises and the failures of successive governments over the past decades could trigger a '**social revolution**', including one of the majority Sinhala-Buddhist kind.
- **Violation of Fundamental Rights:** There is a fear that emergency declaration could lead to repression.
 - ♦ It'll be the president's rule by himself, making emergency regulations under the public security ordinance. And that can override considerations of health, or even food supplies.
 - ♦ The danger is that given the present government's propensity to stifle dissent, emergency regulations would be used to curb protests and other democratic action.
- **Fundamental problem remains unaddressed:**
 - ♦ Sri Lanka does not have a universal public distribution system or ration cards that can ensure essential goods reach all consumers.
 - The current regulations do not address its fundamental economic problem, and instead pose the risk of creating black market.

Impact on Indian exporters:

- Exporters in India worried as the curbs placed by the island nation on imports and foreign currency may worsen **payment problems** they are already facing.

- While India's exports and imports may be the first to be affected by the crisis in Sri Lanka, its investments in development projects and areas such as petroleum retail, tourism & hotel, manufacturing, real estate, and financial services may also take a hit if the situation worsens.
- Banks are not willing to discount Letter of Credit of Sri Lankan Banks as payments are not coming on time. This is resulting in a payment problem for Indian exporters, including those from the yarns and fabric sector.

India Sri Lanka Relations:

• Political Relations:

- ♦ India and Sri Lanka have time-tested bilateral ties, which are founded on the principles of mutual benefit, mutual understanding and a common purpose defined by good neighborly relations.
- ♦ India and Sri Lanka, both a former colony of Britain, shares maritime borders.
- ♦ Post LTTE, the political relation between the two South Asian nations have improved significantly and are marked by several high-level visits and summits.
 - Sri Lankan President H.E Gotabaya Rajapaksa visited India from 28-30 November 2019 in the first overseas trip as President.
 - Prime Minister Shri. Narendra Modi hosted a Virtual Bilateral Summit (VBS) with Sri Lankan Prime Minister H.E. Mahinda Rajapaksa on 26 September 2020.
 - A joint statement covering all areas of bilateral cooperation, titled '**MitratvaMaga**' was issued following the Virtual Summit.
- ♦ India and Sri Lanka interact at many multilateral forums, such as SAARC, BIMSTEC, etc.
- ♦ Sri Lanka is an important pillar of India's Neighborhood First policy and Sri Lankan leaders have in principle accepted India First approach.

• Commercial:

- ♦ In the year 2000, India and Sri Lanka signed India-Sri Lanka **Free Trade Agreement (ISFTA)**.
- ♦ India has traditionally been among Sri Lanka's largest trade partners and Sri Lanka remains among the largest trade partners of India in the **SAARC**.
 - In 2020, India was Sri Lanka's 2nd largest trading partner with the bilateral merchandise trade amounting to about USD \$ 3.6 billion.
 - **The main items of exports** from Sri Lanka to India are: Base Oil, Poultry feeds, Areca nuts, (waste and scrap) paper or paperboard, Pepper, Ignition Wiring Sets, Copper wire, Marble, travertine and alabaster.
 - **Main items of Imports from India to Sri Lanka are:** Gas oil/ Diesel, Motorcycles, Pharmaceutical Products, Portland cement, Semi finished products of Iron, Military

weapon, Fuel oil, Rice, Cement clinkers, Kerosene Type jet Fuel.

- ♦ India has been the largest source market of tourists visiting Sri Lanka, prior to the pandemic. The total number of tourist arrivals from India to Sri Lanka during January-December 2019 was 355,002 i.e. approximately 18.2% of the total tourist arrivals into Sri Lanka.
- **Major Indian investments in Sri Lanka:**
 - ♦ India is among the top investors in Sri Lanka with cumulative investments of close to USD 1.7 billion since 2005. According to data provided by BOI (Board of Investment of Sri Lanka), FDI from India amounted to about USD 139 million in 2019.
 - ♦ Government of India has committed a sum of US\$ 3.5 bn, out of which US\$ 750 mn is grant money.
 - ♦ Few major Indian projects in Sri Lanka are:
 - **The Indian Housing Project**, with an initial commitment to build 50,000 houses in war affected areas and estate workers in the plantation areas, is Government of India (GoI)'s flagship grant project in Sri Lanka.
 - The country-wide 1990 Emergency Ambulance Service is another flagship project.
 - **A US\$ 100 million LoC** for undertaking solar projects in Sri Lanka has been signed between the Government of Sri Lanka and EXIM Bank on June 16, 2021.
 - On September 30, an Indian company, the **Adani Group, signed a \$700 million deal with the Sri Lanka Ports Authority** and the Sri Lankan conglomerate John Keells Holdings.
 - The agreement is meant to develop the **Western Container Terminal (WCT)** of the Colombo Port, with the Adani Group having a 51 percent stake.
- **Strategic relations:**
 - ♦ As the centre of gravity of global strategic power is shifting to the Indian Ocean Region (IOR), Sri Lanka is emerging as its pivot.
 - ♦ India and Sri Lanka conduct joint Military (**Mitra Shakti**) and Naval exercise (**SLINEX**).
 - ♦ India also provides defence training to Sri Lankan forces.
- **Cultural Relations:**
 - ♦ The two countries have deep Buddhist connect.
 - Prime Minister Shri Narendra Modi during the Virtual Bilateral Summit held between India and Sri Lanka on 26 September 2020, announced a USD 15 million grant assistance for protection and promotion of Buddhist ties between India and Sri Lanka.
 - In July 2020, the Government of India declared **the Kushinagar Airport in India, the place of Lord Buddha's Mahaparinibbana**, as an international airport, to allow Buddhist pilgrims from around the world to visit the revered site associated with Lord Buddha with ease.
 - First inaugural flight to the airport was from Sri Lanka.

- **China issue:**
 - ♦ Sri Lanka is a part of Belt and Road initiative which India opposes.
 - ♦ The current government in Sri Lanka is considered to be soft on China.
 - ♦ On 19 May 2021, the Sri Lankan Parliament approved the '**Colombo Port City Economic Commission Bill**' by a majority vote (148-59).
 - The passing of the Bill which will soon become an Act will give China an additional 269 hectares of reclaimed seafront off the Colombo port in the country's south-west with little oversight from the Sri Lankan government and will enable it to have full control to the extent that it could even regulate the movement of people and since any currency will be allowed to be used, the Yuan will be a certainty.
 - ♦ Sri Lanka has leased out Hambantota Port to China, in order to repay its debt, for 99 years.
 - Control of this port is a strategic asset for China in mitigating the vulnerability of its trade and energy in what is referred to as its Malacca Dilemma.
 - A permanent PLA(N) presence in the Indian Ocean is a source of concern to the Indian Navy which has been flagged by successive Chiefs of the Indian Navy.
 - A PLA(N) presence in the eastern Indian Ocean will certainly inhibit the Indian Navy's deployment options and will neutralise the geographical advantage it enjoys in these waters.
 - **Other issues between India and Sri Lanka:**
 - ♦ **Death of Indian fishermen:** Given the proximity of the territorial waters of both countries, especially in the Palk Straits and the Gulf of Mannar, incidents of straying of fishermen are common.
 - Four Indian fishermen died due to collision between an Indian vessel and a Sri Lankan naval craft on January 18, 2021.
 - The Rameswaram fishermen community was outraged with the decision of the Sri Lankan authority to auction more than 100 Indian trawlers in its custody.
 - ♦ **Cancellation of the ECT Project at the Colombo Port:** Sri Lanka, Japan, and India signed an agreement to jointly develop the ECT at the Colombo Port in May 2019.
 - On February 1, 2021, the Sri Lankan Cabinet decided to pull out of the Tripartite Agreement.
 - India was disappointed with the decision as over 70 per cent of the transshipment business in the terminal is linked to India.
 - It is also of geostrategic interest for India, as the terminal is located in proximity to Colombo Port City, being developed by the Chinese.
 - ♦ **UNHRC Resolution on Sri Lanka:** In 2012, India had voted against Sri Lanka at the UNHRC, in the background of deteriorating relations between the two countries.
 - The resolution, 'Promoting reconciliation, accountability and human rights in Sri Lanka', was tabled on February 22, 2021 was tabled at UNHRC.
 - While Pakistan and China have opposed the resolution, India abstained from a crucial vote on Sri Lanka's rights record at the United Nations Human Rights Council in Geneva.
 - ♦ **Jaffna Hybrid Energy Project:** The MS/Sinosoar-Etechwin joint venture (JV) was awarded the contract to install a hybrid renewable energy system on Nainativu, Delft, and Analaitivu islands off the Jaffna Peninsula.
 - Citing security concerns, India registered a protest over the selection of the Chinese company to execute the project.
- Way Forward:**
- India being a bigger nation, must play the role of an elder brother, rather than that of a big brother.
 - India must work on areas, where its strength is more than that of China.
 - ♦ In education, healthcare, and tourism, India is a far stronger partner than China.
 - ♦ India can build on the educational exchanges by establishing an Indian Institute of Technology (IIT in Sri Lanka's planned education zone.
 - ♦ In the country's northeast, India can set up technical and English language training centres like the Sri Lanka-India Centre for English Language Training (SLICELT) in Kandy.
 - In addition, India and Sri Lanka should look forward to extensive cooperation in pharmaceutical manufacturing, as announced in the joint statement issued during Jaishankar's visit earlier this year.
 - In the technology sector, India could create job opportunities by expanding the presence of its information technology companies in Sri Lanka.
 - ♦ Aside from a special economic zone (SEZ) for pharmaceuticals, the two sides could also look into similar provisions for information technology and education, among other sectors.
 - ♦ The grandeur and prevalence of cricket in both countries ought to be leveraged.
 - Expanding the Indian Premier League (IPL) to Sri Lanka in partnership with Lanka Premier League (LPL) will encourage people-to-people contact and boost tourism.
 - Any issue which arises between the two nations must be resolved peacefully. India must use Gujral Doctrine while playing the role of a larger neighbor.

JUDICIAL REFORMS: NEED FOR INDIANISATION

Chief Justice of India N V Ramana has called for Indianization of the country's legal system to make the justice delivery system more accessible and effective.

About:

- Our legal and judicial history dates back to 5000 years. No other judicial system has a more ancient and acclaimed pedigree like Bharat-Varsh.
- Law in India has evolved from religious prescription to the current constitutional and legal system we have today, traversing through secular legal systems and the common law.
- However, our legal system is often accused of colonial hangover, as the attire of its office bearers and service providers, the language they speak in, and many of the laws they interpret and enforce, are all overtly drawn from our erstwhile colonial masters.
- Hence, there are calls for Indianisation of legal system which means the need to adapt to the practical realities of our society and to localise our justice delivery system
- CJI has called for Indianisation of legal system due to following reasons
 - ♦ Very often our justice delivery poses many barriers for the common people – language and regional barriers.
 - ♦ The working and the style of courts do not sit well with the complexities of India.
 - ♦ Our systems, practice, rules being colonial in origin, may not be best suited to the needs of the Indian population

Need of Indianised Legal System:

- **Prominent role of English** - English, which is spoken as a first, second or third language by only between 6-10 % of all Indians, has a near monopoly on legal proceedings at the level of the High Courts and the Supreme Court.
 - ♦ Hence, Parties from a rural place fighting a family dispute are usually made to feel out of place in the court as they do not understand arguments or pleadings which are mostly in English.
- **Exclusion of large Indians from understanding law** - While many subordinate courts do transact business in the Indian language of the area they are situated in, the law they apply is laid down in English and their decisions are subject to appeals before higher courts in English.
 - ♦ This excludes a large proportion of Indians from an accurate and direct understanding of the law of the land.
- **Lengthy judgements** - These days judgments have become lengthy, which further complicates the position of the litigants.

- ♦ Parties are forced to spend more money to understand the implication of the judgment.
- ♦ It also adds to pendency of cases due to extra time consumed in lengthy judgements.

- **Malimath Committee (2000)** - Its report on reforms in the Criminal Justice System of India (CJS) in 2003 suggested that a Schedule to the Code be brought out in all regional languages so that the accused knows his/her rights, as well as how to enforce them and whom to approach when there is a denial of those rights.

Other issues plaguing Indian Judicial System:

- **Pendency of cases** – The large pendency of cases is a long-standing issue across the Indian judiciary which leads to delay in delivering the justice. Currently, around 4.5 crore cases are pending in Indian courts.
- **Vacancies across the judicial system** – This problem further adds to the rising pendency thereby delaying justice.
 - ♦ The judge-population ratio in India stood at 21.03 judges per million people in 2020.
- **Poor representation of women in Higher judiciary** - The first-ever woman judge in the SC was appointed in 1989, 39 years after the apex court came into existence. Since then, only 10 women have become judges in the apex court.
 - ♦ In High courts, women account for only 11% of the judges.
 - ♦ In five HCs (Manipur, Meghalaya, Patna, Tripura, Uttarakhand), no woman has served as a judge.
- **Independence of judiciary in question** – In many politically sensitive cases, the Courts often virtually defer to the executive instead of stepping in to restore constitutional rights and values in letter and spirit which raises question of its independence.
 - ♦ Also, various retired judges have been given top constitutional posts like that of governor, which sends a wrong signal and further erodes the confidence in judicial independence.
- **Lack of transparency (particularly in the appointment of judges)** – Collegiums have virtually monopolised appointments and transfers of the judges and rejected governments National Judicial Appointments Commission (NJAC) system.
 - ♦ Be it the collegium system or the NJAC, none seem to be transparent enough to make the selection process of judges clear and understandable to the common public.

- ◆ Also, judiciary in many judgements have stepped in the domain of legislature leading to judicial overreach.
- **Inadequate infrastructure** - Courts in the country do not have basic facilities for litigants. Most subordinate courts lack basic infrastructure for judges, court staffs, and litigants.
- **Govt expenditure** – It has been found that India does not spend enough on the judiciary and actual expenditures regularly fall well below the requisite budgetary allocations.
 - ◆ India Justice Report 2019 found that, out of the twenty-seven states and two union territories, the growth rate of judicial expenditures was lower than the growth rate of total expenditures in twenty-one of them.



Important Reforms taken to Improve Judicial System:

- **National Mission for Justice Delivery and Legal Reforms** was setup in 2011 to introduce judicial reforms in the country which adopted many strategic initiatives mentioned below.
- **Improvement in infrastructure** – The Centrally Sponsored Scheme (CSS) for Development of Infrastructure Facilities for Judiciary has been extended by 5 years up to 2026.
 - ◆ The number of court halls at district and subordinate courts had gone up by more than 3,800 from close to 16,000 in 2014 to more than 19,500 in 2020.
- **Grants to Gram Nyayalayas** - The govt has also approved a proposal to support Gram Nyayalayas by providing recurring and non-recurring grants for a period of 5 years with a total outlay of Rs 50 crore.
- **Adopting digital solutions** - The govt has implemented the e-Courts Mission Mode Project across the country and the number of computerised district and subordinate courts had increased from 13,672 to 16,845 between 2014 and 2020.
- **'Arrears Committees'** – These have been set up across Indian Courts to “clear cases pending for more than five years”.

- **Artificial Intelligence (AI) portal SUPACE** - The Supreme Court recently unveiled its Artificial Intelligence (AI) portal SUPACE, designed to make research easier for judges, thereby easing their workload.

Way Forward

- **Separate judicial and administrative functions:** Most administrative functions should be placed with the separate agency so that day-to-day administration does not consume judges' time—which should largely be spent on judicial functions.
- **A comprehensive strategy for data collection and analysis** at courts, tribunals, and investigative agencies needs to be developed.
 - ◆ This can be based on consistent and agreed parameters – such as parameters based on the nature of the matters (summons or warrant cases), duration of pendency, and stage of the matters.
- Increase use of technology and digitization of the judicial process. The COVID-19 period has already tested virtual hearings and there is no reason why this cannot be institutionalized further.
- **Litigant-centric courts** - Courts need to be litigant-centric as they are the ultimate beneficiaries.
 - ◆ The simplification of justice delivery is crucial to make justice delivery more transparent, accessible and effective.
 - ◆ The lawyers and judges to create an environment which is comforting for litigants and other stakeholders
 - ◆ A common man while approaching the court should not feel scared of judges and the courts; he should be able to speak the truth
- **Alternate dispute mechanisms** like mediation and conciliation need to be promoted to reduce pendency, unnecessary litigation and save resources.
- **Indianisation at grass root levels** - The Supreme Court's project of 2019 for providing authoritative translations of judgments in 9 regional languages, of the state of origin of the case, is a commendable one.
 - ◆ It had lost steam during the COVID-19 induced disruption of life and it needs to be brought back in full force and catch up on lost time.
- **Reforms at tribunal level** - Implement measures to strengthen and expedite justice delivery and disposal of matters at tribunal level, including through timely appointments, provision of adequate infrastructure, and regular monitoring of case-load ageing at such tribunals (as well as making this information available to the general public)
- **Empower Panchayati Raj Institutions:** These Institutions need to be empowered so that all the small cases are not allowed to clog the normal court system but given to them.

RIGHT TO BE FORGOTTEN AND RIGHT TO BE LEFT ALONE

The Delhi High Court in a recent judgement upheld the view that the “Right to Privacy” includes the “Right to be Forgotten” and the “Right to be Left Alone”.

About:

- Recently, responding to a plea by unnamed Bengali actor, the Delhi High Court has reaffirmed that “Right to be forgotten” and the “Right to be Left Alone” covered are part of Right to privacy and covered under Article 21 of Indian Constitution
- Issues in the current case:** In her plea, the unnamed female actor has told that a trailer video related with an unpublished web series was uploaded on social media account by the producers which contained explicit scenes of complete frontal nudity.
 - On the other hand, online platforms questioned their right to publish.

Observations made by the Delhi High Court:

- Infringement of fundamental rights:** In this case the court has observed that the victim is entitled ‘to be left alone’ and ‘to be forgotten’. Further, she is also entitled to protection from invasion of her privacy by strangers and anonymous callers.
- Impacting Reputation of the person:** The court clearly stated that explicit videos that are being circulated have a clear and immediate impact on the reputation of the person seen in the videos in a state of nudity which are published without her consent.

- The court opined that the right to be forgotten and the right to be left alone as “**inherent aspects**” of the right to privacy.
 - Right to privacy is protected as an intrinsic part of the right to life and personal liberty under Article 21 and as a part of the freedoms guaranteed by Part III of the Constitution.
 - In Puttaswamy v. Union of India case, 2017, the Right to Privacy was declared a fundamental right by the Supreme Court.
- Checking invasion of privacy:** The court has clearly stated that the victim is entitled to get defended on account of ‘Right to be forgotten’ and ‘Right to be Left Alone’. These rights will help victims to ensure privacy of the individuals.

Significance of the judgement:

- Impact on personal life:** In accordance with natural law a person can’t be subjected to mental torture and harassments for such deeds for which he has been punished or is a matter of past.
- Impacts fundamental rights:** This impacts right to privacy and other fundamental rights such as ‘Right to live with human dignity’ covered under article 21 of the constitution.’
- Clarity in the provisions of “Right to Life” under article 21 of the constitution checks infringement of fundamental rights.

CASE STUDY

Ashutosh Kaushik Vs Union of India and others:

- The case was related to right to privacy pertaining to ‘Right to be Forgotten’ in India.
- The plea was filed by Ashutosh Kaushik who had won reality shows such as Bigg Boss in 2008 and MTV Roadies 5.0.
- The plea was filed as a writ under article 226 of the constitution.
- Right to be forgotten:** He approached the Delhi High Court with a plea saying that his videos, photographs and articles etc. be removed from the internet citing his “Right to be forgotten”.
- The plea stated that diminutive acts which were committed by the petitioner erroneously a decade ago are available on various search engines and online platforms”.
- These are causing psychological pain and his personal life had come to public’s knowledge and would remain in the space for future generations also.
- Verdict:** The court also has issued a notice regarding

Kaushik’s plea, seeking directions to remove all the posts, videos and articles related to him on the internet.

Other Bills and legislations containing ‘Right to be forgotten:

- Right to be Forgotten (RTBF)** means the right to have publicly available personal information removed from the internet, search, databases, websites or any other public platforms, once the personal information in question is no longer necessary, or relevant.
- The RTBF gained importance after the 2014 decision of the Court of Justice of the European Union (“CJEU”) in the Google Spain case.
- Personal Data Protection Bill, 2019:** Section 20 of the Personal Data Protection Bill, 2019 explicitly recognizes the ‘right to be forgotten’.
- About the Right to be Left Alone:** It doesn’t mean that one is withdrawing from society. It is an expectation that society will not interfere in the choices made by the person so long as they do not cause harm to others.

Challenges of RTBF:

- **Conflict with Public Record:** Right to be forgotten may get into conflict with matters involving public records.
 - ♦ For instance, judgments have always been treated as public records and fall within the definition of a public document according to Section 74 of the Indian Evidence Act, 1872.
 - ♦ The RTBF cannot be extended to official public records, especially judicial records as that would undermine public faith in the judicial system in the long run.
- **Individual vs Society:** Right to be forgotten creates a dilemma between the right to privacy of individuals and the right to information of society and freedom of press.
- **Ambiguity in judgements:** Courts in India have repeatedly either accepted or rejected the application of RTBF while completely ignoring the wider constitutional questions associated with it.
- **Enforceability Against Private Individuals:** The RTBF will normally be claimed against a private party (a media or news website).

- ♦ This raises the question of whether fundamental rights can be enforced against the private individual, which is generally enforceable against the state.
- ♦ Only Article 15(2), Article 17 and Article 23 provides protection against a private act of a private party that is challenged based on its violation of the Constitution.

Way Forward:

- Availability of large amount of data on OTT (Over the Top) platforms has led to reemergence of contents of the previous decades which are disturbing for individuals who have transformed themselves over the years in personality and work fronts.
- Clarification on Right to be forgotten and right to be left alone by the high court will successfully resolve the cases of such type.
- However, the parliament and Supreme Court shall come together to engage in detailed analysis about RTBF.

ISSUES PRIVACY RULING CAN IMPACT

Implications on Aadhar aside, the verdict has wide-ranging ramifications, including on euthanasia and the right to be forgotten. Here, the immediate issues impacted

BEEF BAN

“ I don't think anybody would like to be told by the State.. what they should eat or how they should dress...”

JUSTICE CHELAMESHWAR

- ▶ Implications for beef ban and prohibition of alcohol

AADHAAR

Verdict will impact arguments in the 23 cases regarding mandatory Aadhaar, which will now be heard by a five-judge bench.

“ ...If the government tomorrow says your Aadhaar card will be required for your travel and income tax filings, that will be an unreasonable restriction”

PRASHANT BHUSHAN | PARTY TO THE CASE



ABORTION

“ A woman's freedom of choice whether to bear a child or abort her pregnancy fall in the realm of privacy

JUSTICE CHELAMESHWAR

HOMOSEXUALITY

“ Minuscule fraction constitutes LGBT (as SC observed) is not sustainable basis to deny the right to privacy

EUTHANASIA

“An individual's right to refuse life prolonging medical treatment or terminate life falls within the zone of the right of privacy”

JUSTICE CHELAMESHWAR

- ▶ SC has allowed passive euthanasia in the “rarest of rare” cases, although there's no law on it yet



RIGHT TO BE FORGOTTEN

“ ... An individual who is no longer desirous of his personal data to be processed or stored, should be able to remove it from the system where (it) is no longer necessary, relevant, or is incorrect...”

SANJAY K KAUL

- ▶ The court said such a right cannot be exercised where the information is necessary and involves issues of compliance with legal

PARLIAMENTARY DISRUPTIONS

Rajya Sabha Chairman Shri M.Venkaiah Naidu unequivocally held that disruptions of proceedings amount to contempt of the House

About:

- In a first by any Presiding Officer of the legislatures in the country and in the context of rising disruptions and low productivity of the house, Rajya Sabha Chairman said disruptors can't claim disruptions as their privilege to do so.
- The Chairman said that the productivity of Rajya Sabha during 2004 -14 has been about 78% and it declined to about 65% since then.
- Of the 11 sessions that Shri Naidu presided over, four of them clocked low productivity of 6.80%, 27.30%, 28.90% and 29.55% and during the year 2018, the Rajya Sabha recorded the lowest ever productivity of 35.75% under the impact of disruptions, he stated.
- During the last monsoon session (254th), the Rajya Sabha lost more than 70% of the scheduled time including over 76% of the valuable Question Hour time, the Chairman noted.
- **Facts on Parliamentary proceedings and their productivity:** A PRS (PRS Legislative Research) report says during the 15th Lok Sabha (2009-14), frequent disruptions of Parliamentary proceedings have resulted in the Lok Sabha working for 61% and Rajya Sabha for 66% of its scheduled time.
- Another PRS report said, the 16th Lok Sabha (2014-19) lost 16% of its scheduled time to disruptions, better than the 15th Lok Sabha (37%), but worse than the 14th Lok Sabha (13%).
- The Rajya Sabha lost 36% of its scheduled time. In the 15th and 14th Lok Sabhas, it had lost 32% and 14% of its scheduled time respectively.

Reasons for Disruptions:

- It appears that a number of disruptions in Parliament stem from discussions on either listed topics that are controversial, or unlisted matters that are of public importance.
 - ♦ The matters such as the Pegasus Project, Citizenship Amendment Act, 2019 are such examples of causing disruptions.
- Disruptions also get triggered **due to lack of adequate time** for raising questions and objections in respect of matters that are not listed for discussion in a particular, or during a particular session.
- **Scarce Resort to Disciplinary Powers:** Another systemic reason why disruptions are not effectively prevented relates to the scarce resort to disciplinary powers by the Speaker of the Lok Sabha and the Chairman of the Rajya Sabha.

- As a result, most members engaging in disorderly conduct are neither deterred nor restrained from engaging in such conduct.
- **Other Reasons:** In 2001, a conference was held in the Central Hall of Parliament to discuss discipline and decorum in legislatures. It identified four reasons behind the disorderly conduct by MPs.
 - ♦ Dissatisfaction in MPs because of inadequate time for airing their grievances.
 - ♦ An unresponsive attitude of the government and the retaliatory posture of the treasury benches.
 - ♦ Political parties not adhering to parliamentary norms and disciplining their members.
 - ♦ The absence of prompt action against disrupting MPs under the legislature's rules.
- **Party Politics:** When a contentious issue crops up, the government dithers on debating it, leading to Opposition MPs violating the conduct rules and disrupting the proceedings of Parliament.
- Since they have the support of their parties in breaking the rules, the threat of suspension from the House does not deter them.

What can be done?

- To curb disorder in Parliament there is a need for strict enforcement of code of conduct for MPs and MLAs.
- Recommended by the 2001 conference, there should be an increase in the working days of Parliament. It resolved that Parliament should meet for 110 days every year and state legislative assemblies for 90 days.
- In the United Kingdom, where Parliament meets over 100 days a year, opposition parties get 20 days on which they decide the agenda for discussion in Parliament. Canada also has a similar concept of opposition days.
- In 2019, Rajya Sabha Deputy Chairperson mooted an idea of evolving a '**Parliament Disruption Index**' to monitor disruptions in Parliament and state legislature. In the Lok Sabha, some members proposed automatic suspension of members who cause disruption and rush to the Well of the House.
 - ♦ But the proposals are still in a nascent stage.
- **Productivity Meter:** The overall productivity of the session also can be studied and disseminated to the public on a weekly basis.

Privileges of the MP:

The powers, privileges and immunities of Parliament and its members and committees are laid down in **Article 105 of the Constitution**.

- The Constitution specifies some of the privileges such as
 - ♦ Freedom of speech in Parliament
 - ♦ They have the freedom from arrest 40 days prior or after a session of legislature or during the session or from the premises of the legislature without the permission of the house.
 - ♦ They are exempted from **jury service**. They can refuse to give evidence and appear as a witness in a case pending in a court when Parliament is in session.
- However, the members can be punished for the breach of privileges by the house itself. Punishment includes imprisonment, fine or suspension.

Various Rules and Provisions:

- **Rules 235 to 241 of Rajya Sabha** provide for the conduct of the Members during the proceedings of the House.
 - ♦ Rule 235 clearly stipulates that Members shall not obstruct the proceedings of the House and interrupt members while speaking by disorderly expression or noises or in any other disorderly manner and shall maintain silence while not speaking in the Council.
- **Rule 243** requires that the Chairman whenever he rises shall be heard in silence and any member who is speaking or offering to speak shall immediately sit down. But these Rules are being violated too often.
- **The 14-point Framework of Code of Conduct** recommended by the Ethics Committee of Rajya Sabha and adopted by the House on December 15, 1999 requires that members must not do anything that brings disrepute to the Parliament and affects its credibility.

- Further, there is an elaborate **42-point Parliamentary Etiquette** which the Members are required to follow which helps in upholding the dignity of the House and the Members.

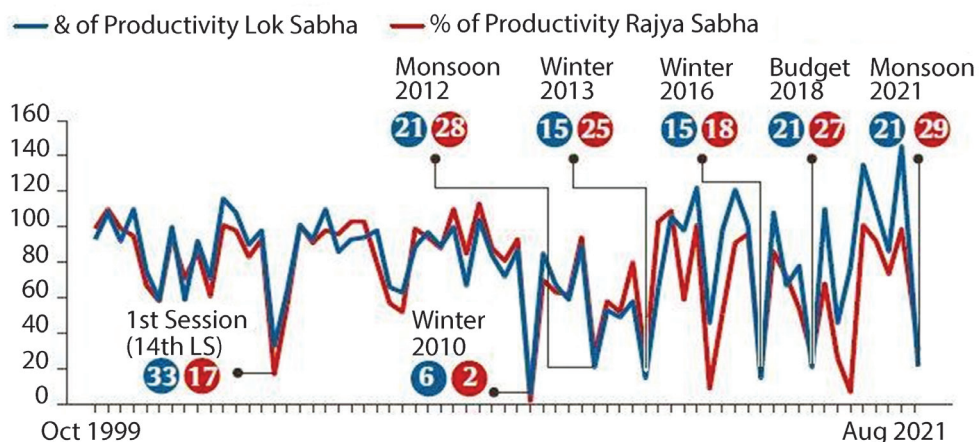
Contempt of House:

- Any act or omission which obstructs or impedes wither House of Parliament in the performance of its functions, or which obstructs or impedes any member of officer of such House in the discharge of his duty, or which has a tendency, directly or indirectly, to produce such results may be treated as a contempt even though there is no precedent of offence.
- Actions which are not breaches of any specific privilege but are offences against the dignity and authority of the House amount to contempt of the House.

Way Forward:

- The privileges granted to the Members of Parliament are on behalf of the people and are to be exercised on their behalf and in such a manner that it enables effective performance of the individual members.
- MPs have the right to protest against the perceived omissions and commissions of the government of the day. But it should be done in a civil manner without rendering the legislature dysfunctional.
- The executive can be taken to task during the debates through effective interventions; protesting members can either talk it out or walk out; reach out to the media/people highlighting their grievances etc.
- All the stakeholders, including all political parties and the executive shall introspect and commit themselves to do the needful to put an end to the unsavory saga of disruptions in the legislatures to enhance the quality and dignity of our parliamentary democracy by restoring the credibility of its organs.

THE LOWS IN HOUSE PRODUCTIVITY



PRODUCTION LINKED INCENTIVE (PLI) SCHEME FOR TEXTILES

Government recently approved a Production-Linked Incentive (PLI) Scheme worth ₹ 10,683 crore for the textiles sector to boost domestic manufacturing and exports.

About:

- It is part of a larger PLI scheme announced for 13 sectors in 2021-2022 budget with an outlay of 1.97 lakh crore.
- The PLI scheme for textiles aims to attract investments worth Rs 19,000 crore over five years to increase the production of in-demand textile products
 - ♦ Man-made fibre (MMF) fabric
 - ♦ Garments and
 - ♦ Technical textiles
- **India's Textile Sector:** Currently, two-thirds of international trade in textiles is of man-made and technical textiles and hence, India wants to contribute to this ecosystem through this scheme.
 - ♦ A relentless shift in consumer preferences and fashion trends saw MMF surpass cotton as the fibre of choice in the 1990s, since vaulting its share in worldwide textile consumption to about 75%.
 - ♦ The Indian textile and apparel sector, with USD 37 billion exports and USD 85 billion domestic consumption, is one of the largest employers in the country. Every USD 1 billion additional exports in apparel manufacturing can create 1.5 lakh new jobs.
 - ♦ If some adequate measures are taken on time, Indian exports can grow in double digits for the next several years, which in turn will create millions of jobs. In this context, it is imperative to remove the problems of the textile sector and take some urgent measures.
 - ♦ The Indian apparel sector needs scale, specialisation and competitiveness to capitalise on the emerging post-Covid opportunities in global trade.
 - ♦ India's textile and clothing exports on the other hand have continued to remain dominated by cotton and other natural fibre-based products, with MMF having contributed less than 30% of the country's \$35.6 billion in overall sectoral exports in 2017-18.
- **Which producers will benefit from the PLI scheme?**
 - ♦ The scheme is set to provide incentives to eligible producers in two phases.
 - ♦ **First:** Any person or company willing to invest a minimum of Rs 300 crore over two years in plant, machinery, equipment and civil works (excluding land and administrative building cost) to produce products of MMF fabrics, garments and products of technical textiles will be eligible.
 - However, they need to hit a minimum turnover of ₹600 crore
 - ♦ **Second** - Investors willing to spend a minimum of Rs 100 crore (with a pre-set minimum turnover of ₹200 crore) under the same conditions shall be eligible.
 - ♦ **Priority to backward areas** - Investments made in aspirational districts, tier 3, tier 4 towns and rural areas would get priority under the scheme.
- **Challenges of Textile Sector:**
 - ♦ **Highly fragmented:** The Indian textile industry is highly fragmented and is being dominated by the unorganized sector and small and medium industries.
 - ♦ **Outdated technology:** The Indian textile industry has its limitations of access to the latest technology (especially in small-scale industries) and failures to meet global standards in the highly competitive market.
 - ♦ **Tax structure issues:** The tax structure GST (Goods and Service Tax) makes the garments expensive and uncompetitive in domestic as well as international markets. Another threat is rising labour wages and workers' salaries.
 - ♦ **Stagnant exports:** The export from the sector has been stagnating and remained at the USD 40-billion level for the last six years.
 - ♦ **Lack of scale:** The apparel units in India have an average size of 100 machines which is very less in comparison with Bangladesh, which has on an average of at least 500 machines per factory.
 - ♦ **Lack of foreign investment:** Due to challenges given above the foreign investors are not very enthusiastic about investing in the textile sector which is also one of the areas of concern.
- **Significance PLI-**
 - ♦ **New age in textiles manufacturing** - PLI for Textiles along with RoSCTL, RoDTEP and other measures of Government in sector e.g., providing raw material at competitive prices, skill development etc will herald a new age in textiles manufacturing.
 - **Remission of Duties and Taxes on Export Products (RoDTEP)** aims to refund to exporters the embedded non-creditable central, state and local levies paid on inputs.
 - **Rebate of State and Central Levies and Taxes (RoSCTL) scheme** rebates all embedded State and Central Taxes/levies on exports of made-up articles & garments.
 - ♦ **Help India regain dominant status in global textiles** - It will give a major push to growing high value MMF segment which will complement the efforts of cotton and other natural fibre-based textiles industry in generating new opportunities for employment and trade.

- It will thus help India regain its historical dominant status in global textiles trade.
- It will help realign our export strategy, which, so far, has been dependent upon cotton products.
- ♦ **Empower women** - The textiles industry predominantly employs women; therefore, the scheme will empower women and increase their participation in formal economy.
- ♦ **Fresh investments** - It will lead to fresh investment of more than Rs. 19,000 crore and cumulative turnover of over Rs. 3 lakh crore.
- ♦ **Additional employment opportunities** - It will create additional employment opportunities of more than 7.5 lakh jobs in this sector and several lakhs more for supporting activities.

- **Specialisation:** India has built a strong ecosystem in cotton apparels, but is lagging in man-made fiber (MMF) apparel manufacturing. Global fashion is moving towards blends.
 - ♦ The US annually imports around Rs. 3-lakh crore worth of MMF apparels. In this mega market, India has a share of just 2.5%.
 - ♦ Hence, with a focussed approach, the sector can be aligned towards global fashion demands.
- **Efficiency in Pricing:** To compete with low-cost competitors, India needs to be ultra-efficient in pricing. With assured production incentives in the PLI scheme, entrepreneurs with growth aspirations will boldly invest in integrated smart factories. This can help achieve world-class productivity and manufacturing efficiency.
- **Attracting capital:** Only 10% of the Indian textile sector is listed on the stock exchange. The textile sector's (excluding raw-material makers) market cap of around Rs. 2-lakh crore is hardly 1% of the BSE's Rs. 250-lakh crore market cap.

Way Forward:

- **Need for scale:** Scale is important to bring down the cost of production, improve productivity levels to match global benchmarks and, thereby, cater to large orders from markets like the US.

TEXTILE SECTOR IN INDIA

Robust Demand	Policy Support	Policy Support	Increasing Investments
<ul style="list-style-type: none"> ▪ Increased penetration of organised retail, favourable demographics and rising income level will drive demand for textiles. ▪ The Indian technical textiles market is expected to expand to US\$ 23.3 billion by 2027. ▪ Additionally, the pandemic has led to increased demand for technical textiles in the form of PPE suits and equipment. Government is supporting the sector through funding and machinery sponsoring. 	<ul style="list-style-type: none"> ▪ India enjoys a comparative advantages in terms of skilled manpower and in cost of production relative to major textile producers. ▪ In March 2021, Minister of Textiles Smriti Irani announced that India will be fully self-reliant in silk production in the next two years. 	<ul style="list-style-type: none"> ▪ 100% FDI (automatic route) is allowed in textiles. ▪ Production-linked Incentive (PLI) Scheme worth Rs. 10,683 crore (US\$ 1.44 billion) for manmade fibre and technical textiles over a five-year period. ▪ To support the handloom weavers/weaver entrepreneurs, the Weaver MUDRA Scheme was launched to provide margin money assistance at 20% of the loan amount subject to a maximum of Rs. 10,000 per weaver. The loan is provided at an interest rate of 6% with credit guarantee of three years. 	<ul style="list-style-type: none"> ▪ Huge funds in schemes such as Integrated Textile Parks (SITP) (US\$ 184.98 million) and Technology Upgradation Fund Schemes (US\$ 961.11 million) released by Government during 2015-16 to 2019-20 to encourage more private equity and provide employment.

PLI SCHEME

Production Linked Incentive (PLI) Scheme:

- PLI Schemes are a cornerstone of the Government's push for achieving an Atmanirbhar Bharat.
- The objective is to make domestic manufacturing globally competitive and to create global Champions in manufacturing.
- The strategy behind scheme is to offer companies incentives on incremental sales from products manufactured in India, over the base year.
- They have been specifically designed to boost domestic manufacturing in sunrise and strategic sectors, curb cheaper imports and reduce import bills, improve cost competitiveness

of domestically manufactured goods, and enhance domestic capacity and exports.

- **The first three PLI schemes** were approved in March, 2020 for
 - ♦ Mobile phone and electronic manufacturing,
 - ♦ Drug intermediaries and active pharmaceutical ingredients (APIs),
 - ♦ Medical devices
- **Later 10 New PLI Schemes** have been announced for various sectors like Food Products, electronic and tech products, pharmaceuticals drugs, telecom and networking products, automobiles and auto Components, advanced batteries and specialty steel sectors etc.

BAD BANK

Government recently sets up India's first-ever "Bad Bank" to take over and resolve Non-Performing Assets (NPAs) amounting to ₹2 lakh crore.

About:

- **New bad bank** - Government has announced that NARCL-IDRCL structure is the new bad bank.
 - ♦ **"National Asset Reconstruction Company Limited" (NARCL)** will acquire stressed assets worth about Rs 2 lakh crore from various commercial banks in different phases.
 - It has already been incorporated under the Companies Act.
 - It has applied to Reserve Bank of India for license as an Asset Reconstruction Company (ARC).
 - PSBs will maintain 51% ownership in NARCL.
 - ♦ **India Debt Resolution Company Ltd (IDRCL)**, which has also been set up, will then try to sell the stressed assets in the market.
 - Public Sector Banks (PSBs) and Public FIs will hold a maximum of 49% stake and the rest will be with private sector lenders.
- **Guarantee programme** - To make it work, the government has cleared a ₹30,600-crore guarantee programme for securities to be issued by this newly incorporated 'bad bank'.
 - ♦ This guarantee has been provided only for 5 years and condition precedent for invocation it will be resolution or liquidation.
 - ♦ Further, to disincentivize delay in resolution, NARCL has to pay a Guarantee fee which increase with passage of time.

How will the NARCL-IDRCL work?

- The NARCL will first purchase bad loans from banks.
 - ♦ It will pay 15% of the agreed price in cash and the remaining 85% will be in the form of "Security Receipts".
 - ♦ Private sector asset reconstruction (ARCs) firms may also be allowed to outbid the NARCL.
- When the assets are sold, with the help of IDRCL, the commercial banks will be paid back the rest.
- If the bad bank is unable to sell the bad loan, or has to sell it at a loss, then the government guarantee will be invoked.
 - ♦ Then the difference between what the commercial bank was supposed to get and what the bad bank was able to raise will be paid from the Rs 30,600 crore provided by the government.

Need of this new NARCL-IDRCL type structure:

- In India, the level of NPAs has risen alarmingly since 2016.
 - ♦ **The Financial Stability Report (FSR)** of the RBI noted that the gross NPAs in the Indian banking sector is expected

to shoot up to 13.5% of loans and advances by September 2021, from 7.5% in September 2020.

- ♦ **The K V Kamath Committee** established by the RBI noted that corporate sector debt worth INR 15.52 lakh crore has come under stress after Covid-19 hit India, while another INR 22.20 lakh crore was already under stress before the pandemic.
- Existing ARCs have been helpful only in resolution of stressed assets for smaller value loans.
- Substantial amount of NPAs continue on balance sheets of banks in spite of various existing resolution mechanisms like
 - ♦ Insolvency and Bankruptcy Code (IBC),
 - ♦ Securitization and Reconstruction of Financial Assets and Enforcement of Securities Interest (SARFAESI Act) and
 - ♦ Debt Recovery Tribunals
- This is because the stock of bad loans as revealed by the Asset Quality Review is not only large but fragmented across various lenders.
- Considering the large stock of legacy NPAs, additional options/alternatives like NARCL-IDRCL are needed.

Bad Bank:

- **A bad bank is an Asset Reconstruction Company (ARC)** or an Asset Management Company (AMC) that buys bad loans (Non-Performing Assets) from the commercial banks at a discount and tries to recover the money from the defaulter by providing a systematic solution over a period of time.
- The bad bank is not involved in lending and taking deposits, but helps commercial banks clean up their balance sheets and resolve bad loans.

What it means, and how it works

Finance minister Nirmala Sitharaman on Thursday announced measures that paved way for operationalisation of the bad bank, which was originally announced in Union Budget 2021-22

₹30,600 cr

in guarantees to be provided by Centre to buy bad loans from banks over a period of 5 years

WHO WILL PURCHASE THESE BAD LOANS AND HOW?

The National Asset Reconstruction Company Ltd (NARCL) has been incorporated under the Companies Act and has applied to RBI for licence as an asset reconstruction company. It will purchase bad loans at a discounted value from banks under a 15:85 structure, where it will pay up to 15% of the value in cash and issue security receipts for the rest

WHAT WILL THIS COVER?

NARCL is intended to resolve stressed loan assets above ₹500cr which together amount to:

₹2,00,000cr worth bad loans

HOW WILL THIS HELP?

This will enable speedy disposal of stressed assets and clean balance-sheets of banks

"[The structure] will incentivise quicker action on resolving stressed assets helping in better value realisation... This approach will also permit freeing up of personnel in banks to focus on increasing business and credit growth."

- NIRMALA SITHARAMAN, finance minister



The idea of 'Bad Bank':

- **US-based Mellon Bank created the first bad bank in 1988**, after which the concept has been implemented in other countries including Sweden, Finland, France, and Germany.
- **The Economic Survey-2017 suggested** the creation of a Public Sector Asset Rehabilitation Agency (PARA).
- **PAMC and NAMC:** The RBI suggested forming two entities to clean up the bad loan problems ailing PSBs, namely, PAMC (Private Asset Management Company) and NAMC (National Assets Management Company).
 - ♦ **PAMC:** PAMC to be formed by roping in banks and global funding companies. This would invest in areas where there's short-term economic viability.
 - ♦ **NAMC:** NAMC to be formed with government support, which would invest in bad assets with short-term stress but good chances of turnaround and economic benefit.

Benefits of 'Bad Bank':

- **Asset Monetization:** Bad Bank may provide a parallel mechanism with the Insolvency and Bankruptcy Code and help in the generation of money out of stressed assets.
 - ♦ Setting up of the twin entities, the NARCL and the IDRCL will incentivise quicker action on resolving stressed assets, thereby helping in better value realisation.
- **Improving the balance sheet of the Banks:** This would free the banks from the problem of NPAs, leading to improved credit creation in the economy paving the way for recovered economic growth.
- **Coordination among creditors:** Often a debtor had taken a loan from multiple banks or financial institutions.
 - ♦ A centralized agency like Bad Bank would solve the problem of lack of coordination among banks for the resolution of the NPAs.
- **Speedy settlement process:** Aggregating stressed assets into a single firm could make it easier for foreign funds to build up controlling positions in the debt of companies.
 - ♦ At present, Investors need to negotiate individually with each lender, resulting in debt resolutions that take over a year.
- **Post-Covid recovery:** Covid-19 pandemic had deteriorated the earnings of businesses and individuals, thereby imposing further strain on their ability to repay loans despite the RBI's loan moratorium.

Challenges:

- **Availability of Buyer** - There is an apprehension of low chances of private participation unless investors are allowed a major say in the governance of the new entity
- **Encourage moral Hazard** - Economists point out that if states take over non-performing loans, this encourages banks to take undue risks, leading to a moral hazard.
- **Laxity in assessing risk due to guarantee** - The government's role in guaranteeing some part of the NPAs could lead to laxity on the part of bankers in assessing risk and thus creating fresh dodgy loans.
- **No addressing Long-term solution:** Bad Bank will not address the long-term problems such as the requirement of governance reform in Public sector banks.
- **Who will bail out bad bank?** - The plan of bailing out commercial banks will collapse if the bad bank is unable to sell such impaired assets in the market.
 - ♦ If that happens, who will bail out the bad bank itself?

Way Forward:

- **Governance reform:** The establishment of a Bad Bank must be preceded by the implementation of governance reforms in the banking sector as envisaged under the Indra Dhanush plan launched in 2015.
- **Stricter NPA Recovery:** The government needs to amend the laws and give more powers to banks to recover NPAs.
 - ♦ The RBI has asked for nine additional powers under the Banking Regulation Act with regards to PSBs including the ability to appoint and remove CMDs, the power to supersede the Board of Directors, etc.
- **Transparency and accountability:** There is an urgent need to tighten banks' internal and external audit systems to prohibit banking fraud.
- **Combine recapitalisation with asset segregation** - A January 2020 Bank for International Settlements working paper on 'Bad bank resolutions and bank lending', found that "bad bank segregations are effective in cleaning up balance sheets and promoting bank lending only if they combine recapitalisation with asset segregation".

PRIVATISATION OF RAILWAYS

The employee's union of the North Western Railway (NWR) protested against the privatisation of railways announced by the Centre.

About:

- **Announcement:** The Railway Ministry in July 2020 had announced that 151 trains in 109 pairs of routes will be operated by private sectors.
- **The objective of this initiative is to**
 - ♦ Introduce modern technology rolling stock with reduced maintenance,
 - ♦ Reduced transit time
 - ♦ Boost job creation
 - ♦ Provide enhanced safety
 - ♦ Provide world-class travel experience to passengers
 - ♦ Reduce demand supply deficit in the passenger transportation sector
- **Major highlights**
 - ♦ The private train operations will begin by April 2023.
 - ♦ Around 400 stations will be sold under PPP model.
 - ♦ The target is to sell 90 trains to private parties.
 - ♦ 1,400 km of track is targeted to be handed over to private investors by 2023.
 - ♦ The Centre has set a target of handing over 265 goods train to private investors
- **Protests:** Hence, unions of different railway zones have been protesting time and again against this privatisation of railways.

IMPORTANCE OF RAILWAYS

- **Huge Network:** In a country of 1.3 billion, the Indian Railways plays an integral role running the world's fourth largest rail network in the world—across 64,000 route km, ferrying nearly 23 million passengers per day in over 13,000 passenger trains daily.
- **Employment:** With a workforce of nearly 1.3 million, it is also one of the largest employers in the world.

Roots of Current Reforms:

- **Bibek Debroy committee**
 - ♦ In 2015, a committee led by then Niti Aayog member Bibek Debroy drafted a report for mobilisation of resources for major railway projects and restructuring of the railway ministry and Railway Board.
 - ♦ The committee highlighted that the Indian Railways was no longer a monopoly and faced stiff competition from the road sector. It pointed out that
 - **The cross-subsidisation** of low passenger fares by artificially high freight rates has led to a shift in favour of

road transport, for both freight as well as short distance passenger traffic.

- Most passengers are willing to pay higher fares, albeit only if accompanied by enhanced services.
- ♦ Hence, it suggested
 - **Liberalisation—and not privatisation**—for entry of new operators into railway operations as a viable option for encouraging growth and improving services
 - **Concessions of commercial operation** of train service like Rajdhani/Shatabdi to private parties.
 - **Corporatization of railway board** and decentralization
 - **Separation of roles** of policy making, regulation and operations of railways
 - **An independent regulatory mechanism** to promote a healthy competition and to protect the interest of all stakeholders.
 - **The unification of the railway budget with the Union budget** to allocate financial resources more prudently and facilitate multi-modal transport planning between railways, inland waterways, and highways.
- **Unification of the railway budget with the Union budget** - Bibek Debroy committee's suggestion for the unification of the railway budget with the Union budget was implemented by the National Democratic Alliance (NDA) government in 2016.
- **Redeveloping stations** - The NDA government announced the plan for redeveloping the stations in 2016 by leveraging commercial development of spaces around them.
 - ♦ In 2017, then Union railway launched the "largest transit-oriented development programme" for the redevelopment and complete overhaul of 400 stations as world class facilities.
 - ♦ It was decided to bring in private operators to emulate the airport model and lease them out for a period of 45 years.
- The railway ministry in July 2020 finally began the formal process of allowing private trains on 109 routes.

Need of Private Investments:

- **Poor service quality** - Indian Railways deserves the credit for serving the largest democracy in the world, it has also faced criticism, particularly in case of aspects like service, catering and punctuality.
- **Dwindling finances** – The revenue generated by the Indian Railways is low, especially due to cross subsidisation and keeps the system always in losses.

- ◆ There is also the cost of operations, which includes electricity, manpower etc.
- ◆ Hence, it keeps looking ways of generating revenue through different streams, including the non-fare revenue segment, leasing out its vacant land and, opening doors for Public Private Partnership (PPP) for its trains and stations.
- **Requirement of huge modernisation expense** – Also, introducing new, modern trains requires heavy investment in rolling stock like coaches and engines to provide better onboard services and faster trains.
- **Bureaucratic Red tapism** - Government authority means it takes years to get new projects sanctioned which delays the progress in the railway sector.
 - ◆ Files, bills, funds have to be passed through several phases to get a simple project started.
- **New capacity generation** – Around 70 per cent of freight trains, which now jostle for space with passenger trains on the overcrowded Indian Railway network, will shift to the two upcoming Dedicated Freight Corridors from December 2021.
 - ◆ It will free up a lot capacity to introduce more passenger trains with better services and higher speeds.
- **High number of accidents** - Due to low-quality maintenance, the number of accidents increases during the rainy season. Slipping from rails, broken rails all become common during harsh seasons.

Benefits of Privatisation of Railways:

- **Improved Infrastructure** - It will lead to better infrastructure which in turn would lead to improved amenities for travellers.
- **Balancing Quality of Service with High Fares** – Private players would foster competition and hence lead to overall betterment in the quality of services at reasonable prices.
- **Lesser Accidents** – As private ownership is synonymous with better maintenance, it will reduce the number of accidents, thus resulting in safe travel and higher monetary savings in the long run.
- **Technological advancement** - The private players will be able to accommodate the latest technology in the station and the coaches of trains leading to modernization of our ages-old railway system.
- **High security and better monitoring** - It will ensure high security and better monitoring of the stations along with better rail management.

Issues related to Privatisation of Railways:

- **Coverage Limited to Lucrative Sectors** –
 - ◆ An advantage of Indian Railways being government-owned is that it provides nation-wide connectivity irrespective of profit.

- ◆ However, privatisation may lead to elimination of routes which are less popular and thus having a negative impact on connectivity.
- ◆ It will also render some parts of the country virtually inaccessible and omit them from the process of development.
- **Fares** – As private enterprise runs on profit, it may lead to hike in fares, thus rendering the service out of reach for lower income groups.
 - ◆ This will defeat the entire purpose of the system which is meant to serve the entire population of the country irrespective of the level of income.
- **Accountability** –
 - ◆ As Indian Railways is so vast, it will be near impossible for any private body to handle Indian Railways in every corner of India
 - ◆ If different private bodies are assigned different areas, then there will be problems with communication and coordination which will hinder the smooth-running railways.
 - ◆ It would also be difficult to pin the accountability on a particular entity, should there be a discrepancy.
- **Affect economy** – Privatization of railways will definitely affect the economy of India as currently it is the spine of India and provides a low cost of transportation of goods and services across the country.
- **Strong vertical integration a hurdle to privatization** – We cannot privatize only isolated operations of the railways as it is strongly vertically integrated (i.e. controlled wholly by a Ministry of Railways) and complete privatization is not possible due to above reasons.

Way Forward:

- **Promote competition** - Privatisation needs to be done in a manner that it leads to competition and not just transfer of a public sector monopoly to a private sector monopoly.
- **Cost rationalisations for freight transfer** - Government should ensure that privatisation lead to cost rationalisations and drop-in freight rates so that railways become a preferred choice for transport of goods & services.
- **Reimburse social costs and ensure price sensitivity** - Measures must be taken to reimburse the social costs imposed due to privatization.
 - ◆ Price sensitivity needs to be ensured so that more vulnerable segments who use the mode of transport on daily basis are not burdened.
- **Corporatize rather than privatize** – As recommended by Bibek Debroy, Core Railways functions can be Corporatized rather than privatized.
 - ◆ However, the peripheral function of railways (cleanliness, ticket disposal, traveler's amenities) can be privatized.

TAMIL NADU'S OPPOSITION TO NEET

Tamil Nadu government passed a bill to provide a mechanism for admission to UG degree courses in Indian medicine, dentistry and homeopathy.

About:

- Tamil Nadu government passed 'The Tamil Nadu Admission to Undergraduate Medical Degree Courses Bill, 2021'.
- The bill aims to 'dispense' with the requirement for candidates to qualify in the National Eligibility-cum-Entrance Test (NEET) for admission to undergraduate medical courses in the State.
- The bill seeks to allow admission to medical courses based on Class 12 marks to "ensure social justice".
- **Permanent Exemption from NEET Bill:** Previously, Permanent Exemption Bill from NEET was passed by the assembly to exempt students from Tamil Nadu to appear in NEET examination.
- **Normalization Method:** It seeks to provide admission to such courses on the basis of marks obtained in the qualifying examination, through "Normalization methods".

NEET

- It is an entrance exam for medical courses like MBBS, BDS, and Post-Graduation in both government and private medical colleges. In 2013, NEET-UG replaced the All-India Pre-Medical Test (AIPMT) and all individual MBBS exams conducted by states or colleges themselves.
- The NTA – National Testing Agency, the regulatory body for NEET UG Exam, conducts it every year in various parts of India in multiple languages.

Justice AK Rajan Committee's Recommendation:

- **NEET unfavorable for healthcare system:** The committee recommended that if NEET would have continued for a few more years, it would have affected the healthcare infrastructure of Tamil Nadu.
- **Inconsistent with Social Justice:** The report submitted by the committee also stated that students from rural regions and poor backgrounds might lose access to medical education especially those who studied in Tamil as a medium
- **Dominance of culture of 'coaching':** It further stated that the culture of 'coaching' is gradually replacing 'learning', which is very essential for the would-be-Doctors (medical aspirants).
- **Disfavors the poor:** It has favored mainly the affordable and affluent sections of the society and thwarting the dreams of underprivileged social groups.
- **Eliminate Immediately:** The Committee had recommended immediate elimination of NEET which was done by the state by passing Permanent Exemption from NEET Bill.

CONSTITUTIONAL PROVISIONS

- **Concurrent List:** 'University education' is a subject of Concurrent List with entry number 25 in seventh schedule of the constitution. Entry 11 of the same list provides for general provision for 'Regulation of Universities'.
- **State List:** Entry 32 under the state list incorporates universities; unincorporated trading, literary, scientific, religious and other societies and associations; co-operative societies.
- Justice AK Rajan committee suggested that due to above mentioned circumstances **Article 254** of the constitution can't be invoked to override Act 3 of 2007.
- **Act 3 of 2007:** This act provides for the admission in medical colleges of Tamil Nadu such as affiliated colleges under the Tamil Nadu Dr M G R Medical University.
- **Article 254:** According to it, if there is any inconsistency between laws passed by Parliament and those passed by a state legislature, the former should prevail.

Limitations of the Bill:

- **Overriding the concept of 'One Nation, One Examination':** NEET was designed in order to realize the concept of "One Nation, One Examination".
- **Centre-state conflict:** The issue may give rise to centre-state conflict in this matter as the bill has been brought to benefit students from Tamil Nadu while at the same time students from other states will not get equitable opportunity in the state.

MATTER SUB JUDICE

- Earlier too Tamil Nadu government issued an order in 2017 providing for the reservation of 85% of the seats for students passed out from the State board, however it was struck down by the Madras High Court.
- The introduction of internal reservation for government school students is under challenge before the Madras High Court. Similarly, NEET as a requirement is also pending in the Supreme Court. Unless these two issues are decided, NEET cannot be removed by a state amendment.

Way Forward:

- National Eligibility-cum-Entrance Test (NEET) was brought by the central government to bring homogeneity in the process of admissions to various colleges across the country. Moreover, the Supreme Court has also upheld NEET as a requirement.

COMMUNALIZATION OF THE INDIAN MEDIA

Recently, the Chief Justice of India N.V. Ramana remarked that certain sections of media gave communal angle to everything and this will ultimately result in giving the country a bad name.

About:

- These remarks came in the light of Supreme Court listening to the petition filed by Jamiat Ulema-i-Hind who sought action against those responsible for disseminating “fake news” linking spread of COVID-19 with the Tablighi Jamaat gathering at the Markaz Nizamuddin, Delhi.
- It was also said that some media channels have propagated information to the general public.
 - ♦ Media channels include TV, news channels, electronic media, print media, social media platforms (Twitter, Facebook, YouTube etc.), Over-The-Top (OTT) platforms (Netflix, Hotstar etc.)
- With the real time reporting or coverage of certain events, combined with the biases of the reporters (not only journalists), certain violent situations may emerge.
 - ♦ the planning and rehearsal;
 - ♦ the instigation of riotous activity; and
 - ♦ the interpretation phase
- There are a growing number of instances where social media is being used as a tool for inciting malicious or anti-national 'fake news', inciting communal riots through disrespect to religious sentiments, recruitment of youth by terrorist organizations and so on.
- **There is lack of accountability** that breeds such communal reporting, with impunity. Thus, the current regulatory mechanism needs an overlook – to either revise it or implement it effectively
 - ♦ There is a lack of control over fake news and slandering in web portals and YouTube channels. If you go to YouTube, you will find how fake news is freely circulated and anyone can start a channel on YouTube.

COMMUNALISM AND COMMUNALIZATION

- **Communalism:** In Indian context, it implies having a strong sense of attachment and identity towards one's own community, at times, to the extent of hatred or negative feelings towards others' community.
- **Communalization:** It implies interpretation of an event, an action, practice etc. from a communal angle i.e., associating it with the practice of a particular community or making a particular community victim or perpetrator of such event, action, practice etc.

Major reasons for concerns against media:

- **The constant rush to report-it-first** or to garner more ‘followers’ forces the communicators to post news from unreliable sources, combined with misplaced stereotypes, baseless myths, rumours and gossips.
- **Mass-media is the most potent** instrument to shape the public opinion and incite quick reactions. This places a huge responsibility on shoulders of professional newsmen
- **Social Media as tool:** The CJI expressed concern that various section over social media platforms shows everything with communal angle, and ultimately not only break the solidarity among Indians but also tarnish nation's image
- The CJI added that these platforms do not revert back to ordinary people, institutions and judges but only the “powerful people”.
- The media play important role in fomenting the communal violence at all stages including:
 - ♦ **Other Issues plaguing India Media:**
 - **Paid news:** It is one of the biggest threats to journalism. The origins of the unethical practice of paid news can be trace back to the liberalisation of the Indian economy in 1991. With market forces at play and public investment in private companies, journalists found it sometimes lucrative to write only partially true stories of companies waiting to list on the stock exchanges.
 - **Media Trial:** Media trial can be defined as a trial parallel to the court of law in which the media house declares a person innocent or guilty before the final judgment of the court based on debates and discussions.
 - **Side-lining of real issues:** The media often portray non-issues as real issues, while the real issues are side-lined. The real issues in India are economic, that is, the terrible economic conditions in which 80 percent of our people are living, the poverty, and unemployment, lack of housing and medical care and so on. Instead of addressing these real issues, the media often try to divert the attention of people to non-issues.
 - **Lack of transparency:** India is one of the biggest media markets. Only a few people control the ownership. The transparency in the inner structure of media organizations is dwindling, putting the credibility of media at stake.
 - **Lack of Diversity:** In India, there are 800 channels and 36000 weekly magazine publications and hundreds of thousands of web portals. Despite these many publications, there is still a lack of diversity in news coverage.

- ◆ For example, many remote places including the northeast, south India and tier-3 cities hardly get the required coverage in national media.
- ◆ **Opaque private treaties:** There has been growing nexus of politicians and corporate entities in the news media through such schemes. Indian media today are trapped by power centres, business tycoons and Indian state authorities converting their role of watchdog to lapdog.
- ◆ **Most of the Indian media houses are owned or controlled by politically affiliated people.** For example, Subhash Chandra, BJP MP owns the Zee Network including channels Zee News, Wion, etc.
- ◆ **Widening legal regulatory gap:** The Press Council of India has dragged its feet on addressing paid news and other unethical practices. There have been growing practices of advertisements being published as news for a fee. This has severely affected their credibility.
- ◆ **Flawed measurements of audience reach and readership:** The yardsticks to measure the reach and impact of the Indian media are dubious. Television ratings also fail to tell the real picture.
- ◆ These provide for a redressal mechanism and timely resolution of grievances of users
- ◆ IT Rules require these platforms to appoint a grievance redressal officer who is a resident of India
- ◆ However, these recently adopted Rules have been challenged in various High Courts

Cable Television Networks (Amendment) Rules, 2021:

- ◆ Broadcasters are regulated under these Rules
- ◆ CTN Rules have been amended in 2021, by the Ministry of Electronics and Information Technology
- ◆ Amended CTN Rules provide for a three-level grievance redressal mechanism:
 - ◆ Self-regulation by broadcasters
 - ◆ Self-regulation by the self-regulating bodies of the broadcasters
 - ◆ Oversight by an Inter-Departmental Committee at the level of the Central government
- ◆ A viewer can file a complaint directly to the broadcaster, who will have to respond within 15 days. If the complainant is not satisfied with the response, the complaint can be escalated to the self-regulating bodies set up by TV channels, which should deal with the case in 60 days. Appeal can be made further, to the Inter-Departmental Committee set up under the Oversight Mechanism.

Regulatory Structure for the Indian Media:

- ◆ **Press Council of India (PCI):** It is a statutory body under the PCI Act, 1978, which builds code of conduct for news agencies, reviews barriers to dissemination of news, and also receives complaints of violation by newsmen. However, it has no powers to inflict fines or punishments
- ◆ **Central Board of Film Certification (CBFC):** It controls the content of movies and television shows, etc.
- ◆ **Program and Advertisement Codes** for regulating content broadcast on the television, are issued under the Cable Television Networks (Regulation) Act, 1995.
- ◆ Content accessible over internet is regulated as per the provisions of **the Information Technology Act and Information Technology Rules**. However, there is no body such as the PCI or CBFC in this domain. Complaints are addressed to internet service providers (ISPs) or to the host.
- ◆ There are bodies such as the News Broadcasters Association (NBA), Broadcast Editors' Association (BEA), **Advertising Standards Council of India (ASCI)** that self-regulate through agreements, without any statutory power or backup.

Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021:

- ◆ Ministry of Electronics and Information Technology notified these Rules under the IT Act, 2000 in May 2021
- ◆ IT Rules are framed to regulate social media and OTT platforms
- ◆ The dual-purpose envisaged under these Rules is to increase accountability of social media platforms and also to provide grievance redressal mechanism to the social media users

Way Forward:

- ◆ In order to curb the communalization by the Indian media, regulation is important. However, such regulation should not hamper freedom of the press, but at the same time, it is to be ensured that the citizens' right to "right" information and unadulterated news should be safeguarded. Communalism should have no place in a country with a secular Constitution.
- ◆ **Transparency in the functioning:** The Press Council should publicize itself, its powers, its work and its adjudication so as to make itself known to the public and to gain its trust.
- ◆ **Adopting code practices:** Freelance journalists should make themselves familiar with the respective code for practice of the newspaper for which they are writing. Newspapers also must develop such codes for best practices in journalism.
- ◆ **Undertaking oath:** Journalists should adopt their own Journalist oath, in the same manner as the Hippocratic Oath in medicine.

Conclusion:

- ◆ Undoubtedly free media is fourth pillar of democracy. One of its roles is to watch what the Government does; the media will not be able to perform this duty if it is under the government's control. But it is essential for the media to take some concrete measures to improve their conduct.

WORLD OZONE DAY: MONTREAL PROTOCOL KEEPING US, OUR FOOD, AND VACCINES COOL

International day for preservation of Ozone layer is observed with the theme that Montreal protocol helped to keep us our food and vaccines cool.

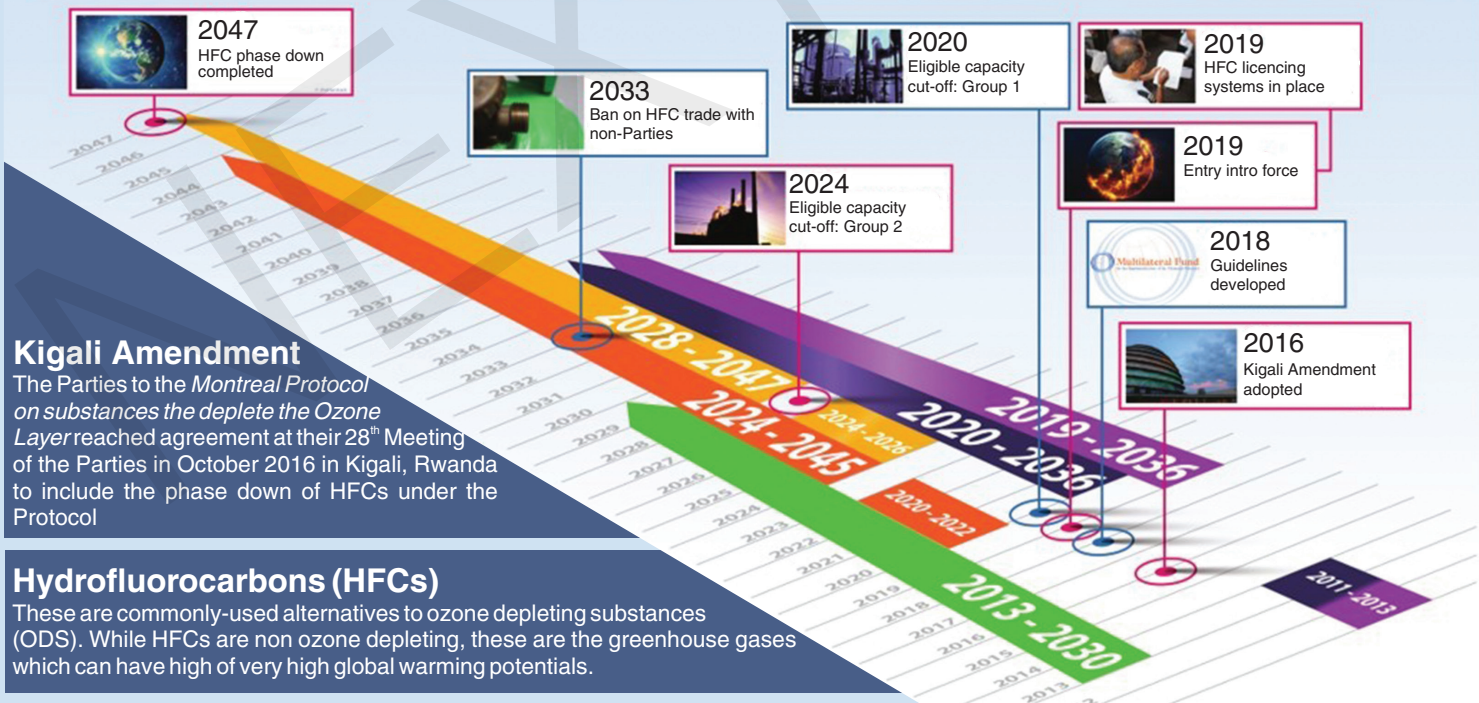
About:

- International day for preservation of Ozone is celebrated on 16th September every year to commemorate the signing of Montreal Protocol
- It is also observed to spread awareness about the depletion of the Ozone Layer and search for possible solutions to preserve it
- Theme 2021: Keeping us, our food, and vaccines cool.
 - ♦ **The theme** highlights the importance of Montreal Protocol in slowing climate change and helping to boost energy efficiency in the cooling sector, which contributes to food security also.
- The ozone layer is a fragile shield of gas that protects the Earth from the harmful portion of the rays of the sun, thus helping preserve life on Earth.

Montreal Protocol:

- It was adopted under the 1985 Vienna Convention for the Protection of the Ozone Layer and was Montreal Protocol on Substances that Deplete the Ozone Layer was signed in 1987.
- It is a landmark multilateral environmental agreement that regulates the production and consumption of nearly 100 man-made chemicals referred to as ozone depleting substances (ODS).
- It was adopted under the 1985 Vienna Convention for the Protection of the Ozone Layer.
- Under it developing and developed countries have equal but differentiated responsibilities, but most importantly, both groups of countries have binding, time-targeted and measurable commitments.

The Path from Kigali: HFC Phase-Down Timeline



Kigali Amendment

The Parties to the *Montreal Protocol on substances that deplete the Ozone Layer* reached agreement at their 28th Meeting of the Parties in October 2016 in Kigali, Rwanda to include the phase down of HFCs under the Protocol

Hydrofluorocarbons (HFCs)

These are commonly-used alternatives to ozone depleting substances (ODS). While HFCs are non ozone depleting, these are the greenhouse gases which can have high of very high global warming potentials.

Country Groups

The Montreal Protocol Parties are split into four Kigali Amendment groups:

- Article 5, Group 1: The majority of Article 5 Parties.
- Article 5, Group 2: Bahrain, India, Iran, Iraq, Kuwait, Oman, Pakistan, Qatar, Saudi Arabia, United Arab Emirates
- Non-Article 5, earlier start: Most non-Article 5 countries
- Non-Article 5, later start: Belarus, the Russian Federation, Kazakhstan, Tajikistan and Uzbekistan

- It's one of the most successful treaties on environment and also the only UN treaty ever that has been ratified by every country on Earth - all 198 UN Member States.
- The treaty evolves over time in light of new scientific, technical and economic developments, and it continues to be amended and adjusted.
- Hence, when it was found that Hydro Fluoro Carbons (HFCs), which were introduced as non-ozone depleting alternatives to support the timely phase out of CFCs and HCFCs are actually contributing to global warming then Kigali amendment was proposed to Montreal Protocol to even phase out HFCs.
- National strategy for phase down of Hydrofluorocarbons as per the applicable phase down schedule for India will be developed after required consultation with all the industry stakeholders by 2023.
- Amendments to the existing legislation framework, the Ozone Depleting Substances (Regulation and Control) Rules to allow appropriate control of the production and consumption of Hydrofluorocarbons to ensure compliance with the Kigali Amendment will be done by mid-2024.
- India even came out with a Cooling Action Plan in 2019, and set targets for reducing and offsetting the climate-threatening (and otherwise planet harming) effects of cooling and refrigeration. This is evidence of exemplary climate responsibility shown by India to even developed countries of world.

Kigali Amendment:

- Kigali Amendment was adopted globally in 2016, and became effective in 2019
- It aims to limit the use of Hydrofluorocarbons
- HFCs are almost a thousand times more potent than carbon dioxide. Hence, they may not be ozone-depleting but carry a catastrophic global warming potential.

The Commitments:

- It is a legally binding agreement on parties and its commitments are fully supported the amendment can avoid up to 0.4°C of global warming by the end of this century.
- Under the commitments industrialised nations are to cut production and use of HFCs by 85% of the 2011-2013 levels by 2036. One group of developing nations including China, Brazil and South Africa, will need to cut by 80% from 2020-22 levels by 2045.
 - ♦ Another group of nations including India and Iran will need to cut 85% from 2024-26 levels by 2047.
- **Problem:** HFC is widely used in cooling and refrigeration and as climate-change making intense heat waves more frequent than ever before controlling their use will be a challenging task.

Indian Efforts:

- The Indian Government has recently ratified the Kigali Amendment to the Montreal Protocol and its other environmental commitments had placed it in strong footing.
- India will complete its phase down of HFCs in 4 steps from 2032 onwards with cumulative reduction of 10% in 2032, 20% in 2037, 30% in 2042 and 85% in 2047.

Benefits to India:

- The Kigali Amendment will focus adoption of low-global warming potential and energy-efficient technologies which will achieve energy efficiency gains and carbon dioxide emissions reduction - a climate co-benefit.
- HFCs phase down implementation will involve synergies with on-going government programmes and schemes of the Government of India with the objective to maximize the economic and social co-benefits, besides environmental gains.
- There would be scope for domestic manufacturing of equipment as well as alternative non-HFC and low-global warming potential chemicals to enable the industry to transition to the low global warming potential alternatives as per the agreed HFC phase down schedule.

Emerging threats to Ozone:

- Other than ozone Depleting Chemicals their other factors also which deplete ozone but are not covered under Montreal protocol. The world needs to act on these factors like:
- **Anthropogenic emission** of nitrous oxide as it plays a significant role in stratospheric ozone depletion directly and by moderating depletion by chlorinated chemicals.
- **Space exploration** also poses a significant threat to the ozone layer
- As countries are allowing private participation in space this boom in space-related activity in the coming years will pose newer threats for ozone.

**MONTREAL PROTOCOL
CONTRIBUTES TO THE**



**SUSTAINABLE
DEVELOPMENT
GOALS**



AYUSHMAN BHARAT DIGITAL MISSION

Prime Minister Modi recently launched Ayushman Bharat Digital Mission for the entire country virtually

About:

- **Announcement:** The pilot project of Ayushman Bharat Digital Mission was announced by the Prime Minister from the ramparts of Red Fort on August 15 last year.
- **It aims** to provide digital health IDs for all Indian citizens to help hospitals, insurance firms, and citizens access health records electronically when required.
- **Current Implementation:** Currently, the programme is being implemented on a pilot basis in six Union Territories.
- **Key Components:** The key components of the project include a **health ID** for every citizen, a Healthcare Professionals Registry (**HPR**) and Healthcare Facilities Registries (**HFR**).

National Health ID System:

- **Repository:** The national health ID will be a repository of all health-related information of a person.
- **Linking of the ID:** Each Health ID will be linked to a health data consent manager — such as National Digital Health Mission (NDHM) — which will be used to seek the patient's consent and allow for seamless flow of health information from the Personal Health Records module.
- **Unique for each Person:** The Health ID is created by using a person's basic details and mobile number or Aadhaar number. This will make it unique to the person, who will have the option to link all of their health records to this ID.

Healthcare Facility Registry (HFR):

- It is a comprehensive repository of health facilities of the nation across different systems of medicine.
- It includes both public and private health facilities including hospitals, clinics, diagnostic laboratories and imaging centers, pharmacies, etc.

Healthcare Professionals Registry (HPR):

- It is a comprehensive repository of all healthcare professionals involved in delivery of healthcare services across both modern and traditional systems of medicine..

Implementing Agency:

- **National Health Authority (NHA)** has been entrusted with the role of designing strategy, building technological infrastructure and implementation of National Digital Health Mission.

Benefits:

- **Efficiency And Accountability:** The implementation of ABDM is expected to significantly improve the efficiency, effectiveness, and transparency of health service delivery overall.

- Patients will be able to securely store and access their medical records and share them with health care providers to ensure appropriate treatment and follow-up.
- **Choice for People:** ABDM will provide choice to individuals to access both public and private health services, facilitate compliance with laid down guidelines and protocols, and ensure transparency in pricing of services and accountability for the health services being rendered.
- **Better Access to patient Medical History:** Health care professionals across disciplines will have better access to a patient's medical history for prescribing more appropriate and effective health interventions.
- **Helping Government:** At the same time, policy makers and programme managers will have better access to data, enabling more informed decision making by the Government.
- **Better Monitoring and Decision Making:** It will also enable geography and demography-based monitoring and appropriate decision making.



Way Forward:

- The health card system will be very useful for many patients. There was an urgent need for reforms in the health care system and NDHM is a welcome move. This indeed will revolutionise the health care system in India and will bring cheers to the poor and disadvantaged.
- The health insurance schemes, e-Sanjeevani, Jan Aushadhi implemented by the government are helping the beneficiaries with assured health service and NDHM will bridge the existing gap amongst different stakeholders of the Healthcare ecosystem through digital highways.

AUKUS

UK, US and Australia launch pact to counter China

About:

- On September 15, U.S. President Joe Biden, along with Prime Ministers Scott Morrison and Boris Johnson of Australia and the U.K. respectively, announced the formation of a new trilateral security partnership called AUKUS (Australia-U.K.-U.S.).
 - Under the pact, the US and the UK will help Australia to acquire nuclear-powered submarines.
 - This has happened only once in 70 years, when it shared the technology with the UK in 1958.
- Its stated aim** is to "update and enhance our shared ability to take on the threats of the 21st century just as we did in the 20th century: together,"
- The pact also includes cooperation on cyber capabilities, artificial intelligence, quantum technologies and undersea capabilities.
- Under the pact, Australia will acquire new long-range strike capabilities for its air force and navy.
- Only a handful of countries possess nuclear-powered submarines. These include the US, the UK, France, Russia, China and India. With the AUKUS partnership, Australia will also join these elite countries. Further, Australia will also be the only country to have such submarines without having a civilian nuclear power industry.
- The pact will focus on military capability, separating it from the Five Eyes intelligence-sharing alliance that also includes New Zealand and Canada.
- China has condemned the agreement as "extremely irresponsible".
 - Foreign ministry spokesman Zhao Lijian said it "seriously undermines regional peace and stability and intensifies the arms race".
 - China's embassy in Washington accused the countries of a "Cold War mentality and ideological prejudice".

AUKUS and France:

- Australia and France entered into a submarine contract which was initially meant to cost ₹ 31 bn, but the figure had reached around ₹ 56 bn at last count.
- However, post AUKUS agreement Australia scrapped its \$90bn (₹ 56 bn) submarine deal with France and entered a new pact with the US and the UK to procure nuclear-powered submarines.
 - The submarines will be built in Adelaide, making Australia the seventh country in the world to have submarines propelled by nuclear reactors.
- In response to the pact, France withdrew its ambassadors from Washington and Canberra and cancelled a defense summit with the UK due to take place this week.
- France claims it has been informed of the cancellation of the submarine contract only a couple of hours before the three Anglosphere nations made their public announcement.
- As France is also having a growing presence in the Indo-Pacific region, it will impact any future cooperation with France in the region. Further, it also impacts the India-Australia-France trilateral for the time being. Recently, France had cancelled a scheduled meeting of the foreign ministers of Australia, France, and India at the UN.

India's concerns with AUKUS:

- Strengthened Australia:** Australia will receive top quality nuclear submarine technology from the U.S. and the U.K., which will be strengthening China deterrence in the Indo-Pacific.
- Security concern in Eastern Indian Ocean:** There is apprehension that the deal could eventually lead to a crowding of nuclear attack submarines (SSNs/submersible ship nuclear) in the Eastern Indian Ocean, eroding India's regional pre-eminence.
 - US's willingness to help Canberra build SSNs raises the possibility that Australia could deploy nuclear submarines in the Eastern Indian Ocean well before India positions its own.
 - India will not be comfortable with the prospect of friendly SSNs in its backyard.
- Shift in US Policy:** AUKUS may be the beginning of a shift in the US policy which is about finding a new partner to lead in the Indo-Pacific region i.e. Australia.
 - Unpredictability on USA's Side:** The US not even informed or consulted any other partners in the region, For instance, countries like France, Canada, New Zealand, and Japan were not invited to join this partnership. Recently, the US has clarified that India or Japan would not be added to the AUKUS alliance.
- According to Arzan Tarapore, a South Asia security expert,** "If the new partnership lives up to its promise, it could be a "game-changer" for the region". He also mentions, "Alongside India's stated intent to acquire more nuclear-powered submarines, the AUKUS will amount to a step-change increase in the Quad's undersea and anti-submarine warfare capabilities".
 - The Quad is not a security grouping, so the AUKUS brings a security adjunct to the Quad. For the present, the Quad and AUKUS will move on parallel tracks, with the possibility that in future, the two could merge.

Other Challenges associated with AUKUS:

- **New type of Cold War:** Strategic experts believe that these types of new alliances are similar to the Cold War days, where the entire world was divided into groups. As US-China relations unravelled in recent years, nations in the Indo-Pacific have found it increasingly difficult to navigate between the two superpowers.

Way Forward:

- **Enhanced partnership with France:** AUKUS has opened a window of strategic opportunity and a chance for New Delhi to deepen its partnership with France provided it plays the cards well.
 - ♦ The need of the hour is intense and mature diplomacy to tap into the opportunities beyond binaries. Towards that end, the timing of the AUKUS agreement couldn't have come at a better time for India.

- **Not an alternative of QUAD:** AUKUS is a significant step towards managing the geopolitical turbulence in the Indo-Pacific, and it will complement, not diminish the importance of Quad.
- **Build a larger coalition:** India must remind France, Australia, the UK and US of the shared interests in securing the Indo-Pacific and the dangers of letting the current quarrel undermine that larger goal.

Conclusion:

- At a time when the world is witnessing a blatant violation of International maritime rules by China, it is necessary that likeminded countries must come together to ensure Freedom of navigation and any rift might prove counterproductive. India can play a balancing role and help creating a platform where all likeminded countries can come together.

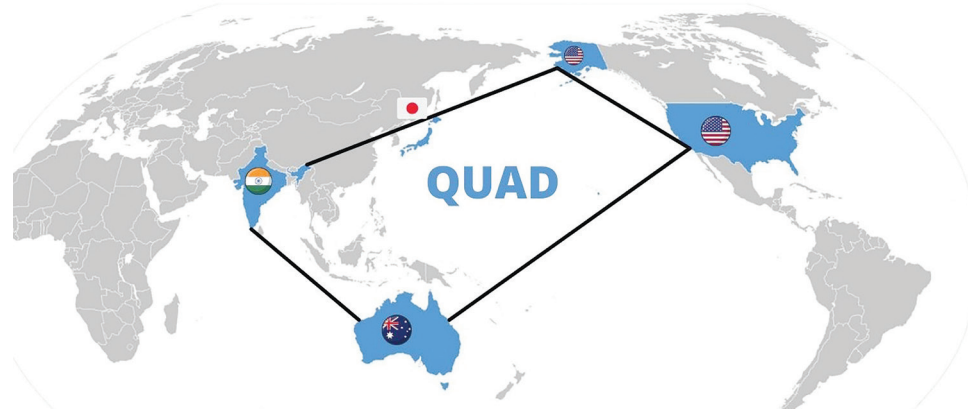
The Quad: In Different Domains

India hosted a Quad **counterterrorism table-top exercise** in November 2019

In December 2019, the Quad countries' **cyber experts** met on the sidelines of a summit

Quad **diplomats meet** in different countries. Recently, the American, Australian, Indian, & Japanese ambassadors met in Brussels

Senior **military leaders** appeared on Quad-plus panels at India's Raisina Dialogue in 2018, 2019, & 2020 (with French or Indonesian participants)



NATIONAL REGISTER OF CITIZENS

Even after two years of Assam NRC, an uncertainty is looming over re verification process.

About:

- Final draft of National Register of Citizens (NRC) was published on August 31, 2019, in Assam, which had left out over 19 lakh people out of 3.3 crore applicants.
- Those who were excluded from the list, are yet to receive their rejection slips, so that they can challenge the decision in the Foreigner's Tribunal.
 - ♦ Rejection slip outlines the reasons for a person left out of the list.
 - ♦ According to the SOP, each excluded person was to have been issued a rejection slip for appealing to a Foreigner's Tribunal within 120 days of receiving the slip.
- Assam government had demanded for reverification in the Supreme Court, and the same is pending.
- Out of the total 19.06 lakh people who were left out in the final draft, around 1.08 lakh are D-voters (doubtful voters).
- The Assam cabinet has decided not to prosecute members of the Gorkha community under the Citizenship Act, 1955, and withdrew all cases — approximately 22,000 — against them in the Foreigners' Tribunals.
 - ♦ Foreigners' Tribunals are quasi-judicial bodies established as per the Foreigners' Tribunal Order, 1964 and the Foreigners' Act, 1946.

About NRC:

- The first National Register of Citizens was compiled in 1951, after the Census was completed that year.
 - ♦ The register is meant to be a list of Indian citizens living in Assam.
- In 1979, Assam saw an anti-foreigners' agitation against "illegal immigrants" who allegedly had migrated from Bangladesh to India during the 1971 India Pakistan war.
 - ♦ Assamese ethnic nationalists claimed illegal immigrants had entered electoral rolls and were taking away the right of communities defined as indigenous to determine their political future.

There are two kinds of illegal immigrants: those who cross the borders without passport and visa, and those who arrive with a visa and stay on even after the visa has expired.

- Assam Accord was signed in 1985 after a violent agitation led by All Assam Students Union. Under the accord:
 - ♦ Those who entered the state between 1966 and 1971, their names would be deleted from the electoral rolls and

they would lose their voting rights for 10 years, after which their names would be restored to the rolls.

- ♦ Those who entered on or after March 25, 1971, the eve of the Bangladesh War, would be declared foreigners and be deported.

Process of updating NRC:

- The mechanism for detecting so-called foreigners had previously been delineated by the Illegal Migrants (Determination by Tribunals) Act of 1983.
 - ♦ This was struck down by the Supreme Court in 2005, on a petition which argued that the provisions of the law were so stringent, they made the "detection and deportation of illegal migrants almost impossible".
- The decision to start updating the National Register of Citizens was taken at a tripartite meeting attended by the Centre, the Assam government as well as the All Assam Students' Union and chaired by then Prime Minister Manmohan Singh.

When did Supreme Court come into picture?

- The court came into the picture after a non-governmental organisation called Assam Public Works filed a petition asking that so-called illegal migrants be struck off the electoral rolls.
- In 2013, the Supreme Court asked the Centre to finalise the modalities to update the new National Register of Citizens.
- The project was launched in earnest from 2015, monitored directly by the Supreme Court.

Process of establishing citizenship under NRC:

- First, the data for entire state was collected.
- People who had to apply for inclusion of their names in the NRC had to prove not only that their ancestors had lived in Assam pre-1971 but also their relationship with the ancestor.
 - ♦ Once the data was submitted, the applicant's blood relations were plotted on a family tree.
- Under the verification process, documents were sent to the original issuing authorities while NRC officials conducted field verification.

Definition of illegal immigrant under NRC:

- The National Register of Citizens takes its definition of illegal immigrants from the Assam Accord – anyone who cannot prove that they or their ancestors entered the country before the midnight of March 24, 1971, would be declared a foreigner and face deportation.

Criticism of NRC Process:

- **Biased process:** Bengali Muslims, the community most often branded as illegal Bangladeshi immigrants, felt they were put under greater scrutiny than other groups.
- **Original inhabitant:** People internally classified as original inhabitants faced less scrutiny. It was rumored that no Muslims had been included in this category.
- **Certificates issued by Gram Panchayat:** In March 2017, the Guwahati High Court ruled that residency certificates issued by gram panchayats could not be used as a link document connecting people born after 1971 with their ancestors.
 - ♦ This measure hit married women the hardest.
 - ♦ The Supreme Court later overturned this decision and panchayat certificates were allowed, provided they were verified and submitted with additional documentary proof.
 - ♦ But only those women categorised as "original inhabitants" and relying on such certificates made it to the first draft of the register, published on December 31, 2017.
- **Future of those who cannot make to the list:** There is ambiguity over what will be the future of people who cannot make it to the list, as India has already assured Bangladesh it won't deport anyone excluded in the NRC.

National Population Register (NPR) vs NRC:

- National Population Register is a database of people living in India, citizens or otherwise, but National Register of Citizens is a database of Indian citizens.

- The NRC process demands proof of citizenship from the respondents. Those found without proof may face action.

Way Forward:

- People who do not get enrolled in the National Register for Citizens (NRC) in Assam for lack of proof should not be detained in camps like those deemed foreigners by the state's Foreigners Tribunals but they should have truncated rights.
- Objective should be to give all of them citizenship over a period of time.
 - ♦ Three-quarters of them should be dispersed across other states, so that the burden does not fall entirely on Assam.
 - ♦ Till they are made citizens, they should be given work permits but no citizenship or voting rights.
- Under the Citizenship Amendment Act of 2019, illegal immigrants who are Hindus, Sikhs, Buddhists, Jains, Parsis and Christians from Afghanistan, Bangladesh and Pakistan are eligible for citizenship.

Conclusion:

- Any process of identifying the illegal migrants must be taken up with due diligence towards fact that no human rights violation takes place. Even those who cannot make it to the list must be treated with dignity and a rationale decision must be taken about their future. India must also keep in mind its relations with its neighbors before proceeding any further in the NRC process.

NRC IN ASSAM

- Assam had started a mammoth exercise in 2013 to update the National Register of Citizens (NRC) of 1951 to identify the illegal foreigners living in the state.

- The government finalized 25 March 1971, as the cut off date to consider the India citizenship which implies that those who came before midnight of March 24 1971 are Indian citizens while those came after that has to be detected and deported.

- The draft NRC published by the Assam government had excluded 40,07,707 people due to 'some discrepancies' in the document submitted by them to prove their Indian citizenship.

- Over 36 Lakh of them applied afresh to get their names included in the NRC.

- The Assam government is going to



establish 400 Foreigners' Tribunals in the state to deal with the cases of people, whose names are excluded from the final National Register of Citizens (NRC).

- At present there are 100 Foreigners' Tribunals in the state.
- The Foreigners' Tribunals are Quasi judicial courts mandated to hear the appeal of those excluded from the NRC.

- Under the provisions of Foreigners Act, 1946 and Foreigners Tribunal Order, 1964, only Foreigner Tribunals are empowered to declare a person as a foreigner. Thus, non-inclusion of a person's name in NRC does not by itself amount to him/her being declared as a foreigner

GLOBAL AIR QUALITY GUIDELINES

The World Health Organisation (WHO) released stringent air quality guidelines, lowering the recommended levels of pollutants that can be considered safe for human health.

About:

- These guidelines have been issued after a gap of fifteen years. The last guidelines were issued in 2005. Since 2005 global update, there has been a marked increase of evidence that shows how air pollution affects different aspects of health.
- The guidelines recommend new air quality levels to protect the health of populations, by reducing levels of key air pollutants, some of which also contribute to climate change.
- Adjusted AQGs Levels WHO has adjusted almost all the AQGs levels downwards, warning that exceeding the new air quality guideline levels is associated with significant risks to health.
- **Classical Pollutants:** WHO's new guidelines recommend air quality levels for 6 pollutants, where evidence has advanced the most on health effects from exposure.
- 6 pollutants so-called classical pollutants include particulate matter (PM), ozone (O₃), nitrogen dioxide (NO₂), sulfur dioxide (SO₂) and carbon monoxide (CO).
- **Insufficient Quantitative Evidence for Certain Particulate Matter:** The guidelines also highlight good practices for the management of certain types of particulate matter for which there is currently insufficient quantitative evidence to set air quality guideline levels e.g. black carbon/elemental carbon, ultrafine particles, particles originating from sand and dust storms.

REVISED AFTER 16 YEARS

WHO Then & Now

Pollutant*	Average	2005*	2021*
PM2.5	Annual mean	10	5
	24-hour mean	25	15
PM10	Annual mean	20	15
	24-hour mean	50	45
O ₃	Annual mean	NS**	60
	8-hour mean	100	100
NO ₂	Annual mean	40	10
	24-hour mean	NS**	25
SO ₂	24-hour mean	20	40
CO	24-hour mean	NS**	4

India's National Ambient Air Quality Standards (NAAQS)

Average Annual mean 24-hour mean

PM2.5
40 | 60

PM10
60 | 100

NO₂
40 | 80

SO₂
50 | 80

Average (8 hour mean)
O₃ | 100; CO | 2



* micrograms per cubic meter (µg/m³); **NS - Not Set; PM2.5 & PM10 - Particulate Matters; O₃ - Ozone; NO₂ - Nitrogen Dioxide; SO₂ - Sulfure Dioxide; CO - Carbon Monoxide

What does this mean for India?

- **Differences with India's Air Quality Standards:** The new WHO guidelines have sharpened the difference with India's ambient air quality standards that are in the intermediate category and require revision overtime to finally attain the WHO limit.
- **Higher PM2.5 and PM10:** For instance, India's annual average standard for PM2.5 is 40 µg/m³. That is eight times more lax than the new WHO guidelines and the annual average standard for PM10 at 60 µg/m³ is four times more lax.

Some Alignment with the Guidelines:

- India aligns with the WHO guidelines **only in the case of ozone and carbon monoxide**, as these have not changed. But both NO₂ and SO₂ guidelines are tighter than the current Indian standard.
- **Tough Targets:** It is not clear as to how tough targets such as five µg / m³ and 15 µg/m³ for PM2.5 can be met in south Asia and particularly in India.

Effect of Air Pollution on Human Health:

- **Premature Deaths:** Every year, exposure to air pollution is estimated to cause 7 million premature deaths and result in the loss of millions more healthy years of life.
- **Children:** In children, this could include reduced lung growth and function, respiratory infections and aggravated asthma.
- **Adults:** In adults, ischemic heart disease and stroke are the most common causes of premature death attributable to outdoor air pollution.

NATIONAL AMBIENT AIR QUALITY STANDARDS (NAAQS)

- National Ambient Air Quality Standards are the standards for ambient air quality set by the Central Pollution Control Board (CPCB) that are applicable nationwide.
- The CPCB has been conferred this power by the Air (Prevention and Control of Pollution) Act, 1981.
- **Last Revision of NAAQS:** India's NAAQs was last revised in 2009.
- The 2009 standards lowered the maximum permissible limits for pollutants as compared to earlier revisions and made the standards uniform across the nation. Earlier, less stringent standards were prescribed for industrial zones as compared to residential areas.

WESTERN GHATS OFFER MAJOR ADDITIONS TO FLORA

The Botanical Survey of India, in its new publication Plant Discoveries 2020 has added 267 new taxa/species to the country's flora.

About:

- The BSI every year compiles and documents new plant discoveries, playing a central role to fulfil India's global commitment of comprehensive documentation and identification of plant diversity of the country.
- India is a signatory to the 'Convention on Biological Diversity' (CBD) and is committed to work towards a global strategy of plant conservation.

Discoveries:

- **New Species Added:** BSI has added 267 new taxa/species to the country's flora. It includes 119 angiosperms; 3 pteridophytes; 5 bryophytes, 44 lichens; 57 fungi, 21 algae and 18 microbes.
 - ♦ Out of these 202 plant species are new to science while 65 others had never been reported from India.
- **Places of discovery:** Among the new discoveries this year, nine new species of balsams (*Impatiens*) one species of wild banana (*Musa pradhanii*) were discovered from Darjeeling, one species each of wild Jamun (*Syzygium anamalaiantum*) from Coimbatore and fern species (*Selaginella odishana*) were recorded from Kandhamal in Odisha.
 - ♦ There are 14 new macros and 31 new micro fungi species recorded from various parts of India.
- **Geographical Distribution:** Geographical distribution of these newly discovered plants reveals that 22% of the discoveries were made from the Western Ghats followed by Western Himalayas (15%), Eastern Himalayas (14%) and Northeast Ranges (12%).
- **Contribution:** The West coast contributed 10% while the East Coast contributed (9%) in total discoveries; the Eastern Ghats and South Deccan contributed 4% of each while Central Highland and North Deccan added 3% each.

India's Flora:

- **Identified Species:** India has about 45,000 species of plants, already identified and classified, which account for about 7% of the total plant species of the world. About 28% of the Indian plants are endemic to the country.
- **Plant Diversities:** With these new discoveries the latest estimate of plant diversity in India stands at 54,733 taxa including 21,849 angiosperms, 82 gymnosperms, 1,130 pteridophytes, 2,791 bryophytes, 2961 lichens, 15,504 fungi, 8,979 algae and 1,257 microbes.

- **Flora Distribution:** According to BSI, the Indian flora is mainly concentrated in three major centers of floristic diversity viz., the Himalayas, the Western Ghats and Andaman & Nicobar Islands, which are part of four of the 34 identified 'global biodiversity hotspots'.

WESTERN GHATS

- The Ghats traverse the States of Kerala, Tamil Nadu, Karnataka, Goa, Maharashtra and Gujarat
- The Western Ghats is older than the great Himalayan mountain chain
- **Internationally Recognized:** The Western Ghats are internationally recognized as a region of immense global importance for the conservation of biological diversity.
- **Spread:** The Ghats traverse the States of Kerala, Tamil Nadu, Karnataka, Goa, Maharashtra and Gujarat.
- **Affecting Monsoon:** The mountains of the Western Ghats and their characteristic montane forest ecosystems influence the Indian monsoon weather patterns.
- **Act as a Barrier:** The Ghats act as a key barrier, intercepting the rain-laden monsoon winds that sweep in from the south-west during late summer.
- **Hottest Hotspots:** The Western Ghats are recognized as one of the world's eight 'hottest hotspots' of biological diversity along with Sri Lanka.
- **Species Found:** At least 325 globally threatened (IUCN Red Data List) species occur in the Western Ghats. Of the total 325 globally threatened species in the Western Ghats, 129 are classified as Vulnerable, 145 as Endangered and 51 as Critically Endangered.

BOTANICAL SURVEY OF INDIA

- Botanical Survey of India (BSI) is the apex taxonomic research organization of the country which is under the Ministry of Environment, Forest & Climate Change, Government of India.
- It was established on 13th February 1890 under the direction of Sir George King.
- It is involved in survey, research and conservation of plant resources, flora and endangered species of India.

LOAN GUARANTEE SCHEME FOR COVID-AFFECTED SECTORS (LGSCAS)

Union Finance Minister recently asked all stakeholders to conclude Rs 50,000 cr Loan Guarantee Scheme for Covid-Affected Sectors in time to deal with any future third wave.

About:

- **Boost medical infrastructure** - Launched in June 2021, the LGSCAS scheme is aimed at boosting medical infrastructure in the country, specifically targeting underserved areas (non-metro cities and smaller towns).
- **Provides guarantee for loans** - It aims to provide guarantee to Scheduled Commercial Banks for loans given for new projects i.e Greenfield projects and for expansion i.e. Brownfield projects related to healthcare infrastructure.
 - ♦ National Credit Guarantee Trustee Company Ltd (NCGTC) will provide the guarantee.

Brownfield Project	Greenfield Project
A brownfield project is one, where the development work is carried out in a place where prior work has been done. It refers to a project, where an existing one is rebuilt, modified or upgraded.	A greenfield project is one, where the land on which the project is developed, has never been used and there is no need to rebuild or demolish an existing structure.

- **Targets** - The Scheme is applicable to all eligible loans sanctioned up to 31.03.2022, or till an amount of Rs. 50,000 crore is sanctioned, whichever is earlier.
- **Cheaper interest rate** - Loans under the scheme are made available at cheaper interest rate of 7.95%.
- **Guarantee coverage:** Guarantee cover for urban or rural locations other than 8 Metropolitan Tier 1 cities (Class X cities)
 - ♦ 50 percent for brownfield projects and 75 per cent for greenfield projects
 - ♦ For aspirational districts, the guarantee covers for both brownfield expansion and greenfield projects is 75%.
 - ♦ Maximum Loan cap for a project is Rs. 100 crores.
 - ♦ Guarantee duration is upto 3 years.
- **Expected benefits –**
 - ♦ It is expected to help the country in shoring up its much-needed healthcare infrastructure along with creating more employment opportunities.
 - ♦ It will partially mitigate credit risk (primarily construction risk) and facilitate bank credit at lower rates of interest.

NATIONAL CREDIT GUARANTEE TRUSTEE COMPANY LTD (NCGTC)

- It is a private limited company incorporated under the Companies Act 1956 in 2014.
- It was established by the Department of Financial Services, Ministry of Finance, as a wholly owned company of the Government of India.
- It acts as a common trustee company for multiple credit guarantee funds.

ACCOUNT AGGREGATOR (AA) NETWORK

Finance Ministry recently unveiled the Account Aggregator (AA) network (a financial data-sharing system) in banking with eight of India's largest banks.

About:

- **RBI's account aggregator network** - Eight major banks have joined RBI's account aggregator network that will enable customers to digitally access and share their financial data in a secure manner.
 - ♦ These include State Bank of India, ICICI Bank, Axis Bank, IDFC First Bank, Kotak Mahindra Bank, HDFC Bank, IndusInd Bank, and Federal Bank.
 - ♦ Neo bank Fi has also joined the account aggregator network and is one of the first fintechs to join the ecosystem.
- The framework, which has been under discussion since 2016 and in the testing phase for some time, will now be open to all customers.
- The AA framework was created through initiative of the Financial Stability and Development Council (FSDC) and an inter-regulatory decision by RBI and other regulators including
 - ♦ Securities and Exchange Board of India
 - ♦ Insurance Regulatory and Development Authority and
 - ♦ Pension Fund Regulatory and Development Authority (PFRDA)
- **The licence for AAs is issued by the RBI**, and the financial sector will have many AAs.

Account Aggregator (AA):

- According to RBI, AA is a non-banking financial company (NBFC) engaged in the business of providing, under a contract, the service of retrieving or collecting financial information pertaining to its customer.

- It is thus a type of RBI regulated entity (with an NBFC-AA license) that helps an individual securely and digitally access and share information from one financial institution they have an account with to any other regulated financial institution in the AA network.
 - ♦ Data cannot be shared without the consent of the individual.
- There will be many Account Aggregators an individual can choose between.

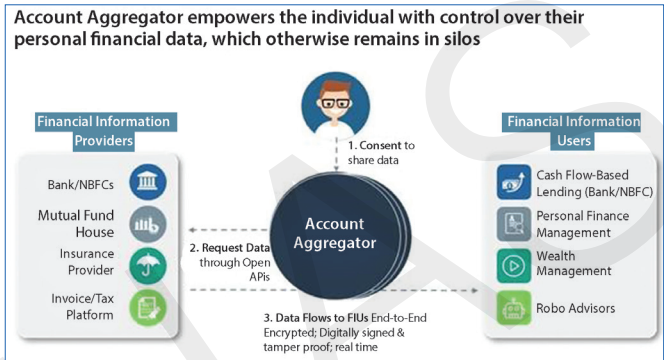
- Through Account Aggregator, a company can access tamper-proof secure data quickly and cheaply, and fast track the loan evaluation process so that a customer can get a loan.
- Also, a customer may be able to access a loan without physical collateral, by sharing trusted information on a future invoice or cash flow directly from a government system like GST or GeM (Government e-Marketplace).

The Account Aggregator is an interoperable data blind Consent Manager

AAs cannot read consumer data. They cannot resell consumer data.

AAs enable consumers to selectively share & even revoke data once shared.

AAs have a fiduciary duty to consumers and are RBI regulated entities, sharing digitally signed & encrypted data



How does it work?

- **It has a three-tier structure:** Account Aggregator, FIP (Financial Information Provider) and FIU (Financial Information User).
- **An FIP** is the data fiduciary, which holds customers' data. It can be a bank, NBFC, mutual fund, insurance repository or pension fund repository.
- **An FIU** consumes the data from an FIP to provide various services to the consumer. An FIU is a lending bank that wants access to the borrower's data to determine if the borrower qualifies for a loan.
- Banks play a dual role – as an FIP and as an FIU.

How will the new account aggregator network improve an average person's financial life?

- India's financial system involves many hassles for consumers today – sharing physical signed and scanned copies of bank statements, running around to notarise or stamp documents, or having to share one's personal username and password to give their financial history to a third party.
- The Account Aggregator network would replace all these with a simple, mobile-based, simple, and safe digital data access & sharing process.
- This will create opportunities for new kinds of services -- eg new types of loans.
- The individual's bank just needs to join the Account Aggregator network.
- The two key services that will be improved for an individual is access to loans and access to money management due to digital sharing of financial information.

How is an account aggregator network different from Aadhaar eKYC data sharing, credit bureau data sharing, and platforms like CKYC?

- Aadhaar eKYC and CKYC only allow sharing of four 'identity' data fields for KYC purposes (eg name, address, gender, etc).
 - ♦ Similarly, credit bureau data only shows loan history and/or a credit score.
- The Account Aggregator network allows sharing of transaction data or bank statements from savings/deposit/current accounts.

What kind of data can be shared?

- Currently, banking transaction data is available to be shared (for example, bank statements from a current or savings account) across the banks that have gone live on the network.
- Gradually, the AA framework will make all financial data available for sharing, including tax data, pensions data, securities data (mutual funds and brokerage), and insurance data will be available to consumers.
- It will also expand beyond the financial sector to allow healthcare and telecom data to be accessible to the individual via AA.

Can AAs view or 'aggregate' personal data? Is the data sharing secure?

- Account Aggregators cannot see the data; they merely take it from one financial institution to another based on an individual's direction and consent.

- Contrary to the name, they cannot 'aggregate' our data. AAs are not like technology companies which aggregate our data and create detailed profiles of us.
- The data AAs share is encrypted by the sender and can be decrypted only by the recipient.
- The end-to-end encryption and use of technology like the 'digital signature' make the process much more secure than sharing paper documents.
- **Data Sharing is voluntary:** Registering with an AA is fully voluntary for consumers.
- If the bank the consumer is using has joined the network, a person can choose to register on an AA, choose which accounts they want to link, and share their data from one of their accounts for some specific purpose to a new lender or financial institution at the stage of giving 'consent' via one of the Account Aggregators.
- A customer can reject a consent to share request at any time.
- If a consumer has accepted to share data in a recurring manner over a period (eg during a loan period), it can also be revoked at any time later as well by the consumer.
- The exact time period for which the recipient institution will have access will be shown to the consumer at the time of consent for data sharing.

How can a customer get registered with an AA?

- One can register with an AA through their app or website. AA will provide a handle (like username) which can be used during the consent process.
- **At present, four apps are available** for download (Finvu, OneMoney, CAMS Finserv, and NADL) with operational licenses to be AAs.
- Three more have received in principle approval from RBI (PhonePe, Yodlee, and Perfios) and may be launching apps soon.
- A customer can register with any AA to access data from any bank on the network.
- **Fee Charged:** This will depend on the AA. Some AAs may be free because they are charging a service fee to financial institutions. Some may charge a small user fee.

COMPETITION COMMISSION OF INDIA (CCI)

Apple Inc is facing an antitrust challenge in India for allegedly abusing its dominant position in the apps market.

About:

- **Recent Case:** An Indian non-profit group has filed an anti-trust case against Apple with Competition Commission of India (CCI) by arguing that

- Apple forced developers to use its proprietary in-app purchase system.
- Apple's fee of up to 30% hurts competition by raising costs for app developers and customers, while also acting as a barrier to market entry.
- Restriction on developers to use domestic payment systems which offer services at lower rates of 1-5%
- Restriction on developers on informing customers of alternative payment systems
- **The case has been pending with the CCI.**
 - Unlike Indian court cases, filings and details of cases reviewed by the CCI are not made public.
 - The CCI will review the case and could order its investigations arm to conduct a wider probe, or dismiss it altogether if it finds no merit in it.
- **Global happenings**
 - The allegations are similar to a case Apple faces in the European Union, where Apple imposed an in-app fee of 30% for distribution of paid digital content and other restrictions.
 - South Korea's parliament also recently approved a bill that bans major app store operators like Alphabet Inc's Google and Apple from forcing software developers to use their payment systems.
- Companies like Apple and Google have argued that their fee covers the security and marketing benefits their app stores provide.

Competition Commission of India (CCI):

- **It is a statutory body** established in 2003 by Government of India under the Competition Act, 2002 for the administration, implementation, and enforcement of the Act.
 - The Competition Act, 2002
 - Prohibits Anti-competitive agreements,
 - Prohibits Abuse of dominant position by enterprises and
 - Regulates combinations (acquisition, acquiring of control and M&A), which causes or likely to cause an appreciable adverse effect on competition within India.
 - It is the duty of the Commission to
 - Eliminate practices having adverse effect on competition
 - Promote and sustain competition
 - Protect the interests of consumers
 - Ensure freedom of trade in the markets of India
- **CCI aims to establish a robust competitive environment through:**
 - Proactive engagement with all stakeholders, including consumers, industry, government and international jurisdictions.
 - Being a knowledge intensive organization with high competence level.

- ◆ Professionalism, transparency, resolve and wisdom in enforcement.
- It is also required to give opinion on competition issues on a reference received from a statutory authority established under any law and to undertake competition advocacy, create public awareness and impart training on competition issues.
- CCI consists of a chairperson and 6 Members appointed by the Central Government.

GREY MARKET IPO

Lately, traders are increasingly showing interest in grey market stocks.

About:

- **IPO** - The term IPO refers to initial public offering i.e., the first sale of stock issued by a private company to raise capital from public investors.
- **Grey Market IPO or Parallel market IPO** - On the other hand, Grey Market IPO is an unofficial market where individuals buy/sell IPO shares or applications before they are officially launched for trading on the stock exchange.
- **Regulations** - As it is an unofficial over-the-counter market, there are no regulations around it.
 - ◆ As it is illegal, all transactions are done in cash on a personal basis.
 - ◆ Any 3rd party firms like SEBI, Stock Exchange or Brokers are not involved or back this transaction.
 - ◆ Grey market trading is done among the small set of people as there is no official platform or rules defined for these trading.
- **Two popular terms used in the IPO grey market** are 'Grey Market Premium' and 'Kostak'.
 - ◆ **IPO Shares traded** - Grey market premium (GPM) is a premium amount at which grey market IPO shares are traded before they get listed in the stock exchange.
 - ◆ **IPO applications traded** - Kostak (or price of application) is the premium amount at which IPO applications are being traded for in the grey market.
- **Reason to launch Grey Market IPO:**
 - ◆ Usually, companies that decide to launch an IPO decide to test waters in the grey market.
 - ◆ They do so for various reasons such as to check the demand for the impending IPO or to gauge what the IPO valuation should be.
 - ◆ Grey market trading also occurs when a stock has been suspended from the market trades.

- **Significance:**
 - ◆ It provides an excellent opportunity for retail investors and traders to purchase the shares before they are listed, if they feel that the stock is going to increase in value.
 - ◆ It also allows people to buy IPO shares even though they missed the application deadline or if they want to buy even more shares than the IPO application could provide them with.
- **Concerns**
 - ◆ Grey market trading can destroy the reputation of listed entities.
 - ◆ Trading in grey markets is unregulated and all transactions are undertaken solely on the basis of trust.
 - ◆ Hence, they carry counterparty risks as there is no legal recourse available if the stock tanks.

CENTRAL SECURITIES DEPOSITORY (CSD)

The Reserve Bank of India is planning to enable international settlement of transactions in government securities (G-sec) through international central securities depositories (ICSDs).

About:

- Once operationalised, ICSDs will help in inclusion of Indian G-secs in global bond indices.
- It will thus enhance access of non-residents to the G-secs market and help expand the investor base for these securities.

FUNCTIONS OF DEPOSITORIES

- Dematerialization i.e. converting physical certificates in to their electronics form.
- Rematerialization i.e. covering securities in Demat form in to physical certificates.
- Electronic settlement of trades in stock exchanges connected to NSDL.
- Pledging or hypothecation of the dematerialized securities against loan.
- Allocation in electronic form in case of initial public offering.

Central Securities Depository (CSD):

- CSD is a financial organisation that specialises in holding securities (debt, equities, bonds etc).
 - ◆ A CSD organisation may be for a specific type of security, such as government bonds.
- These securities are either certificated or uncertificated in form so that ownership can be easily transferred electronically without the need for physical certificates.

ABOUT G-SECS

Government Securities or G-secs:

- These are debt instruments issued by the Central Government or the State Governments to borrow money.
- **The two key categories are**
 - ♦ **Treasury bills** – Short-term instruments which mature in 91 days, 182 days, or 364 days, and
 - ♦ **Dated securities** – Long-term instruments, which mature anywhere between 5 years and 40 years.
- **Factors affecting the prices of G-Sec:**
 - ♦ Demand and supply of the securities.
 - ♦ Changes in interest rates in the economy and other macro-economic factors, such as, liquidity and inflation.
 - ♦ Developments in other markets like money, foreign exchange, credit and capital markets.
 - ♦ Developments in international bond markets, specifically the US Treasuries.
 - ♦ Policy actions by RBI like change in repo rates, cash-reserve ratio and open-market operations.
- **In India,**
 - ♦ **The Central Government** issues both, treasury bills and bonds or dated securities
 - ♦ **The State Governments** issue only bonds or dated securities, which are called the State Development Loans (SDLs).
- They are generally considered the safest form of investment because they are backed by the government. So, the risk of default is almost nil and hence, are called **risk-free gilt-edged instruments**.

- ♦ However, they are not completely risk free, since they are subject to fluctuations in interest rates and other factors mentioned above.
- Like bank fixed deposits, **g-secs are not tax-free**.

Retail Direct' Scheme:

- RBI also announced the 'Retail Direct' scheme recently to encourage direct retail participation in G-secs
- It is a one-stop solution to facilitate investment in government securities by individual investors.
- Under this scheme, Retail investors (individuals) will have the facility to open and maintain the 'Retail Direct Gilt Account' (RDG Account) with the RBI.
- RDG account can be opened through an **online portal** provided for the purpose of the scheme and used to
 - ♦ Invest in government securities through the primary market
 - ♦ Buy and sell government securities through the secondary market
 - ♦ It will allow access to **NDS-OM (Negotiated Dealing System - Gilt Order Matching System)**
 - NDS-OM is a screen based electronic anonymous order matching system for **secondary market** trading in Government securities owned by RBI.
 - It accounts for more than 75% of all secondary market dealing in Government Securities (GSecs)
- The date of commencement of the scheme will be announced later.

- This means that brokers and financial companies can hold their securities at a single location for clearing and settlement.
- Some CSD organisations also carry out centralised comparison, and transaction processing such as clearing and settlement of securities.
- A CSD can be national or international –
 - ♦ National central securities depository (CSD)
 - Many countries have one domestic CSD that is traditionally associated with the national stock exchange.
 - These organisations are usually heavily regulated by the government and may sometimes be separate from the security trading exchanges.
 - ♦ International central securities depository (ICSD)
 - An international CSD settles trades in international securities such as euro bonds although many also settle trades in various domestic securities, either directly or through local agents.
 - International CSDs include Clearstream, Euroclear and SIX SIS.

FINANCIAL STABILITY AND DEVELOPMENT COUNCIL

Union Minister for Finance & Corporate Affairs recently chaired the 24th meeting of FSDC.

About:

- The meeting deliberated on the various mandates of the Financial Stability Development Council (FSDC), viz.,
 - ♦ Financial Stability,
 - ♦ Financial Sector Development,
 - ♦ Inter-regulatory Coordination,
 - ♦ Financial Literacy,
 - ♦ Financial Inclusion, and
 - ♦ Macro prudential supervision of the economy including the functioning of large financial conglomerates etc.
- It was noted that there is a need to keep a continuous vigil by Government and all regulators on the financial conditions.

- It also discussed issues relating to management of stressed assets, strengthening institutional mechanism for financial stability analysis, financial inclusion, framework for resolution of financial institutions and internationalization of Indian Rupee and pension sector related issues.

About Financial Stability and Development Council:

- **Established** - It was constituted as a non-statutory apex council under the Ministry of Finance by the Executive Order in 2010.
 - ♦ The Raghuram Rajan Committee (2008) on financial sector reforms first proposed the creation of FSDC.
- **Aim** – It aims to strengthen and institutionalize the mechanism for maintaining financial stability, enhancing inter-regulatory coordination and promoting financial sector development.
- **Composition:**
 - ♦ **The Chairman** of the Council is the finance minister.
 - ♦ **FSDC sub-committee** is headed by the Governor of RBI.
 - ♦ The Council can **invite experts** to its meeting if required.
 - ♦ **Members** include the heads of financial sector Regulators (RBI, SEBI, PFRDA, IRDA & FMC) Finance Secretary and/ or Secretary, Department of Economic Affairs (DEA), Secretary, Department of Financial Services, and Chief Economic Adviser.
 - ♦ In 2018, it also added the following members
 - Minister of state responsible for the Department of Economic Affairs (DEA),
 - Secretary of Department of Electronics and Information Technology,
 - Chairperson of the Insolvency and Bankruptcy Board of India (IBBI) and
 - Revenue secretary.
 - ♦ The Council can invite experts to its meeting if required.
- **Functions** - It monitors macro prudential supervision of the economy, including functioning of large financial conglomerates, and addresses inter-regulatory coordination and financial sector development issues.
 - ♦ It also focuses on financial literacy and financial inclusion.
- **Secretariat** - The FSDC Secretariat in DEA is the Secretariat for the Council.
- **Sub-committee** - The FSDC Sub-committee has also been set up under the chairmanship of Governor, RBI.
 - ♦ All the members of the FSDC are also the members of the Sub-committee.

NATIONAL SINGLE WINDOW SYSTEM (NSWS)

Union Minister for Commerce and Industry recently launched the National Single Window System (NSWS).

About:

- India was placed at 63rd position in the World Bank's ease of doing business report, 2020 out of 190 countries. Recently, the World Bank has decided to discontinue 'Doing Business' reports.
- In this context it is imperative to improve the ease of doing business scenario in India for which this NSWS is created
- **One-stop-shop** - This single window portal will serve as a one-stop-shop for investors for approvals and clearances.
- **Developer** - The Department for Promotion of Industry and Internal Trade (**DPIIT**) along with **Invest India** initiated the process of developing the portal as a National Single Window System.
 - ♦ It will help domestic and global investors in getting regulatory approvals through the online portal, which currently hosts 18 central departments and nine states.
 - ♦ The portal will add another 14 central departments and five states by the end of 2021.
- **End-to-end facilitation** - NSWS will provide end-to-end facilitation and support to investors, facilitate clearances at the Centre and State levels, provide pre-investment advisory to new businesses, and share information related to land banks.
 - ♦ It will provide investors services such as know-your-approval (KYA), common registration, state registration, document repository, and e-communication.
- **Address inefficiency** - It seeks to address information asymmetry, duplication of information submitted across platforms and authorities, and inefficient tracking of approvals and registration faced by investors.
- **Provide strength to other schemes** - NSWS will also provide strength to other schemes such as Make in India, Startup India, and the Performance Linked Investment (PLI) scheme.
- **Promotes transparency** - It will thus bring transparency, accountability and responsiveness in the ecosystem and all information will be available on a single dashboard.

INVEST INDIA

- It was formed in 2009 for promotion of foreign investment.
- It is a public-private venture with 49% government's stake and 51% shareholding is equally held by industry associations -- the Federation of Indian Chambers of Commerce and Industry (FICCI), the Confederation of Indian Industry (CII) and the National Association of Software and Service Companies (NASSCOM).
- The 49% government's stake is held by the Ministry of commerce and industry, and 19 states.
- Industry secretary is the non-executive chairman of Invest India.

PLI SCHEME FOR DRONES AND DRONE COMPONENTS

The Central Government recently approved the PLI scheme for drone and drone components.

About:

- The Production-Linked Incentive (PLI) scheme comes as a follow-through of the liberalised Drone Rules, 2021 released by the Central Government in August 2021.
- The PLI scheme and new drone rules are intended to catalyse super-normal growth in the upcoming drone sector.

Top features of PLI Scheme for Drones and Drone Components:

- **Financial allocation for three years** - The total amount allocated

is INR 120 crore spread over three financial years starting from FY 2021-22.

- **Incentives** - The incentive for a manufacturer of drones and drone components shall be as high as 20% of the value addition made by him/her.
- **Exceptional Constant PLI rate** - The Government, has agreed to keep the PLI rate constant at 20% for all three years.
 - ♦ It is an exceptional treatment given only to the drone industry.
 - ♦ In PLI schemes for other sectors, the PLI rate reduces every year.
- **Relaxed minimum value addition norm** - The Government has agreed to fix the minimum value addition norm at 40% of net sales for drones and drone components instead of 50%.
 - ♦ It is another exceptional treatment given to the drone industry.

DRONE RULES, 2021

Important highlights of liberalised Drone Rules, 2021:

- These aim to make drone operations simpler for civilian drone operators.
- Several requirements and approvals have been abolished which includes
 - ♦ Unique authorisation number, unique prototype identification number, certificate of manufacturing and airworthiness, operator permit etc.
 - ♦ Number of forms reduced from 25 to 5 and types of fees from 72 to 4.
 - ♦ **The coverage of these rules** has been increased to cover drones up to 500 kg in weight from 300 kg earlier.
 - ♦ The quantum of fees, which was earlier linked to the size of drone, has been reduced and **delinked from the size**.
 - For instance, the remote pilot license fee has been reduced from INR 3000 (for large drone) to INR 100 for all categories of drones; and is valid for 10 years.
- **Digital sky platform** shall be developed as a user-friendly single-window system. There will be minimal human interface and most permissions will be self-generated.
- **Interactive airspace map with green, yellow and red zones** shall be displayed on the digital sky platform
 - ♦ **Green Zone** - No permission is required for operating drones with an all-up weight of up to 500 kg in green zones. Green zone means the airspace
 - Up to 400 feet that has not been designated as a red or yellow zone, and
 - Up to 200 feet above the area located between 8-12 km from the perimeter of an operational airport.
 - ♦ **Yellow zone** - Drone operations in yellow zone require permission from the concerned air traffic control authorities — which could be either the Airports Authority of India, the Indian Air Force, the Indian Navy, Hindustan Aeronautics Ltd, etc as the case may be.
 - ♦ Yellow zone is the airspace
 - Above 400 feet in a designated green zone, and
 - Above 200 feet in the area located between 8-12 km from the perimeter of an airport (Earlier the perimeter was 45 km)
 - Above ground in the area located between 5-8 km from the perimeter of an airport
 - ♦ Red zone is the 'no-drone zone' within which drones can be operated only after a permission from the Central government.
- **No remote pilot licence** required for micro drones (for non-commercial use) and nano drones. Classification of drones is as follows
 - ♦ **Nano drone:** Less than or equal to 250 grams;
 - ♦ **Micro drone:** Greater than 250 grams and less than or equal to 2 kilograms;
 - ♦ **Small drone:** Greater than 2 kilograms and less than or equal to 25 kilograms;
 - ♦ **Medium drone:** Greater than 25 kilograms and less than or equal to 150 kilograms;
 - ♦ **Large drone:** Greater than 150 kilograms
- **No requirement for security clearance** before issuance of any registration or licence.
- **No restriction on foreign ownership** in Indian drone companies.
- **No import clearance required from DGCA** though import of drones will be regulated by DGFT.
- Safety and security features like 'No permission – no take-off' (NPNT), real-time tracking beacon, geo-fencing etc. will also be notified soon.

- **Wide variety of components** - The scheme covers a wide variety of drone components:
 - ♦ Airframe, propulsion systems (engine and electric), power systems, batteries and associated components, launch and recovery systems;
 - ♦ Inertial Measurement Unit, Inertial Navigation System, flight control module, ground control station and associated components;
 - ♦ Communications systems (radio frequency, transponders, satellite-based etc.)
 - ♦ Cameras, sensors, spraying systems and related payload etc.;
 - ♦ 'Detect and Avoid' system, emergency recovery system, trackers etc. and other components critical for safety and security.

Developers of drone-related IT products:

- PLI for a manufacturer shall be capped at 25% of total annual outlay to allow widening the number of beneficiaries.

UDAN SCHEME

Ministry of Civil Aviation recently unveiled the Centre's 100-day plan for civil aviation sector.

About:

- The plan sets targets for infrastructure, policy and reforms for 100 days with the aim of increasing accountability towards stakeholders.
- It includes
 - ♦ Launching 50 new routes under the UDAN scheme
 - ♦ Rationalising the value added tax (VAT) charged on aviation turbine fuel (ATF)
 - ♦ AirSewa 3.0 portal would be launched through which users would be able to escalate their complaints to senior airline officials.

UDAN (Ude Desh Ka Aam Nagrik) Scheme:

- **Regional Connectivity Scheme (RCS)** - It is a Regional Connectivity Scheme (RCS) launched in 2016 to enhance connectivity to remote and regional areas of the country and make air travel affordable.
- **Market-based mechanism** - UDAN is a first-of-its-kind scheme globally to stimulate regional connectivity through a market-based mechanism.
 - ♦ It aims to develop the regional aviation market where airlines compete to win subsidies for operating flights linking small airports with bigger ones.
- **50% subsidised seats** - Under the scheme, nearly half of the seats in Udan flights are offered at subsidised fares.

- It is a key component of Centre's National Civil Aviation Policy 2016.
- **The Airports Authority of India (AAI)** is the implementing agency.
- Under UDAN 4 (Fourth phase), the operation of helicopter and seaplanes has also been incorporated.

How does it work?

- It has a **unique market-based model** to develop regional connectivity.
- Interested airline and helicopter operators can start operations on hitherto un-connected routes by submitting proposals to the Implementing Agency.
- **Viability Gap Funding (VGF)** - The operators could seek a Viability Gap Funding (VGF) apart from getting various concessions from Central and State governments and airport operators. VGF is shared between the Centre and the concerned states.
- **Competitive Reverse bidding** - All such route proposals would then be offered for competitive bidding through a reverse bidding mechanism and the route would be awarded to the participant quoting the lowest VGF per Seat.
- The selected airline operator would have to abide by the terms and conditions on capped fares, minimum and maximum UDAN seats, frequency etc.
- **A Regional Connectivity Fund** has been created to meet the viability gap funding requirements under the scheme.

INTERNATIONAL UDAN

- It was launched in 2018 and is an extension of the domestic UDAN scheme.
- It aims to connect India's smaller cities directly to some key foreign destinations in the neighbourhood.
- Such direct air connectivity would promote the development of the city and the State by wooing tourists and businesspeople to travel via smaller towns, instead of their flying through the metros.
- Only the State government provides the financial support for flights under international UDAN.

EASE OF DOING BUSINESS REPORT STOPS

The World Bank said that it would discontinue the practice of issuing a Doing Business report

About:

- This was done following an investigation prompted by internal reports of "data irregularities" in its 2018 and 2020 editions (released in 2017 and 2019, respectively) and possible "ethical matters" involving bank staff.

- **A Benchmarking Report:** The Doing Business Report is the flagship **publication of the World Bank Group** that benchmarks business regulations in 191 economies.
- **Measuring Regulation:** The Doing Business Report measures regulations that enhance business activity and those that constrain it.
- **A Ranking System:** The Ease of Doing Business (EoDB) index is a ranking system established by the World Bank Group wherein the 'higher rankings' (a lower numerical value) indicate better, usually simpler, regulations for businesses and stronger protections of property rights.
- **EoDB Score and Ranking:** The Ease Of Doing Business Score shows an economy's absolute position relative to the best regulatory performance, whereas the ease of doing business ranking is an indication of an economy's position relative to that of other economies.
- **Rank:** In 2017, 2018 and 2019, India ranked among the top 10 economies showing "the most notable improvement".
 - ♦ **Improvement in Ranking:** Of the 79 positions in the Bank's Doing Business rankings that India gained between 2014 and 2019, 67 rank improvements happened 2017 onwards, with the biggest 30-rank jump happening in the Doing Business 2018 report, released in October 2017.

WORLD BANK

- **Formation:** It was created in 1944, as the International Bank for Reconstruction and Development (IBRD) along with the International Monetary Fund. The IBRD later became the World Bank.
- The World Bank serves two mandates:
 - ♦ To end extreme poverty, by reducing the share of the global population that lives in extreme poverty to 3% by 2030.
 - ♦ To promote shared prosperity, by increasing the incomes of the poorest 40% of people in every country.
- **Member Countries:** There are 189 member countries that are shareholders in the IBRD, the primary arm of the WBG. To become a member, however, a country must first join the International Monetary Fund (IMF). India is a member country.
- **Size of Shareholders:** The size of the World Bank's shareholders, like that of the IMF's shareholders, depends on the size of a country's economy. Thus, the cost of a subscription to the World Bank is a factor of the quota paid to the IMF.

Reason for Stopping the Report:

- **Tampering Data:** According to an investigation conducted by Washington-based law firm WilmerHale, World Bank staff members changed data on China to improve its ranking on

the ease of doing business, under pressure from the office of the then-World Bank president Jim Yong Kim and the then-chief executive Kristalina Georgieva and one of her advisers.

- **Change in Data of four Countries:** The reports were flagged by the World Bank for certain "improper data changes" made in the case of four countries — China, Azerbaijan, Saudi Arabia and the UAE — at the behest of senior executives at the bank.
- **Reviews and Audits:** After data irregularities on Doing Business 2018 and 2020 were reported internally in June 2020, World Bank management paused the next Doing Business report and initiated a series of reviews and audits of the report and its methodology.

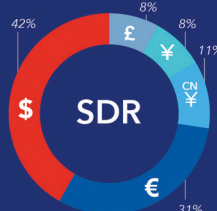
SPECIAL DRAWING RIGHTS (SDR)

The International Monetary Fund (IMF) recently allocated 12.57 billion Special Drawing Rights (SDRs), equivalent to around \$17.86 billion, to India.

About:

- The fresh SDR allocation to the Reserve Bank of India (RBI) follows the recent G-20 decision to increase IMF's lending capacity by \$650 billion to fight the economic fallout of Covid-19.
- This allocation is about 2.75 per cent of the overall 456.5 billion SDRs general allocation made to the IMF's member countries.
 - ♦ It is in line with India's existing quota in the fund.
- Following the allocation, India's total SDR holdings now stand at SDR 13.66 billion (equivalent to around \$19.41 billion at the latest exchange rate) as of August 23, 2021.

SDR allocations: what are they and how are they used?



What is an SDR?

Special Drawing Rights (SDRs) are international reserve assets created by the IMF to supplement the official reserves of member countries. The value of an SDR is based on a basket of five currencies.

How are SDRs used?

SDRs are allocated to IMF member countries in proportion to their relative share in the IMF. Countries can exchange SDRs for hard currencies with other IMF members.



SDR allocations: COVID-19 vaccine purchase example

Step 1: Allocation of SDRs

The IMF allocates SDRs. Country A receives an amount in proportion to its share in the IMF.



Step 2: Trade SDRs for currency

Country A can exchange its SDRs with Country B for foreign currency reserves.



Step 3: Acquire vaccines

Country A can then use these foreign currency reserves to purchase vaccines.



Special Drawing Rights:

- **International reserve asset** - SDR is an interest-bearing international reserve asset created by the IMF in 1969 to supplement other reserve assets of member countries.
- **Supplement foreign reserves** - SDR holdings is one of the components of the foreign exchange reserves (FER) of a country.
 - ♦ It is a way of supplementing IMF's member countries' FER, allowing them to reduce their reliance on more expensive domestic or external debt for building reserves.
- **Based on basket of international currencies** - The SDR is based on a basket of international currencies comprising the US dollar, Japanese yen, euro, pound sterling and Chinese Renminbi.
 - ♦ **Claim on freely usable currencies** - SDR is not a currency, nor a claim on the IMF, but is potentially a claim on freely usable currencies of IMF members.
 - ♦ **Criteria to include currencies** - Currencies included in the SDR basket have to meet two criteria
 - The export criterion and

- The freely usable criterion
- ♦ **Reviewed after five years** - The SDR basket is reviewed every five years, or earlier if warranted, to ensure that the basket reflects the relative importance of currencies in the world's trading and financial systems.
 - SDR is expressed in dollars for valuation purposes.
- **Allocation in proportion to Quotas** - IMF makes the general SDR allocation to its members in proportion to their existing quotas in the Fund.
 - ♦ Quota (the amount contributed to the IMF) of a country is denominated in SDRs.
 - ♦ Members' voting power is related directly to their quotas.
- IMF makes the general SDR allocation to its members in proportion to their existing quotas in the IMF.
 - ♦ The current quota formula is a weighted average of GDP (weight of 50 percent), openness (30 percent), economic variability (15 percent), and international reserves (5 percent)
 - ♦ Participating members and prescribed holders can buy and sell SDRs in the voluntary market.
- The SDR interest rate (SDRi)
 - ♦ The SDRi provides the basis for calculating the interest rate charged to members on their non-concessional borrowing from the IMF and is paid to members for their remunerated creditor positions in the IMF.
 - ♦ It is also the interest paid to members on their SDR holdings and charged on their SDR allocations.

INTERNATIONAL MONETARY FUND (IMF)

- IMF is formed to promote international financial stability and monetary cooperation.
- Its mandate was updated in 2012 to include all macroeconomic and financial sector issues that bear on global stability
- It also facilitates international trade, promotes employment and sustainable economic growth, and helps to reduce global poverty.
- It was conceived in July 1944 at the United Nations Bretton Woods Conference in New Hampshire, United States.
- The IMF was set up along with the World Bank after the Second World War to assist in the reconstruction of war-ravaged countries.
- The two organisations were agreed to be set up at a conference in Bretton Woods in the US. Hence, they are known as the Bretton Woods twins.
- Created in 1945, the IMF is governed by and accountable to the 190 countries that make up its near-global membership. India joined in December 1945.

DISTRICT LEVEL COMMITTEE FOR POWER RELATED SCHEME

The Ministry of Power has issued an order to set up District Level Committees to improve electricity supply in the country.

About:

- **Setting Up the Committee:** The Ministry of Power has issued an order for the setting up of District Level Committees which shall exercise oversight over all power related schemes of Government of India.
 - ♦ All the States/UTs will have to notify and ensure establishment of these District Electricity Committees, under intimation to this Ministry of Power.
- **Involving People:** This is being done in order to ensure the involvement and oversight of the people in the process of power sector reforms, and their implementation, in the country.

Committee:

- **Members:** The committee will comprise most members of Parliament in the district, district collector, chairperson and president of the district panchayat, MLAs, senior representatives of state-run firms of ministries of power and new and renewable energy and chief engineer and superintending engineer of the electricity distribution company (discom) or the power department.
- **Meetings:** The order states that the Committee of a district will meet at District Headquarters at least once in three months to review and coordinate overall development of power supply infrastructure in the district in accordance with the schemes of the Government.

Funding:

- **Strengthening the Distribution Systems:** The Union Government has been providing funds under different schemes for strengthening the Distribution Systems in the country.
- **Funding for Various Schemes:** In the past five years almost 2 lakhs crores were provided under Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY), Integrated Power Development Scheme (IPDS), Pradhan Mantri Sahaj Bijli Har Ghar Yojana (SAUBHAGYA), etc. to ensure universal access by electrifying every village and every hamlet and every household.
- **CCEA Recent Approval:** This comes at the time of the Cabinet Committee on Economic Affairs (CCEA) recently approving the marquee ₹3.03 trillion power distribution company (discom) reform scheme.

MEANING OF ELECTRIFIED

- **Prior to October 1997:** A Village should be classified as electrified if electricity is being used within its revenue area for any purpose whatsoever.
- **After October 1997:** A village will be deemed to be electrified if the electricity is used in the inhabited locality, within the revenue boundary of the village for any purpose whatsoever.

CREDIT BANK AND GLUE GRANT

Forty central universities will be implementing the academic credit bank and the glue grant scheme meant to encourage multidisciplinary.

About:

- The scheme was announced in the budget 2021-22 by the Finance Minister
- Finance minister proposed to set up an umbrella body as part of the glue grant scheme to monitor and conduct joint operations between the industries and the academic institutions.
- **Sharing Resources:** Under it, the institutions in the same city would be encouraged to share resources, equipment and even allow their students to take classes from each other.
- **Joint Courses:** Ultimately, faculty will be able to design joint courses, for e.g., a DU student able to take a few classes at IIT-Delhi, or vice versa.
- **Need not to Duplicate Work:** This also meant that institutions need not duplicate work by developing the same capacities, but would be able to build on each other's expertise.
- **Six cluster cities have been identified** and the glue grant framework has been initiated with the support of Principal Scientific Advisor (PSA).
- **The identified cities are** Delhi NCR, Bengaluru, Pune, Hyderabad, Jodhpur and Bhubaneswar.

About Academic Credit Bank:

- Academic Bank of Credit is envisaged as a digital bank that holds the credit earned by a student in any course.
- **Attain Qualifications by Amassing Credits:** The system would allow students to attain qualifications by amassing credits rather than specific durations on campus.
- **Multiple Entry and Exit Points:** A certain number of credits would add up to a certificate, then a diploma and then a degree, allowing for multiple entry and exit points.
- **Earn Credits:** Students can earn up to 40% of their credits in online Swayam classes, rather than in the physical classroom. In the future, these credits will hold validity across different institutions.

- **Selecting Best Course:** Academic Bank of Credits will enable students to select the best courses or combination of courses to **suit their aptitude and to tailor their degrees** or make specific modifications or specializations rather than undergoing the rigid, regularly prescribed degree or courses of a single university.
- **Academic Account Holders:** Students will be academic account holders to whom the Academic Bank of Credits will provide a variety of services including credit verification, credit accumulation, credit transfer or redemption and authentication of academic awards.
- **Organisational Structure:** The organisational structure of an academic bank of credits shall be a digital or virtual or online store-house entity of academic credit data base of higher education institution with students as its stakeholder.

PATENTS (AMENDMENT) RULES, 2021

Patent fees for all educational institutions have been reduced by 80% through Patents (Amendment) Rules, 2021.

About:

- The Patent fee reduction is undertaken by Department for Promotion of Industry and Internal Trade, Ministry of Commerce to strengthen innovation and creativity in the knowledge economy.
- This benefit was earlier available to all recognised educational institutions owned by the government. Now, it has been extended to **all educational institutions** in the country. This is at par with similar concession provided to startups under the Startup India initiative.
- **Need:** The high patenting fee was a hindrance for educational institutions in getting newer research and technologies patented and hence worked as a disincentive for the development of newer technologies. Hence, official fees payable by them in respect of various acts under the Patents Rules, 2003, have been reduced by way of the 2021 amendment.

Patent:

- **Exclusive right granted for invention:** A patent is an exclusive right granted by the Government to the inventor to exclude others to use, make and sell an invention is a specific period of time.
 - ♦ The invention is a product or a process that provides, in general, a new way of doing something, or offers a new technical solution to a problem.
- To get a patent, technical information about the invention must be disclosed to the public in a patent application.
- Three basic criteria for awarding patent (Even India follows it)
 - ♦ **Novelty** - The invention must be novel, meaning thereby that the Invention must not be in existence.

- ♦ **Inventive step** - The product or process must be an inventive solution and non-obvious.
- ♦ **Industrial applicability** - The invention must be useful in a bonafide manner to the world.

India Patent Law (Patents Act, 1970):

- The present Indian position in respect of patent law is governed by the provisions of the **Patents Act, 1970**.
 - ♦ It came into force in 1972 with the Patents Rules 1972.
 - ♦ It replaced the Indian Patents and Designs Act 1911.
- **The Act was amended in 1999, 2002 and finally in 2005** to meet the international obligations under the TRIPS.
 - ♦ The 2005 amendment led to the dawn of the "**product patent regime**" in India
 - ♦ The product patent was extended to all subjects of technology consisting of food, drugs, chemicals and micro-organisms.
 - ♦ **It introduced pharmaceutical product patents** in India for the first time but also introduced section 3(d) to curb ever-greening.
 - **Section 3(d)** said that the mere discovery of a new form of a known substance which does not result in the enhancement of the known efficacy is not patentable.
 - ♦ **It abolished of Exclusive Marketing Rights (EMR)** and led to provisions of compulsory licensing.
- The Patent Act 1970 (in amended form) provides for patent protection for inventions relating to both processes and products.
 - ♦ **Product patent** - In case of patents relating to product, the grant provides exclusive right to prevent unauthorized persons from making, using, offering for sale, selling or importing the product in India.
 - ♦ **Process patent** - In case of patents relating to process, the patentee receives an exclusive right to prevent unauthorized persons from using the process and offering for sale, selling or importing for those purposes the product obtained directly from the process in India.
 - Product produced by the process is also protected
- **Compulsory licence** - The act also contains provisions for compulsory licence.
 - ♦ Compulsory licensing is when a government allows someone else to produce a patented product or process without the consent of the patent owner or plans to use the patent-protected invention itself.
- A person may apply for a compulsory license three years after the grant of a patent on the following grounds:
 - ♦ the reasonable requirements of the public have not been satisfied, or patented invention is not available at a reasonable affordable price or the patented invention is not worked in India.
- The term of every patent granted under the Act is **twenty years** from the date of filing.

INDIA-US TRADE ISSUES

Recently, the new (Joe Biden) US administration has indicated that it is no longer interested in securing a bilateral Free Trade Agreement (FTA) with India.

About:

- Commerce and Industry Minister Piyush Goyal also last week ruled out any trade agreements with the United States in the near future pointing out that the world's largest economy is not looking at any new trade agreements for now.
 - ♦ He, however, assured exporters that the government is working with the United States on issues of market access for Indian exporters.

FREE TRADE AGREEMENT

- It is a pact between two or more nations to reduce barriers to imports and exports among them. Under a free trade policy, goods and services can be bought and sold across international borders with little or no government tariffs, quotas, subsidies, or prohibitions to inhibit their exchange.
- The concept of free trade is the opposite of trade protectionism or economic isolationism.
- **India's FTA:** After India opted out of the Regional Comprehensive Economic Partnership (RCEP) in November 2019, the 15-member FTA grouping that includes Japan, China and Australia, FTAs went into cold storage for India.
- But in May 2021 came the announcement that India-EU talks, which had stalled in 2013, would be resumed. This was followed by the news that FTAs with other countries like the UAE, Australia and Britain, too, are in various stages of discussion.

India US Mini trade deal:

- India was keen to push for a mini-trade deal with the United States last year.
- The mini trade deal was largely seen as a first step towards a comprehensive free trade agreement between both countries.
- In the trade deal, India was seeking benefits for some of its exports such as greater access for its automobile, engineering and agro products, it also wanted restoration of the generalised system of preferences (GSP).

- ♦ The US, meanwhile, was bargaining for larger market access for its agri and dairy products and some manufacturing and technology-related products, as well as high-end medical devices.
- India, however, failed to secure the deal, both in the final months of the Trump administration and the first few months of the Biden regime.

Reasons for calling off the deal:

- **China factor:** The Biden administration's main focus as far as trade is concerned is now aimed at China, as such US is shying away from signing any new trade deal with any country.
- **Tough demands of USA:** It has been seeking substantial market access in the agri sector which is highly protected in India.
 - ♦ The US also is seeking substantial amendments to patent laws and for changes in data protection laws.
- **Trade Surplus:** US is one of the very few countries with which India has a trade surplus.
 - ♦ India's trade surplus with the US was at \$23 billion in 2020-21, as against \$17 billion in the previous two years.
 - ♦ In the current fiscal, the trade surplus is around \$5 billion so far.
 - ♦ The US is India's largest export market but only its second largest importer after China.
- **Equalisation Levy:** USTR report also highlights that India's move to impose data equalisation levy on foreign e-commerce firms discriminates against American companies.
- The US is clear that if India doesn't offer much in terms of market access, then a deal is not beneficial.

Other trade issues between India and USA:

- **Tariff:** India has been referred to by the US as "tariff king" that imposes "tremendously high" import duties.
- **GSP:** India wants Resumption of export benefits to certain domestic products under the Generalised System of Preferences (GSP).
- **Intellectual Property:** The two sides differ on how to balance IP protection to incentivize innovation and support other policy goals, such as access to medicines.
 - ♦ India remains on the "Special 301" Priority Watch List for 2021, based on such concerns as its treatment of patents, infringement rates, and protection of trade secrets.
- **Totalization Agreement:** India continues to seek a "totalization agreement" to coordinate social security protection for workers who split their careers between the two countries.

Way Forward:

- **Economic Reforms:** India's trade policy framework must be supported by economic reforms that result in an open, competitive, and technologically innovative Indian economy.
- **Set a Precedent of Delinking Issues:** The tendency of both India and the US to link trade tensions to other avenues of cooperation has further fueled tensions.
 - ♦ Such actions hamper avenues of cooperation and possibly diminish prospects of future resolution of trade divergences. Therefore, both countries must work towards delinking issues.
- **Switching to Multilateralism:** Given that India is not party to any mega-trade deals, this would be an important part of a positive trade policy agenda.
 - ♦ Having walked out of RCEP, India needs to demonstrate to its potential FTA partners, including the EU and the UK, that it is a viable alternative to China in a post-Covid world.
- **Stress on the Strategic Merits of India's GSP Status:** As the US-China trade war continues, India must argue for the reinstatement of GSP benefits, especially from the standpoint of its strategic relevance for the US administration's approach to China.
- **Need For Innovation:** If innovation needs to be promoted, perhaps India should have unveiled an innovation incentivization policy, as intellectual property rights are the flip side of the innovation coin.

Conclusion:

- India's ties with the US in the strategic realm, particularly defence trade and force interoperability, are now at an all-time high, but trade tensions persist. So far, they have not drastically hindered the India-US strategic cooperation. In searching for a template appropriate for the unique characteristics of the India-US dynamic, the centrality of a vibrant trade relationship as a precursor to a sustained strategic partnership must be recognised. Both nations must actively work towards de-escalating trade tensions.

21ST SCO MEET

Recently, Prime Minister of India participated virtually in the 21st meeting of the Shanghai Cooperation Organization (SCO).

About:

- The 21st meeting of the SCO Council of Heads of State was held on 17 September 2021 in Dushanbe, Tajikistan.
- Prime Minister of India participated virtually in the meeting and also addressed the Joint SCO-CSTO Outreach Session on Afghanistan through a video message.

- Iran has been accepted as the ninth full member of the organisation.
- The meeting was chaired by H.E. Emomali Rahmon, the President of Tajikistan.

Major issues and concerns discussed by India in the meeting

- **Increasing radicalization and extremism:** The leaders of the summit discussed the growing radicalization and extremism in the broader SCO region.
- The Indian Prime Minister highlighted the concerns amid rise of Taliban in Afghanistan.
- India mentioned that the economic woes of the Afghan people are increasing due to the blockage in financial and trade flows.
- Pointed out that the developments in the country could lead to an uncontrolled flow of drugs, illegal weapons and human trafficking.
- **Scientific and rational developmental goals:** India also highlighted experience of using digital technologies in its development programmes, and offered to share these open-source solutions with other SCO members.
- It also urged the member nations to promote moderation and scientific and rational thought, which would be especially relevant for the youth of the region.

Significance of SCO from India's point of view

- **India's Economic security in Afghanistan:** After occupation of Kabul by Taliban led militia, there is imbalance of geopolitics in South and Central Asia.
- India has heavily invested in Afghanistan's infrastructure in last 20 years and was expecting to reap revenues, but advent of Taliban has ruined India's economic security in Afghanistan.
- Taliban is currently supported by India's arch rivals Pakistan and China.
- Both China and Pakistan are members of SCO and engagement with them and coordination from SCO can secure India's interests in Afghanistan.
- **Checking Misuse of Afghanistan's territory:** Afghanistan is keystone in terms of regional stability. There is a chance of misuse of Afghanistan's land under Taliban against India's interest.
- Hence, SCO can play an important role in averting such situation.
- **Sharing Technology:** India is one of the most technically advanced countries among the SCO nations.
- India retreated on the forum for increasing cooperation among the member nations for technology transfer and increasing cooperation and connectivity.

- **Vaccine Diplomacy:** Amid COVID-19 pandemic, India has emerged as vaccine capital of the world.
- India has the infrastructure to manufacture vaccines to the SCO nations which will increase its presence as a 'Soft Power' on the global map.

SCO

- **Creation:** It is a permanent intergovernmental international organisation. It was created in 2001. The SCO Charter was signed in 2002, and entered into force in 2003.
- It's a Eurasian political, economic and military organisation aiming to maintain peace, security and stability in the region.
- **Origin:** Prior to the creation of SCO in 2001, Kazakhstan, China, Kyrgyzstan, Russia and Tajikistan were members of the Shanghai Five.
- Shanghai Five (1996) emerged from a series of border demarcation and demilitarization talks which the four former Soviet republics held with China to ensure stability along the borders.
- Following the accession of Uzbekistan to the organisation in 2001, the Shanghai Five was renamed the SCO.
- India and Pakistan became members in 2017.
- **New Member added:** Iran is the ninth and the newest member of SCO.
- **Permanent Bodies:** SCO Secretariat in Beijing and Executive Committee of the Regional Anti-Terrorist Structure (RATS) in Tashkent.

COLLECTIVE SECURITY TREATY ORGANIZATION (CSTO)

Collective Security Treaty Organization to hold military drills on Afghanistan border.

About:

- Amid deteriorating situation in Afghanistan, Collective Security Treaty Organization (CSTO) said that it has planned to hold large military drills in Tajikistan next month.
- Tajikistan is the only country out of the six-member bloc led by Russia that shares a border with Afghanistan.
- The group has taken "collective measures" to ensure Tajikistan's security in case of an "aggravation" on its border with Afghanistan.
- The general secretary of the Collective Security Treaty Organization (CSTO) Stanislav Zas said the group would hold several "large-scale exercises".

- CSTO member leaders also reached an agreement to "accelerate the adoption of Tajikistan's Special Interstate Policy on Strengthening the Tajik-Afghan Border, proposed within the CSTO.



About CSTO:

- The Collective Security Treaty Organization originates from the conclusion of the Collective Security Treaty, which was signed in Tashkent (Uzbekistan) on May 15, 1992 by the heads of Armenia, Kazakhstan, Kyrgyzstan, Russia, Tajikistan and Uzbekistan. (Tashkent Treaty)
- Headquarter is located in Moscow, Russia
 - ♦ Later, it was joined by Azerbaijan, Belarus and Georgia (1993).
- In 1999, Armenia, Belarus, Kazakhstan, Kyrgyzstan, Russia and Tajikistan signed a Protocol on the extension of the Collective Security Treaty.
 - ♦ Azerbaijan, Georgia and Uzbekistan ceased their membership in the Treaty.
- On May 14, 2002, in Moscow, the Collective Security Council made a decision to grant the status of an international regional organization to the Collective Security Treaty.
 - ♦ On October 7, 2002, the Charter of the CSTO was approved. In December 2003, the CSTO Charter was registered with the UN Secretariat. And in 2004, the Organization received observer status in the UN General Assembly.
- Uzbekistan again became a CSTO member in 2006 but then withdrew its membership in 2012.
- Article 4 of the Treaty states: "If one of the States Parties is subjected to aggression by any state or group of states, then this will be considered as aggression against all States Parties to this Treaty.

- ♦ In the event of an act of aggression against any of the participating States, all other participating States will provide him with the necessary assistance, including military, and will also provide support at their disposal in exercising the right to collective defense in accordance with Article 51 of the UN Charter.
- Beyond mutual defence, the CSTO also coordinates efforts in fighting the illegal circulation of weapons among member states and has developed law enforcement training for its members in pursuit of these aims.
 - ♦ Members also use the organization to counter cyber warfare, narcotics trafficking, the illegal circulation of weapons, transnational crime, and terrorism
- Applauding President Putin's vision for the development of the Russian Far East, PM Modi reiterated India's commitment as part of its 'Act East Policy' of being a reliable partner of Russia in this regard.
- PM Modi stressed on the importance of greater economic and commercial engagement between the two sides in line with the 'Special and Privileged Strategic Partnership'.
- PM Modi extended an invitation to Governors of the 11 regions of Russian Far East to visit India.
- India has approved Russia's Covid vaccine — Sputnik V — for vaccination in the country.

Weakness of CSTO:

- While the CSTO nominally provides equal standing to member states, it was clearly conceived by Russia as a multilateral institution to project its power regionally.
- Organization has given Russia the power to block NATO operations in the region and provided a way for Russia to contain Chinese military influence in the region.
- The Russian dominance of the CSTO not only weakens the organization's legitimacy globally, it also presents a foreign policy challenge as Russian aims do not always align with other CSTO members' interests.

EASTERN ECONOMIC FORUM

PM Modi addressed the plenary session of 6th Eastern Economic Forum virtually

About:

- It may be recalled that the PM was the Chief Guest for the 5th EEF in 2019.
- Highlights of the meet: Prime Minister Narendra Modi said that the friendship between India and Russia has stood the test of time and it was seen during Covid pandemic.
- He also said that Covid had highlighted the importance of health and pharma sectors in both the countries' bilateral cooperation.
 - ♦ He also referred to other potential areas of economic cooperation including diamond, coking coal, steel, timber etc.
- Highlighting the importance of energy partnership, Prime Minister said that India-Russia energy partnership can help bring stability to the global energy market.
 - ♦ Minister of Petroleum and Natural Gas, Hardeep Puri is in Vladivostok to represent India at this forum

About Eastern Economic Forum:

- Eastern Economic Forum is an international forum held each year in Vladivostok, Russia, for the purpose of encouraging foreign investment in the Russian Far East.
 - ♦ It was established by the decree of the President of the Russian Federation in the year 2015
- It is held each year since 2015 in September, at the Far Eastern Federal University in Vladivostok, Russia.
 - ♦ The Russian president and the Japanese premier have attended this forum since its beginning.
- Far East Economic Forum is sponsored by the organizing committee appointed by Roscongress, an association of the Russian Government, which also sponsors other international forums, such as St. Petersburg International Economic Forum.

Significance of Eastern Economic Forum:

- In the last five years, as many as 17 different countries have invested in the Far East.
- These include regional and global heavyweights like China, Japan, South Korea, Australia, New Zealand, and Vietnam.
- As a result, 20 advanced special economic zones and five free ports have been put in place.
 - ♦ A total of 1,780 new investment projects, worth over 3.8 trillion rubles, and 230 new enterprises have become functional.

Eastern Economic Forum and India:

- India is the first country that has opened its consulate in Vladivostok.
- India has extended a \$1 billion line of credit towards the development of the Russian Far East.
- India has actively engaged in East Asia as part of its 'Act East' policy which has also given a new dimension to its economic diplomacy.
- India is interested in expanding the level of trade between the two countries. An area of special interest for India is the exploration of hydrocarbon reserves along the coast of Russia's Far East.

INDIA- RUSSIA RELATIONS IN BRIEF

- **China Factor:** Russia organized a trilateral meeting among the foreign ministers of Russia, India, and China following deadly clashes in the Galwan Valley, indicating the balancing role Russia can play.
- **Afghanistan issue:** Both nations are working closely to ensure that no terrorist activity takes place out of Afghanistan, and Russia has supported early finalization of the Comprehensive Convention on International Terrorism.
- **Defence cooperation:** Although India has consciously diversified its new defence purchases from other countries, the bulk of its defence equipment (60 to 70%) is still from Russia.
 - ♦ In March, India entered into a joint venture with Russia to manufacture the legendary Kalashnikov assault rifles in India.
 - ♦ In 2018, Russia sold the S-400 advanced air defence system to India.
- **UNSC and NSG:** Russia supports India's candidacy for permanent membership of a reformed United Nations Security Council and of the Nuclear Suppliers Group.
- **Economic cooperation:** Apart from traditional areas of cooperation such as weapons, hydrocarbons, nuclear energy (Kudankulam), space (Gaganyaan) and diamonds, new sectors of economic engagement are likely to emerge — mining, agro-industrial, and high technology, including robotics, nanotech, and biotech.
 - ♦ India's footprint in the Russian Far East and in the Arctic is set to expand. Connectivity projects may get a boost too.

- ♦ Quad countries have pledged to donate more than 1.2 billion vaccine doses globally
- ♦ Japan, through Japan Bank for International Cooperation, will work with India to enhance key investments of approximately \$100 million in the healthcare sector related to COVID-19, including vaccine and treatment drugs.
- ♦ QUAD will support the call for "global pandemic radar" and will improve the viral genomic surveillance
- **Infrastructure:**
 - ♦ Building on existing leadership from Quad partners on high-standards infrastructure, a senior Quad infrastructure coordination group will meet regularly
 - ♦ Since 2015, Quad partners have provided more than \$48 billion in official finance for infrastructure in the region.

QUAD

- Quadrilateral Security Dialogue (Quad) is the informal strategic dialogue between India, USA, Japan and Australia with a shared objective to ensure and support a "free, open and prosperous" Indo-Pacific region.
- The idea of Quad was first mooted by Japanese Prime Minister Shinzo Abe in 2007. However, the idea couldn't move ahead with Australia pulling out of it, apparently due to Chinese pressure.
- In December 2012, Shinzo Abe again floated the concept of Asia's "Democratic Security Diamond" involving Australia, India, Japan and the US to safeguard the maritime commons from the Indian Ocean to the western Pacific.
 - ♦ In November 2017, India, the US, Australia and Japan gave shape to the long-pending "Quad" Coalition to develop a new strategy to keep the critical sea routes in the Indo-Pacific free of any influence (especially China).
 - ♦ It is often dubbed as an "Asian" or "mini" NATO
 - ♦ In 2020, all four QUAD Countries - Japan, India, Australia and the USA took part in the Malabar exercise.

QUAD SUMMIT 2021

The first in person summit of the leaders of the Quad group of countries held in Washington DC, USA

About:

- Prime Minister addressed the first summit of the leaders of the QUAD (Quadrilateral Framework). The meeting was hosted by the USA on a virtual platform.
- **Important points discussed at the summit:**
- QUAD pledged to promote a free, open rules-based order, rooted in international law to advance security and prosperity and counter threats to both in the Indo-Pacific and beyond.
- **COVID-19:** Quad leaders recognize that the most immediate threat to lives is the COVID-19 pandemic.

- Concern over IPCC Climate Findings: Quad countries have shared serious concern with the August Intergovernmental Panel on Climate Change's report findings on the latest climate science, which has significant implications for climate action.
 - ♦ Quad countries will focus their efforts on the themes of climate ambition, including working on 2030 SDG targets
 - ♦ The Quad will announce a clean-hydrogen partnership
 - ♦ Quad countries commit to increasing the Indo-Pacific region's resilience to climate change by improving critical climate information-sharing and disaster-resilient infrastructure.

- People-to-People Exchange and Education: Quad partners announced the Quad Fellowship: a first-of-its-kind scholarship program, operated and administered by a philanthropic initiative
- Critical and Emerging Technologies: QUAD has decided to launch following programs:
 - ♦ Quad will launch a statement of principles on technology design, development, governance, and use that we hope will guide not only the region but the world towards responsible, open, high-standards innovation.
 - ♦ QUAD will launch a Semiconductor Supply Chain Initiative.
 - ♦ QUAD will support 5G Deployment and Diversification.
 - ♦ The Quad will monitor trends in critical and emerging technologies, starting with advanced biotechnologies, including synthetic biology, genome sequencing, and biomanufacturing.

EAST ASIA SUMMIT: ENERGY MINISTERS MEET

Minister of State for Power Krishan Pal Gurjar attended 15th East Asia Summit Energy Ministers meet.

About:

- 15th East Asia Summit Energy Ministers Meeting was held virtually.
- The theme of the meeting was "We Care, We Prepare, We Prosper".
- It was aimed at coordinating efforts of ASEAN countries in pursuing the goal of energy security and energy transition that will benefit the people of the region.
- India confirmed that ASEAN is a region of great importance for us.
- Engagement with ASEAN has been, and will remain, a critical element of India's 'Act East' policy and strategy.
 - ♦ Acting East is now a central element in India's Indo-Pacific vision.
- The Minister provided a brief status of the Indian energy transition plans, policies, challenges and efforts towards decarbonization.

About East Asia Summit:

- The East Asia Summit (EAS) process was initiated in 2005 with the convening of the 1st East Asia Summit in Kuala Lumpur, Malaysia.
- Members: At its inception, the East Asia Summit comprised 16 participating countries, namely ASEAN Member States, Australia, China, India, Japan, New Zealand, and the Republic of Korea.

- ♦ The United States and Russian Federation joined at the 6th East Asia Summit in Bali, Indonesia on 19 November 2011.
- ♦ So total 18 members.
- **Objective:** Dialogue and cooperation on broad strategic, political, and economic issues of common interest and concern with the aim of promoting peace, stability, and economic prosperity in East Asia.
- **Priority Areas:** The East Asia Summit has identified six priority areas of cooperation, namely environment and energy, education, finance, global health issues and pandemic diseases, natural disaster management, and ASEAN Connectivity.
 - ♦ Plans of Actions have been developed to promote cooperation on these priority areas.
 - ♦ The East Asia Summit also discussed cooperation in other areas and emerging issues such as food security, trade and economics, maritime security and cooperation, and traditional and non-traditional security issues.
- India is one of the founding members of the East Asia Summit.
- At the East Asia Summit in Bangkok in November 2019, India had unveiled India's Indo-Pacific Oceans Initiative (IPOI), which is aimed at forging partnerships to create a secure and stable maritime domain.

Act East Policy of India:

- India's 'Act East' policy is a diplomatic initiative to promote economic, strategic and cultural relations with the vast Asia-Pacific region at different levels.
 - ♦ The 'Act East Policy' was announced in November, 2014 as an upgrade of the "Look East Policy".
 - ♦ It aims at improving the economic development of the North Eastern Region (NER) which is a gateway to the South East Asia Region.
- Act East Policy focused on ASEAN countries + Economic Integration + East Asian countries + Security cooperation.
- **4Cs by PM Modi:**
 - ♦ Culture
 - ♦ Commerce
 - ♦ Connectivity
 - ♦ Capacity building
- **Security is an important dimension of India's Act East Policy.**
 - ♦ In the context of growing Chinese assertiveness in the South China Sea and the Indian Ocean, securing freedom of navigation and India's own role in the Indian Ocean is a key feature of Act East Policy.

G-20 AGRICULTURE MINISTERS MEET

Recently, India's Agriculture Minister addressed the G20 Agriculture meeting virtually.

About:

- It is one of the ministerial meetings organised as part of the G20 Leaders' Summit 2021 to be hosted by Italy in October 2021.
- **Food security:** Signed a final statement called the "Florence Sustainability Charter". India's commitment to achieving food security in a three-dimensional framework for sustainability: economic, social and environmental.
- **Coordinated effort:** It will strengthen cooperation between G20 members and developing countries in food and agriculture to share information and help develop domestic production capacity that best suits local needs, thereby contributing to the strengthening and revitalization of agriculture and rural communities.
- **Zero hunger:** They also reaffirmed their goal of achieving the goal of hunger, threatened with Covid-19 results.
- **Theme:** The theme of this session was "Working together to achieve the Zero Hunger goal: successful projects implemented by the Ministries of Agriculture".

**India's take on it**

- **Traditional food:** Government of India has emphasized on re-introducing traditional food items including millet, other nutritious cereals, fruits and vegetables, fish, dairy and organic products in the diet of the people.
- **Production:** Their production has been phenomenal in India in recent years and India is becoming a destination country for healthy food items.
- **International year of millets:** United Nations has accepted the proposal of the Government of India and declared the year 2023 as the International Year of Millets to promote nutrition and sustainable agriculture.

- **During COVID Pandemic:** The Indian agriculture sector remained unaffected even during the COVID pandemic. During the year 2020-2021, along with increase in the production of food grains, there has been a significant increase in exports.
- **Bio fortified-varieties** are the source of staple diet rich in micronutrients. They are being promoted to remove malnutrition. 17 such varieties of different crops have been developed and released for cultivation.
- **Use of water resources:** Steps has been taken to increase the optimal use of water resources, create infrastructure for irrigation, conserve soil fertility with balanced use of fertilizers, and provide connectivity from farms to markets.
- **R & D:** India also resolve to cooperate in R&D and exchange of best practices to enhance productivity

Other Government initiative

- **Pradhan Mantri Kisan Samman Nidhi Yojana:** The government is providing income support of Rs.6, 000 per year to small farmers.
- **The 'Per Drop: More Crop'** scheme for irrigation and 'Paramparagat Krishi Vikas Yojana' for organic farming is being successfully implemented.
- **Pradhan Mantri Fasal Bima Yojana** to provide insurance cover for the farmers.
- To address the malnutrition problem, India is running the world's largest food-based safety net program, which includes the Public Distribution System and the Mid-Day Meal Scheme.

G20 LEADERS SUMMIT 2021

- It will be hosted by Italy in October 2021.
- **Focus:** The Summit will focus on three broad, interconnected pillars of action: People, Planet, and Prosperity.
- **Aim:** To take the lead in ensuring a swift international response to the COVID-19 pandemic – able to provide equitable, worldwide access to diagnostics, therapeutics and vaccines – while building up resilience to future health-related shocks.
- The G20 Ministers of Agriculture met for the first time in Paris in 2011 to address the impact of the economic crisis on the agricultural sector threatened by price volatility.
- Since 2015, they have met annually to discuss food security, nutrition and global agricultural development.
- The recent G20 Agriculture Ministers' Meeting was held in Florence on 17-18 September 2021.

AUSINDEX EXERCISE

India and Australia participated in the 4th edition of AUSINDEX Naval Exercise.

About:

- AUSINDEX started in 2015 as a bilateral maritime exercise between India and Australia.
- **Aim:** The exercise focuses on developing deeper understanding and cooperation between the Indian Navy (IN) and the Royal Australian Navy (RAN). The 2021 exercise is being held in Australia.
- **Indian Navy task group** comprising vessels Shivalik and Kadmatt participated in the exercise alongside the RAN's Anzac-class frigate HMAS Warramunga.
- In 2019 India saw the first anti-submarine warfare exercises and also the first coordinated P-8 maritime patrol aircraft missions take place over the Bay of Bengal.
- **Other Exercises:** Ex AUSTRAL HIND (Bilateral Exercise with Army) and EX PITCH BLACK (Australia's multilateral air combat training exercise).

KAZIND-21

Recently, India and Kazakhstan participated joint military exercise "KAZIND-21".

About:

- "KAZIND-21" is a joint military exercise between India – Kazakhstan.
- **Venue:** This year the exercise commenced at Aisha Bibi Training Node in Kazakhstan.
- The exercise is the 5th Edition of Annual bilateral joint exercise of both Armies.
- The fourth edition of the exercise was conducted in Pithoragarh, India.

Significance of the Exercise:

- **Rise of 'Taliban' and significance of Central Asia:** Amid rise of Taliban in Afghanistan and its occupation of Kabul is a cause of great concern for India.
- India is concerned about misuse of Afghanistan's land for terrorism related activities by non-state actors.
- Such exercises and coordination with Kazakhstan's army will help India in future in counter-terrorism operations.

- **Testing co-ordination and capabilities:** The validation exercise aimed to act as a test bed for the soldiers of both Armies as they would be undergoing challenges of actual operations in such scenarios.

Way Forward:

- Central Asia is a way to 'Europe' and increasing Chinese influence on Taliban led Afghanistan and 'Belt and Road Initiative' has raised concerns for India.
- Further, rise of ISIS-K and Taliban in Afghanistan has impacted the regions' stability.
- Exercises like "KAZIND-21" would help India to prepare for counter-terrorism operations in similar conditions.

ZAPAD 2021

Indian Army personnel participated in Exercise ZAPAD 2021 in Russia.

About:

- **The exercise:** ZAPAD is one of the four major training events for the Russian military, which happen on a rotational basis every year. The names of these events correspond to the geographical location of these military districts. While ZAPAD means 'west' in Russian, the other exercises are Vostok (east), Tsentr (center), and Kavkaz (Caucasus).
- It is one of the theatre level exercises of Russian armed forces and will focus primarily on operations against terrorists.
- **Aim:** The exercise aims to enhance military and strategic ties amongst the participating nations.
- **Participating nations:** Nine countries are participating which include Mongolia, Armenia, Kazakhstan, Tajikistan, Kyrgyzstan, Serbia, Russia, India and Belarus.
- **Observers countries:** Pakistan, China, Vietnam, Malaysia, Bangladesh, Myanmar, Uzbekistan and Sri Lanka.
- **Operations:** The Indian Contingent has been put through a strenuous training schedule which encompasses all facets of conventional operations including mechanized, airborne and heliborne, counter terrorism, combat conditioning and firing.
- **Geopolitical situation:** ZAPAD-2021 is one of the exercises which are also directed towards countering any possible aggression from NATO forces towards Russia and its allies. This is why whenever the ZAPAD exercise takes place; there is a sense of heightened discomfort among Russia's west-oriented neighbours like Ukraine, Poland, and Latvia.

6TH EDITION OF EXERCISE PEACEFUL MISSION IS BEING HOSTED BY RUSSIA

India participated in the 6th edition of SCO peace mission at Russia with China, Pakistan.

About:

- **The mission:** The Mission was based on joint counter-terrorism operations at the operational and tactical level in an urban environment in which Armies and Air Forces of all SCO member states are participating.
- **India's participation:** India participated for the first time in the 5th edition of the Exercise (2018).
- **Nations participating:** The members participating in the exercise include China, India, Kazakhstan, Kyrgyzstan, Russia, Pakistan, Tajikistan and Uzbekistan
- **Objective:** The exercise will enable sharing of best practices between the Armed Forces of SCO nations. The exercise will also provide an opportunity to the Armed Forces of SCO Nations to train in Counter-Terrorism Operations in an urban scenario in a multinational and joint environment.

SCO

- The SCO is an eight-member economic and security bloc and has emerged as one of the largest trans-regional international organizations.
- India and Pakistan became its permanent members in 2017.
- The SCO was founded at a summit in Shanghai in 2001 by the presidents of Russia, China, the Kyrgyz Republic, Kazakhstan, Tajikistan and Uzbekistan.
- India has shown keen interest in deepening its security-related cooperation with the SCO and its regional anti-terrorism structure (RATS), which specifically deals with issues relating to security and defense.
- India was made an observer at the SCO in 2005 and has generally participated in the ministerial-level meetings of the group focusing mainly on security and economic cooperation in the Eurasian region.

SURYA KIRAN EXERCISE

India, Nepal participated in the 15th edition of joint military exercise 'Surya Kiran' in Uttarakhand's Pithoragarh.

About:

- **The exercise:** The biannual exercise takes place alternately in both countries.

- ♦ As part of the exercise, both the Armies familiarized themselves with each other's weapons, equipment, tactics, techniques and procedures of operating in a counter-insurgency environment in mountainous terrain.
- **Objective:** The exercise is part of an initiative to develop interoperability and sharing expertise between the two nations.
- **Last edition:** Exercise Surya Kiran was conducted in Nepal in 2019.

EXERCISE 'SAMUDRA SHAKTI'

Indian navy and Indonesian navy participated in exercise 'Samudra Shakti'

About:

- In pursuance of India's Act East Policy, Exercise 'Samudra Shakti' was conceived in 2018 as a bilateral IN-IDN exercise
- **Aim:** The exercise aims to strengthen the bilateral relationship, enhance mutual understanding and interoperability in maritime operations between the two navies.
- **Indian Navy:** The Indian Navy participated with its latest ships Shivalik and Kadmatt multi-role Guided Missile Stealth Frigate and Anti-Submarine Corvette respectively

Other Exercises with Indonesia:

- Garuda Shakti (Military Exercise)
- IND-INDO CORPAT, IND-INDO BILAT (Maritime Exercise)

HANSA NEW GENERATION (NG) TRAINER AIRCRAFT

Hansa, a new generation trainer aircraft designed and developed by CSIR-NAL in Bengaluru has successfully made its maiden flight.

About:

- **Achievement:** The aircraft is a new version of the original aircraft Hansa, which was developed three decades ago.
- **Developed by:** The aircraft has been designed and developed by the National Aerospace Laboratories (NAL)
- **Features:** The unique features of Hansa-NG are glass cockpit with cabin comfort, high efficient digitally controlled engine, electrically operated flaps, Long endurance, low acquisition and Low operating cost.
- **Significance:** The defense sector can also use Hansa-NG for cadet training and coastal surveillance.

MEGHALAYA ENTERPRISE ARCHITECTURE PROJECT (MEGHEA)

Union Minister of Electronics & Information Technology and Meghalaya Chief Minister jointly launched 'MeghEA-Meghalaya Enterprise Architecture'.

About:

- It is a framework to implement integrated digital service system in the governance.
- **Enterprise Architecture (EA)** is the process by which organizations standardize and organize IT (Information Technology) infrastructure to align with business goals.
- The MeghEA initiative is spread **across 6 pillars** i.e. Governance, Human Resources, Entrepreneurship, Primary Sector, Infrastructure and Environment, and envision to make Meghalaya a high-income state by 2030.
- The project aims to improve service delivery and governance for the people using the power of Digital technologies.
- The implementation of this project includes integration of multiple digital platforms, integrated seamlessly through modern technology, with an intention to digitize the government system and provide quick and easy service to its citizens.

Significance:

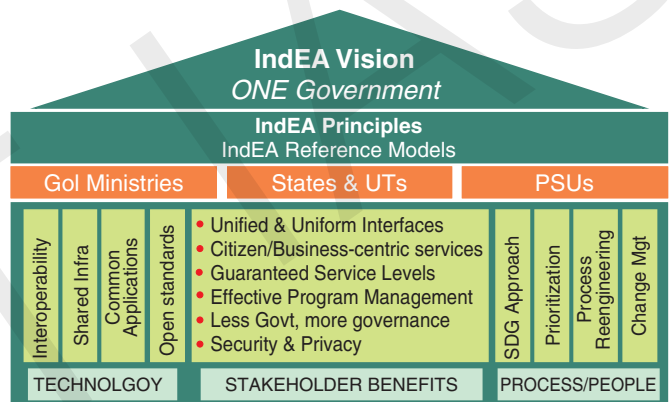
- Meghalaya became the first state to implement IndEA as MeghEA and promote Enterprise Architecture to digitize Governance Process.
- MegEA would help India to realize the vision of digital India. The focus of the program is to transform the life of the common man and how the government effort leads to quality differences in the common man's life.
- Realize cost-effectiveness through use of shared infrastructure and services.
- Enable establishing a Connected Government that works for inclusive development.

About IndEA (India Enterprise Architecture):

- It is an initiative of Ministry of Electronics and Information Technology Government of India under Digital India Programme for e-Government development, launched in 2018
- IndEA is a framework for developing a holistic architecture treating the Government as a single enterprise or more

realistically, as an Enterprise of Enterprises, which are functionally interrelated.

- It is a structured combination of several Reference Models that, together, enable a boundary-less flow of information across the length and breadth of the government and facilitate the delivery of integrated services to the stakeholders, namely, the citizens, businesses and employees.
- Simply stated, IndEA is a way to establish Unity in Diversity in the domain of e-Governance.



Way Forward:

- Once the project is implemented, we will see its impact on the governance as a whole and it will help improve service delivery at the grassroots level.
- The implementation of MeghEA in the department would improve government efficiency as it will improve the effectiveness of implementation of the developmental and welfare schemes through a holistic performance management.

INDO-CHINA BORDER DEVELOPMENT LEGISLATORS FORUM OF ARUNACHAL PRADESH

The Forum has been constituted to formulate plans and strategies to curb the migration of people from the border villages to urban areas.

About:

- ICBDLAP suggests reviewing certain aspects of the Border Area Development Plan.

- The ICBDFAP comprises of Arunachal Pradesh MLAs representing constituencies along the India-China border.

HOW BORDER POPULATION HELPS

- Eleven Assembly constituencies of the state lie along the Arunachal border.
 - Their population is considered as the first line of defence
 - They help in reporting the transgressions by the Chinese troops
 - However, due to topographical reasons and inaccessibility, these areas have been under-developed, leading to migration of population to the urban areas such as Itanagar
 - Arunachal Pradesh shares borders with Bhutan, Myanmar, and China to the north and northeast
- ♦ The plan aims to prevent out-migration of people from these border constituencies in search of livelihood opportunities.
 - It aims to develop 1080 km long frontier areas along the Indo-China border.
 - It will make plans and strategies to help border people avail all basic facilities and find better life and livelihoods without migration
 - The Forum suggested to modify existing guidelines of the Border Area Development Plan (BADP)
 - Concerning BADP, it also suggested increase of allocation and submission of block-wise utilisation certification, instead of the existing collective submission.

About Border Area Development Plan:

- The BADP was introduced in 1986-87 (during the 7th Five year Plan) as a Centrally Sponsored Scheme
- Initially started in the Western Border States (J&K, Punjab, Rajasthan, Gujarat) – the twin objectives of the BADP were to develop infrastructure and to provide sense of security to border populations, by deployment of Border Security Force
- In 1993-95, it was expanded to States bordering Bangladesh, and during the 9th Five Year Plan, it covered states bordering Myanmar, China, Bhutan and Nepal
- Currently the BADP covers 17 border states – 362 border blocks – focusing on people living within 50 km of the international borders
- It is implemented under the aegis of the Ministry of Home Affairs

Structure and Implementation of BADP:

- It is a Centrally Sponsored Scheme that provides States with a non-lapsable special central assistance for projects related

to infrastructure, livelihood, education, health, agriculture and allied sector

- It is implemented via participatory and decentralized basis through the Panchayati Raj Institutions, Autonomous Councils and local bodies
- It also aims to saturate the border areas with the entire essential infrastructure through convergence of all Central, BADP, State and Local schemes
- Funds are allocated to the States on the basis of following three parameters bearing equal weightage under BADP:
 - ♦ Length of International Border,
 - ♦ Population of border block, and
 - ♦ Areas of border blocks.
- In addition to the above parameters, 15% weightage is given to hilly, desert and Rann of Kutch areas on account of difficult terrain, scarcity of resources and relatively higher cost of construction, etc.
 - ♦ Border States are required to prepare the Annual Action Plans and get approval of the Ministry of Home Affairs for availing funds
 - ♦ BADP Online Management System was launched in 2018, for better planning, monitoring, and implementation of various projects.

Evaluation of the BADP:

- Even when funds allocated are increasing every year, there is a gap between allocation and release of funds
- Further, in a report by the NITI Aayog for 2007-11 period, it was learnt that funds to 50% of States were inadequate and 40% States reported delay in release of funds
- Majority of the people in the North-east border states do not feel secure and are not satisfied with level of work done under the BADP
- Convergence of BADP with other schemes such as MGNREGA, Saakshar Bharat has not been successful
- Bigger villages, better political connections help in more sanction of work, and other areas miss out

Suggestions for BADP:

- North-east region needs more support, planning and funds – guidelines should be revised to facilitate this
- Small-scale industry promotion is desirable to provide regular source of income
- There is a need to evolve a fixed criteria for sanction of work, at state-level and to lessen political interference
- Involvement of Panchayat Samitis in planning and implementation of scheme will reflect local needs
- Convergence with other centre and local schemes will lead to effective use of resources

ASSAM CATTLE PRESERVATION ACT, 2021

Assam Cattle Preservation Act, 2021 was passed in the Assam State Assembly, amid walkout by the Opposition.

About:

- **Major Provisions:** It prohibits the sale and purchase of beef in areas inhabited by non-beef-eating communities and within a radius of five km of a temple or a **satra** (Vaishnavite monastery). Consumption of beef was not illegal prior to the passing of this Act.
- The Act replaces the Assam Cattle Preservation Act of 1950 for regulating “slaughter, consumption, illegal transportation” of cattle
- It prevents slaughter of the cattle without a certificate from a registered veterinary officer that the cattle is fit for slaughter.
- Further, certified cattle can be slaughtered only at licenced and recognized slaughterhouses
- Only cows over 14 years of age or those permanently incapacitated due to work, breeding, accident, or deformity will be certified for slaughter.
- It prohibits the inter-State transport of cattle to and from, as well as through Assam without valid documents – thus, also checking cattle smuggling to Bangladesh.
- A competent authority will issue permit for the transportation of cattle for bona fide agricultural or animal husbandry purposes as per the Prevention of Cruelty to Animals Act, 1960.
- Selling of beef and beef products is prohibited except at places permitted by the government
- There can be exemption to the above in certain places of worship or on certain occasions, for religious purposes
- The Act empowers police and veterinary officers to seize cattle, carcasses, or vehicles used to transport cattle sold without following rules
- Violation of the Act may lead to imprisonment of 3 to 8 years, along with fine of INR 3 to 5 lakhs.
- With this, Assam joins other states such as Madhya Pradesh, Uttar Pradesh and Karnataka that have cattle protection laws.

Need:

- There is a rise of illegal cattle smuggling along the India-Bangladesh border despite the deployment of adequate security forces.
- According to the Union government, the Border Security Forces seized 476,035 head of cattle between 2016 and 2020 along the Indo-Bangla border.
- **Cattle slaughter in India:** Cattle slaughter, particularly cow slaughter, is controversial in India. This is because of cattle's traditional status as a respected and endeared living being in

Hinduism, Jainism, Sikhism, Buddhism, and Zoroastrianism. On the other hand, it is considered an acceptable source of meat by Muslims, Christians and other non-Dharmic Religions like Animists and non-Indian Zoroastrians. Legislation against cattle slaughter is in place in most of the Indian states except in Kerala, Goa, West Bengal, and Northeast India.

Issues and Concerns with the Act:

- Assam is a gateway to the North East region. The Act will affect supply of cattle to Christian-majority regions where beef is consumed
- As more than 70% of the state's population is still dependent on the agriculture sector for livelihood, compared to less than 50% for all of India, the new law could have a particularly adverse effect on Assam's rural economy
- Meghalaya CM noted that they will take the matter to the Centre if the supply of beef is affected due to their State
- It specifies who is empowered to inspect, search and detain. The power has been provided to Veterinary Officer, Police Officer (Sub Inspector or above), and any person authorized by the State Government. This also might lead to political or communal misuse.
- The punishments and Fines provided are very extreme. These kinds of punishments are given to a very serious offender in the Indian Penal Code, 1860.
- The Act may cause communal tensions and may affect the livelihood of legal cattle traders
- It has been speculated that contentious interpretations may be taken, and this could lead to attacks on communities that consume beef.
- Ban of sale on beef, around temple/ **satra** interferes with the food habits
- Ban on transportation may also affect revenue collection
- Protests against the Act may lead to unrest in an already often-volatile State.

Way Forward:

- Protests by the Opposition and also by the CMs of the adjoining States calls for study of after-effects of implementation of this Act. Since this subject of cattle trading affects a large size of population of Assam, and also the interests of neighbouring states, it is recommended that the law be revised suitably as per findings of the study.

KARBI ANGLONG PEACE ACCORD

The tripartite Karbi Anglong Agreement was signed recently between the Centre, the Assam government, and the five insurgent groups' active in the Karbi Anglong region of Assam.

About:

- This agreement is also known as Memorandum of Settlement.
- The Accord was in the making since long, and in February 2021, 1,040 militants of five militant groups of Karbi Anglong district ceremonially laid down arms at an event in Guwahati in the presence of Assam CM Sarbananda Sonowal.

KARBI ANGLONG

- **Pre-independence:** Mikir Hills tract (now Karbi Anglong) was not under dominance of Assam but it was coerced into Assam, by the British, for their administrative convenience 
- **Post-Independence:** New district named as United Mikir and North Cachar, was formed
- **1970:** Bifurcated into 'Mikir Hill' and 'North Cachar' hill districts
- **1976:** Mikir Hill renamed as Karbi Anglong, and Karbi Anglong District Council (KADC) formed – with autonomous status, under the Sixth Schedule of the Constitution
- **1995:** KADC upgraded to Karbi Anglong Autonomous Council (KAAC) – following an MOU and related Constitutional amendments
- **2011:** United People's Democratic Solidarity (UPDS) signed a tripartite agreement with the Centre and the Assam Government but those opposing it, continued their demands and protests
- **2016:** West Karbi Anglong district formed by splitting from Karbi Anglong.

- **The Accord outlines the following objectives:**
 - ♦ Focused development of the Council area, without affecting the territorial and administrative integrity of Assam
 - ♦ Ensure greater devolution of autonomy to the Karbi Anglong Autonomous Council
 - ♦ Inclusion of some areas into Karbi Anglong Autonomous Council (KAAC),
 - ♦ Reservation of seats for Scheduled Tribes,
 - ♦ More powers to the council,
 - ♦ Inclusion of Karbi language in the Eighth Schedule,
- Union government will create a **Special Development Package of Rs 1,000 crores** for the state to fund specific projects for the development of Karbi areas
- Assam government will **set up a Karbi welfare council** for the focused development of Karbi people living outside the KAAC area
- **Armed group will shun violence** and join the democratic process while the government will facilitate the rehabilitation of their cadres.

- **Five insurgent groups** on the table include: Karbi People's Liberation Tiger (KPLT), People's Democratic Council of Karbi Longri (PDCK), Karbi Longri NC Hills Liberation Front (KLNLFF), Kuki Liberation Front (KLF) and United People's Liberation Army (UPLA).

Reasons for Disquiet in Karbi Anglong Region:

- **Ethnicity:** Karbi Anglong district is a melting pot of ethnicity – it is home to Karbi, Dimasa, Bodo, Kuki, Hmar, Tiwa, Garo, Man (Tai speakers), and Rengma Naga communities
- **Animosity between hilly and plain region people:** People of Mikir hill tracts have less affinity toward people of plains. But they have been harmless and non-local – that led to neglect of their identity and subjugation of rights.
- Core demand of forming a separate state has led to killings, ethnic violence, abductions and taxation since the late 1980s.
- **Demand of Autonomous State:** The entire political discourse in three districts of Karbi Anglong, West Karbi and Dima Hasao — revolves around the demand for granting of "Autonomous State" status to the region and more autonomy and power to the KAAC and the North Cachar Hills Autonomous Council (which administers over Dima Hasao district).
- There are a number of factions, so even when peace or other agreements are signed, not all come on board. This leads to failure of such agreements
- Developmental funds and packages allotted to the autonomous council are not utilized transparently, and are at times diverted for private purposes, leading to non-development of the region, causing dissatisfaction toward the government policies.

Other Accords signed recently for Peaceful and Prosperous Northeast Region:

- **Bodoland Peace Accord (Assam):** It was signed in January 2020 to redraw and rename the Bodoland Territorial Area District (BTAD) as the Bodoland Territorial Region (BTR), in Assam.
- **Bru Rehabilitation Agreement:** It was a quadripartite (Centre, Tripura, Mizoram, Bru NGOs/ Groups) agreement undertaken in January 2020 for resettlement of Bru.

KARBIS

Karbis are one of the major tribal communities dwelling in Assam. They are presently disintegrated into various groups and factions. Originally, they are one of Northeast India's tribal groups, largely inhabiting the Karbi Anglong and Dima Hasao (formerly North Cachar) hills districts.

GRANT-IN-AID TO RURAL LOCAL BODIES

The Department of Expenditure (under Ministry of Finance) released an amount of INR 13,385.70 crore to 25 States for providing grants to the Rural Local Bodies (RLBs).

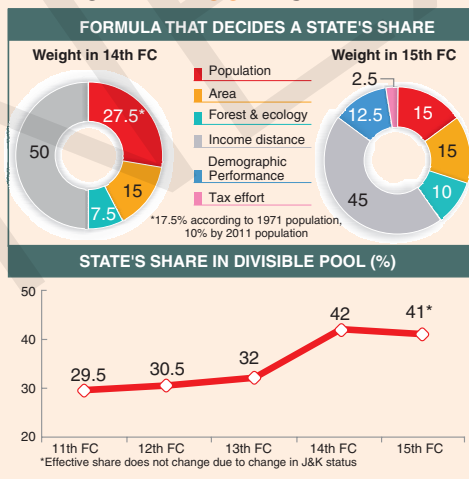
About:

- This Grant-in-aid is the first instalment of Tied grants of the year 2021-22. The grants have been released as per the recommendations of the 15th Finance Commission (15 FC).
- The 15th FC has recommended over 1 lakh 42 thousand crore rupees tied to Panchayats for water & sanitation during the period 2021-22 to 2025-26.
- The Union Budget provides funds to local bodies, state disaster relief funds and compensates any revenue loss to states after devolution of taxes on the recommendation of FC.

FIFTEENTH FINANCE COMMISSION

- Finance Commission is a Constitutional body, under Article 280 – constituted periodically after every five years by President of India.
- 15th FC was constituted in November 2017, with NK Singh as its Chairperson – and it submitted its report in November 2002, for the period 2021-22 to 2025-26.
- FC determines the formula for distributing the tax proceeds between the Centre and states, and among the states as per the constitutional arrangement and present requirements.
- Devolution percentages utilized by the 15th FC:

HOW THE BOOTY IS DIVIDED



- The Central government releases grants-in-aid for PRIs, comprising of **60% "tied" grants and 40% "untied" grants**.
- **Tied Grants** are tied with achievement of national priorities such as drinking water, sanitation etc., while the untied

grants are at the discretion of the RLBs for location specific felt needs, except for payment of salaries.

- Tied Grants to the RLBs are provided to achieve the following critical services
 - ♦ Sanitation and maintenance of open-defecation free (ODF) status
 - ♦ Supply of drinking water, rain water harvesting and water recycling
- Tied Grants are over and above the funds allocated for said services under various Centrally Sponsored Schemes
- States are required to transfer the grants to the RLBs within 10 working days of their receipt from the Central Government. Any delay beyond 10 working days requires the State Governments to release the grants with interest
- **Remaining 40% is 'Untied Grant'** and is to be utilized at the discretion of the Panchayati Raj institutions for location specific needs, except for payment of salaries.

About Rural Local Bodies:

- The local bodies constituted for local planning, development and administration in the rural areas are referred as Rural Local Bodies or Panchayati Raj Institutions (PRIs).
- Local Government is a State subject, enlisted in List II of the Seventh Schedule to the Constitution of India.
- Part IX of the Constitution was inserted by the Constitution (73rd Amendment) Act, 1992, consisting of Articles 243 to 243-O
- Article 243B of the Indian Constitution provides for composition and structure of the PRIs
- Article 243G enshrines the basic principle for devolution of power to the Local Bodies
- Eleventh Schedule lists down 29 items, on which the PRIs can legislate, provided the concerned State legislature has devolved such items to their PRIs.

DIVISION OF FINANCE COMMISSION GRANTS

- Grants for Rural Local Bodies
- **Grants for Urban Local Bodies:** Urban local bodies like municipal councils receive the largest chunk of FC Grants after Rural Local Bodies and Post Devolution Deficit Grants to states.
- **Assistance to SDRF:** The central government also provides funds to State Disaster Relief Funds in addition to funding the National Disaster Management Authority (NDMA).
- **Post Devolution Revenue Deficit Grants:** The FC also provides a mechanism for compensation of any loss incurred by states, which is called post-devolution revenue deficit grants.

ATMANIRBHAR BHARAT CORNER

Ministry of External Affairs and TRIFED are going to set up an Atmanirbhar Bharat corner in 100 Indian Missions/ Embassies across the world.

About:

- The **Atmanirbhar Bharat corner** will be an exclusive space to promote GI tagged tribal art and craft products besides natural and organic products.
- The first 'Atmanirbhar Bharat' corner was inaugurated at the Indian Embassy in Bangkok, Thailand, on Independence Day.
- **Geographical Indication:**
 - ♦ The Geographical Indication, which has been recognized by the World Trade Organization, is used to denote the geographical territory from where a product, be it an agricultural produce, natural product or manufactured, and also conveys assurance of qualities or attributes that are unique to that specific geographic region.
 - ♦ India became a signatory to this convention, when, as a member of the WTO, it enacted the Geographical Indications (Registration and Protection Act), 1999, which came into effect from September 15, 2003.

TRIFED

The Tribal Cooperative Marketing Development Federation of India (TRIFED):

- Established in 1987, a national-level cooperative body, TRIFED is under the administrative control of the Ministry of Tribal Affairs, Government of India.
- TRIFED was established with the mandate to bring socio-economic development to the tribals of the country.
- TRIFED provides end-to-end service, by way of marketing tribal products on which the lives of tribals depend heavily.
- The objective of the mission is to empower tribal people with tools, knowledge, and a pool of information so that it can aid them in undertaking the operations in a systematic and scientific manner.
 - ♦ The approach involves exploring marketing possibilities in national as well as international markets in order to create opportunities for tribal products.
- This is not the first time that TRIFED has taken such a step to promote age-old tribal traditions, but earlier this year, TRIFED worked extensively in collaboration with various ministries and departments in order to promote GI Tag products.

- TRIFED in collaboration with the Ministry of Culture has earlier identified 8 heritage locations across India where GI-specific Tribes India stores will be set up. Among these 8 heritage locations, work has commenced in Sarnath, Uttar Pradesh, Hampi, Karnataka, Golconda Fort, Telangana.

CRIME IN INDIA REPORT 2020

Recently, the National Crime Records Bureau released the Crime in India Report 2020.

About:

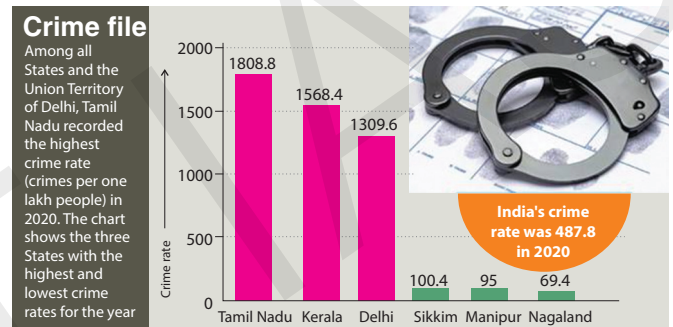
- **Overview:** While 2020, a year marked by months of a national lockdown due to the pandemic saw fewer "traditional crimes" such as those committed against women and children, among others, it witnessed a big spike in civil conflicts.
- **Communal Riots:**
 - ♦ Communal riots registered an increase of 96% in 2020 over the previous year.
 - ♦ Most of the 2020 cases are attributed to the Northeast Delhi riots of February last year. Delhi Police alone registered 520 cases of communal riots in the year.
 - ♦ Bihar is at second spot with 117 cases, Haryana and Jharkhand 51 each, followed by Maharashtra (26) and Gujarat (23). Uttar Pradesh did not record a single case of communal violence in 2020, according to the data.
- **Cast Riots:** Caste riots saw an increase of close to 50%.
 - ♦ Bihar recorded the highest number in cast conflict at 208, followed by Maharashtra (125), UP (116), Karnataka (95) and Tamil Nadu (69).
- **Agrarian Riot and Rioting during Andolan Morcha:** There is an increase of agrarian riots to 38%.
 - ♦ Punjab reported zero cases of agrarian riots and Haryana 34. The highest number of cases have been reported from Bihar (1,286), followed by Maharashtra (279), Karnataka (148), UP (142) and Jharkhand (83).
 - ♦ The riots during 'andolan/morcha' increased by 33%.
 - ♦ In cases of rioting during 'andolan/morcha', it is Kerala that has recorded the highest number of cases at 1,798, accounting for almost 95% of all such cases in 2020.
- **Offence against the States:**
 - ♦ 'Offences against the State' include cases related to sedition and waging war against the nation, those falling under provisions of the Unlawful Activities Prevention Act (UAPA), Official Secrets Act and Damage to Public Property Act.

- The year also saw a significant drop in cases related to 'Offences against the State', with a drop of 27% over 2019.
- UP, however, was the only major state to record an increase in this category, mostly due to the large number of 'Damage to Public Property' cases registered by the state, many of them during the anti- CAA protests.
- UAPA cases, in fact, registered a decrease of 35% in 2020 over 2019. The highest number of UAPA cases were registered in J&K (287), followed by Manipur (169), Jharkhand (86), Assam (76) and UP (72). UP was the only state in the top five with no ongoing insurgency to record such high numbers.

A JUMP IN NUMBERS			
OFFENCES	2019	2020	%increase
Communal riots	438	857	96%
Caste riots	492	736	50%
Agrarian riots	1,579	2,188	38%
Andolan/Morcha riots	1,442	1,905	33%
Promoting Enmity Between Groups	1,058	1,804	70%
TOTAL RIOTS (including other causes)	45,985	51,606	12%

Offences Against the State decreased by 27% but UP only major state where they increased

- **Cyber Crime:** The rate of cybercrime (incidents per lakh population) increased from 3.3 per cent in 2019 to 3.7 per cent in 2020 in the country, according to the National Crime Records Bureau (NCRB) data. Bengaluru tops India in the highest number of cybercrimes registered in 2020.
- **Environmental Offences:** During the year 2020, a total of 61,767 cases were registered under Environment Related Offences as compared to 34,676 cases in the year 2019, showing an increase of 78.1%.
- **Attacks on Police Personnel:** The year saw the number of attacks on police personnel decrease from 1,054 to 616 in 2020, a drop of almost 40%.
- **Crime rate:**



- **Crime Against women and children:**
 - Cases of crime against women in cities were down by 8.3% in the year 2020 when compared to 2019.
 - Crimes against women includes cases of rape, outraging modesty, dowry deaths and harassment, acid attacks and kidnapping.
 - The majority of crimes against women were registered under 'cruelty by husband or his relatives (30.2%) followed by 'assault on women with intent to outrage her modesty (19.7%), 'kidnapping and abduction of women (19.0%) and 'rape' (7.2%).
 - Rajasthan saw a decline of 11.45% in rape cases last year when compared to 2019. Similarly, it also saw a dip in crimes against women by 16%.
 - Madhya Pradesh saw a mere 1% dip in rape of minors unlike other states such as Uttar Pradesh and Rajasthan where the decline ranged from 5% to 10%.
 - From 7,797 in 2019, cases of kidnapping and abduction of children went down to 5,513 in 2020.
- **Crime Against Senior Citizen:** There is a decrease of 10.8% in registration for committing crime against Senior Citizens (aged above 60 years).

NATIONAL CRIME RECORD BUREAU (NCRB)

- It was set up in 1986 to function as a repository of information on crime and criminals.
- It was established on the recommendations of the Tandon Committee to the National Police Commission (1977-1981) and the MHA's Taskforce (1985).
- NCRB was entrusted with the responsibility for monitoring, coordinating and implementing the Crime and Criminal Tracking Network & Systems (CCTNS) project in the year 2009.
- This project connects 15000+ police stations and 6000 higher offices of police in the country.
- In August 2017, NCRB launched the National Digital Police Portal, which allows search for a criminal/suspect on the CCTNS database.
- The Bureau has also been entrusted to maintain the National Database of Sexual Offenders (NDSO) and share it with the States/UTs on a regular basis.
- NCRB has also been designated as the Central Nodal Agency to manage technical and operational functions of the 'Online Cyber-Crime Reporting Portal.

FREE EDUCATION TO 112 ASPIRATIONAL DISTRICTS

The NITI Aayog launched a new initiative in partnership with edutech giant BYJU'S.

About:

- Under this initiative 112 'Aspirational Districts' will get free access to the tech driven learning programme.
- **Free Access to Premium Resource:** Classes 6-12 in government schools across 112 'Aspirational Districts' will get free access to the company's "premium learning resources".
- **Free Coaching classes to Meritorious Students:** BYJU'S will also provide "free" coaching classes to over 3,000 "meritorious" students of Classes 11 and 12, offered by Aakash Institute, for engineering and medical entrance examinations.
- **Dedicated Working Group Setup:** As part of the partnership, a dedicated working group will be set up that will—among other things—actively monitor and evaluate implementation of the programs.
- **Aspirational Districts:** The so-called aspirational districts are in the country's most developmentally challenged regions across sectors such as health and nutrition, education, agriculture and water resources, infrastructure, financial inclusion, and skill development.
- **Pre Designed Test:** For the Career Plus programme, students will be selected through a pre-designed test and provided teaching and content material, along with mentoring support and guidance. This initiative will combine classroom and online learning.

NITI AAYOG

- **Formation:** National Institution for Transforming India, better known as NITI Aayog, was formed via a resolution of the Union Cabinet on 1 January 2015.
- **Think Tank:** NITI Aayog is the premier policy think tank of the Government of India, providing directional and policy inputs. Apart from designing strategic and long-term policies and programmes for the Government of India, NITI Aayog also provides relevant technical advice to the Centre, States, and Union Territories.
- **Members:** The Governing Council of NITI Aayog is chaired by the Hon'ble Prime Minister and comprises Chief Ministers of all the States and Union Territories with legislatures and Lt Governors of other Union Territories.
- **Replacing Planning Commission:** The Government of India constituted NITI Aayog to replace the Planning Commission, which had been instituted in 1950. This step was taken to better serve the needs and aspirations of the people.

The collaboration will feature two main components:

- **Byju's Career Plus programme,** which will identify and provide high-quality coaching to 3,000 students of Classes 11 and 12 who aspire to appear for NEET and JEE.
- **A voluntary programme** will allow children of school-going age (Classes 6-12) to opt for scholastic content from Byju's Learning App for three years, under the edtech's social impact initiative, Education for All.

INCREASE IN MSP FOR RABI CROPS

The Cabinet Committee on Economic Affairs (CCEA) has approved the increase in the Minimum Support Prices (MSP) for all mandated Rabi crops for 2022-23.

About:

- **Increased MSP:** The government has increased the MSP of Rabi crops for Rabi Marketing Season 2022-23 to ensure remunerative prices for the growers for their produce.
- **Reason:** This has been done to encourage the farmers to shift to larger areas under these crops and adopt best technologies and farm practices to correct demand-supply imbalance.
- **In Line with the Union Budget 2018-19:** The increase in MSP for Rabi crops for RMS 2022-23 is in line with the Union Budget 2018-19 announcement of fixing the MSPs at a level of at least 1.5 times the all-India weighted average cost of production, aiming a reasonably fair remuneration for the farmers.

Minimum Support Price:

- **A form of Market Intervention:** Minimum Support Price (MSP) is a form of market intervention by the Government of India to insure agricultural producers against any sharp fall in farm prices.
- **Announcement of MSP:** The minimum support prices are announced by the Government of India at the beginning of the sowing season for certain crops on the basis of the recommendations of the Commission for Agricultural Costs and Prices (CACP).
- This MSP is usually estimated based on three types of calculation methods.
 - ♦ **A2:** Under this, MSP is set 50% higher than the amount farmers spend on farming including spending on seeds, fertilizers, pesticides, and labor.
 - ♦ **A2+FL:** It includes A2 plus an assigned value of unpaid family labor.
 - ♦ **C2:** Under C2, the estimated land rent and the cost of interest on the money taken for farming are added on top of A2+FL.

- **A Fixed Price:** MSP is price fixed by the Government of India to protect the producer - farmers - against excessive fall in price during bumper production years. The minimum support prices are a guarantee price for their produce from the Government.
- **Major Objective:** The major objectives are to support the farmers from distress sales and to procure food grains for public distribution.
- **In Case of fall in Market Price:** In case the market price for the commodity falls below the announced minimum price due to bumper production and glut in the market, government agencies purchase the entire quantity offered by the farmers at the announced minimum price.
- **MSPs For Crops:** Government announces minimum support prices (MSPs) for 22 mandated crops and fair and remunerative price (FRP) for sugarcane. The mandated crops are 14 crops of the kharif season, 6 rabi crops and two other commercial crops. In addition, the MSPs of toria and de-husked coconut are fixed on the basis of the MSPs of rapeseed/mustard and copra, respectively.
- **Informed Decision:** Based on these pilot projects farmers will be able to make informed decisions on what crop to grow, what variety of seed to use and what best practices to adopt to maximize the yield.
 - ♦ Farmers can take informed decisions about whether to sell or store their produce and when and where and what price to sell.
- **Digital Agriculture Based on Latest Technology:**
 - ♦ **Digital Agriculture Mission:** A Digital agriculture mission has been initiated for 2021-2025 by the government for projects based on new technologies like artificial intelligence, block chain, remote sensing and GIS technology, use of drones and robots etc.
 - ♦ **Farmers Database:** Recognizing the importance of Digitization in Agriculture the Department is creating a federated Farmers Database and building different Services around this Database so as to build Digital Ecosystems of Agriculture.
 - ♦ **Land and Records Database Linking:** Federated farmers' databases will be linked by the land records of farmers from across the country and a unique Farmer ID will be created.
 - ♦ **Record of Benefit:** Under this unified database for all farmers the information of all benefits and supports of various schemes of the Central & State Government can be kept and this can be the source for accessing information for providing benefits to farmers in the future. So far, the database is ready with details of around 5.5 crore farmers.

CABINET COMMITTEE ON ECONOMIC AFFAIRS

- **Review Economic Trend:** CCEA has a mandate to review economic trends on a continuous basis, as also the problems and prospects, with a view to evolving a consistent and integrated economic policy framework for the country.
- **Policy Decisions:** It also directs and coordinates all policies and activities in the economic field including foreign investment that require policy decisions at the highest level.
- **Investment Proposals:** The CCEA also lays down priorities for public sector investment and considers specific proposals for investment of not less than specific levels (Rs. 3 billion at present) as revised from time to time.
- **Price Control:** It is important to note that the increase in the prices of essential commodities or bulk goods under any form of formal or informal control is decided by the CCEA.

MOUs SIGNED FOR DIGITAL AGRICULTURE

The Union Minister of Agriculture and Farmers Welfare, signed five Memorandums of Understanding (MOUs) to advance digital agriculture.

About:

- These pilot projects are part of the Digital Agriculture Mission and will draw on the National Farmers Database which already includes 5.5 crore farmers identified using existing national schemes.

About Digital Agriculture:

- **Digital agriculture** is the use of digital technology to integrate agricultural production from the paddock to the consumer. These technologies can provide the agricultural industry with tools and information to make more informed decisions and improve productivity.

Benefits Of Digital Agriculture:

- **Improve Existing Policies:** It can help governments improve the efficiency and effectiveness of existing policies and programs.
- **Support Trade Agriculture:** It can support trade in agriculture and food products, by connecting private sector suppliers to new markets.
- **Sustainable Agriculture:** It can support the goal of achieving more resilient, productive, and sustainable agriculture and food systems.
- Reduces chemical application in crop production.
- Efficient use of water resources.
- Disseminates modern farm practices to improve the quality, quantity and reduced cost of production.
- Changes the socio-economic status of farmers.

Examples:

- **Agricultural biotechnology** encompasses a variety of strategies, including traditional breeding, that alter living organisms or sections of organisms in order to create or modify goods, better plants or animals, or produce microbes for specific agricultural use.
- **Precision Agriculture:** When compared to traditional cultivation techniques such as agroforestry, intercropping, crop rotation, and so on, precision agriculture (PA) is an approach in which inputs are used in precise amounts to boost average yields. It is based on the use of information and communication technologies (ICTs).
- **Use of Digital and Wireless Technology:** Data measurement using digital and wireless technologies, weather monitoring, robotics/drone technology, and so on.

Disadvantages:

- **High capital costs** deter farmers from adopting digital farming methods.
- **Modest Land Holdings:** Indian farms are generally small, with the most frequent being 1–2-acre farm holdings. In India, agricultural land leasing under various forms is also very common.
- **Rental and Sharing Practices:** Due to a lack of financial resources and small farm plots, renting and sharing platforms for equipment and machinery such as tractors, harvesters, and other farm machinery are preferred over outright purchases.
- **Illiteracy in Rural Areas:** The lack of basic computer literacy inhibits e-rapid agriculture's expansion.

Way Forward:

- Technology has redefined the 21st century. As the world moves toward quantum computing, AI, big data, and other new technologies, India has huge potential to reap the advantage of being an IT giant and revolutionize the farming sector.

POSHAN 2.0

Union Minister for Women and Child Development urged all aspirational districts of the country to make a commitment to establish a Poshan Vatika.

About:

- Poshan Vatika (nutrition garden) is to be established during the nutrition month starting from September 1 for the protection of **Severe Actual Malnourished (SAM)** children.
- **Launch:** Mission Poshan 2.0 was launched by the finance minister in February 2021 to prevent any backsliding of nutrition indicators.

- **Umbrella Scheme:** Mission Poshan 2.0 is an umbrella scheme covering the Integrated Child Development Services (ICDS)—Anganwadi Services, Supplementary Nutrition Programme, Poshan Abhiyan, Scheme for Adolescent Girls and National Creche Scheme.
- **Announcement:** It was announced in the **Union Budget 2021-22** and an amount of Rs 20,105 crore has been assigned to Saksham Anganwadi and Poshan 2.0.
- **Objective:** The objective is to implement a comprehensive, unified strategy to strengthen nutritional content, delivery, outreach and outcome, with renewed focus on developing practices that nurture health, wellness and immunity to disease and malnutrition in the country.

About Poshan Vatika (Nutri Garden):

- **Poshan Vatika:** Poshan Vatika means that small piece of land where the people of the house grow vegetables to make sure that all in the family specially children and women should not become victims of mal-nutrition.
- **Objective:** The main objective is to ensure supply of nutrition through organically home-grown vegetables and fruits simultaneously ensuring that the soil must also remain healthy.
- **Principle:** It evolved on the principle of low-cost organic farming in a small piece of land either part of an agri field or a small area adjacent to the home or hut of the family.

About Poshan Maah:

- **Celebration:** Every year the Poshan Maah is celebrated during the month of September under POSHAN Abhiyaan (PM's Overarching Scheme for Holistic Nourishment), which was launched in 2018.
- **Objective:** The objective of the Poshan Maah is to ensure community mobilisation and bolster people's participation for addressing malnutrition amongst young children, and women and to ensure health and nutrition for everyone.
- It includes a month-long activities focussed on antenatal care, optimal breastfeeding, Anaemia, growth monitoring, girls education, diet, right age of marriage, hygiene and sanitation and eating healthy (Food Fortification).
 - ♦ The activities focus on Social and Behavioural Change Communication (SBCC) and are based on Jan Andolan Guidelines.

Malnutrition in India:

- **World Bank Report:** According to a 2010 World Bank report, India suffered an economic loss of Rs 24,000 crore due to lack of toilets and poor hygiene.
- **Study of 2018:** According to the study of the year 2018, the GDP suffered a decline of 4% due to malnutrition.
- **Sam Children:** The number of SAM children in the country was earlier 80 lakhs, which has now come down to 10 lakhs.

POSHAN ABHIYAN

- **A flagship Programme:** The Prime Minister's Overarching Scheme for Holistic Nourishment (POSHAN Abhiyaan), or the National Nutrition Mission, is the Government of India's flagship programme to improve nutritional outcomes for children, pregnant women and lactating mothers.
- **Launch:** Launched by Hon'ble Prime Minister on the occasion of International Women's Day 2018, the POSHAN Abhiyaan directs the attention of the country towards the problem of malnutrition and addresses it in a mission-mode.
- **Nodal Ministry:** The Ministry of Women and Child Development is the nodal Ministry for POSHAN Abhiyan.
- **Objective:** The objective of POSHAN Abhiyaan is to reduce stunting in identified Districts of India with the highest malnutrition burden by improving utilization of key Anganwadi Services and improving the quality of Anganwadi Services delivery.
- **Aim:** Its aim is to ensure holistic development and adequate nutrition for pregnant women, mothers and children.

SWACHH SURVEKSHAN GRAMEEN, 2021

The Swachh Survekshan Grameen, 2021 will be launched under the Swachh Bharat Mission Phase- 2 by the Jal Shakti Ministry as part of the 'Azadi Ka Amrit Mahotsav.

About:

- **Survey:** It is a survey of cleanliness, hygiene and sanitation to boost the government's push for Open Defecation Free (ODF) Plus status for villages.
 - ♦ **ODF-plus status** aims to ensure management of solid as well as liquid waste and is an upgradation of ODF status in which construction of adequate toilets was required so that people did not have to defecate in the open.
- The Swachh Survekshan Urban 2021 is to be announced. It was introduced by the Ministry of Housing and Urban Affairs (MoHUA) in 2016.
- **Carried by an Expert Agent:** An expert agency has been hired to carry out the Swachh Survekshan Grameen, 2021, which will be launched under phase two of the Swachh Bharat Mission.
- **Ranking:** As part of the Survekshan, Villages, Districts and States would be ranked using key parameters.
- **Earlier Commissions:** The Department of Drinking Water and Sanitation had commissioned the 'Swachh Survekshan Grameen' in 2018 and 2019.

- **Coverage:** 17,475 villages in 698 districts of the country will be covered by the Swachh Survekshan Grameen.
- The weights to different elements of the SSG 2021 are:
 - ♦ Direct Observation of sanitation at public places -30%
 - ♦ Citizen's Feedback -35%
 - ♦ Service Level Progress on sanitation related parameters -35%

About Swachh Bharat Mission Phase-2:

- **SBM (G) Phase-II:** SBM (G) Phase-II will focus on sustaining the gains made in the first phase of the programme and will ensure that effective solid and liquid waste management (SLWM) is instituted in every gram panchayat of the country.
- **Implementation:** The programme will be implemented from 2020-2021 to 2024-2025 in a mission mode with a total outlay of ₹1,40,881 crore.
- **The fund sharing pattern between Centre and States** will be 90:10 for North-Eastern States and Himalayan States and UT of J&K; 60:40 for other States; and 100% for other Union Territories.
 - ♦ Funding Norms for SLWM have been rationalized and changed to per capita basis in place of the number of households.
- **Budget Allocation:** ₹52,497 crore will be allocated from the budget of the department of drinking water and sanitation.
 - ♦ The remaining amount will be dovetailed from the funds being released under the 15th finance commission, MGNREGS and revenue generation models particularly for SLWM.

SWACHH BHARAT MISSION

- **Launch:** To accelerate the efforts to achieve Universal Sanitation Coverage and to put the focus on sanitation, the Hon'ble Prime Minister of India had launched the Swachh Bharat Mission on 2nd October 2014.
- **Coverage:** Under the mission, all villages, Gram Panchayats, Districts, States and Union Territories in India declared themselves "open-defecation free" (ODF) by 2 October 2019, the 150th birth anniversary of Mahatma Gandhi, by constructing over 100 million toilets in rural India.
- **Implementation:** SBM is being implemented by the Ministry of Housing and Urban Affairs (M/o HUA) and by the Ministry of Jal Shakti for urban and rural areas respectively.

SHIKSHAK PARV

The Ministry of Education (MoE) is celebrating Shikshak Parv, 2021

About:

- **Celebration:** The Shikshak Parv was celebrated from 5th-17th of Sept to recognise the contributions of teachers and take NEP 2020 a step forward.
- **Theme:** The theme of the 'Shikshak Parv-2021' is "Quality and Sustainable Schools: Learnings from Schools in India".
- **Webinars and Discussion:** The inaugural conclave was followed by webinars, discussions and presentations up to September 17 in which the educational practitioners from various schools of the country have been invited to share their experience, learnings and the roadmap ahead.
- **The National Award to Teachers:** The National Award to Teachers was conferred by the President through a webinar on 5th September.

Initiatives launched on the occasion of Shikshak Parv:

- The Indian Sign Language Dictionary (audio and text embedded sign language video for the hearing impaired, in conformity with Universal Design of Learning)
- Talking Books (audio books for the visually impaired).

NEW NATIONAL EDUCATION POLICY 2020

SCHOOL EDUCATION KEY HIGHLIGHTS

- ▶ Universalization of Early Childhood Care Education (ECCE)
- ▶ National Mission of Foundation Literacy and Numeracy
- ▶ 5+3+3+4 Curricular and Pedagogical Structure
- ▶ Curriculum to Integrate 21st Century Skills, Mathematical Thinking and Scientific Temper
- ▶ No Rigid Separation Between Art & Science, Between Curricular and Extra-Curricular Activities, Between Vocational and Academic Streams
- ▶ Education of Gifted Children
- ▶ Gender Inclusion Fund
- ▶ KGBV's Up to Grade 12
- ▶ Reduction in the Curriculum to Core Concepts
- ▶ Vocational Integration From Class 6 Onwards

- School Quality Assurance and Assessment Framework of CBSE,
- NISHTHA teachers' training programme for NIPUN Bharat
 - ♦ National Initiative for School Heads' and Teachers' Holistic Advancement (NISHTHA) is a capacity building programme for improving the quality of school education through integrated teacher training.

- ♦ NIPUN (National Initiative for Proficiency in Reading with Understanding and Numeracy) Bharat Scheme was launched to create an enabling environment to ensure universal acquisition of foundational literacy and numeracy, so that every child achieves the desired learning competencies in reading, writing and numeracy by the end of Grade 3, by 2026-27.
- Vidyanjali portal for facilitating education volunteers, donors and CSR contributors for school development.

THE NATIONAL AWARD TO TEACHERS

- **Institution:** The National Awards to Teachers were first instituted in 1958 to recognise excellence and commitment of teachers in shaping the minds as well as the future of the youth.
- **5th Sept:** From mid-60s onwards, September 5 came to be the fixed date for the function on account of the birthday of Sarvapalli Radhakrishnan, former president of India and an eminent educationist.
- **Objective:** The award is to accord public recognition to meritorious teachers working in elementary and secondary schools.

NEW EDUCATION POLICY (NEP) 2020

- **The National Policy on Education:** The National Policy on Education was framed in 1986 and modified in 1992.
- **NEP 2020:** The NEP 2020 is the first education policy of the 21st century and replaces the thirty-four-year-old National Policy on Education (NPE), 1986.
- **Foundational Pillars:** Built on the foundational pillars of Access, Equity, Quality, Affordability and Accountability, this policy is aligned to the 2030 Agenda for Sustainable Development.
- **Aim:** It aims to transform India into a vibrant knowledge society and global knowledge superpower by making both school and college education more holistic, flexible, multidisciplinary.

STRENGTHENING THE POTENTIAL OF INDIA (SPIN) SCHEME

The Khadi and Village Industries Commission (KVIC) launched a unique scheme Strengthening the Potential of India (SPIN).

About:

- It aims to set up a pottery cluster under the Scheme of Fund for Regeneration of Traditional Industries (SFURTI) Scheme in Varanasi to empower over 1100 people of the marginalized potters' community.

- ◆ **Scheme of Fund for Regeneration of Traditional Industries (SFURTI)** is an initiative by the Ministry of Micro, Small & Medium Enterprises to promote cluster development. Khadi and Village Industries Commission (KVIC) is the nodal agency for the promotion of Cluster development for Khadi.
- ◆ The objective of the scheme is to organize the traditional industries and artisans into clusters to make them competitive and provide support for their long term sustainability.

KASHI POTTERY CLUSTER

- **First Pottery Cluster:** This is the first pottery cluster in Varanasi district set up by KVIC under the SFURTI Scheme.
- **Providing Direct Employment:** The cluster, set up over an area of 7100 square feet at the cost of Rs 2.50 crore, has provided direct employment to 340 pottery artisans who have been trained by KVIC.
- **Modern Equipment:** The cluster is equipped with modern equipment like furnaces, electric pottery wheels, blunger machines, pug mills and other modern equipment for higher production of clay pottery.

PRADHAN MANTRI MUDRA YOJANA

- **MUDRA:** Micro Units Development and Refinance Agency Ltd. [MUDRA] is an NBFC supporting development of the micro enterprise sector in the country.
- **Provides Refinance Support:** MUDRA provides refinance support to Banks / MFIs for lending to micro units having loan requirement upto 10 lakh. MUDRA provides refinance to micro businesses under the Scheme of Pradhan Mantri MUDRA Yojana.
- **Interventions:** MUDRA offers incentives through these interventions:
 - ◆ **Shishu:** Covering loans upto 50,000/-.
 - ◆ **Kishor:** Covering loans above 50,000/- and upto 5 lakh.
 - ◆ **Tarun:** Covering loans above 5 lakh and upto 10 lakh.
- The SPIN initiative has been launched on the occasion of "Sewa Diwas", which is observed on the birthday of Prime Minister Narendra Modi
- **SPIN:** SPIN is a specially designed program to make potters self-sustainable.
- **Easy Loan:** Under the scheme, KVIC will facilitate potters to get easy loans from banks that will help the potters to diversify their activities and enhance their income.
 - ◆ The Khadi and Village Industries Commission (KVIC) is a statutory body established by an Act of Parliament in April 1957.

- **Reduce Dependency:** This will reduce their dependence on government subsidy and thus make our potters self-reliant.
- **Increase Skills:** The new Kashi pottery cluster will help traditional potters in increasing their skills with the help of modern equipment which will eventually help them occupy a bigger market space and get a better income.
- **Objective:** It aimed at sustainable development by creating local self-employment is the key objective of KVIC which is aligned with the Prime Minister's commitment of "Job to Every Hand" (Har Hath Me Kaam).

Salient Features of SPIN Scheme:

- It is a no-subsidy program
- KVIC facilitates potters to get bank loans under Pradhan Mantri Shishu Mudra Yojana
- No financial burden on the exchequer
- Beneficiaries can repay the loans in easy installments.

RASHTRIYA GOKUL MISSION (RGM)

A review meeting on the performance of the Rashtriya Gokul Mission was held recently.

About:

- **Launch:** RGM was launched in **December 2014** for development and **conservation of indigenous breeds** through selective breeding in the breeding tract and genetic upgradation of nondescript bovine population.
- It is launched under the National Programme for Bovine Breeding and Dairy Development (NPBBD).
- **Components:** The scheme comprises **two components** namely National Programme for Bovine Breeding (**NPBB**) and National Mission on Bovine Productivity (**NMBP**).

Objective of the RGM:

- Development and conservation of indigenous breeds
- Breed improvement programme for indigenous breeds so as to improve the genetic makeup and increase the stock
- Enhancing milk production and productivity of bovine population by increasing disease free high genetic merit female population and check on spread of diseases
- Distribution of disease free high genetic merit bulls for natural service.
- To arrange quality **Artificial Insemination (AI) services** at farmers' doorstep.
- To create e-market portal for bovine germplasm for connecting breeders and farmers.

Implementing Agency:

- **State Implementing Agency:** Rashtriya Gokul Mission will be implemented through the "State Implementing Agency (SIA viz Livestock Development Boards).
- **State Gauseva Ayogs:** State Gauseva Ayogs will be given the mandate to sponsor proposals to the SIA's (LDB's) and monitor implementation of the sponsored proposal.
- **Participating Agencies:** All Agencies having a role in indigenous cattle development will be the "Participating Agencies" like CFSPTI, CCBFs, ICAR, Universities, Colleges, NGO's and Gaushalas with best germplasm.

What are Gokul Grams?

- **Gokul Gram:** The Rashtriya Gokul Mission envisages establishment of integrated cattle development centres 'Gokul Grams' to develop indigenous breeds including upto 40% nondescript breeds.
- **State of Art:** The Gokul Gram will also function as a state of the art in situ training centre for Farmers, Breeders and MAITRI's.
- **Gokul Grams will be established in:** (i) the native breeding tracts and (ii) near metropolitan cities for housing the urban cattle.
- **Self-Sustaining:** The Gokul Gram will be self-sustaining and will generate economic resources from sale of A2 milk, organic manure, vermi-composting, urine distillates, and production of electricity from biogas for in house consumption and sale of animal products.
- **Maintaining Animals:** The Gokul Gram will maintain milch and unproductive animals in the ratio of 60:40 and will have the capacity to maintain about 1000 animals.

National Kamdhenu Breeding Centre (NKBC):

- **NKBC:** Under RGM, two "National Kamdhenu Breeding Centres" (NKBC) are being established as Centres of Excellence to develop and conserve Indigenous Breeds in a holistic and scientific manner.

MAI BHI DIGITAL 3.0

Ministry of Housing and Urban Affairs and Ministry of Electronics and Information Technology launched the 'Main Bhi Digital 3.0'

About:

- **A Special Scheme:** Mai Bhi Digital is a special Campaign for Digital Onboarding and Training of street vendors under PM SVANidhi scheme across 223 cities in the country.

- **Launch:** It was jointly launched by the Housing and Urban Affairs Secretary and the Electronics and IT Secretary in a virtual event. The drive is in line with the Prime Minister's vision of Sabka Saath Sabka Vikas.
- **Training:** Under this the street vendors will be trained to accept and make payments digitally.
 - ♦ They will also be trained to pay for material they procure from sellers using unique QR codes.
- **Participating Companies:** BharatPe, Mswipe, PhonePe, Paytm, Aceware are participating in this drive to issue UPI IDs, QR codes and provide digital training.

PM Street Vendor's AtmaNirbhar Nidhi (PM SVANidhi):

- **Launch:** PM SVANidhi was launched on June 1, 2020 as a Central Sector Scheme.
- **Loan:** The scheme facilitates affordable working capital loans for street vendors of up to ₹10,000 with an interest subsidy of 7% on regular repayment to let them restart their businesses lost during lockdown.
- **Graded Guarantee Cover:** The street vendors are not required to pay any collateral for the loan. The scheme provides Graded Guarantee Cover, to Lending Institutions, on a portfolio basis.
- **Targets:** The scheme targets to cover 50 lakh street vendors, who had been vending on or before March 24, 2020.
 - ♦ The street vendors also stand a chance to avail a loan of ₹20,000 and ₹50,000 in the second and third tranches respectively on timely repayment of the loan.
- **Encouragement:** To encourage digital transactions a cash back up to ₹1,200 on digital transactions at ₹100 per month is provided to the street vendors under the scheme.
- **Paperless Loan Processing:** An Integrated IT Platform has been developed to provide an end-to-end solution for the paperless loan processing. SIDBI has been appointed as the implementation agency for scheme administration.

Who is Street Vendor?

- **Street Vendor:** Anyone who doesn't have a permanent shop is considered a street vendor. According to government estimates, street-vending accounts for 14% of the total (non-agricultural) urban informal employment in the country.
- **Total Number of Vendors:** There are an estimated 50-60 lakh street vendors in India, with the largest concentrations in the cities of Delhi, Mumbai, Kolkata, and Ahmedabad. Most of them are migrants who typically work for 10-12 hours every day on average.
- **Problem Associated with the Sector:**
 - ♦ **Licence caps are unrealistic** in most cities — Mumbai for example, has a ceiling of around 15,000 licences as against an estimated 2.5 lakh vendors.
 - ♦ This means most vendors hawk their goods illegally,

which makes them vulnerable to exploitation and extortion by local police and municipal authorities.

- ♦ Often, local bodies conduct eviction drives to clear the pavements of encroachers, and confiscate their goods.

Fines for recovery are heavy.

THE STREET VENDORS ACT 2014

- **Enact:** The Street Vendors (Protection of Livelihood and Regulation of Street Vending) Act, 2014 was enacted to regulate street vendors in public areas and protect their rights.
- **Introduction:** It was introduced in Lok Sabha on September 6, 2012 by then Union Minister of Housing and Urban Poverty Alleviation.
- **Definition of Street Vendors:** The Act defines a "street vendor" as a person engaged in vending of articles... of everyday use or offering services to the general public, in...any public place or private area, from a temporary built-up structure or by moving from place to place".
- **Formation of Committees:** The Act envisages the formation of Town Vending Committees in various districts to ensure that all street vendors identified by the government are accommodated in the vending zones subject to norms. The implementation of the Act has been patchy.

VISVESVARAYA PhD SCHEME 2.0

The Electronics and IT Minister launched Phase II of Visvesvaraya PhD Scheme.

About:

- **Aim:** It aims to promote research in 42 emerging technologies in Electronics System Design and Manufacturing (ESDM) and Information Technology (IT) / Information Technology-Enabled Services (ITES).
- **Ministry:** "Visvesvaraya PhD Scheme for Electronics and IT" was initiated by the Ministry of Electronics and Information Technology with an objective to enhance the number of PhDs in Electronics System Design & Manufacturing (ESDM) and IT/IT Enabled Services (IT/ITES) sectors in the country.
- **Approval:** Cabinet Committee on Economic Affairs (CCEA) approved the scheme in 2014 for a period of nine years with a total estimated cost of ₹ 466 crores.
- **Phase I:** The first phase of the scheme saw 63 global patents and the publication of thousands of research papers in reputed international journals.
- **Phase II:** Phase II of the scheme is being launched with enhanced features to serve the purpose of productive research in India.

- ♦ Phase II of the scheme aims to support 1000 Full Time PhD Candidates, 150 Part Time PhD Candidates, 50 Young Faculty Research Fellowships and 225 Post-Doctoral Fellowships.

Salient Features of the Scheme:

- **Fellowship:** The scheme provides 25% more fellowship amount than most of the other PhD Schemes.
- **Incentive:** Part-time PhD candidates get one time incentive on completion of the PhD.
- **Supporting Talents:** Scheme also supports 200 Young Faculty Research fellowships in the areas of the ESDM and IT/ITES with the objective to retain and attract bright young faculty members in these sectors.
- **Encourage:** The scheme is also expected to encourage working professionals and non-PhD faculty members to pursue PhD.
- **No Direct Funding:** The support under the scheme will be provided to the institution granting the PhD degree and no direct funding support will be provided by Government of India to the PhD candidates or faculty members or to the departments in the supported institution.
- **Nominating a Nodal Officer:** Each institution supported under the scheme has nominated a nodal officer at the institute to coordinate with PhD Cell for matters related to the scheme.

MOKSHAGUNDAM VISVESVARAYA

- In India, we celebrate Engineer's Day on September 15, as a tribute to the greatest Indian Engineer Bharat Ratna Mokshagundam Visvesvaraya.
- He was known as the father of Modern Mysore for his outstanding contribution to society.
- In 1955, the government of India honoured him with the highest civilian honour — Bharat Ratna for his numerous industrial, economic and social projects.
- He was also conferred the British knighthood by King George V, which put the honorific 'sir' before his name.
- He designed and patented automatic water floodgates in 1903, which were first installed at the Khadakwasla reservoir, in Pune.
- He was a renowned precursor of economic planning in India.
- In 1917, Visvesvaraya established Government Engineering College in Bengaluru which was later named University Visvesvaraya College of Engineering in his honour.

RAIL KAUSHAL VIKAS YOJANA

Ministry of Railways launched Rail Kaushal Vikas Yojana (RKVY) under Pradhan Mantri Kaushal Vikas Yojana.

About:

- **Training in Relevant Skills:** Under the scheme, youths will be provided training in industry relevant skills in Railway Training Institutes under the Apprentice Act 1961.
- **Aim:** The aim of this initiative is to impart training skills to the youth in various trades to bring qualitative improvement.
- **Training in Four Trades:** The training will be provided in four trades viz. Electrician, Welder, Machinist and Fitter and will comprise of initial basic training of 100 hours.
- **Eligibility:** Candidates who are 10th passed and between 18-35 years shall be eligible to apply. Participants in the scheme shall however have no claim to seek employment in Railways on the basis of this training.
- **Curriculum:** The program curriculum has been developed by Banaras Locomotive Works, the nodal PU for this scheme, which will also standardize assessments and maintain a centralized database of participants.
- **Assessments:** Trainees shall be required to undergo a standardized assessment and will be awarded a certificate in the allotted trade by the National Rail & Transportation Institute, upon conclusion of their programme.

Pradhan Mantri Kaushal Vikas Yojana:

- **A Flagship Scheme:** Launched in 2015, PMKVY is the flagship scheme for skill training of youth and is implemented by the new Ministry of Skill Development and Entrepreneurship through the National Skill Development Corporation (NSDC).
- **It aims** to mobilize youth to take up skill training with the aim of increasing productivity and aligning the training and certification to the needs of the country.
- **Fee Payment:** Under this Scheme, Training and Assessment fees are completely paid by the Government.
- **Training:** Skill training would be done based on the National Skill Qualification Framework (NSQF) and industry led standards.

Key Components:

- **Short Term Training:** Training as per National Skills Qualification Framework (NSQF) is provided to those who are either school/college dropouts or unemployed.

- **Recognition of Prior Learning:** An individual with a certain set of skills or with prior learning experience is assessed and certified under RPL with grade according to the NSQF.
- **Special Projects:** This component ensures training in special areas and premises of government bodies and corporate. It aims to encourage training in vulnerable and marginalized groups of society.
- **PMKVY 1.0:** Owing to the success of PMKVY 1.0 wherein more than 19 lakh students were trained as against the target of 24 lakh, the scheme was relaunched as **PMKVY 2.0 (2016-2020)** with an allocated budget of Rs. 12000 Crores that aimed to train 10 million youth by the year 2020.
- **PMKVY 3.0:** And further **PMKVY 3.0 was launched in 2021**, in a bid to empower India's youth with employable skills by making over 300 skill courses available to them. It envisages training of eight lakh candidates over a scheme period of 2020-2021.

APPRENTICES ACT, 1961

- **Enactment:** The Apprentices Act, 1961 was enacted with the prime objective to fully utilize the facilities available in industry for imparting practical training with a view to meeting the requirements of skilled manpower for industry.
- **Amendments:** Initially, the Act covered the apprenticeship training for the trade Apprentices and subsequently amended in **1973, 1986 and 2014** to bring the Graduates, Technician, Technician (Vocational) and Optional Trade Apprentices respectively under its purview.
- **Objective:**
 - ♦ To regulate the programme of training of apprentices in the industry so as to conform to the prescribed syllabi, period of training etc.as laid down by the Central Apprenticeship Council;
 - ♦ To utilize the facilities available in industry for imparting practical training with a view to meeting the requirements of skilled manpower for industry.
- **Central Apprentice Council:**
 - ♦ It is an **apex statutory body**. It is tripartite by constitution with members from Government both Central and States/UTs, Employers etc.
 - ♦ It advises the Government on laying down policies and prescribing norms & standards in respect of Apprenticeship Training.

PHOTOS DEPICTING DEGRADATION OF ASSAM'S DEEPOPOR BEEL

Locals take photos depicting elephants negotiating a killer railway track alongside Deepor Beel.

About:

- A dairy farmer Pramod Kalita and his informal group of 25 members took photographs of elephants, trees, birds, boats, a massive garbage dump and warehouses and a killer railway track skirting Deepor Beel.
- Deepor Beel is facing severe ecological challenges due to anthropogenically caused pollution. The deterioration has been to such an extent that not only water quality but also diversity of aquatic life has declined in the water body.

Challenges faced in Deepor Beel:

- **Declining quality of animal life:** Fewer elephants come to the wetland than two-three decades ago because the wetland has lost or is losing at least five aquatic plants and reeds (perennial grasses which typically grow in wetlands and have hollow stems and broad leaves) the animals gorged on.
- **Loss of livelihood of local community:** The number of fishermen has come down from 850 to some 100 because the water is contaminated with seepage from the garbage dump on the wetland's eastern side and Guwahati's sewage.
- **Pollution due to negligence:** To make things worse, picnic spots, snacks shops and eateries along the road have contributed to the littering of the wetland.
- **Death of animals and wildlife conservators due to passage of communication lines from the site.**

About Deepor Beel:

- It is a freshwater lake on the south-western edge of Guwahati and has been designated as a Ramsar Site in 2002. It is located on the southern bank of the Brahmaputra river.
- It is also classified as an Important Bird Area by Birdlife International for sustaining 219 species of birds and a range of aquatic life forms.
- The **beel** has shrunk 35% since the 1990s due to the expansion of the city. Its official area now is 4,014 hectares of 15.5 square miles.
- It is an open lake basin connected with a set of inflow and outflow channels. Deepor Beel has both biological and environmental importance besides being the only major storm-water storage basin for Guwahati city.

OPEN LAKE VS CLOSED LAKE

- Open Lake basin is one which has where water constantly flows out under almost all climatic circumstance. e.g
- Closed lakes are bodies of water that do not drain into an ocean or river i.e. that no water flows out of the lake. Instead, water is reduced within the lake via seepage into groundwater or evaporation.
- It is considered one of the staging sites for migratory birds in India; and some of the large congregations of aquatic birds in Assam during winter.

ODISHA'S KENDRAPARA NOW INDIA'S ONLY DISTRICT TO HAVE ALL 3 SPECIES OF CROCODILIANS

A baby gharial was found in a Kendrapara river on August 29; the district is already home to saltwater and mugger crocodiles.

About:

- Odisha's Kendrapara district, crisscrossed by rivers, creeks and water inlets, has earned the distinction of being the only district in India where all three species of crocodiles i.e. salt-water, **gharial** and **mugger** are found.
- The district has already claimed fame for its successful conservation programme for salt-water or estuarine crocodiles at the Bhitarkanika National Park.



Significance:

- Odisha is the only state to have all three species of crocodilians found in the country.
- Bhitarkanika National park is also the home of saltwater crocodiles (**Crocodylus porosus**).
- All three species of crocodilians in the river systems of Odisha were on the verge of extinction by the 1970s. However with recent development the moment has become crucial in history of wildlife conservation in Odisha.

Steps for conservation of the species:

- The gharial and saltwater crocodile conservation programme was first implemented in Odisha in early 1975. Subsequently, the mugger conservation programme was initiated.
- The Ramatirtha Centre, meant for mugger crocodiles within the Similipal Tiger Reserve, initially started with eggs and juveniles of muggers procured from Tamil Nadu.
- A gharial project was started at Tikarpada in Angul district in 1975 with an aim to increase their population.
- In 1975, the Union ministry of forest and environment, in collaboration with the United Nations Development Programme, had started a crocodile breeding and rearing project in Dangamala within the Bhitarkanika.

Impact of efforts to conserve wildlife:

- Since 1984, more than 600 muggers have been captive-bred and released in Similipal.
- In January 2021, there were 1,768 saltwater crocodiles in Bhitarkanika, up from 96 in 1974.

DUST STORMS

APDIM reports highlights that Sand and dust storms impact over 500 million in India.

About:

- The findings were published in the Asian and Pacific Centre for the Development of Disaster Information Management (APDIM) report *Sand and Dust Storms Risk Assessment in Asia and the Pacific*.
- APDIM is a regional institution of the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP).

Dust Storms Prone Areas:

- More than 500 million people in India and more than 80 per cent of the populations of Turkmenistan, Pakistan, Uzbekistan, Tajikistan and Iran are exposed to medium and high levels of poor air quality due to sand and dust storms.
- The situation is much worse for six million residents of eight cities across the region: three in China, two in Iran, two in Pakistan and one in Uzbekistan. These places had unhealthy concentrations of particulate matter in the air every day for at least ten months in 2019.
- The report identified 'east and northeast Asia', 'south and southwest Asia', 'central Asia' and the 'Pacific' as the four main sand and dust storm corridors of Asia-Pacific. The region is the second-largest emitter of mineral dust, it added.

Multidimensional Impact of Dust Storms:

- **Economic loss:** As per report India, China and Pakistan lost 1,584 gigawatt-hours (gWh), 679 gWh and 555 gWh of energy loss, respectively, due to sand and dust storms in 2019. These losses amounted to over \$107 million (Rs 782 crore) for India per year and exceeded \$46 million and \$37 million for China and Pakistan respectively.
- **Ecological impact:** Very high dust deposition also occurs in the Himalaya-Hindu Kush mountain range and the Tibetan Plateau, the so-called 'third pole' that are the sources for fresh water for more than 1.3 billion people in Asia. The deposition of dust on glaciers induces a warming effect, increasing the melting of ice, with direct and indirect impacts on society through numerous issues, including food security, energy production, agriculture, water stress and flood regimes, the researchers wrote in the paper.
- **Impact on agriculture:** Dust deposition impacted large portions of farmland in Turkmenistan (71 per cent), Pakistan (49 per cent) and Uzbekistan (44 per cent), the report stated. Much of this dust is characterized by high salt content, making it toxic for plants. It reduces yield, posing a significant threat to the production of irrigated cotton and other crops.
- Sand and dust storms directly affect 11 of the 17 United Nations-mandated sustainable development goals (SDG).
- **Impact on frequency of disasters:** The risk of impacts from sand and dust storms is projected to increase in the 2030s due to more extreme drought conditions in parts of Western Australia, south-eastern Turkey, Iran and Afghanistan, according to the study.

Positive Implications:

- The impacts of dust storms are not all negative. They can increase the nutrient content in the areas of deposition and benefit vegetation.
- Dust deposited on water bodies can alter their chemical characteristics, triggering both positive as well as adverse outcomes. Dust particles that carry iron can enrich parts of oceans, improving the phytoplankton balance and impacting marine food webs.

Conclusion:

- Managing the risks associated with sand and dust storms would also become necessary in places not previously recognized as source areas for such phenomena due to more extreme droughts projected in parts of northern and southern Thailand, south-eastern China, northern Malaysia and southeastern most Australia, the scientists posited.
- India with growing frequency and intensity of disaster must have built resilience and capability to adapt and mitigate the challenges that may arise due to these ecological phenomena.

US FDA PLANS TO RECLASSIFY 'TOXIC 3 OS' USED IN SUNSCREEN

After demand by US politicians and activists FDA is considering to reclassify Oxybenzone, octinoxate and octocrylene also known as Toxic 3 Os.

About:

- The US Food and Drug Administration (FDA) received a Citizen petition to reclassify oxybenzone, octinoxate and octocrylene used in sunscreen.
- The petition was submitted by US politicians, activists coalitions of around 60 environmental groups especially from Hawaii and Virgin islands
 - ♦ They urged that these chemicals be shifted to Not Generally Recognized as Safe & Effective (GRASE Category II).
 - ♦ They also called for the removal of products that contained these chemicals from the marketplace.
- In May 2021, the FDA published a notice of intent to prepare an Environmental Impact Statement under the National Environmental Policy Act to evaluate the potential environmental effects of certain sunscreen products for over-the-counter (OTC) use without prior approval of a new drug application.

Present Status:

- Oxybenzone, octinoxate and octocrylene are designated GRASE [Generally recognised as Safe and Effective] Category III by FDA which did not place any restriction on their use but just points towards data insufficiency about their use in sunscreen
 - ♦ Before this category they were placed in GRASE category-I (Generally safe and effective) along with other 11 soluble Organic filters
- But as the public record does not contain sufficient data to support positive GRASE determinations their category was change to present one.

Toxic 3Os:

- Oxybenzone, Octinoxate and octocrylene are called as Toxic 3 Os due to their negative impact to public health, marine life and coral reefs.
- These are active ingredients present in more than two-thirds of all sunscreens.
- They have been shown to destroy coral and trigger health risks to people and marine life.
- They wash off people's bodies when they swim and contaminate through waste water runoff and cause '**zombie coral**' which looks healthy but is unable to reproduce, coral bleaching as well as other issues.

- ♦ Coral reefs take up less than one per cent of the ocean floor but are home to more than twenty-five per cent of marine life.
- They cause human cell damage that has been linked to cancer, disrupt hormones, have been found in breast milk, blood and urine and are known allergens.
- **Octocrylene** in sun protection products degrades into benzophenone, a carcinogen that can also interfere with key hormones and reproductive organs.
- **Oxybenzone** is particularly toxic to corals, even at concentrations as low as a few parts per trillion it may be enough to severely damage or kill coral.

Indian Scenario:

- The Bureau of Indian Standards is responsible for quality certification of goods in India.
- In 2019 it proposed to adopt international standards to determine the sun protection factor (SPF) and UVA protection in cosmetic sunscreens.

2 INDIAN PROJECTS AMONG 15 FINALISTS FOR PRINCE WILLIAM'S EARTHSHOT PRIZE

Vinisha Umashankar and Vidhut Mohan has been nominated for this award.

About:

- Vinisha Umashankar a 14 year old school girl from Tamil Nadu and Delhi's Vidhut Mohan were recently nominated among the 15 finalists of Earthshot prize.
- Both of them proposed solutions in the Clean Our Air category
- Vinisha proposed concept of a solar-powered street iron cart.
- It is a clean alternative to the charcoal-powered iron that presses clothes for millions of Indians each day. Five hours of sunshine powers the iron for six hours.
- The cart even provides extra mobility which helps the vendor to sell on doorsteps as well as the roadside.
- It even has built in phone top up and charging points which can bring extra income to the vendor.
- Vidhut's Takachar Social enterprise has developed a machine that converts crop residues into sellable bio-products like fuel and fertilizer.
- This cheap, small-scale, portable technology attaches to tractors in remote farms
- Normally agriculture waste is burned by farmers which cause air pollution and reduced life expectancy especially in and around Delhi.
- This technology reduces smoke emissions by up to 98 per cent which will help improve the air quality.

- If scaled this technology can cut a billion tonnes of carbon dioxide emissions a year.

About Earthshot Prize:

- The Earthshot prize was announced by Prince William in 2019 with the aim of finding 50 solutions across a decade to the world's biggest environmental challenges.
- It aims to mobilise collective action around our unique ability to innovate, problem solve and repair our planet.
- Recently, the first 15 finalists have been announced, five of which will go on to win £1 million each at a ceremony in London to be held in October.
- The finalists are from 14 different countries and were selected by the Earthshot's advisory panel from 750 nominations.
- It has five categories: Protect and Restore Nature; Clean our Air; Revive our Oceans; Build a Waste-free World; and Fix our Climate.



NITIAAYOG LAUNCHES 'SHOONYA' PROGRAMME

NITI Aayog is supported by Rocky Mountain Institute (RMI) and RMI India in this campaign.

About:

- Shoonya is an initiative to promote zero-pollution delivery vehicles by working with consumers and industry.
- It has been launched by NITI Aayog with support from Rocky Mountain Institute (RMI) and RMI India
- It aims to accelerate adoption of electric vehicles (EVs) in the urban deliveries segment and create consumer awareness about the benefits of zero-pollution delivery.
- As part of the campaign, a **corporate branding and certification programme** is being launched to recognise and promote industry's efforts towards transitioning to EVs for final-mile deliveries.

- An **online tracking platform** will share the campaign's impact through data such as vehicle kilometres electrified, carbon savings, criteria pollutant savings and other benefits from clean delivery vehicles.

Benefits:

- It will promote awareness about health, environmental and economic benefits of electric vehicles.
- It would urge e-commerce companies, auto manufacturers, and logistics fleet operators to acknowledge the opportunity to eliminate pollution from the urban freight sector.

Need of clean transportation:

- Urban freight vehicles account for 10 % of freight transportation-related CO2 emissions in India, and these emissions are expected to grow by 114% by 2030.
- As India continues to move forward towards a sustainable and resilient future transitioning to clean transportation is critical.
- Competitive economics and available technology also support full electrification of India's urban deliver fleets on an accelerated timeline.
- This will also create tailwinds for other market segments to follow.

Advantages of Electric Vehicles(EVs):

- They emit no tailpipe emissions contributing immensely to an improved air quality.
- Even during the manufacturing stage they emit 15-40% less CO2 compared to their internal combustion engine counterparts.
- They have lower operational cost also.

Challenges:

- **Lack of Charging Points:** The EV customers are often worried about the vehicles capability to reach from one point to other before the battery runs out. This issue is closely connected to the scarce charging infrastructure in India.
- **Infrastructure Issues:**
 - ♦ **Technology Lack:** India lacks in production of necessary backbone infrastructure for EVs like batteries, semiconductors, controllers, etc.
 - ♦ **Dependence on imports:** India doesn't produce lithium. Hence, it relies on import for most popular and widely used EV batteries resulting in the sky-high price for these important components and eventually the EVs as well.
 - ♦ **Lack of Skilled Workers:** As EVs work on cutting edge technology they require skilled workers with skill sets for production, maintenance, servicing as well as repair, which India currently lacks.

- **High price:** Electric vehicles are more expensive than their conventional fuel-powered counterparts which discourage buyers.
- **Consumer perception:** The consumer perception about electric vehicles in India is still weak as compared to gasoline based vehicles.

Way Forward:

- The central and the state governments have introduced policies to provide upfront incentives for EVs.
- GOI has extend the second phase of the Faster Adoption and Manufacturing of Hybrid and Electric vehicle (FAME) scheme up to March 31, 2024 for promoting sales of electric vehicles.
- The Delhi Government launched the Electric Vehicle Policy in 2020.
 - ♦ It aims to boost the city's economy, reduce pollution levels and generate employment in the transport sector.

About Rocky Mountain Institute (RMI):

- Founded in 1982, it is an independent, non-partisan, non-profit organization of experts across disciplines working to accelerate the clean energy transition and improve lives.
- RMI's India program collaborates with government and industry leaders to create clean, resilient, and equitable energy and mobility systems.

FOOTPRINTS OF 3 DINOSAUR SPECIES FOUND IN THAR DESERT

Estimated to be 200 million years old these footprints were found in Jaisalmer district of Rajasthan.

About:

- A team of palaeontologists recently discovered footprints of three species of dinosaurs in the Thar desert near Jaisalmer's Thaiat village in Rajasthan.
- The footprints were originally made in the sediment or silt of the seashore and later become permanently stone-like.
- They belong to three species of dinosaurs — Eubrontes cf. giganteus, Eubrontes glenrosensis and Grallator tenuis.
 - ♦ The dinosaur species are considered to be of the theropod type, with the distinguishing features of hollow bones and feet with three digits.
- Theropod is an member of the dinosaur subgroup Theropoda, which includes all the flesh-eating dinosaurs.
- Eubrontes could have been 12 to 15 metres long and weighed between 500 kg and 700 kg, while the height of the Grallator is estimated to have been two metres, as much as a human, with a length of up to three metres.

Significance:

- It proved the presence of the giant reptiles in the western part of the State, which formed the seashore to the Tethys Ocean during the Mesozoic era.

HIGH ASH COAL GASIFICATION BASED METHANOL PRODUCTION PLANT

First Indigenously Designed High Ash Coal Gasification Based Methanol Production Plant has been opened in Hyderabad.

About:

- **Used as a Fuel:** Methanol is utilized as a motor fuel, to power ship engines, and to generate clean power all over the world.
- Methanol is also used to generate di-methyl ether (DME), a liquid fuel that is very similar to diesel.
- **Derived from Natural Gas:** The majority of worldwide methanol production is derived from natural gas, which is a relatively easy process.
 - ♦ **Economy:** Since India doesn't have much of the natural gas reserves, producing methanol from imported natural gas leads to outflow of foreign exchange and sometimes uneconomical due to excessive prices of natural gas.

Methanol Economy Programme:

- **Reducing Import Bill and GHGs:** NITI Aayog launched the 'Methanol Economy Programme' to reduce India's oil import bill and subsequent reduction in Greenhouse Gas Emissions while converting coal reserves and municipal solid waste into methanol.
- **Methanol:** Methanol is a low carbon, hydrogen carrier fuel produced from high ash coal, agricultural residue, CO₂ from thermal power plants and natural gas. It is the best pathway for meeting India's commitment to COP 21.
- **As a Replacement:** Although slightly lower in energy content than petrol and diesel, methanol can replace both these fuels in the transport sector (road, rail and marine), energy sector (comprising DG sets, boilers, process heating modules, tractors and commercial vehicles) and retail cooking (replacing LPG [partially], kerosene and wood charcoal).
- **Blending:** Blending of 15% methanol in gasoline can result in at least 15% reduction in the import of gasoline/crude oil.
 - ♦ In addition, this would bring down GHG emissions by 20% in terms of particulate matter, NO_x, and SO_x, thereby improving the urban air quality.
 - ♦ The Methanol Economy will also create close to 5 million jobs through methanol production/application and distribution services.

SEA CUCUMBER

The Indian Coast Guard has seized two tonnes of banned sea cucumber in Tamil Nadu's Mandapam.

About:

- Sea cucumbers are part of a larger animal group called **echinoderms**, which also contains starfish and sea urchins. There are some **1,250 known species**.
- **Size:** Depending on the species, sea cucumbers normally vary in size from **less than an inch (2.5 centimeters) to over six feet (1.8 meters)**.
- **Shape:** Their body shape is similar to a cucumber, but they have small tentacle-like tube feet that are used for locomotion and feeding.
- **Inhabitant:** All sea cucumbers are ocean dwellers, Sea cucumbers are benthic, meaning they live on the ocean floor Feeding: Sea cucumbers feed on tiny particles like algae, minute aquatic animals, or waste materials.
- **Defensive Adaptation:** They propel their own toxic internal organs from their bodies in the direction of an attacker for their defense .The organs grow back, and it may save them from being eaten.

TRADE IN SEA CUCUMBER

- Sea cucumbers are in high demand in China and Southeast Asia.
- An analysis of the last six years of the share of top ten agricultural commodities in total value of agricultural export shows that the share of marine products in total agricultural export value has remained the largest over the period, says the economic survey report, 2021.

INDIAN COAST GUARD

- The Indian Coast Guard was formally established on 1 Feb. 1977 by the Coast Guard Act, 1978 of the Parliament of India. It operates under the Ministry of Defence.
- It is a multi-mission organization, conducting round-the-year real-life operations at sea. Despite being relatively small, it has a wide range of task capabilities for both surface and air operations.
- **Headed By:** The organization is headed by the Director General Indian Coast Guard (DGICG) exercising his overall command and superintendence from the Coast Guard the Headquarters (located at New Delhi).
- **Reproduction:** Sea cucumbers can breed sexually or asexually Conservation Status: Sea cucumber populations are stable.

- **Fact:** Sea cucumber in India is treated as an endangered species listed under schedule I of Wildlife Protection Act of 1972. It is primarily smuggled from Tamil Nadu to Sri Lanka in fishing vessels from Ramanathapuram and Tuticorin districts.

HEATWAVES

New research has found that the regions of central, northwest and south-central India are the new hotspots of intense heat waves in the country for the last 50 years.

About:

- **Shift in the Spatio-temporal trend of HW:** The study showed a shift in the Spatio-temporal trend of HW events from the eastern region of Gangetic West Bengal and Bihar to North-Western, Central and further to the south-central region of India.
- **Expansion and a Spatial Surge in SHW Events:** The research also observed an alarming southward expansion and a spatial surge in SHW events in the last few decades that may put a greater population at additional risk of heat stress in a region already characterized by low Diurnal Temperature Range (DTR), or the difference between the maximum and minimum temperatures within one day and high humidity.
- **Correlated with Mortality in Odisha and Andhra Pradesh:** the HW/SHW events were found to be positively correlated with mortality in Odisha and Andhra Pradesh, highlighting that human health is highly susceptible to severe heatwave disasters.

About Heat Wave:

- **Heat Wave:** A heat wave is a period of unusually hot weather that typically lasts two or more days. Criteria for declaring Heat Wave: Heat wave is considered if the maximum temperature of a place/region reaches at least 40 degrees Celsius or more for Plains and at least 30 degrees Celsius or more for Hilly regions.
- **Period of Heat Wave in India:** It occurs mainly during March to June and in some rare cases even in July. The peak month of the heat wave over India is May.
- **The heat waves prone states over India:** Heat waves generally occur over plains of northwest India, Central, East & north Peninsular India during March to June. It covers Punjab, Haryana, Delhi, Uttar Pradesh, Bihar, Jharkhand, West Bengal, Odisha, Madhya Pradesh, Rajasthan, Gujarat, parts of Maharashtra & Karnataka, Andhra Pradesh and Telangana. Sometimes it occurs over Tamil Nadu & Kerala also.
- **Favorable conditions for Heat wave:**
 - ♦ Transportation / Prevalence of hot dry air over a region
 - ♦ Absence of moisture in the upper atmosphere
 - ♦ The sky should be practically cloudless

- ◆ Large amplitude anticyclone flow over the area.
- **Health Impacts of Heat Waves:** The health impacts of Heat Waves typically involve dehydration, heat cramps, heat exhaustion and/or heat stroke. And if not taken care properly and timely it may lead to death.
- **Impact based heat wave warning issue by India Meteorological Department (IMD):**

Colour Code	Alert	Warning	Impact	Suggested Actions
Green (No action)	Normal Day	Maximum temperatures are near normal	Comfortable temperature. No cautionary action required.	Nil
Yellow Alert (Be updated)	Heat Alert	Heat wave conditions at isolated packets persists on 2 days	Moderate temperature. Heat is tolerable for general public but moderate health concern for vulnerable people e.g., infants, elderly, people with chronic disease	(a) Avoid heat exposure. (b) Wear lightweight, light-coloured, loose, cotton clothes. (c) Cover your head: Use a cloth, hat or umbrella
Orange Alert (Be prepared)	Severe Heat Alert for the day.	(i) Severe heat wave conditions persists for 2 days (ii) Through not severe, but heat wave persists for 4 days or more	High temperature. Increased likelihood of heat illness symptoms in people who are either exposed to sun for a prolonged period or doing heavy work. High health concern for vulnerable people e.g., infants, elderly, people with chronic diseases.	(b) Avoid heat exposure- Keep coll. Avoid dehydration (b) Drink sufficient water- even if not thirsty. (c) Use ORS, homemade drinks like lassi, torani (rice water), lemon water buttermilk, etc. to keep yourself hydrated

Way Forward:

- With an ever-increasing extreme-temperature threshold, a heat resilient future is the need of the hour. Dense population with an intensive outdoor work culture calls for an equitable heat resilient mitigation and adaptation strategies covering each section of the society depending on their vulnerability.
- To mitigate future disastrous implications of exacerbated heat extremes and frame adequate adaptation measures in the wake of possible emergence of new hotspots, reliable future projections are needed.

ADDITIONAL INFORMATION

- Between 2000 and 2016, the number of people exposed to heat waves increased by around 125 million. In 2015 alone, 175 million additional people were exposed to heat waves compared to average years.
- Single events can last weeks, occur consecutively, and result in significant excess mortality. In 2003, 70,000 people in Europe died as a result of the June-August event, in 2010, 56,000 excess deaths occurred during a 44-day heatwave in the Russian Federation.

SEA SNOT OUTBREAK IN TURKEY

Turkey's Sea of Marmara, that connects the Black Sea to the Aegean Sea, has witnessed the largest outbreak of sea snot.

About:

- Sea snot is a slimy layer of grey or green sludge which forms on the sea surface.
- It has also been spotted in the adjoining Black and Aegean seas also.

About Sea Snot:

- It is marine mucilage that is formed when algae are overloaded with nutrients as a result of water pollution combined with the effects of climate change.
- The nutrient overload occurs when algae feast on warm weather caused by global warming.
- **Causes:** Overproduction of phytoplankton caused by climate change and the uncontrolled dumping of household and industrial waste into the seas has led to the present crisis. Water pollution acts as catalyst to this problem

Harmful Effects

- It has caused mass deaths among the fish population, and also killed other aquatic organisms such as corals and sponges.
- When the sludge collapse to the bottom and cover the sea floor it causes major damage to the marine ecosystem.
- It also affects the livelihoods of fishermen, as not only they kill fish but nets make their nets so heavy that they break or get lost.
- Moreover, the mucilage coating makes the strings of nets visible to fish and keep them away.
- It can also cause an outbreak of water-borne diseases such as cholera.

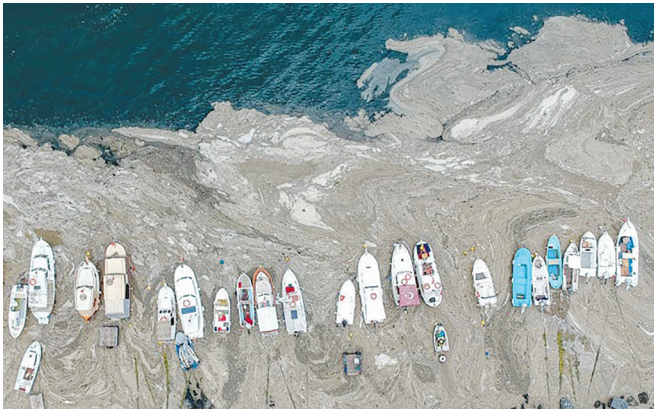
Present Crisis:

- Harbours, shorelines and swathes of Istanbul's seawater have been blanketed by this viscous, greyish substance.
- Turkish President said dumping of sewage in the sea along with rising temperatures is causing the crisis.
- He has blamed the outbreak on discharge of untreated water from cities like Istanbul.
- Hence, Turkey is planning to designate the entire Sea of Marmara a protected area, reduce pollution and improve treatment of waste water from coastal cities and ships which has helped the sea snot to spread.
- Experts say this would reduce nitrogen levels in the sea by 40% and is believed to help restore the waters to their previous state.

Way Forward:

- Ecologists said that this brown mucilage floating in the seas is a sign of how the marine ecosystem can be damaged and the effect it can have on the environment as a whole

- The world also needs to take serious steps to tackle the twin crisis of pollution and global warming else it can become a very damaging effect on the entire marine ecosystem.



INDIAN BIOLOGIST HONOURED WITH BEHLER TURTLE CONSERVATION AWARD

Dr. Shailendra Singh was honoured with the 16th Annual Behler Turtle Conservation Award.

About

- Dr Shailendra has immensely contributed to bringing three critically endangered turtle conservation species namely Red-crowned Roofed Turtle, Northern River Terrapin and Black Softshell Turtle, back from the brink of extinction.
- Northern River Terrapin (Batagur baska) is being conserved at the Sunderbans;
- Red-crowned Roofed Turtle (Batagur kachuga) at Chambal;
- Black Softshell Turtle (Nilssonina nigricans) at different temples in Assam.

Behler Turtle Conservation Award

- The Behler Turtle Conservation Award is widely considered the “Nobel Prize” of turtle conservation and biology.
- It was established in 2006 to recognize outstanding achievements, contributions, and leadership excellence in international turtle conservation and biology in honour of John L. Behler.

John L. Behler was an American naturalist, herpetologist, author, and activist known for his work in conserving endangered species of turtles, snakes, and other reptiles.

- The award is co-presented by the Turtle Survival Alliance (TSA), the IUCN/SSC Tortoise and Freshwater Turtle Specialist Group (TFTSG), the Turtle Conservancy (TC), and the Turtle Conservation Fund (TCF).

Indian Scenario of Turtles:

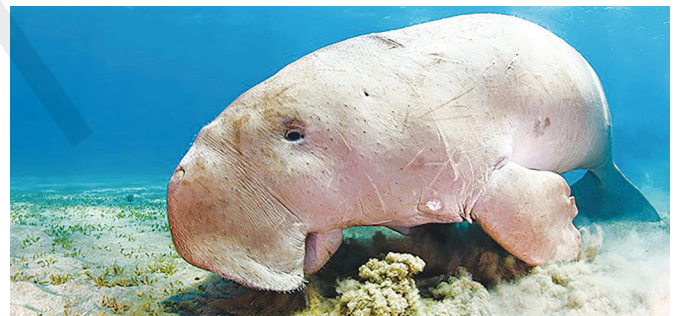
- India is third in the world in terms of freshwater turtle and tortoise diversity with 41 native species and subspecies.
- There are 29 species of freshwater turtles and tortoises in India.
- More than half are listed as Threatened by the International Union for Conservation of Nature (IUCN).
- These critically endangered turtles are being conserved as a part of TSA India’s research, conservation breeding and education programme in different parts of the country.

INDIA'S FIRST DUGONG CONSERVATION RESERVE

The Tamil Nadu government declared 500 sq.km of Palk Bay as India's first dugong conservation reserve.

About:

- They are protected in India under Schedule I of the Wild (Life) Protection Act, 1972 and has been listed as Vulnerable on the IUCN Red List of Threatened Species.



- Dugong (Dugong dugon) also called as ‘Sea Cow’, is one of the four surviving species in the Order Sirenia.
- It is the only existing species of herbivorous mammal that lives exclusively in the sea including in India. Dugongs are protected in India and are found in the Gulf of Mannar, PalkBay, Gulf of Kutch and Andaman and Nicobar islands.
- Once abundant in Indian waters, Dugong population has now reduced to about 200 individuals and is believed to be continuously declining in its number and range.

Conservation Status: They are protected in India under Schedule I of the Wild (Life) Protection Act, 1972 and has been listed as Vulnerable on the IUCN Red List of Threatened Species

Reasons for Decline

- Human activities such as the destruction and modification of habitat, pollution, rampant illegal fishing activities, vessel strikes, unsustainable hunting or poaching and unplanned tourism are the main threats to dugongs.

- The loss of seagrass beds due to ocean floor trawling was the most important factor behind dwindling dugong populations in many parts of the world.
- Ocean Floor trawling is a fishing practice that herds and captures the target species, like ground fish or crabs, by towing a net along the ocean floor.
- Hundreds of dugongs inhabited waters off the Odisha, West Bengal and Andhra Pradesh coasts two centuries back. But they are extinct in these areas now.
- A decade back, people used to consume meat under the wrong impression that it would cool their body temperature and this has resulted in the decline of numbers of dugong.
- Female dugongs give birth underwater to a single calf at three to seven-year intervals, which is very long.

Conservation efforts

- The Government of India has been a signatory to the Convention on the Conservation of Migratory Species of Wild Animals (CMS) since 1983.
- India has signed non-legally binding Memorandums of Understanding with CMS on the conservation and management of Dugongs (2008).
- The Government of India constituted a 'Task Force for Conservation of Dugongs'.

IRRAWADDY DOLPHIN

A six-foot-long Irrawaddy dolphin, an endangered species, was found dead in Odisha's Chilika Lake

About:

- This is the eighth dolphin death reported from the state in eight months.

Causes for Dolphin Deaths

- Accidental entanglement in fishing gear, known as by catch, is the leading source of human-induced mortality for Irrawaddy dolphins.
- These fishing gears are often set and left unattended for long periods of time, entangling dolphins as they travel or chase fish into the nets
- Private boats operate in the Chilika Lake that make a lot of noise and harm the marine ecosystem, Dolphins are slow-moving and prone to injuries on collision with propellers of boats.

About Irrawaddy Dolphins

- Irrawaddy Dolphin is a marine mammal which means it's warm-blooded, gives birth, produces milk (to feed its children) and breathes air.

- Irrawaddy dolphins fall under Schedule I of the Indian Wildlife (Protection) Act, 1972 and are mentioned in the International Union for the Conservation of Nature (IUCN) Red List of Endangered Species.
- Irrawaddy dolphins are found in coastal areas in South and Southeast Asia, and in rivers: the Ayeyarwady (Myanmar), the Mahakam (Indonesian Borneo), India's Ganges and the Mekong (it is the longest river in Southeast Asia covering China, Myanmar, Thailand, Lao PDR, Cambodia and Vietnam).
- These dolphins have a bulging forehead, short beak, and 12-19 teeth on each side of both jaws.
- Their Natural habitats are Lakes, Rivers, Estuaries, and Coasts.

CHILIKA LAKE

- It is Asia's largest brackish Water Lagoon with estuarine character that spread across the districts of Puri, Khurda and Ganjam in the state of Odisha East coast of India.
- Due to its rich biological diversity, Lake Chilika was the first Indian wetland of international importance to be designated under the Ramsar Convention in 1981.
- It was earlier placed on the Montreux Record, but later it was removed from the list.
- It is one of the hotspots of biodiversity in the country
- It is the largest wintering ground for migratory waterfowl found anywhere on the Indian sub-continent.

Status of Irrawaddy population in lake:

- Around 146 Irrawaddy dolphins and 17 bottlenose dolphins were observed in Chilika Lake in 2020 by forest officials. In 2021, the forest department counted 188 dolphins, including 162 Irrawaddy dolphins and 26 bottlenose dolphins in Chilika.
- The rise in the Irrawaddy dolphin's population in Chilika can be attributed to the eviction of illegal fish enclosures. After thousands of hectares of Chilika water were made encroachment-free, Irrawaddy dolphins found unobstructed areas for movement.
- Also, due to the COVID-19 lockdown last year, there were comparatively fewer tourist boats on Chilika Lake, which made it conducive for dolphins to move from one part [of the lake] to another.

Dolphins in India

- There are only two subspecies of South Asian river dolphin found in India, Ganges river dolphin and Indus river dolphin
- The Ganges river dolphin is found in the Ganges and Brahmaputra rivers and their tributaries
 - ♦ The Ganges river dolphin is the national aquatic animal of India and also selected as city animal for the Indian city of Guwahati.

- Assam and Bihar are two best places in India to spot Ganges river dolphins.
- Rest of the place are famous for oceanic dolphins, Irrawaddy dolphin and Bottlenose dolphins.

Significance of Dolphins The Gangetic dolphin is at the top of the food chain, protecting the species and its habitat ensures conservation of aquatic lives of the river This shows the health of the aquatic life of a river.

- **Indus river dolphin:** It can only be found in the lower parts of the Indus River in Pakistan and in River Beas, a tributary of the Indus River in Punjab, India.

Project Dolphin

- India in 2020 proposed Project Dolphin on the lines of Project Tiger to take special conservation programmes to increase the Dolphin population.
- The project focuses on both types of dolphins living in the rivers and in the seas.
- It will also give a boost to biodiversity, tourism and create employment opportunities.

GROUNDWELL REPORT RELEASED BY THE WORLD BANK

The report "Groundswell: Acting on Internal Climate Migration" projects that climate change could drive 216 million people to migrate within their own countries by 2050.

About

- **Model Approach:** It has been built on the modelling approach of the previous World Bank Groundswell report from 2018, which covered Sub-Saharan Africa, South Asia, and Latin America.
- **Region Studied:** The updated report includes projections and analysis for three regions: East Asia and the Pacific, North Africa, and Eastern Europe and Central Asia.
- **First time a Global Picture:** The two report's combined findings provide for the first time, a global picture of the potential scale of internal climate migration across the six regions.
- **Mobility Trends:** It provides for a better understanding of how slow-onset climate change impacts, population dynamics, and development contexts shape mobility trends.
- **Recommendations:** The report provides a series of policy recommendations that can help slow the factors driving climate migration and prepare for expected migration flows.

Key Findings of the Report

- **Migration in Regions:** By 2050 Sub-Saharan Africa: could see as many as 86 million internal climate migrants; East Asia and

the Pacific: 49 million; South Asia: 40 million; North Africa: 19 million; Latin America: 17 million; and Eastern Europe and Central Asia: 5 million.

Migration Hotspots: hotspots of internal migration could emerge as soon as 2030, spreading and intensifying by 2050.

- People are expected to move due to increasing water scarcity, declining crop productivity, and sea-level rise, and urban and rural areas with better conditions to build new livelihoods.
- People will migrate from areas with lower water availability and crop productivity and from areas affected by sea-level rise and storm surges.
- **Reduction in Migration:** Immediate and concerted action to reduce global emissions and efforts to support green, inclusive, and resilient development could however reduce the scale of climate migration by as much as 80%.
- **Identifying the Most Vulnerable:** In the worst-case scenario, Sub-Saharan Africa the most vulnerable region due to desertification, fragile coastlines and the population's dependence on agriculture would see the most movement, with up to 86 million climate migrants moving within national borders.



Policy recommendations as per the Report

- Reducing global emissions and making every effort to meet the temperature goals of the Paris Agreement.
- Implanting internal climate migration in far-sighted green, resilient, and inclusive development planning.
- Preparing for each phase of migration, so that internal climate migration as an adaptation strategy can result in positive development outcomes.
- Investing in better understanding of the drivers of internal climate migration to inform well-targeted policies.

Way Forward:

- The Groundswell report is a stark reminder of the human toll of climate change, particularly on the world's poorest — those who are contributing the least to its causes.
- It also clearly lays out a path for countries to address some of the key factors that are causing climate-driven migration.
- Countries have to come together and work in coordination to assess and implement the suitable policies to change the future Global scenario for the Climate Migrants.

WATER DIVERSION FROM BRAHMANI RIVER

Experts express concern over diversion of fresh water from Odisha's Brahmani River

About

- **Reduced Freshwater discharge to sea:** The Wildlife Society of Orissa (WSO), a pressure group, had drawn public attention on the excess water allocation for industries, which is likely to reduce fresh water discharge to the sea.
- **Water supplies for industries:** Abundant supplies of freshwater were needed by the Kalinga Nagar industrial hub.
- **Bhitarkanika:** The second-largest mangrove forest in India will be destroyed if freshwater continues to be diverted from the Brahmani river basin.

About Brahmani River

- Brahmani is a major seasonal river in the Odisha state of Eastern India. Brahmani is the second longest river in Odisha after Mahanadi.
- Brahmani is formed by the confluence of the Sankh and South Koel rivers, and flows. Together with the rivers Mahanadi and Baitarani, it forms a large delta before draining into the Bay of Bengal at Dhamra.
- Freshwater mixed with seawater near the lower end of the Brahmani and Kharasrota rivers results in brackish water is ideal for mangroves.

Issues related to Water Diversion of Brahmani

- **Effect on agricultural activity:** It will hamper the agricultural activity in 220 villages and around 0.4 million people will be affected.
- Commercially important species like freshwater shrimp, mullets, mud crabs and bhetki to disappear, leading to a decline in the incomes of thousands of fishermen in Kendrapara district.

Threats to Bhitarkanika:

- Mangroves that grow in brackish water are very sensitive to changes in salinity.

- Brackish water is also high in nutrients for a variety of life forms like crustaceans, fish, aquatic flora and water birds.
- **Gahirmatha Marine Sanctuary:** Nearly half a million turtles arrive in the sanctuary every winter for mass nesting.
- Without the mangroves, the Gahirmatha Marine Sanctuary will become a marine desert and lose its richness and diversity of marine life. Nutrients from Bhitarkanika are flushed out to the Gahirmatha Marine Sanctuary, which attracts the world's largest population of Olive Ridley sea turtles for nesting.

BHITARKANIKA NATIONAL PARK

- Bhitarkanika National Park is the second largest mangrove ecosystem in the country.
- It is situated in the estuarial Brahmani-Baitarani region of the north-eastern Kendrapara district of Odisha.
- It was designated as a Ramsar site in August 2002 Bhitarkanika has one of the largest populations of endangered saltwater crocodile in India.

GAHIRMATHA MARINE SANCTUARY

- It is located within the close vicinity of the Bhitarkanika National Park is Odisha's only Turtle Sanctuary.
- Olive Ridley Turtles travel all the way from South Pacific Ocean to breed on the coast of Gahirmatha.
- About half a million of these species visit the beach every year for mating, it is the one of world's most important nesting beach for turtles.

- **Human-crocodile conflict:** There might be a jump in human-crocodile conflict since the estuarine crocodiles of the park will leave the core sanctuary area and migrate upstream once salinity increases.

BLUE FLAG CERTIFICATION OF INDIAN BEACHES

Two more beaches in India have been awarded 'Blue Flag' certification, taking the total number of such beaches in the country to 10.

About:

- **The Blue Flag:** The 'Blue Flag' is a certification that can be obtained by a beach, marina, or sustainable boating tourism operator, and serves as an eco-label. It is an annual award.
- **Awarded by:** The certification is awarded by the Denmark-based non-profit Foundation for Environmental Education (FEE), which sets stringent environmental, educational, safety-related and access-related criteria that applicants must meet and maintain.

- **Criteria to qualify:** In order to qualify for the tag, 33 stringent criteria relating to environment, water quality, educational, safety, services and accessibility standards must be met by the beaches.
- **Establishments:** The Blue Flag programme was started in France in 1985 and in areas outside of Europe in 2001.
- **Sustainable Development:** The programme promotes sustainable development in freshwater and marine areas through four main criteria: water quality, environmental management, environmental education and safety.
- **Participating Countries:** Forty-seven countries currently participate in the program, and 4,573 beaches, marinas, and boats have this certification.
- **Selection of the Beaches:** The beaches to get the Blue Flag tag are selected by an eminent international jury, which comprises members of the UN Environment Programme, UN World Tourism Organization, Foundation for Environmental Education and IUCN.
- The forthcoming 26th UN Climate Change Conference of the Parties (COP26) in Glasgow from November 1-12, 2021 is to re-examine the coordinated action plans to mitigate greenhouse gases and climate adaptation measures.
- In order to achieve the goal of an alternative source of energy, governments are placing large bets in the hope of adopting a multi-faceted practical approach to utilise 'Green hydrogen' as a driving source to power our industries and light our homes with the 'zero emission' of carbon dioxide.

Hydrogen - Energy Rich Source:

- **Abundant Element:** Hydrogen is the most abundant element on the planet, but **rarely in its pure form** which is how we need it. It has an energy density almost three times that of diesel.
- **Production Techniques:** The production techniques of this 'Energy-Carrier' **vary depending upon its applications** — designated with different colours such as black hydrogen, brown hydrogen, blue hydrogen, green hydrogen, etc.

INDIA'S JOURNEY

India had started its journey of sustainable development of coastal regions on World Environment Day in June 2018 by launching its beach cleaning campaign – I-AM- SAVING-MY-BEACH simultaneously at 13 coastal states.

Blue Flag Certification in India:

- **2 new beaches:** 2 new beaches Kovalam in Tamil Nadu and Eden in Puducherry beaches have been given Blue Flag certification this year.
- **Other Beaches:** The other eight Indian beaches, which had got this tag last year, are Shivrajpur (Dwarka, Gujarat), Ghoghla (Diu), Kasarkod and Padubidri (Karnataka), Kappad (Kerala), Rushikonda (Andhra Pradesh), Golden Beach (Puri, Odisha) and Radhanagar (Andaman & Nicobar Islands).
- **Waving Blue Flag Indication:** A waving "Blue Flag" is an indication of 100 per cent compliance to these 33 stringent criteria and sound health of the beach.

ZERO CARBON FUTURE

The latest studies by a battery of scientists representing about 195 countries have signalled the crucial issue of climate vulnerability, especially for the Asian countries.

About:

- The quest of discovering alternative fuels to fossil fuels which are responsible for the production of over 830 million tons per annum of carbon dioxide has been going for years.

Need for Green Hydrogen:

- **Increasing Fuel Demand in Future:** India is the world's fourth largest energy consuming, according to the IEA's forecast, and will overtake the European Union to become the world's third energy consumer by the year 2030.
- **Green Hydrogen a Novel Concept:** 'Green hydrogen', the emerging novel concept, is a zero-carbon fuel made by electrolysis using renewable power from wind and solar to split water into hydrogen and oxygen.
- **IEA Forecasts:** The International Energy Agency (IEA) forecasts the additional power demand to be to the tune of 25%-30% by the year 2040.
- **Minimizing Our Dependence on Conventional Fossil Fuel:** This will also be a leap forward in minimizing our dependence on conventional fossil fuel; in 2018, 8.7 million people died prematurely as result of air pollution from fossil fuels.
- **Indian Railway Initiative:** The Indian Railways have announced the country's first experiment of a hydrogen-fuel cell technology-based train by retrofitting an existing diesel engine; this will run under Northern Railway on the 89 km stretch between Sonipat and Jind.

Issues Associated:

- **Challenge to Compress or Liquify:** Hydrogen a rich source of energy, but the challenge is to compress or liquify the LH2 (liquid hydrogen).
- **High Production Cost:** The 'production cost' of 'Green hydrogen' has been considered to be a prime obstacle as the production cost of this 'green source of energy' is expected to be around \$1.5 per kilogram by the year 2030.

PMFME SCHEME SEED CAPITAL MODULE

The Ministry of Food Processing Industries has launched the Seed Capital Module under Pradhan Mantri Formalisation of Micro food processing Enterprises (PMFME).

About:

- **The scheme has been launched** at Deendayal Antyodaya Yojana-National Urban Livelihoods Mission (DAY-NULM) MIS Portal with seed funding for members of Urban Assistance Groups working in the food processing industry in India.



DAY-NULM

Deendayal Antyodaya Yojana-National Urban Livelihoods Mission (DAY-NULM)

- It is a central funded scheme.
- It was launched in 2014 and aims to uplift the urban poor by increasing sustainable livelihood opportunities through skills development.
- The beneficiaries include the urban poor (street vendors, slum dwellers, homeless, and textile pickers), the unemployed and the disabled in a different way. The scheme also provides skills training and employment for these people.
- It also provides subsidies to the urban poor which is an interest rate of 5% - 7% for start-ups of individual small businesses with loans of up to 2 lakhs and for businesses with a loan limit of up to Rs.10 lakhs.
- **Financial assistance:** The seed money website can be accessed at <https://nulm.gov.in/Auth/Login.aspx> for Self-Help Groups to receive Rs.40, 000 financial assistance
- **Purpose:** The PMFME Scheme aims to enhance the competitiveness and promote formalization of the unorganized micro—food processing enterprises in India.

- **Benefits:** The scheme aims to empower the self-help groups by:
 - ♦ Seed capital support of Rs.40,000 per SHG member;
 - ♦ Credit linked subsidy for capital investment up to 35% with a ceiling of Rs. 10 lakh;
 - ♦ Credit linked grant support up to 35% for establishing common infrastructure;
 - ♦ Handholding support for DPR preparation and;
 - ♦ Capacity building and training support.

PMFME Scheme:

- The Pradhan Mantri Formalisation of Micro food processing Enterprises (PMFME) Scheme is a centrally sponsored scheme.
- **Aim:** Its aim is to enhance the competitiveness of existing individual micro-enterprises in the unorganized segment of the food processing industry and promote formalization of the sector and provide support to Farmer Producer Organizations, Self Help Groups, and Producers Cooperatives along their entire value chain.
- **Assistance:** With an outlay of Rs. 10,000 crore over a period of five years from 2020-21 to 2024-25, the scheme envisions to directly assist the 2,00,000 micro food processing units for providing financial, technical, and business support for up gradation of existing micro food processing enterprises.

PROMOTION OF MEDICAL DEVICE PARKS SCHEME

Scheme for medical device park was notified by Department of Pharmaceuticals, Ministry of Chemicals and Fertilizers.

About:

- **Industry:** The medical device industry is a unique combination of engineering and medicine. It involves the making of machines used to support life in the human body.
- **Equipment's:** Medical equipment includes Surgical Equipment, diagnostic equipment such as Cardiac imaging, CT scan, X-ray, Molecular Imaging, MRI and Ultrasound-imaging including hand-held objects; Life Support Equipment such as ventilator, etc.
- **Objectives:** Easy access to standardized testing and resources for the construction of world-class competitive infrastructure. This will lead to a significant reduction in the cost of medical device production, leading to better availability and purchasing of medical devices in the domestic market.

- ◆ Receiving benefits from resource efficiency and quality economy.
- ◆ The scheme reflects the spirit of co-operative federalism where the Central Government and State Governments will partner to develop the Medical Device parks for better performance of the sector.
- **Investment:** The total investment for the program is Rs 400 crore, and the duration of the scheme is from FY 2020-2021 to FY 2024-2025.
 - ◆ 70% of the cost of the shared infrastructure project will be funded by funding from Selected Medical Park.
- **Financial assistance:** It will be 90% of the project cost in the case of the North-Eastern States and Hilly States.
 - ◆ The maximum amount of support available under the One Medical Park program will be Rs. 100 crores.
- **Centres:** The Government of Himachal Pradesh, Tamil Nadu, Madhya Pradesh, and Uttar Pradesh have been given "in-principle" approval under the scheme for medical devices park.

Other Initiative for Promotion of Medical Device Parks:

- **ICMED:** In June 2021, the Quality Council of India (QCI) and the Association of Indian Manufacturers of Medical Devices (AiMeD) launched the Indian Certification of Medical Devices (ICMED) 13485 Plus system to ensure the quality, safety and performance of medical devices.
- **PLI Scheme:** To increase domestic production of medical devices and attract major investment in India, the pharmaceutical department has introduced a PLI program for domestic production of medical devices, with a total disbursement of Rs.3, 420 crore over the period FY21-FY28.
- **Eligibility:** The Department of Health and Family Welfare has announced that medical devices will be eligible as 'drugs' under Section 3 of the Drugs and Cosmetics Act (D&CA), 1940 with effect from April 1, 2020.
- **Parks:** Medical Devices Parks are set up in Andhra Pradesh, Telangana, Tamil Nadu and Kerala. In 2020, Kerala has launched Med Park, one of the largest medical device parks in the country, in Thiruvananthapuram.
- **Make in India campaign:** The Indian government recognized medical devices as a sector of sunrise under the 'Make in India' campaign in 2014.

NEW CRISPR BASED SYSTEM TO SAFELY RESTRAIN MOSQUITO VECTOR

Researchers from California had developed this new technique to safely restrain mosquito vector via sterilization.

About:

- This CRISPR based technique to control population of mosquitoes is called Precision-Guided Sterile Insect Technique, or pgSIT.
- It alters genes linked to male fertility creating sterile offspring and female flight in *Aedes aegypti*.
 - ◆ *Aedes aegypti* are the mosquitoes responsible for spreading wide-ranging diseases including dengue fever, chikungunya and Zika.

The Mechanism:

- Males don't transmit diseases so the idea is to release more and more sterile males to suppress the mosquito population without relying on harmful chemicals and insecticides.
- pgSIT differs from "gene drive" systems that could suppress disease vectors by passing desired genetic alterations indefinitely from one generation to the next as pgSIT uses CRISPR to sterilize male mosquitoes and render female mosquitoes, which spread disease, as flightless.
- The system is self-limiting and is not predicted to persist or spread in the environment, two important safety features that should enable acceptance for this technology.
- This system is implemented by deploying eggs of sterile males and flightless females at target locations where mosquito-borne disease spread is occurring.

Benefits:

- pgSIT may provide an efficient, safe, scalable, and environmentally friendly alternative next-generation technology for wild population control of mosquitoes resulting in wide-scale prevention of human disease transmission.
- It is designed as a much more precise and scalable technology since it uses CRISPR.
- The researchers believe this technology could be used beyond *Aedes aegypti* to other species that spread disease.

CRISPR Technology:

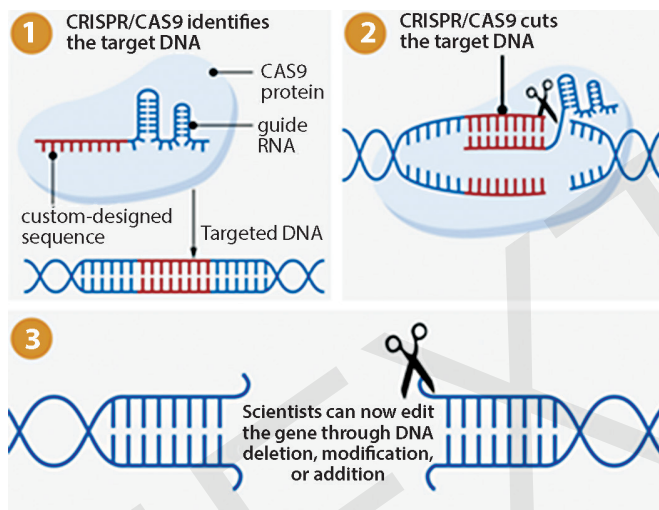
- CRISPR stands for Clustered Regularly Interspaced Short Palindromic Repeats
- It is a technology that can be used to edit gene
- It's actually a way to find a specific bit of DNA inside a cell and alter that piece of DNA.
- CRISPR has also been adapted to do other things too, such as turning genes on or off without altering their sequence.
- This technology particularly stands out due to its advantages of easy handling, high accuracy, and low cost.

Genome Editing using CRISPR:

- It was adapted from the natural defence mechanisms of bacteria which it uses to foil attacks by viruses and other

foreign bodies. They do so primarily by chopping up and destroying the DNA of a foreign invader.

- The genomes of various organisms encode a series of messages and instructions within their DNA sequences.
- Genome editing involves changing those sequences, thereby changing the messages.
- The specific location of the genetic codes that need to be changed, or “edited”, is identified on the DNA strand, and the Cas9 protein is used as a pair of scissors to cut that strand from that location.
- When a DNA strand is broken it has a natural tendency to repair itself and during this auto-repair process scientists intervene by supplying the desired sequence of genetic codes that binds itself with the broken DNA strand.



Concerns with the CRISPR Technology:

- Genome editing are limited to somatic cells. These changes affect only certain tissues and are not passed from one generation to the next.
- Germline cell and embryo genome editing bring up a number of ethical challenges, including whether it would be permissible to use this technology to enhance normal human traits (such as height or intelligence).
- The use of gene drives also poses a much larger risk to the environment, as they have the potential to decimate an entire species, eliminate a food source for other species, or promote the proliferation of invasive pests.
- **Justice and Equity:** There is concern that genome editing will only be accessible to the wealthy and will increase existing disparities in access to health care and other interventions.

TRADE IN WHITE GOLD: LITHIUM

Provinces in Argentina are building regional mining logistics nodes, access roads, lowering tax rates and rationalizing confusing rules for the sector to attract investment

About:

- Lithium is the most electropositive metal, the lightest and the least dense solid element at room temperature, and is also highly flammable.
- It is high reactive and hence is present only in compounds in nature — either in brines or hard rock minerals — and must be stored under anhydrous atmospheres, in mineral oil or sealed evacuated ampoules.

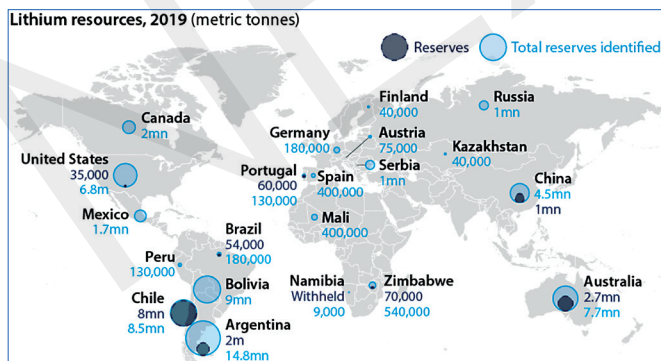
Significance:

- Lithium due to its unique properties is used for varied purposes but what makes it **White Gold**.
- **It has** high electrical conductivity and due to this property it is a primary ingredient of the lithium-ion batteries almost present in all rechargeable devices, such as cell phones, laptops, and energy storage systems and next generation of electric vehicles.
- It is used in high-temperature lubricants, to strengthen alloys, and for heat-transfer applications and manufacture of aircrafts.
- It is also widespread in the fine chemical industry, as organo-lithium reagents to synthesize many chemicals.
- It's also used as a drug for treatment of mental ailments: Lithium carbonate is a common treatment of bipolar disorder, helping to stabilize wild mood swings caused by the illness.
- It is part of celebratory fireworks shows where the element imparts red colour to the fireworks.

The Rush Worldwide:

- With countries around the world scrambling to reduce emissions and shift towards greener mode of transport like electric vehicles, the demand for lithium is rising globally and surging its prices.
- This has drawn increased interest in the so-called 'lithium triangle' of Latin America
 - ♦ Argentina, Bolivia, and Chile hold more than half of the world's lithium deposits. Hence, collectively they are called Lithium Triangle.
- The South American region's abundance is partly due to the vast salt flats, or salars, where the metal is extracted from brine pools through an evaporation process facilitated by the arid, sunny climate.

- **Argentina** despite having the third largest reserves of Lithium is currently the fourth top producer of lithium worldwide.
 - ♦ To gain the prominent spot in Lithium production it's national and local governments are now looking to speed up development, held back for years by red tape, high tax rates, rampant inflation and currency controls.
- In Argentina, mining provinces such as Salta, Jujuy and Catamarca have moved to encourage wary investors, signing an agreement to create uniform rules and to strengthen infrastructure, legal security and fiscal stability.
- Lithium mining projects with companies from China, US, Australia, South Korea etc. are in various stages of development.
- **Problem:** As per experts the problem with Argentina is that the country has quite unstable macro economy, with a high degree of taxes that are imposed on the capital investment.
- The South American region's abundance is partly.
- **Bolivia's** Salar de Uyuni holds the single largest deposit of identified lithium resources in the world. But restrictions and delays in exploiting the metal mean little is known about the potential for its economic viability, hence the lack of data on proven reserves.
- **Chile** currently has the world's largest proven reserves.
- In terms of total lithium content produced, it is second only to Australia but Chile's production costs are about a third of Australia's, thanks to its convenient location with access to the Pacific and favourable conditions of the Atacama Desert, home to the first-ever, large-scale lithium-brine mine.
 - ♦ As one of the driest places on the planet, however, the mines' reliance on water for extraction exacerbates the region's water scarcity and threatens to diminish the lithium content of existing reserves.



Indian Scenario:

- Currently, India is depended on import for its lithium requirements.
- Hence, State-run Khanij Bidesh India Ltd (KABIL) [a joint venture firm of National Aluminium Company Ltd, Hindustan Copper Ltd. and Mineral Exploration Company Ltd] is scouting for acquiring lithium mines overseas.

- India has also inked an agreement with Argentina for securing the supply of Lithium.

Lithium Reserves in India:

- In India, preliminary surveys by the Atomic Minerals Directorate for Exploration and Research (AMD) have shown the presence of lithium resources in the igneous rocks of the Marlagalla-Allapatna region of Karnataka's Mandya district.
- There is also some potential for recovering lithium from the brines of Sambhar and Pachpadra in Rajasthan, and Rann of Kachchh in Gujarat. The major mica belts in Rajasthan, Bihar, and Andhra Pradesh, and the pegmatite belts in Odisha and Chhattisgarh apart from Karnataka are also potential regions for it.
- The Geological Survey of India (GSI) has even taken up seven lithium exploration projects in Arunachal Pradesh, Andhra Pradesh, Chhattisgarh, Jharkhand, Jammu & Kashmir and Rajasthan.

LUNAR SCIENCE WORKSHOP BY ISRO

The workshop commemorated the completion of two years of the Chandrayaan-2 orbiter in the lunar orbit.

About:

- Indian Space Research Organisation (ISRO) hosted two-day online lunar science workshop recently.
- During the workshop ISRO opened up its scientific discussions on Lunar Science to engage with Indian academia, institutes, students, and people from all disciplines and walks of life.
- The workshop lectures included lectures on the Chandrayaan-2 mission, tracking, operations, and data archival aspects as well.
- During this workshop ISRO also released Chandrayaan 2 data for analysis by academia and institutes, for greater participation to bring out more science from this mission.

Key Findings of Chandrayaan-2:

- **Chandra's Atmospheric Composition Explorer-2 [CHASE 2]:** This mass spectrometer conducted first-ever in-situ study of the composition of the lunar neutral exosphere from a polar orbital platform,
 - ♦ It detected and studied the variability of the Argon-40 at the middle and higher latitudes of the Moon.
 - ♦ It depicted the radiogenic activities in the mid and higher latitudes of the Lunar interior.
- **Chandrayaan-2 Large Area Soft X-ray Spectrometer (CLASS):** This payload discovered presence of Chromium and Manganese on the lunar surface.

- **Solar X-ray Monitor (XSM) payload:** It observed micro flares of the Sun, during the quiet-Sun period, which provide important clues on the coronal heating problem of the Sun.
- **Imaging Infra-Red Spectrometer (IIRS) payload:** The first-ever unambiguous detection of the hydration features of the Moon was achieved by using this device.
 - ♦ It captured clear signatures of Hydroxyl and water-ice on the lunar surface.
- **Dual-Frequency Synthetic Aperture Radar (DF-SAR) instrument** was used to study the subsurface features of the Moon.
 - ♦ It detected signatures of the sub-surface water-ice, and achieved high resolution mapping of the lunar morphological features in the polar regions.
- **Orbital High Resolution Camera (OHRC):** It helped Chandrayaan-2 to imagine the Moon from 100 km lunar orbit with best-ever achieved resolution of 25 cm.
- **The Terrain Mapping Camera (TMC-2)** conducted imaging of the Moon at a global scale.
 - ♦ It found interesting geologic signatures of lunar crustal shortening and identification of volcanic domes.
- **The Dual Frequency Radio Sounding (DFRS)** experiment studied the ionosphere of the Moon, which is generated by the solar photo-ionization of the neutral species of the lunar tenuous exosphere.
 - ♦ The science data archived in Indian Space Science Data Centre (ISSDC) at Byalalu are being disseminated to public through the PRADAN portal of ISSDC.
 - ♦ ISSDC is the nodal centre of data archive for ISRO missions.

CHANDRAYAAN-2 IN NUTSHELL

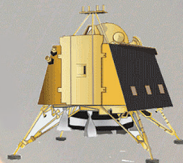
Chandrayaan-2 is ISRO's second lunar mission and has three modules Orbiter, Lander (Vikram) and Rover (Pragyan).



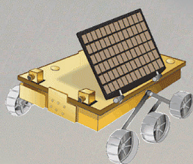
- ✓ The Orbiter and Lander modules would be interfaced mechanically and stacked together as an integrated module and accommodate inside the launch vehicle-GSLV-MkIII.
- ✓ After launch into earth bound orbit, the integrated module will reach Moon orbit using Orbiter Propulsion module.

- ✓ Vikram and Pragyan would land between Manzinus C and Simpelius N craters close to lunar South Pole.

- ✓ Vikram lander weighs 1,471 kg including the Pragyan Rover (27 kg) in side and it's capable of generating about 650 W of electricity.



- ✓ Pragyan will use cameras, an alpha-particle X-ray spectrometer, and Laser-Induced Breakdown Spectroscopy (LIBS) to analyze the chemical composition of the lunar surface.
- ✓ Chandrayaan-2 would make India the fourth country to complete a soft landing on the Moon.
- ✓ Vikram and Pragyan will conduct its set of experiments for 14 days or one lunar day.



BLUE STRAGGLER – BLUER STAR FORMED WHEN ONE STAR EATS UP ANOTHER

Indian researchers have presented a hypothesis for evolution of blue straggler stars after comprehensive analysis.

About:

- Indian researcher Vikrant Jadhav and Annapurni Subramaniam from the Indian Institute of Astrophysics (IIA) have done comprehensive analysis of Blue Straggler star.
- They utilised the Gaia telescope launched in 2013 by the European Space Agency. The excellent positional accuracy helped the scientists to select the blue stragglers in clusters and understand how many such stars there are, where they are and how they are formed.

Key Findings:

- Half of the blue stragglers in their sample are formed through mass transfer from a close binary companion star.
- One third of the blue stragglers are likely formed through collisions of 2 stars.
- The remaining ones are formed through interactions of more than 2 stars.

What are Blue Stragglers?

- Blue straggler star as the name suggests is star of bluish colour and thus is hot.
- They are a class of star observed in old, dense stellar systems such as globular clusters.
- They stand out because old stellar populations are expected to be devoid of blue (high-mass) stars which possess very short lifespans.
- They appear to be lagging behind most of the other stars in the cluster in its evolution toward a cooler, reddish state.
- They tend to be strongly concentrated toward the centre of the cluster.

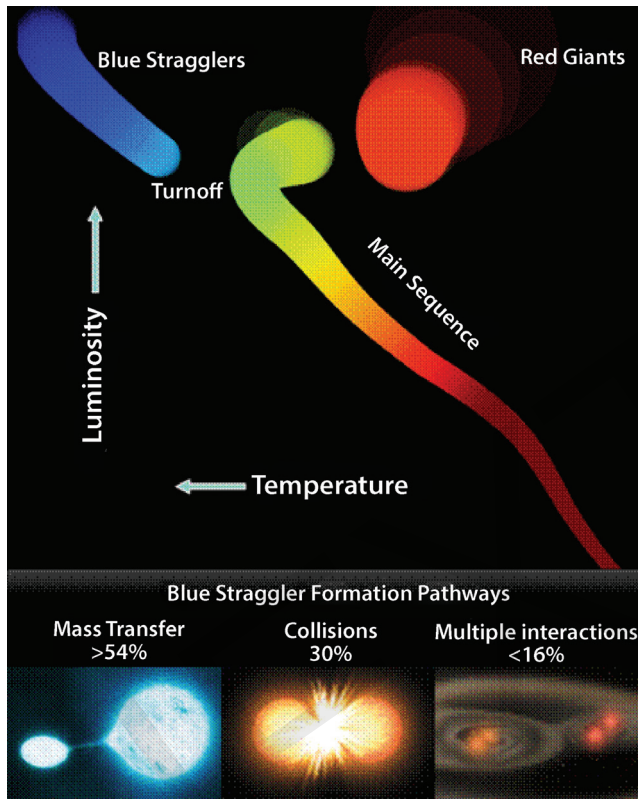
Anomalous Behaviour:

- A bunch of stars born at the same time from the same cloud form a star cluster.
- As time passes, each star evolves differently depending on its mass.
- The most massive and bright stars evolve and move off the main sequence creating a bend in their track, known as the turnoff.
- Stars above this bend or brighter and hotter stars are not expected in a cluster, as they leave the main sequence to become red giants.

- But it was found that Blue Stragglers were still in their clusters.

Benefits of Study:

- The study will help improve understanding of these stellar systems to uncover exciting results in studies of large stellar populations, including galaxies.
- This study will be followed up with ultraviolet imaging with Ultra-Violet Imaging Telescope on AstroSat, India's first dedicated space observatory, as well as the 3.6 m Devasthal Optical Telescope in Nainital.



- The figure shows Hertzsprung-Russell diagram which plots the temperature of stars against their luminosity. It shows a group of stars in various stages of their evolution.

BREAKTHROUGH INFECTIONS AND THEIR CONCERN IN INDIA

India's vaccinated individuals are also getting breakthrough infection points recent researches.

About:

- Kerala and Maharashtra are seeing daily rise in Covid-19 infections despite having a high rate of vaccination.
 - ♦ This daily rise in infections points towards rise of Breakthrough Infection in India.

What is Break Through infection?

- A breakthrough infection is a case of illness in which a vaccinated individual becomes sick from the same illness for which he/she has been vaccinated.
- In this case the virus penetrates through the protective barriers of the antibodies, produced by the vaccine.
- In case of Covid-19 infection if a person gets infected after 14 days of second shot of the vaccine then it is called as breakthrough infection.
- The two-week window is the time it takes for the body to produce necessary antibodies following a shot of the vaccine.

Concern:

- So far the breakthrough infections are not escalating into severe conditions requiring hospitalisation.
- But the U.S. Centres for Disease Control and Prevention reports that the viral load in those with a 'breakthrough infection' can be as much as those unvaccinated, so they can infect people.
- The bigger concern is that people with breakthrough infection, under the belief that they are fully protected, may become less stringent with using masks, precautions etc. and could infect a large number of people.

Estimate of Cases:

- There are no official estimates, nationally, of how many 'breakthrough infections' have been reported in India but news reports in mid-August, estimated that 80,000-100,000 people got infected, nearly half in Kerala.

Reasons for Breakthrough Infection:

- In clinical trials, all vaccines available have reported efficacy rates between 70% and 90%. This implies that between 10% and 30% of a vaccinated population will be vulnerable to infection.
- Moreover, some new variants of Corona Virus may be immune from the vaccine like the delta and delta plus variant.
- Healthcare workers due to their prolonged and close exposure to a variety of patients are at a greater risk of contracting breakthrough infection.

Vaccines in India:

- Indian vaccine program currently uses - the Oxford-AstraZeneca or Covishield, Covaxin by Indian firm Bharat Biotech; and Russian-made Sputnik V.
- The government has also authorised Indian the import of Moderna's vaccine, which has shown nearly 95% efficacy against Covid-19.
- India has given emergency use approval to one more vaccine ZyCoV-D by Cadila Healthcare.

NATIONAL SNAKEBITE AWARENESS SUMMIT

The summit organised on the eve of International Snakebite Awareness Day, observed on 19 September every year.

About:

- National Snakebite Awareness Summit was organised in virtual mode by the Integrated Health and Wellbeing Council, New Delhi. India is registering an alarming number of deaths due to snakebite.
- Most of the deaths are preventable with greater awareness and accessible healthcare.

Snakebite:

- Around 64 countries around the world see significant death and disability from snakebites, with the most affected being in Africa, Asia and Latin America. But still snake bite is not seen a public health challenge.
- In 2017, the World Health Organization added snakebite envenoming to its list of highest priority neglected tropical diseases (NTDs).
- WHO has started the process of preparing a strategic road map that aims at cutting deaths and disability by 50% before 2030
 - ♦ It aims to integrate more attention to snakebite envenoming in national health plans and at grassroots level – engaging with affected communities, improving health care for everyone in communities, and ensuring that everyone has access to safe, effective and affordable treatment.

Indian Scenario:

- In Asia, India has the largest burden with up to 2 million people being envenomed each year due to snake bite and the cases have been increasing and majority of these deaths happen in rural areas.
- Harmful Effects of Snake Bite:
 - ♦ Snakebites can cause paralysis, fatal haemorrhages, irreversible kidney failure and tissue damage that can lead to disability and amputation.
 - ♦ People are left permanently disabled or disfigured, as a result of being bitten by venomous snakes.
 - ♦ In many communities, these permanent injuries result in people being discriminated against and ostracised. It leads to crippling loss of income, debt, mental health issues and reduced quality of life.

Way Forward:

- As majority of snake bite cases happen in rural and tribal areas India need to strengthen PHC health infrastructure for snake bite treatment.

- Region specific treatment protocols and even anti-venom injections should be made available at large.
- The tribal healers who know traditional medicine and medicinal plants can be taken on board to chalk out a strategy.
- Snakebite should be made notifiable disease so that pharma sector can work more on it.
- Most cases of snakebite envenoming can be treated using anti-venoms, but very few countries have capacity to produce these life-saving drugs, and lack of investment in this field has led to low level of innovation, as in some cases, products of poor quality and high cost. Governments need to work upon this also.

NASA'S VIPER LUNAR ROVER

The Moon's South Pole is one of the coldest areas in our solar system, with no prior lunar missions for this region.

About:

- The National Aeronautics and Space Administration's (NASA) upcoming Volatiles Investigating Polar Exploration Rover (VIPER) will land at the Moon's South Pole, near the western edge of the Nobile Crater.
- It will touch down near the western rim of the Nobile Crater at the lunar South Pole in 2023.
- It will spend at least 100 days exploring multiple lunar environments in this mountainous region.
- It aims to map and explore the South Pole's surface and subsurface for water and other resources.

Mission Details:

- VIPER will roam the Moon and use its Regolith and Ice Drill for Exploring New Terrains (TRIDENT) hammer drill for drilling Moon's surface.
- It has the Mass Spectrometer Observing Lunar Operations (MSolo) and the Neutron Spectrometer System to analyse various lunar soil environments at a range of depths and temperatures.
- It will also roam to permanently shadowed craters, some of the coldest spots in the solar system, where water ice reserves have endured for billions of years will help in understand the sources of the lunar polar water.

Unique Challenges faced by VIPER:

- VIPER is NASA's first mobile robot mission to Moon. Hence, it will face some unique challenges like:
 - **Extreme temperatures:** It will need to withstand varying surface temperatures when roaming between sunlight and shade areas

- **Mobility:** The nature of soil in the Moon's Polar Regions is not known hence VIPER need to be designed for unprecedented agility.
 - ♦ The rover can drive sideways or diagonally, spin in a circle and move in any direction without changing the way it's facing.
- **Complex route planning:** The solar-powered VIPER must retreat from shadows zones as it seeks out the right territory to sample while maintaining communications with Earth.
 - ♦ Periods of darkness will be long – up to one Earth week so VIPER will be periodically parked in identified safe havens at high elevations where the darkness only lasts four days.
- **First rover with headlights:** VIPER will explore inside dark craters where the Sun never reaches, making it the first NASA rover to need headlights.
- It will also be a challenging task to build a lighting-plus-camera system to operate in the Moon's harsh temperatures and extreme conditions of light and dark.

Other Rover Missions:

- At the present, the only rover operating on the moon is the Chinese Yutu-2 Rover, which has explored the dark side of the Moon since January 2019. Other rover mission if schedule goes as planned will be: ISRO's Chandrayaan-3 rover and United Arab Emirates Rashid Rover.



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ETHICS OF ROBOTIC WARFARE

Israel Aerospace Industries unveiled a remote-controlled armed robot 'REX MKII', which can patrol battle zones, track infiltrators and open fire. In this light, ethical dilemma related to the use of such robotic warfare needs to be explored.

About:

- The robots we discuss here are those that are capable of making decisions, instead of being remote-controlled or button-controlled by a human agency. These are, at times, abbreviated as LAWS – Lethal Autonomous Weapons Systems. Autonomous robots, not being limited physiologically, can operate without sleep or food, perceive things that humans cannot and act in ways humans cannot. These abilities suggest that using robots in war offers an important tactical advantage, and militaries around the world are making significant investments in robot-related research and development.
- **Ethics of War:** It is common saying that everything is fair in love and war. However, it is not fair to trample human dignity. For these reasons, there are International Rules of War/ Humanitarian Law – enshrined in the Geneva Conventions ratified by all 196 States. The International Humanitarian Law basically rests on following fundamental principles that are inherent to all targeting decisions.
- **Military necessity:** This principle permits measures which are actually necessary to accomplish a legitimate military purpose and are not otherwise prohibited by international humanitarian law. It dictates whether the call for lethal action should be taken and under what circumstances.
- **Unnecessary suffering:** This principle prohibits the employment in armed conflicts of weapons, projectiles and material and methods of warfare of a nature to cause superfluous injury or unnecessary suffering.
- **Proportionality:** This principle holds that in the conduct of hostilities during an armed conflict parties to the conflict must not launch an attack against lawful military objectives if the attack 'may be expected' to result in excessive civilian harm (deaths, injuries, or damage to civilian objects, or a combination thereof) compared to the 'concrete and direct military advantage anticipated'.
- **Distinction (discrimination):** This principle, qualified as "cardinal" and "intransgressible", states that all involved in the armed conflict must distinguish between the persons thus defined (the combatants) and civilians.
- **Humanity:** Complimentary to the principle of military necessity, this principle forbids the infliction of all suffering, injury or destruction not necessary for achieving the legitimate purpose of a conflict. War is in no way a relationship of man with man but a relationship between States, in which individuals are enemies only by accident.
- Deployment of robotic systems should be seen in the context of these principles. Using technology to the humanity's advantage, use of artificial intelligence and machine learning can help enshrine these fundamentals in the very design of such robotic warfare.

Benefits:

- **Robots adhere better to the Laws of War,** as these robots are away from the emotions of vengeance, anger, frustration, and the desire for victory at any cost.
- **Use of robots will decrease human casualties** and other forms of collateral damage. Further, autonomous armed robotic vehicles do not need to have self-preservation as a foremost drive, and thus, can be used in a self-sacrificing manner if needed and appropriate, without reservation by a commanding officer.
- **Robots are not vulnerable to psychological after-effects of war,** like humans are. Also, clouding of judgement in fearful tense situations is ruled out, so are the biases ruled out that are otherwise part of a human's belief system.
- When working on a mixed team of human soldiers and autonomous systems as an organic asset, robots could be designed to have ability of independently and objectively monitoring ethical behaviour in the battlefield by all parties and reporting infractions that might be observed. This presence alone might possibly lead to a reduction in human ethical trespasses.
- **Use of robots can lead to avoiding indoctrination of human-soldiers.** Soldiers are often fed with narrative of nationalism and patriotism, without any alternate ideology, to emotionally charge them to fight with full might for their nation/ cause. This makes them no less than robots. So, instead causing such indignity to human agency, using robots seems more just.

Downside of using Robotic Warfare:

- Using robots will make wars less expensive – in terms of lives and costs, and thus, will bring down the threshold of initiation of wars. Human Casualties create emotions and demand political classes to avoid such damage and demand the leaders to come to the peace table.
- Given that robots, as of now, have **limited sense of discrimination** – they may attack and eliminate civilians as well, along with enemy soldiers. Further, in such a situation, responsibility will not fall upon anyone but technology and mending ways will become challenging. Such 'mistakes by design' are likely to go unpunished.
- **Moral acceptability of using force without human intervention:** Confidence in our armed actions could be undermined by the feeling of being watched by weapons, fear for safety, and concerns about the absence of humans in the loop or risks of a technological error.
- **Possibility of unilateral human-free war will make such combat unjust.** One side with robots and other side with humans will make the idea of war excessive and unreasonable. So either one side will have to make humans enter the war or the other side will have to engage lot of resources and funds to build up a robotic army.
- Human soldiers work in cohesion, being psychologically charged to take on the enemy soldiers. With ethical robots monitoring their performance, **human soldiers might lose their sense of purpose** and belongingness to bring home victory.
- **Level of autonomy provided to the robots may vary.** If immoral, irresponsible, reckless humans were given with the overriding controls to robots, it will lead to science fiction warfare knowing no end. On the contrary, the robots may refuse to take orders – running amok without checks.
- **Such technology if proliferated to terrorists** and the like, consequences could only be imagined.
- **Arms Race:** It will lead to another arms race albeit robotic AI warfare race among the nations.
- **Risks of Machine Learning:** A system designed to identify, designate or even neutralise targets without being able to provide intelligible explanations for its proposals or choices could be regarded with mistrust.
 - ♦ Without appropriate control over what the system "learns", it could lead to unexpected and unwanted behaviour outside the intended framework of use.

Guiding Principles:

- The risks of alteration in human control and the acceptability of assigning use of force to a machine should be systematically assessed.
- Only the chain of command shall have authority to change the targets of a mission in progress or to cancel the mission.

- ♦ The command should define a framework to transpose doctrine, i.e. target to be reached, space and time limits, constraints, engagement rules, for each mission performed.
- ♦ The conditions under which continuous machine learning during a mission can be implemented for on-line computation of new tasks should be clearly specified.
- ♦ When drafting doctrine on the use of weapon systems, appropriate information on automated decision-making functions should be provided. The conditions and limits of use should be clarified relying on technical and operational performance criteria and relevant ethical considerations.

Conclusion:

- Within the United Nations, the Convention on Certain Conventional Weapons (CCW) has hosted international discussions on the future of LAWS. Surveys have discovered that we are not comfortable with such robots that have the power to choose and kill humans on its own.
- But the harsh truth is that wars are going to happen as long as there are humans with ambitions. Also, technology derivatives will be used to achieve such ambitions.
- Therefore, the code of ethics established for humanity should lead to design of ethical autonomous systems capable of lethal action – in short, robotic warfare. Robots must be constrained to adhere to the same laws as humans or they should not be permitted on the battlefield. By implication, robots should have the agency to decline the command which is unethical. So, could we really design an ethically infallible robot? This is question left to be answered before jumping into development and deployment of robotic warfare.

CASE STUDY: CULTURE OF PROCEDURAL ETHICS IN OUR INSTITUTIONS

The IAS officer who caught on camera instructing policemen to "break heads" of farmers who breached a security cordon during a protest, has been transferred from the post of Sub-Divisional Magistrate of Karnal (Haryana) to the post of Additional Secretary in the Citizen Resources Information Department.

Question:

You are a young IAS officer, with just a couple of months' experience of field duty. You are posted as a Sub-Divisional Magistrate in a district where protests have been ongoing since a long period against recently passed law. The situation has gained further traction as the Chief Minister is going to visit the district for a rally. You are required to undertake protocol duties for the CM and ensure that his cordon is not breached by

the protesters. As a pep talk and action briefing, you instructed the policemen to take harsh actions against the protestors and keep them at bay. You used remarks such as “break their heads”. This pep talk was recorded and released to the media. This incident has portrayed you in a very bad light. You are being called an insensitive officer, and your call for violence has initiated debates whether the public protestors should take arms in order to protect themselves. There are demands to lodge FIR against you for incitement of violence and attempt to murder. Eventually, you are transferred from your post of SDM to the post of an additional secretary in the Citizen Resources Information Department.

In this context, answer the following questions:

- How would you explain your conduct which has been very unbecoming of an officer?
- What would you do to rebuild the public trust in yourself?
- What steps should be taken in order to ensure such behaviour is not repeated by other officers?

Answer:

- Peaceful protests are a form of freedom to expression, protected under Section 19 of the Constitution of India. The democratic right to peaceful protests has been acknowledged in a series of judgments by various High Courts and also the Supreme Court of India. Thus, taking action against such protests, without heeding to the series of steps (such as using tear, gas, opening of water cannon, followed by lathi charge and so on) is a sad default on the part of the state law enforcement body and it against the spirit of the Constitution of India. At the same time, safety and security of the high-risk individuals such as the CM, cannot be compromised.
- Nevertheless, the use of the language in the incident described in the question is not pardonable because such instructions coming from an authority figure could lead to unwarranted police action and create an atmosphere of fear – that may lead to violent protests.

(a) Explanation of conduct:

At the outset, I will apologize profusely for the wrong choice of words made by myself in the pep talk and briefing. I have following explanation to offer:

- The protests have taken a violent turn and stone pelting has started. Some of the policemen have been injured by stones and the morale of security forces has taken a hit, as they have been instructed to not retaliate under any circumstances. Therefore strict action was the need of the hour.
- I was under pressure to boost the spirit of security forces, who have been on duty without break for the last 48 hours. As the leader of the forces, it was expected that it was expected of myself that I boost their confidence, energize them to sustain for longer hours of duty, to invoke a sense of service in them – but without asking them to shun their self-respect.

- Despite this situation, my choice of word could have been better. Being a young officer, I was inexperienced and emotionally charged, and therefore, got carried away. I sincerely apologize for my conduct, I repent it and I resolve to learn from this mistake and become a better officer in future, for the service of the people and the nation.

(b) Rebuilding of public trust in myself:

Trust is a hard-earned currency. In the given situation, earning of trust is even more challenging. I begin with the premise that the repairing of public trust will take time and delivery of certain good services on my part. I would undertake following steps to rebuild people’s trust in my abilities to deliver good public services:

- I will offer apology** over various media platforms such as news channels, my social media accounts, apology letter in newspaper – to ensure it reaches wider public and my sincere sense of guilt for indulging in such behaviour is communicated well.
- I will offer to resign from my current position** or proceed on leave, so that any legal action against me can be taken without any perceived influence
- In my newly assigned role of additional secretary, I see an opportunity to engage with citizen, as it is about ‘Citizen Resources Information’. I will make sure that I leave no stone unturned to deliver best services and enhance citizen resources information for better access by the public.
- I understand that rebuilding of trust cannot be done in one day; therefore, I will be patient before embarking on any post such as the SDM/ DM again in my career.
- All my actions will be as per the Code of Ethical Conduct.** I will also **undertake sensitivity training** and public-speaking lessons so that I become more aware of use of right language for effective communication.

(c) Steps that should be taken to ensure such behaviour are not repeated:

Unfortunately, the incident narrated in the question is not a rare occurrence. Officers are often accused of indulging in conduct that reeks of power-high attitude. They develop a sense of ‘ownership’ of their positions and offices, instead of a sense of ‘service’ via these positions and offices. The reasons for such attitude include, but not limited to, the following:

- ‘Mai-baap’ concept of service delivery
- VIP treatment of all officers by the general public, in various gathering
- Portrayal of larger-than-life sense of position by the subordinates
- Political compulsions and desire for ‘choice’ postings

Thus, these reasons require redressal to ensure officers do not just please their political bosses but serve the public in the real spirit.

VICE-PRESIDENT PAID TRIBUTES TO MAHAKAVI SUBRAMANIA BHARATI

Vice-President M. Venkaiah Naidu paid floral tributes to Mahakavi Subramania Bharati to mark the death centenary of the poet and freedom fighter at his memorial home in the city.

About:

- **Birth:** He was born on December 11, 1882, in Ettaiyapuram, Madras Presidency. He is also known as 'Mahakavi Bharathiyar'.
- **Role:** He was and writer of the nationalist period (1885-1920) who is regarded as the father of the modern Tamil style. He was extremely well versed in multiple languages including Tamil, English, French, Sanskrit, Hindi, Hindustani and Telugu.
- **Early life:** The son of a learned Brahman, he became a Tamil scholar at an early age. He received little formal education, however, and in 1904 he moved to Madras. There he translated English into Tamil for several magazines and later joined the Tamil daily newspaper Swadesamitran.
- **The Nationalist period:** The exposure to political affairs led to his involvement in the extremist wing of the Indian National Congress party, and, as a result, he was forced to flee to Pondicherry, a French colony, where he lived in exile from 1910 to 1919. During this time Bharati's nationalistic poems and essays were popular successes. Upon his return to India in 1919 he was briefly imprisoned and later rejoined Swadesamitran.
 - ♦ His vision of nationalism was secular, against casteism and sexism, and pan-Indian. He wrote many patriotic poems which received praise for its nationalistic themes.
- **Important works:** Kannanpattu (1917; Songs to Krishna), Panchalisapatham (1912; Panchali's Vow), and Kuyilpattu (1912; Kuyil's Song). Many of his English works were collected in Agni and Other Poems and Translations and Essays and Other Prose Fragments (1937).
- **As a poet:** Subramania Bharati mostly indulged in secular, political, and spiritual writings.
 - ♦ He was also the first Asian poet to sing the glory of the Bolshevik revolution.
 - ♦ His poems not only are an ode to nature but contain a child-like innocence. His first poem, a sonnet was published in 1904. His collection of work has been published in 16 volumes.

Role as a social reformer:

- He was influenced by Sister Nivedita, a disciple of Vivekananda.
- He was vocal against the caste system and consistently spoke about women's issues.
- He spoke out against social issues such as child marriage, untouchability through his writings.
- **Respects & Recognition:**
 - ♦ The Government of India in 1987 instituted the highest National Subramania Bharati Award conferred along with the Ministry of Human Resource Development (now Education), annually conferred on writers of outstanding works in Hindi literature.
 - ♦ Bharathiar University, a state university has been named after the poet in Coimbatore. Subramania Bharati's commemorative stamp was also issued by the Indian Post in his respect.
- **Death:** He died in 1921, in Chennai at the age of 38.

THAMIRABARANI CIVILIZATION

Thamirabarani River Civilization In Tamil Nadu Dates Back 3,200 Years.

About:

- A carbon dating analysis of rice with soil, found in a burial urn at Sivakalai in Thoothukudi district of Tamil Nadu, by the Miami-based Beta Analytic Testing Laboratory has yielded the date of 1155 BC, indicating that the Thamirabarani civilisation dates back to 3,200 years ago.



- **Thamirabarani River:**
 - ♦ The Thamirabarani or Tamraparni or Porunai is a perennial river that originates from the Agastyarkoodam peak of Pothigai hills of the Western Ghats,
 - ♦ It flows through the Tamil Nadu into the Gulf of Mannar.
 - ♦ It was called the Tamraparni River in the pre-classical period, a name it lent to the island of Sri Lanka.
 - ♦ The old Tamil name of the river is Porunai.
 - ♦ This river flows towards north direction initially. However, it changes to east direction later.
- **Significance:** Archeologically, the findings are exciting as they reveal that there could have been an urban civilisation in Southern India, similar to the Indus Valley Civilisation that existed in the North, a few centuries earlier.
- **New findings:** the findings at Shivakalai, 200 kilometers away from Keezhadi, from where rice and soil were tested, have given evidence that settlements in Tamil Nadu date back another 600 years, to 1155 BC.
- **Sangham literature:**
 - ♦ In Tamil Nadu's Sangam literature, from first to fourth century AD, there are references to an urban landscape.
 - ♦ Adding to this, evidence has already emerged from the Keezhadi cluster – Agaram, Keezhadi, Konthakai and Manalur – that there existed people who dealt in currency that predates Mauryan period in north India.
 - ♦ Sangam literature was written over a period of six centuries (3rd BCE – 3rd CE) contains references to various Chola, Chera and Pandya kings.

INDUS VALLEY CIVILISATION

- India was home to the Indus Valley Civilisation that existed between 2,500 and 1,700 BC.
- As per current geographical boundaries, the civilization thrived in the Punjab and Sindh provinces of Pakistan, and in parts of Gujarat, Rajasthan, Haryana and Punjab in India.
- The two best-known excavated cities of this culture are Harappa and Mohenjo-daro (located in modern-day Pakistan), both of which are thought to have once had populations of between 40,000-50,000 people.
- Excavations at both sites continued between 1944-1948 CE under the direction of the British archaeologist Sir Mortimer Wheeler.

RAJA MAHENDRA PRATAP SINGH STATE UNIVERSITY

The university is being established by the Uttar Pradesh govt. in Aligarh in memory of Raja Mahendra Pratap Singh.

About:

- Prime Minister Modi laid the foundation stone of the university
- The University will provide affiliation to 395 colleges of the Aligarh division.
- Named after the Jat king and freedom fighter, the university will be constructed on 92.27 acres of land in the district's Kol tehsil.
- **Defense Corridor:** Apart from this, the Defense Corridor will be developed in Andala on Khair Road in 1000 acres, for which the responsibility of development has been given to UPEDA.

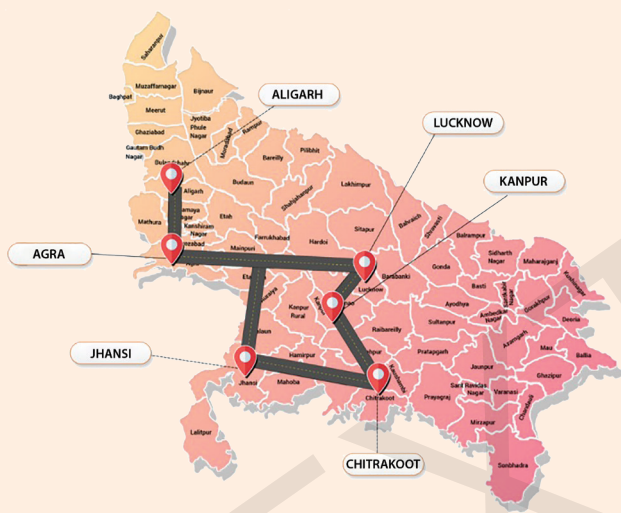
About Raja Mahendra Pratap Singh:

- **Birth:** Born in the Hathras district of Uttar Pradesh in 1886, Singh was a social reformer, freedom fighter and Marxist revolutionary.
- **Early days:** He participated in the 1911 Balkan War with his fellow students at the college (Aligarh Muslim University).
- **Political role:** He was elected to Lok Sabha from Mathura in 1957, defeating the then Jan Sangh candidate Atal Bihari Vajpayee, contesting as an Independent.
- **Role:**
 - ♦ Influenced by the speeches of Dadabhai Naoroji and Bal Gangadhar Tilak, Singh became deeply involved with the Swadeshi movement.
 - ♦ The freedom fighter set up the first Provisional Government of India in Afghanistan in 1915, declaring himself as the President.
 - ♦ He also declared a jihad against colonial rule, leading to the British announcing a bounty on his head.
 - ♦ Singh later fled to Japan, where he established the Executive Board of India in Japan in 1940.
- **Beliefs:** A firm believer in Mahatma Gandhi's policy of non-violence, Singh also set up the Prem Maha Vidyalaya, a polytechnic institution in his palace in Vrindavan.
- The social reformer was also a firm proponent of Panchayat Raj, believing it would reduce corruption and put more power in the hands of the common man.
- **Noble Peace Prize:** Singh, who called himself "the servant of the powerless and weak," was nominated for the Noble Peace Prize in 1932.
- **Revolutionary role:** Mahendra Pratap subsequently travelled to various countries to gather support for the revolutionaries fighting for independence in India. He went to Germany, Japan, and Russia, and met the political leaders of those countries.
- He is said to have met Vladimir Lenin in 1919, two years after the Bolshevik Revolution.
- In 1925, he went on a mission to Tibet and met the Dalai Lama. He was primarily on an unofficial economic mission on behalf of Afghanistan, but he also wanted to expose the British brutalities in India.

- The Raja finally returned to India a year before Independence, and immediately began work with Mahatma Gandhi.

UTTAR PRADESH DEFENCE INDUSTRIAL CORRIDOR

- The Government of India will set up defence industrial corridors in Uttar Pradesh and Tamil Nadu
- The Uttar Pradesh Defence Industrial Corridor is being set up by the Uttar Pradesh Expressways Industrial Development Authority (UPEIDA).
- It consists of the following six nodal points with the potential to develop defence industries in the corridor:
- Lucknow, Kanpur, Agra, Aligarh, Chitrakoot and Jhansi.



REMAINS OF ANCIENT TEMPLE FOUND IN UTTAR PRADESH

Archeologists have found 'shankh lipi' inscriptions on the stairs on an ancient temple dating back to the Gupta period in Uttar Pradesh's Etah district

About:

- **The Archaeological Survey of India's findings:** The Bilsarh site was declared 'protected' in 1928. Every year, the ASI undertakes scrubbing work at the protected sites.
- The discovery becomes significant since only two other structural temples from the Gupta age have been found so far — Dashavatara Temple (Deogarh) and Bhitargaon Temple (Kanpur Dehat).
- Two pillars were excavated on which there is an inscription about Kumaragupta I, the powerful ruler of Gupta dynasty, in 'sankhlipi' typical of the 5th century AD.
- **Gupta period:** The Guptas were the first to build structural temples for Brahminical, Buddhist and Jain followers. Prior to that, only rock-cut temples were built.

- **Earlier findings:** The inscription found on the Etah remains had earlier been seen on a horse statue found in LakhimpurKheri.
- **Shankhalipi:**
 - ♦ It is an ornate, stylised, ancient script, used between the 4th and 8th centuries CE for names and signatures.
 - ♦ Shankhalipi or "shell-script" is a term used by scholars to describe ornate spiral characters assumed to be Brahmi derivatives that look like conch shells or shankhas.
 - ♦ Both Shankhalipi and Brahmi are stylised scripts used primarily for names and signatures.
 - ♦ The script was discovered in 1836 in Uttarakhand's Barahat by English scholar James Prinsep, who was the founding editor of the Journal of the Asiatic Society of Bengal.
 - ♦ A year later, he came across two more similar scripts at Nagarjuna group of caves in the Barabar Hills near Gaya.
 - ♦ Prominent sites with shell inscriptions include
 - ♦ the Mundeshwari Temple in Bihar,
 - ♦ the Udayagiri Caves in Madhya Pradesh,
 - ♦ Mansar in Maharashtra
 - ♦ The shell inscriptions are also reported in Indonesia's Java and Borneo.

KUMARAGUPTA I

- He was the Successor of Chandragupta-II who had a long reign from 414 to 455 A.D.
- He maintained control of his inherited territory, which extended from Gujarat in the west to Bengal region in the east.
- The Bhitari pillar inscription states that his successor Skandagupta restored the fallen fortunes of the Gupta family, which has led to suggestions that during his last years, Kumaragupta suffered reverses, possibly against the Pushyamitras or the Hunas.
- Kumaragupta bore the titles Maharajadhiraja, Paramabhataraka, and Paramadvaita and also adopted the title Mahendraditya.

ACHARYA VINOBA BHAVE

Prime Minister Narendra Modi paid tributes to Vinoba Bhave on his birth anniversary

About Vinoba Bhave:

- **Birth:** He was born on September 11, 1895, in Gagode, Bombay Presidency.
- **Role:** He is one of India's best-known social reformers and a widely venerated disciple of Mahatma Gandhi. Bhave was the founder of the Bhoodan Yajna ("Land-Gift Movement").

- He is considered as a National Teacher of India and the spiritual successor of Mahatma Gandhi.
- **Early life:** Born of a high-caste Brahman family, he abandoned his high school studies in 1916 to join Gandhi's ashram (ascetic community) at Sabarmati, near Ahmadabad.
- Association with Gandhi: Gandhi's teachings led Bhave to a life of austerity dedicated to improving Indian village life. He considered Gandhi his guru, from both a political and spiritual point of view.
- **Literary Work:**
 - ♦ He was an eminent philosopher. The Gita has also been translated into Marathi language by him with the name as Geetai means mother Geeta.
 - ♦ In 1923, he brought out Maharashtra Dharma, a Marathi monthly which had his essays on the Upanishads. He wrote Ishavasyavritti and Sthitaprajna Darshan in jail.
 - ♦ He also learnt four South Indian languages and created the script of Lok Nagari at Vellore jail.
 - ♦ Other eminent works: The essence of Quran, The essence of Christian teachings, Thoughts on education and Swarajya Sastra.
- **Contributions:**
 - ♦ He encouraged gramdan—i.e., the system whereby villagers pooled their land, after which the land was reorganized under a cooperative system.
 - ♦ Throughout 1975 Bhave took a vow of silence over the issue of the involvement of his followers in political agitation.
 - ♦ As a result of a fast in 1979, he secured the government's promise to enforce the law prohibiting the killing of cows (animals sacred to Hinduism) throughout India.
- **Social Work:**
 - ♦ Vinoba Bhave worked tirelessly towards eradicating social evils like inequality. Influenced by the examples set by Gandhi, he took up the cause of people that his guru lovingly referred to as Harijans.
 - ♦ It was his aim to establish the kind of society that Gandhi had envisioned in an Independent India. He adopted the term Sarvodaya from Gandhi which simply means "Progress for All".
 - ♦ The Sarvodaya movement under him implemented various programs during the 1950s, the chief among which is the Bhoodan Movement.
- **Arrest:** Bhave was arrested several times during the 1920s and 1930s and served a five-year jail sentence in the 1940s for leading non-violent resistance to British rule.
- **Freedom struggle:**
 - ♦ In 1940 he was chosen by Gandhi to be the first individual Satyagrahi (an individual standing up for Truth instead of a collective action) against the British rule.

- ♦ Bhave also participated in the Quit India Movement.
- **Religious Work:**
 - ♦ Vinoba was greatly influenced by the Bhagvad Gita and his thoughts and efforts were based upon the doctrines of the Holy Book.
 - ♦ He set up a number of Ashrams to promote a simple way of life, devoid of luxuries that took away one's focus from the Divine.
- He established the Brahma Vidya Mandir in 1959, a small community for women, aiming at self-sufficiency on the lines of Mahatma Gandhi's teachings.
- **Death:** He passed away on 15 November 1982.
- **Awards:** Vinoba Bhave was the first international figure to receive the Ramon Magsaysay Award in 1958. He was awarded Bharat Ratna posthumously in 1983.

BHOODAN MOVEMENT

- In 1951, Vinoba Bhave started his peace-trek on foot through the violence-torn region of Telangana.
- On April 18, 1951, the Harijans of the Pochampalli village requested him to provide them with around 80 acres of land to make a living. Vinoba asked the landlords of the village to come forward and save the Harijans.
- To everybody's surprise, a landlord got up and offered the required land. This incident added a new chapter in the history of sacrifices and non-violence. It was the beginning of the Bhoodan (Gift of the Land) movement.
- The movement continued for thirteen years and Vinoba toured the length and breadth of the country, a total distance of 58741 km. He was successful in collecting around 4.4 million acres of land, of which around 1.3 million was distributed among poor landless farmers.
- The movement attracted admiration from all over the world and was commended for being the only experiment of his kind to incite voluntary social justice.

SAMVATSARI FESTIVAL

Samvatsari Parva 2021: It is the day of forgiveness for Jains.

About:

- **Samvatsari:** It is the last day of Paryushana Shwetambar sect of Jainism.
- It falls on Shukla Panchami each year in the Jain calendar month of Bhadrapada, somewhere between the middle of August and September in the Gregorian calendar.
- **On this day:** Jains forgive and seek forgiveness for their mistakes committed knowingly or unknowingly from all the living beings.

- **Pratikramana:** A yearly, elaborate penitential retreat called "samvatsari pratikramana" is performed on this day. After the pratikramana, Jains seek forgiveness from all the creatures of the world.
- **Significance:** Jain strongly believes in forgiving. The forgiving plead is not limited to present life but also includes there all previous lives, Jains beg forgiveness from all living beings for faults they have made, whether deliberately or unknowingly. The believers undertake a communal confession, and letters are sent asking for forgiveness.
- **Samvatsari and Kshamavaani:** While Samvatsari and shamavaani are typically associated with Shwetambar sect and Digambara respectively, there is no major difference between the two days and both are observed as Forgiveness Days. Rather, the two are usually used interchangeably.

SHWETHAMBARA AND DIGAMBARA

- Shwethambara means "white-clad", and refers to its ascetics' practice of wearing white clothes, which sets it apart from the Digambara "sky-clad" Jains, whose ascetic practitioners go naked.
- Shwethambara, unlike Digambaras, do not believe that ascetics must practice nudity.
- Svetambara Jain communities are currently found mainly in Gujarat, Rajasthan and coastal regions of Maharashtra.
- Digambara Jain communities are currently found mainly in Jain temples of Karnataka, parts of south Maharashtra and Madhya Pradesh.
- The Digambara literature can be traced only to the first millennium, with its oldest surviving sacred text being the mid-second century Satkhandagama "Scripture in Six Parts" of Dharasena (the Moodabidri manuscripts).
- One of the most important scholar-monks of the Digambara tradition was Kundakunda.

BATTLE OF SARAGARHI

12th September marked the 124th anniversary of the Battle of Saragarhi

About:

- Battle of Saragarhi is considered as one of the finest last stands in the military history of the world.
- **When and Where:** The 1897 battle, occurred in a tiny village in the then North-West Frontier Province (now Khyber Pakhtunkhwa, Pakistan).
- **Parties involved:** It was fought between the British Indian contingent comprising 21 Jat Sikh soldiers of the 36th

Sikhs (now known as Indian Army's 4th Battalion) who were stationed at an army post and were attacked by 10,000 to 12,000 Afghans.

- **Led by:** Havildar Ishar Singh
- **Saragarhi Day:** The Punjab government observes Saragarhi Day on 12th September as a holiday.

About the battle:

- **Importance of Saragarhi:** Saragarhi was a communication relay post between Fort Lockhart and Fort Gulistan (also known as Fort Cavagnari) in the Sulaiman Range of the NWFP.
- It was vital to ensuring the survival of these two forts and the defence of the region.
- **Importance of the battle:** Saragarhi is the only instance in the history of warfare where 21 soldiers were posthumously awarded by Queen Victoria with Indian Order Merit, the highest award given to Indian soldiers at the time (equivalent to today's ParamVir Chakra)
- **Why their achievement is celebrated:** The soldiers managed to keep the Afghan attackers at bay for an entire day. This bought time for the two other forts to be reinforced and was able to defend them upon coming under attack.
- Every year, 12 September is observed as the Regimental Battle Honours Day of the Sikh Regiment of the Indian Army.
- **Battle of Thermopylae:** The battle of Saragarhi has been compared to the Spartans' heroic last stand at the battle of Thermopylae in 480 BC between Ancient Greek city-states led by King Leonidas I of Sparta, and the Achaemenid Empire of Xerxes I.
- **Popular Culture:** Saragarhi and the Battle of Thermopylae have been adapted for the silver screen (Kesari in 2019 and the Frank Miller-helmed 300 in 2007).

NATIONAL MISSION ON CULTURAL MAPPING (NMCM)

National Mission on Cultural Mapping (NMCM) has been handed over to the Indira Gandhi National Centre for the Arts (IGNCA),

About:

- IGNCA will start a trial run in 75 villages in October 2021.
- IGNCA was established in 1987 as an autonomous institution under the Ministry of Culture, as a centre for research, academic pursuit and dissemination in the field of the arts.
- The project: The Culture Ministry had approved the mission in 2017 with a 469 crore budget from 2017-2018 to 2019-2020.
- While the entire project would take five years and a budget of 89 crore had been approved for it,

- IGNSA would aim to complete mapping in 5,000 villages by the end of financial year 2021-2022.

National Mission on Cultural Mapping (NMCM):

- **About:** It is a mission mode project of the Ministry of Culture. It was enacted in 2015.
- **Aim:** To address the necessity of preserving the threads of rich Indian Art and Cultural Heritage, convert vast and widespread cultural canvas of India into an objective Cultural Mapping while creating a strong "Cultural Vibrancy" throughout the nation. It encompasses data mapping, demography building, formalising the processes and bringing all cultural activities under one umbrella for better results.
- **Significance:** Fostering Cultural Awareness, Cultural Preservation, Sustainable Employment to creative industries, Optimal Resource Allocation and Utilization and Creation of objective Database for inclusive growth of cultural heritage

SWAMI VIVEKANANDA

The Prime Minister, has said that the spirit of Swami Vivekananda's iconic 1893 speech at Chicago speech has the potential to create a more just, prosperous and inclusive planet.

About:

- **Birth:** He was born on January 12, 1863 in Calcutta.
- In 1893, upon the request of Maharaja Ajit Singh of the Khetri State, he took the name 'Vivekananda.'
- **Role:** He was a hindu spiritual leader and reformer in India who attempted to combine Indian spirituality with Western material progress, maintaining that the two supplemented and complemented one another.
- National Youth Day is held every year to observe the birth anniversary of Swami Vivekananda. Netaji Subhas Chandra Bose had called Vivekananda the "maker of modern India."
- **Contributions:** Social reform became a prominent element of Vivekananda's thought, and he joined the Brahmo Samaj (Society of Brahma), dedicated to eliminating child marriage and illiteracy and determined to spread education among women and the lower castes.
- He later became the most-notable disciple of Ramakrishna, who demonstrated the essential unity of all religions and established the Ramakrishna Mission in 1897.
- Ramakrishna Mission is an organization which works in the area of value-based education, culture, health, women's empowerment, youth and tribal welfare and relief and rehabilitation.
 - ♦ In 1899, he established the Belur Math, which became his permanent abode and he also introduced the world to the Indian philosophies of Vedanta and Yoga.

- **His philosophy:** Vivekananda attempted to infuse vigor into Hindu thought, placing less emphasis on the prevailing pacifism and presenting Hindu spirituality to the West. He was an activating force in the movement to promote Vedanta philosophy (one of the six schools of Indian philosophy) in the United States and England.
- **Chicago Speech:** In 1893 he appeared in Chicago as a spokesman for Hinduism at the World's Parliament of Religions and so captivated the assembly that a newspaper account described him as "an orator by divine right and undoubtedly the greatest figure at the Parliament."
- **Death:** He died on July 4, 1902, after a brief second visit to the West

MAHAKAVI SUBRAMANIA BHARATI

Vice-President M. Venkaiah Naidu paid tributes to Mahakavi Subramania Bharati on his 100th death centenary.

About:

- **Birth:** He was born on December 11, 1882, in Ettaiyapuram, Madras Presidency.
- He is also known as 'Mahakavi Bharathiyar'.
- **Role:** Indian writer of the nationalist period (1885-1920) who is regarded as the father of the modern Tamil style.
- **Early life:** The son of a learned Brahman, he became a Tamil scholar at an early age. He received little formal education, however, and in 1904 he moved to Madras.
- There he translated English into Tamil for several magazines and later joined the Tamil daily newspaper Swadesamitran.
- **The Nationalist period:** The exposure to political affairs led to his involvement in the extremist wing of the Indian National Congress party, and, as a result, he was forced to flee to Pondicherry. During this time Bharati's nationalistic poems and essays were popular successes.
- In order to proclaim its revolutionary ardour, Bharathi had the weekly newspaper named 'India' printed in red paper. It was the first paper in Tamil Nadu to publish political cartoons. He also published and edited a few other journals like "Vijaya".
 - ♦ He was also the first Asian poet to sing the glory of the Bolshevik revolution.
 - ♦ He published the sensational "Sudesa Geethangal" in 1908.
- **Respects & Recognition:**
 - ♦ The Government of India in 1987 instituted the highest National Subramania Bharati Award conferred annually on writers of outstanding works in Hindi literature.
 - ♦ Bharathiar University, a state university has been named after the poet in Coimbatore.
 - ♦ SubramaniaBharati's commemorative stamp was also issued by the Indian Post in his respect.
 - ♦ **Death:** He died in 1921, in Chennai at the age of 38.

CIPS EXCELLENCE IN PROCUREMENT AWARDS 2021

The Government e Marketplace (Gem) was awarded the prestigious CIPS Award 2021.

About:

- **Award:** The CIPS Awards are one of the leading recognitions around procurement globally, which is conducted under the aegis of The Chartered Institute of Procurement & Supply (CIPS), London.
- **Organization:** CIPS is a global not-for-profit organisation and professional body dedicated to promoting good practices in procurement and supply management, with a community across 150 countries.

About GeM:

- GeM is a short form of one stop Government e-Market Place hosted by DGS&D where common user goods and services can be procured.
- GeM is dynamic, self-sustaining and user friendly portal for making procurement by Government officers.
- **Benefits:** GeM offers a cashless, contactless, and paperless experience for sellers and buyers, and serves as an end-to-end solution for procurement of common use goods and services by Government buyers.

3RD STATE FOOD SAFETY INDEX

The Union Minister for Health and Family Welfare has released the 3rd State Food Safety Index (SFSI).

About:

- **Purpose:** The Index is a weighted and quantitative measurement model that provides a framework for the purpose of assessing food safety in all States / UTs.

First index:

- **Nodal Agency:** Food Safety and Standards Authority (FSSAI) has developed the index to measure the performance of states based on five parameters of food safety.
 - ♦ The Index is a dynamic quantitative and qualitative benchmarking model that provides an objective framework for evaluating food safety across all States/UTs.
 - ♦ Important food safety parameters.

- **Parameters:** The parameters include Human Resources and Institutional Information, Compliance, Food Testing - Infrastructure and Oversight, Training and Capacity Building and Consumer Empowerment.
- **Ranking of States:** Among the larger states, Gujarat was the top ranking state, followed by Kerala and Tamil Nadu.
 - ♦ Among the smaller states, Goa stood first followed by Meghalaya and Manipur.
 - ♦ Among UTs, Jammu & Kashmir, Andaman & Nicobar Islands and New Delhi secured top ranks.
- **Related Initiative:** Codex Alimentarius, or "Food Code" is a collection of standards, guidelines and operating codes used by the Codex Alimentarius Commission.
 - ♦ The Codex Alimentarius Commission is a joint body of the Food and Agriculture Organization (FAO) and the World Health Organization (WHO).
 - ♦ Currently, it has 189 members and India is a member.

FOOD SAFETY AND STANDARDS AUTHORITY OF INDIA (FSSAI)

- It is an independent body in terms of the law established under the Food Safety and Standards Act, 2006 (FSS Act).
- The Act aims to establish a single point of reference for all matters relating to food security and standards, from multi-level, multi-departmental administration to a single command line.
- It comes under Ministry of Health & Family Welfare.
- It is made up of the Chairperson and twenty-two members where one-third shall be women. The Chairperson of the FSSAI is appointed by the Central Government.
- The main enforcement obligation is primarily on the State Food Commission.

CYCLONE GULAB

Recently, a deep depression formed in the Bay of Bengal that intensified into a cyclonic storm that hit the coasts of Andhra Pradesh and Odisha.

About:

- **Name:** The name of the storm Gulab was given by Pakistan.
- **Location:** The storm affected the southern coast of and coastal Andhra Pradesh. Andhra Pradesh.

- **Category:** It was categorised as severe category cyclone by IMD.
 - ♦ It caused landslides and heavy rains and strong winds over the northern coast of Andhra Pradesh and the southern coast of Odisha.
- **Type of energy:** Because of the weak to moderate Indian Ocean Dipole (IOD), equatorial Rossby (natural planetary waves) could transfer a lot of energy (moisture) to the system.
- **Formation of cyclones:** They are formed over the oceanic water in the tropical region.
- **Process:** A few different climatic features also help the system to stabilize and retain moisture.

GLOBAL INNOVATION INDEX 2021

Recently, India has climbed 2 spots and has been ranked 46th in the Global Innovation Index 2021 rankings.

About:

- **GII:** The GII is the fulcrum for the governments – across the world – to assess the social and the economic changes in their respective countries.
- **Data:** It is based on both subjective and objective data derived from several sources, including the International Telecommunication Union, the World Bank and the World Economic Forum.
- **Partnership:** It is published in partnership with the Portulans Institute and other corporate partners.
- **Indicators:** The Index comprises around 80 indicators, including measures on the political environment, education, infrastructure and knowledge creation of each economy.
- **Global Performance:** Top Five namely Switzerland, Sweden, U.S., and U.K. continue to lead the innovation ranking, and have all ranked in the top 5 in the past three years.
 - ♦ The Republic of Korea joins the top 5 of the GII for the first time in 2021.
 - ♦ Four Asian economies feature in the top 15: Singapore (8), China (12), Japan (13) and Hong Kong, China (14).
- **India's Performance:** India has been on a rising trajectory, over the past several years in the Global Innovation Index (GII), from a rank of 81 in 2015 to 46 in 2021.
 - ♦ India ranks 2nd among the 34 lower middle-income group economies.
 - ♦ India ranks 1st among the 10 economies in Central and Southern Asia.

JUDIMA WINE RICE GETS G.I TAG

Judima, a home-made rice wine of Assam's Dimasa tribe has been awarded the GI tag.

About:

- It is the first traditional brew in all of northeast to get a GI tag.
- **Meaning:** Judima derives its name from ju which means wine and Dima means 'belonging to the Dimasa'. It is a pale yellow or reddish (depending on the colour of rice) drink that is slightly cloudy in appearance, has a mellow fragrance and is sweet to taste.
- **Made of:** It is made from three different types of saul (rice): red or white bora (the glutinous sticky variety), non-bora (the everyday non-sticky variety) and finally the bairing rice, a unique variety cultivated in Jhum style (terrace farming) only by the Dimasa people.
 - ♦ Bairing rice is cultivated solely for preparing Judima.
- **Taste:** A major contributor to the taste of judima, the indigenous Dhemera herb can be found as a climber and as a shrub.

RELATED FACTS

- Manipur's most famous Hathei chilli and Tamenglong orange were awarded the GI Tag earlier.
- **Other Recent GI Tagged Products from Assam:** Kaji Nemu (a type of lemon) (2020) and Chokuwa Rice of Assam (2019)

WHAT IS A GI TAG?

- A geographical indication is a name or sign used on products which correspond to a specific geographical location or origin.
- It possesses the qualities or reputation that are inherent in the products due to that origin.
- It is used for natural, agricultural and manufactured goods.
- The Department for promotion of industry and internal trade (DPIIT) under the Ministry of Commerce and Industry, provides the GI tag in India.

UTTAR PRADESH DEFENCE INDUSTRIAL CORRIDOR

Recently, PM visited the exhibition models of the Aligarh node of Uttar Pradesh Defence Industrial Corridor and Raja Mahendra Pratap Singh State University.

About:

- **Background:** Defence Industrial Corridor in Uttar Pradesh was announced in February 2018 by the Prime Minister.
- **Aim:** This corridor seeks to make India self-reliant in the field of defence production and promoting Make in India.
- **Nodes:** Under the corridor, a total of six nodes namely Agra, Aligarh, Jhansi, Kanpur, Chitrakoot, and Lucknow have been planned.

- **Why U.P.:** Uttar Pradesh is the fourth largest state in India and the third largest economy within the country.
 - ♦ The state also ranks first in terms of number of Micro, Small & Medium Enterprises (MSMEs) in the country and ranks 2nd in Ease of Doing Business (EoDB).
- **Nodal Agency:** Uttar Pradesh Expressways Industrial Development Authority (UPEIDA) is the nodal agency for the corridor development.

63RD RAMON MAGSAYSAY AWARD

Recently the Ramon Magsaysay Award 2021 was announced

About:

- The Ramon Magsaysay Award is an annual award, which is also known as Asia's Nobel Prize.
- Ramon Magsaysay Award was established in 1957 as an annual award in memory of the third president of the Philippines, Ramon Magsaysay.
- The award aims to perpetuate former Philippine President Ramon Magsaysay's example of integrity in governance, courageous service to the people, and pragmatic idealism within a democratic society.
- The Award recognises and honours individuals and organisations in Asia, regardless of race, creed, gender, or nationality, who have achieved distinction and have helped others generously without aiming for public recognition.
- The awards were traditionally given in six categories, five of which were discontinued in 2009 namely:
 - ♦ Government service; public service; community leadership; journalism, literature and creative communication arts; and peace and international understanding.

WINNERS OF 2021

- Ramon Magsaysay Awards 2021 will be conferred to five people who have made selfless and extraordinary contributions to the eradication of poverty and the development of the society in Asia.
- **Ramon Magsaysay Award 2021 Winners:** Bangladeshi vaccine scientist Dr. Firdausi Qadri, Filipino fisher Roberto Ballon and humanitarian worker Steven Muncy have been named among the five winners of the Ramon Magsaysay Awards 2021.

WITHDRAWAL OF MONSOON

Excess rainfall in September shrinks monsoon deficit to 4% as per IMD.

About:

- **Range:** The weekly cumulative monsoon rainfall over Central and North West India was 150 per cent and 53 percent higher, respectively, than the long period average (LPA), due to which the all-India monsoon rainfall deficit till September 15 got shrunk to 4 percent.
- **Withdrawal:** According to IMD, the monsoon withdrawal from northwest India takes place if there is a cessation of rainfall activity over the area for continuous five days.
- **Anti-cyclone:** For withdrawal of monsoon an anti-cyclonic wind has to form over the lower troposphere, and there should also be considerable reduction in moisture content.
- **Reason:** High rainfall and low salinity were recorded after periods of higher concentrations of atmospheric carbon dioxide, lower levels of global ice volume and subsequent increases in regional moisture-bearing winds.

RELATED INFORMATION

- **Long Period Average (LPA):** It is the average rainfall recorded during the months from June to September, calculated over a period of 50 years, and is maintained as a benchmark while predicting the highest rainfall of the rainy season each year.
- **Anticyclones:** An anticyclone is the opposite of a cyclone i.e., it has an outward-spiralling air circulation around a high pressure centre.
 - ♦ An anticyclone's winds rotate clockwise in the Northern Hemisphere around a centre of high pressure.
 - ♦ In anticyclones, air comes in from above and sinks to the ground. High pressure centres generally have fair weather.

APEDA INKS MOU WITH ICAR-INDIAN INSTITUTE OF MILLET RESEARCH

The Agricultural & Processed Food Products Export Development Authority (APEDA) signed a Memorandum of Understanding (MoU) with the ICAR-Indian Institute of Millet Research (ICAR-IIMR) to boost value addition and farmers' income.

About:

- The MoU envisions the creation of market linkages with farmers and Farmer Producers Organizations (FPOs)
- To promote commercial cultivation of process able varieties developed by ICAR-IIMR for exports.
- The MoU aims to build an export-centric ecosystem with requisite supply chain linkages, technological repository,

clinical studies, awareness creation, policy changes, and a pipeline of entrepreneurs.

- To source considerable quantities of produce & link stakeholders with FPO's, both APEDA & ICAR-IIMR will work for the creation of a Millet Export Promotion Forum in collaboration with key stakeholders.
- At the core of signing the MoU between APEDA & ICAR-IIMR lies the objective of reviving millets for ensuring the nutritional security of the country.

The United Nations General Assembly has passed the resolution to celebrate the International Year of Millets (IYM) in 2023, to promote the health benefits of millets and their suitability under the changing climatic conditions globally.

BAIJAYANT PANDA COMMITTEE

The Ministry of Defence has constituted a high-level expert committee for a comprehensive review of National Cadet Corps (NCC)

About:

- **Members:** Former MP Shri Baijayant Panda to be the Chairperson of the Committee; Cricketer MS Dhoni, Mahindra Group Chairman Anand Mahindra are among the members.

Objective:

- Committee will suggest measures to empower NCC cadets to contribute more effectively towards nation building.
- It will propose ways for gainful engagement of NCC Alumni for betterment of the organisation.
- It will recommend best practices of similar international youth organisations for inclusion in NCC curriculum.

NATIONAL CADET CORPS (NCC)

The NCC is the largest uniformed organisation which aims at developing character, discipline, a secular outlook and ideals of selfless service amongst young citizens. It also aims to create a pool of organised, trained and motivated youth with leadership qualities in all walks of life.

CLIMATE CRISIS MINISTRY

Greece's government has created a new ministry to address the impact of climate change

About:

- The new ministry has been named as the Ministry of Climate Crisis and Civil Protection.
- The new minister will head firefighting, disaster relief and policies to adapt to rising temperatures resulting from climate change.
- **Indian Scenario:** In India Maharashtra government announced the formation of State Council for Climate Change based on a report by the Intergovernmental Panel on Climate Change (IPCC) about carbon impact. Terming it as a "climate emergency", that will prepare an action plan within a month to deal with the challenges of climate crisis.

EAT RIGHT STATION' CERTIFICATION

Chandigarh Railway Station has been awarded a 5- star Eat Right Station certification.

About:

- It is the fifth station in India to get this recognition.
- The other four stations are Anand Vihar Terminal Railway Station (Delhi), Chhatrapati Shivaji Terminus (Mumbai), Mumbai Central Railway Station (Mumbai) and Vadodara Railway Station.
- The certification is part of the 'Eat Right India' movement.
- This certification is granted by FSSAI to railway stations adhering to standard food storage and hygiene practices.
- The 'Eat Right Station' certification is awarded by FSSAI to railway stations that set benchmarks in providing safe and wholesome food to passengers.
- The certification is part of the 'Eat Right India' movement- a large-scale effort by FSSAI to transform the country's food system to ensure safe, healthy and sustainable food for all Indians.
- Eat Right India adopts a judicious mix of regulatory, capacity building, collaborative, and empowerment approaches to ensure that our food is suitable both for the people and the planet.

FUKUTOKU-OKANOBA SUBMARINE VOLCANO

Fukutoku-Okanoba Submarine Volcano that exploded in the Pacific Ocean, off Japan poses a risk to the passage of planes and ships.

About:

- The volcano is situated about 25 metres (80 feet) below the sea five kilometres north of Japan's South Iwo Jima Island.

- Plume is geared towards an underwater event to a volcanic cloud that reaches the lower boundary of the Stratosphere, this is not uncommon for this type of volcano.
- As per experts, the amount of water in the vent of the volcano determined as to how explosive it eventually turned out to be.
- Explosions and underground sea activity often cause water changes in the area, and during the eruption the volcano formed several temporary islands.

SUBMARINE VOLCANOES

- Submarine volcanoes are underwater gaps or cracks in the earth's crust where magma can emerge.
- Many submarine volcanoes are located near the tectonic plateau, known as marine edges.
- The submarine volcanic activity accounts for roughly 75% of the average annual volume of magma that reaches the Earth's crust.
- Most submarine volcanoes are found on ridges thousands of meters below the ocean surface.

INDIA'S FIRST-EVER EURO GREEN BOND

Recently, Power Finance Corporation Ltd (PFC), has issued its maiden Euro Green Bond.

About:

- It is the first ever Euro denominated Green bond issuance from India. Moreover, it is the first ever Euro issuance by an Indian NBFC and the first Euro bond issuance from India since 2017.
- The issuance saw a strong participation from institutional investors across Asia and Europe with a participation from across 82 accounts and was oversubscribed 2.65 times.

Green Bonds:

- A green bond is a type of fixed-income instrument designed specifically to raise money for climate and environmental projects.
- These bonds are usually linked to the asset and are supported by the issuance of the issuing business, so they usually carry the same amount of debt as other issuers' liabilities.
- Green bonds sometime are provided with tax incentives to increase their attractiveness to investors.
- The World Bank is a major supplier of green bonds. It has issued 164 such bonds since 2008, worth a total of \$ 14.4 billion.
- By 2020, the total issuance of green bonds would have cost about \$ 270 billion, according to the Climate Bond Initiative.

- Green bonds work just like any other corporate or government bond.

ADDITIONAL INFORMATION

- In India, YES Bank was the first bank to issue green bonds in 2015 for financing renewable and clean energy projects.
- Ghaziabad Municipal Corporation, a civic body in Uttar Pradesh, has become India's first municipal corporation to successfully list the country's first green municipal bonds on the Bombay Stock Exchange (BSE) in April 2021.
- All blue bonds are green bonds, but not all green bonds are blue bonds.
- Blue bonds are sustainability bonds to finance projects that protect the ocean and related ecosystems.

LADAKH ADOPTS STATE ANIMAL AND BIRD

Two endangered species, Snow Leopard and Black-necked Crane, were adopted by the UT of Ladakh recently as State animal and State bird.

About:

- **Snow Leopard**
 - ♦ **About:** Being the top predator in the food web it acts as an indicator of the health of mountain ecosystem.
 - ♦ **Native:** They are native to the mountain ranges in Central and South Asia.
 - Snow Leopard capital of the world: Hemis National Park, Ladakh.
 - ♦ **Threat:** Illegal poaching, Illegal trade of wildlife parts and products and increased human population infiltration into the species habitat.
 - ♦ **Conservation Status:** The snow leopard is listed as Vulnerable on the IUCN-World Conservation Union's Red List of the Threatened Species and under Schedule I of Wildlife Protection Act, 1972 in India. It is listed on Appendix I of the Convention on International Trade of Endangered Species (CITES)
- **Black-necked Crane:**
 - ♦ **About:** The black-necked crane (*Grus nigricollis*), also known as Tibetan crane, is a large bird and medium-sized crane.
 - ♦ It was the State bird of J&K before August 5, 2019.
 - ♦ **Threat:** Loss of habitat due to human pressure (Development Projects) on the wetlands.
 - ♦ **Conservation Status:** It has been listed in Schedule I of Wildlife (Protection) Act 1972 and as Endangered on the IUCN Red List.

MAMMOTH CAVE

Mammoth Cave National Park, home to the world's longest-known cave system, is now even longer.

About:

- The world's longest cave system has added 8 miles (13 kilometres) to its length.
- **Location:** Mammoth Cave National Park, located in the state of Kentucky (US).
- **Total Length:** It brings the total length of the cave system in south-central Kentucky to 420 miles (676 kilometres)
- **Status:** It has been tagged as World Heritage Site and an International Biosphere Reserve.
- **Formation:** Mammoth Cave was created by the natural process of limestone erosion, known as karst topography.

KARST TOPOGRAPHY

- A typical karst landscape forms when much of the water falling on the surface interacts with and enters the subsurface through cracks, fractures, and holes that have been dissolved into the bedrock.
- It is associated with soluble rock types such as limestone, marble, and gypsum.

MOU BETWEEN INDIA AND ITALIAN REPUBLIC

A Memorandum of Understanding (MoU) was approved between the National Disaster Management Authority (NDMA) of India and Italian Republic on Cooperation in the field of Disaster Risk Reduction and Management.

About:

- The MoU seeks to put in place a system, whereby both India and Italy will benefit from the Disaster Management mechanisms of each other.
- **Use:** It will also help in strengthening the areas of preparedness, response and capacity building in the field of Disaster Management.

PARKS FOR FUTURE MOBILITY

A future mobility park and an integrated apparel park was announced to be setup in Tamil Nadu recently.

About:

- **Purpose:** Both programs will strengthen economic development of the region.
- **Investment:** Efforts were also announced to attract investment to the state defense industry. Ex: A typical test site to assist research in the field of aerospace and defense.

WHAT IS THE FUTURE MOBILITY PARK?

The park will use advances in data science, artificial intelligence and sensory technology to provide clean, flexible transportation, new business models and new ways of moving. Such walking parks were established in the UK, Detroit (USA) etc.

- **Supply chain:** The government has also announced an integrated state-of-the-art supply chain plan to regulate the delivery of goods to customers, and will build an export cell that will improve exports and develop research and development policy.

POLLEN CALENDAR

A team from PGIMER and Punjab University has developed a pollen calendar for Chandigarh for the first time for any Indian city.

About:

- The study has been conducted to examine seasonal periodicities of airborne pollen spectrum.
- **Aim:** The study aims to bring airborne pollen seasonal information to the susceptible population, healthcare professionals, policymakers, and scientists to be familiar with the current changes in the environment, which can further help develop mitigation strategies.
- **Pollens** are considered major outdoor airborne allergens responsible for allergic rhinitis, asthma, and atopic dermatitis in humans.
- **Pollen calendars** represent the time dynamics of airborne pollen taxa in graphical form in a particular geographical area.
- **Features:** Pollen calendars are location-specific, with concentrations closely related to locally distributed flora.
- **Benefits:** This will help prepare early advisories and disseminate them through media channels to the citizens so that they can use protective gear during the period when the concentration of allergic pollens will be high.
 - ♦ It is also a preventive tool for sensitive people to diminish exposure when the levels of aero-pollen are high during specific periods.

MURA-DRAVA-DANUBE BIOSPHERE RESERVE

Recently, the UNESCO designated Mura-Drava-Danube (MDD) as the world's first 'five-country biosphere reserve'.

About:

- This area crossing the biosphere boundaries runs along the Drava, Mura and Danube Rivers, which are separated by flood proof dyes in the floodplain and floodplain.
- Nature reserves provide an important tool for learning the various methods of flood management.
- The park covers 700 kilometres of the Mura, Drava and Danube rivers and extends to Austria, Slovenia, Croatia, Hungary and Serbia.
- The complete park area in the 'Amazon of Europe', makes it one of the most protected river areas on the continent.
- The Park is home to floodplains, gravel and sandy beaches, river islands, oxen and meadows and home to the highest European continent of white breeding eagles.

RELATED INFORMATION

Biosphere Reserves in India:

- Presently, there are 18 Biosphere Reserves in India, among which 12 Biosphere reserves in India find their place in UNESCO's List of Man & Biosphere Reserves Programme.
- The latest included under the MAB was 'Panna Biosphere Reserve' (Madhya Pradesh).
- There are 727 biosphere reserves in 131 countries, including 22 Tran's boundary sites.

Main Zones of a Biosphere Reserve:

- **Core Areas:** It comprises a strictly protected zone that contributes to the conservation of landscapes, ecosystems, species and genetic variation.
- **Buffer Zones:** It surrounds or adjoins the core area(s), and is used for activities compatible with sound ecological practices that can reinforce scientific research, monitoring, training and education.
- **Transition Area:** The transition area is where communities foster socio-culturally and ecologically sustainable economic and human activities.

PROF. S.K. JOSHI LABORATORY EXCELLENCE AWARD

The Quality Council of India (QCI) launched the Prof. S.K. Joshi Laboratory Excellence Award virtually.

About:

- **Award:** This is country's first-of-its-kind Laboratory Excellence Award and aims to promote Laboratory Quality and performance improvement in the country.
- **Objective:** The award has been incepted to ensure the laboratory's commitment to achieve excellence in providing high precision testing and calibration services in line with the prevalent national/international quality systems legislations, including Health, Safety & Environment.
- **Participation:** This award will be open to all currently operational Laboratories pertaining to Testing, Calibration & Medical including their Proficiency Testing Providers & Reference Material Producers located in India.
- **Assessment:** The 5 stages of assessment by Technical Expert Committee (TEC) are Application Document Evaluation, Physical/Virtual Presentation, Site Assessment/Verification, Reference check and Jury evaluation.

INSPIRE AWARDS – MANAK

The 8th National Level Exhibition and Project Competition (NLEPC) for the INSPIRE Awards – MANAK was commenced.

About:

- **Aim:** The scheme aims to motivate student's in the age group of 10-15 years studying in classes 6 to 10 to become future innovators and critical thinkers.

Features:

- **Participants:** Under this program student are invited to all public or private schools across the country, regardless of their educational boards (national and government).
 - ♦ It covers students aged 10-15 and studying in grades 6 to 10, doing Science and research work.
- **Reward:** A prize of Rs. 10, 000 is paid into the bank accounts of successful students.
- **Benefits:** This will help address the societal needs through science and technology and nurture them to become sensitive and responsible citizens and innovation leaders of tomorrow.

INSPIRE SCHEME

- The INSPIRE (Innovation in Science Pursuit for Inspired Research) is a programme of the Ministry of Science and Technology & Earth Sciences.
- Started in the year 2010 the scheme covers students in the age group of 10-32 years and has five components.



Test Yourself

Multiple Choice Questions

- Sun Screen creams are said to contain harmful toxic chemicals like Oxybenzone, octinoxate and octocrylene. Which of the below harmful effects arises from their use:
 - Disrupt coral reproduction
 - Damage human cells
 - Induce carcinogenic activities in cellsSelect the correct codes ?
(a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3
- With respect to Earthshot Prize , Consider the following statements:
 - It aims to mobilise collective action around our unique ability to innovate, problem solve and repair our planet
 - The nominations of this prize were open only for British Commonwealth.
 - Two Indians qualified among the finalists for this award.Which of the above is/are correct?
(a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3
Consider the following sites :
 - Anjar
 - Jabalpur
 - JodhpurWhich of the above is/are related to dinosaur?
(a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3
- Recently, the shorelines of Istanbul were covered with a viscous, greyish substance which has the potential to create ecological disaster. It is known as:
 - Sea Dumping
 - Guyot
 - Sea Snot
 - Algal Bloom
- With respect to the recently launched Shoonya program, consider the following statements:
 - It is an initiative to promote zero-pollution delivery vehicles by working with consumers and industry.
 - It is launched by NITI aayog in association with Ministry of Environment and Forest.
 - It will even have a certification programme to recognise and promote industry's efforts towards transitioning to EVs for final-mile deliveries.Which of the above is/are correct?
(a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3
- With respect to Precision-Guided Sterile Insect Technique (pgSIT), Consider the following statement :
 - It is a CRISPR based technique to control population of mosquitoes.
 - Under this technology the male mosquitoes are sterilized to render female mosquitoes, which spread disease, as flightless.
 - This technology is also harmful as it is predicted to spread in the environments also.Which of the above is/are correct?
(a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3
- Consider the following properties:
 - Highly electro-negative
 - Least dense
 - Highly flammable
 - Highly reactiveWhich of the above is/are properties of Lithium ?
(a) 1, 2 and 3 only (b) 2, 3 and 4 only
(c) 1, 3 and 4 only (d) 1, 2, 3 and 4 "
- With respect to instruments on-board Chandrayaan-2 , Consider the following statement :
 - The Terrain Mapping Camera (TMC-2) did the first-ever unambiguous detection of the hydration features of the Moon
 - Orbital High Resolution Camera (OHRC) helped Chandrayaan-2 to imagine the Moon from 100 km lunar orbit with best-ever achieved resolution of 25 cm.
 - Chandrayaan-2 Large Area Soft X-ray Spectrometer (CLASS) discovered presence of Chromium and Manganese on the lunar surface.Which of the above is/are correct?
(a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3
- These are a class of star observed in old, dense stellar systems such as globular clusters. They appear to be lagging behind most of the other stars in the cluster in its evolution toward a cooler, reddish state. They tend to be strongly concentrated toward the centre of the cluster. They are:
 - Black Hole
 - Pulsar
 - Sirius
 - Blue Straggler "
- Consider the following statements :
 - Mutation in Covid virus strain
 - Prolonged exposure to the virus
 - Lack in efficacy of available vaccinesWhich of the above can be a probable reason/s for breakthrough Covid infection ?
(a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3
- With respect to Kigali Amendment, consider the following statement:
 - It is an amendment brought to the Montreal Protocol for controlling Ozone Depleting Substances.
 - India has not ratified it till now.
 - If implemented in full spirit it can avoid up to 0.4°C of global warming by the end of this century.Which of the above is/are correct?
(a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3

12. Consider the following adverse impacts :
1. Renal Failure
 2. Paralysis
 3. Tissue Damage
 4. Fatal Haemorrhage
- Which of the above can be caused by Snake bite?
- (a) 1,2 and 3 only (b) 2,3 and 4 only
(c) 1,3 and 4 only (d) 1, 2,3 and 4 "
13. With respect to NASA's VIPER mission, consider the following statement:
1. It is NASA's first mobile robot mission to Moon
 2. It will mark a critical step forward in NASA's Artemis program.
 3. It plan to touch down Lunar North Pole by 2023
- Which of the above is/are correct?
- (a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3
14. With reference to Loan Guarantee Scheme for COVID-affected Sectors (LGSCAS), consider the following statements
1. It is aimed at boosting both greenfield and brownfield medical infrastructure in the country.
 2. National Credit Guarantee Trustee Company Ltd (NCGTC) will provide the guarantee for this scheme.
- Which of the above statements is/are correct?
- (a) 1 only (b) 2 only
(c) Both 1 & 2 (d) None of the above
15. With reference to National Credit Guarantee Trustee Company Ltd (NCGTC), consider the following statements
1. It is a private limited company incorporated under the Companies Act 1956 in 2014.
 2. It was established by the Department of Financial Services, Ministry of Finance.
- Which of the above statements is/are correct?
- (a) 1 only (b) 2 only
(c) Both 1 & 2 (d) None of the above
16. With reference to central securities depositories (CSD), consider the following statements
1. CSD is a financial organisation that specialises in holding securities (debt, equities, bonds etc).
 2. These help brokers and financial companies to hold securities at a single location for clearing and settlement.
- Which of the above statements is/are correct?
- (a) 1 only (b) 2 only
(c) Both 1 & 2 (d) None of the above
17. With reference to Government Securities or G-secs, consider the following statements
1. The Central Government issues both, treasury bills and bonds or dated securities
 2. The State Governments issue only bonds or dated securities, which are called the State Development Loans (SDLs).
- Which of the above statements is/are correct?
- (a) 1 only (b) 2 only
(c) Both 1 & 2 (d) None of the above
18. With reference to 'Retail Direct' scheme, consider the following statements
1. It is a one-stop solution to facilitate investment in government securities by individual investors.
 2. Under this scheme, Retail investors (individuals) have the facility to open and maintain the 'Retail Direct Gilt Account' (RDG Account) with the RBI.
- Which of the above statements is/are correct?
- (a) 1 only (b) 2 only
(c) Both 1 & 2 (d) None of the above
19. With reference to Special Drawing Rights (SDR), consider the following statements
1. It is an interest-bearing international reserve asset created by the IMF in 1969 to supplement assets of its member countries.
 2. Participating members are not allowed to buy and sell SDRs in the voluntary market.
- Which of the above statements is/are correct?
- (a) 1 only (b) 2 only
(c) Both 1 & 2 (d) None of the above
20. With reference to Financial Stability and Development Council, consider the following statements
1. It is a statutory council under the Ministry of Finance which promotes financial sector development.
 2. RBI governor is the Chairman of the Council.
- Which of the above statements is/are correct?
- (a) 1 only (b) 2 only
(c) Both 1 & 2 (d) None of the above
21. With reference to Account Aggregator (AA) network, consider the following statements
1. It is a non-banking financial company (NBFC) engaged in the business of providing the service of retrieving or collecting financial information pertaining to its customer.
 2. Account Aggregator network allows sharing of transaction data or bank statements from savings/deposit/current accounts.
 3. RBI has recently made mandatory for customers to join AA network to improve financial dealings in the country.
- (a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1,2 and 3
22. Which of the above statements is/are correct?
- (a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1,2 and 3
23. With reference to UDAN (Ude Desh Ka Aam Nagrik) Scheme, consider the following statements
1. It is a Regional Connectivity Scheme (RCS) launched in 2016 to enhance connectivity to remote and regional areas of the country.
 2. Under the scheme, all the seats in Udan flights are offered at subsidised fares.
 3. The operation of helicopter and seaplanes has also been incorporated under the scheme.
- Which of the above statements is/are correct?
- (a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1,2 and 3
24. With reference to Bad Bank, consider the following statements
1. It is an Asset Reconstruction Company (ARC) that buys bad loans (Non-Performing Assets) from the commercial banks at a discount and tries to recover the money from the defaulters.

2. Government recently set up India's first bad bank in the form of NARCL-IDRCL structure.
Which of the above statements is/are correct?
(a) 1 only (b) 2 only
(c) Both 1 & 2 (d) None of the above
25. With reference to National Asset Reconstruction Company Limited (NARCL), consider the following statements
1. It is a part of newly structured first bad bank of India.
2. Its role in the bad bank is to sell the stressed assets in the market.
Which of the above statements is/are correct?
(a) 1 only (b) 2 only
(c) Both 1 & 2 (d) None of the above
26. With reference to India Debt Resolution Company Ltd (IDRCL), consider the following statements
1. It is a part of newly structured first bad bank of India.
2. Its role in the bad bank is to acquire stressed assets from various commercial banks.
Which of the above statements is/are correct?
(a) 1 only (b) 2 only
(c) Both 1 & 2 (d) None of the above
27. With reference to PLI Scheme for Drones and Drone Components, consider the following statements
1. In an exceptional treatment to drone industry, PLI rate has been constant at 20% for all three years of the scheme period.
2. The scheme also covers developers of drone-related IT products under it.
Which of the above statements is/are correct?
(a) 1 only (b) 2 only
(c) Both 1 & 2 (d) None of the above
28. With reference to Liberalised Drone Rules, 2021, consider the following statements
1. The coverage of the Drone rules has been increased to cover drones up to 500 kg in weight from 300 kg earlier.
2. The quantum of associated fees, which was earlier linked to the size of drone, has been reduced and delinked from the size.
3. The requirement for security clearance before issuance of any registration or licence has been done away with.
Which of the above statements is/are correct?
(a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1,2 and 3
29. With reference to National Single Window System (NSWS), consider the following statements
1. It has been launched by Ministry of Corporate Affairs to serve as a one-stop-shop for investors for approvals and clearances.
2. The Department for Promotion of Industry and Internal Trade along with Invest India initiated the process of developing the portal as a National Single Window System.
Which of the above statements is/are correct?
(a) 1 only (b) 2 only
(c) Both 1 & 2 (d) None of the above
30. With reference to Invest India, consider the following statements
1. It is a public-private venture with 49% government's stake and 51% shareholding equally held by different industry associations.
2. The entire government's stake is held by the Ministry of commerce and industry.
3. Industry secretary is the non-executive chairman of Invest India.
Which of the above statements is/are correct?
(a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1,2 and 3
31. With reference to Patent Act 1970 (in current form), consider the following statements
1. It provides for patent protection for inventions relating to both processes and products.
2. Section 3(d) of the patent act curbs ever-greening of pharmaceutical patents.
3. Recently, patent fees for all educational institutions have been reduced by 80%.
Which of the above statements is/are correct?
(a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1,2 and 3
32. The terms 'Grey Market Premium' and 'Kostak' recently seen in news are related to
(a) Foreign Exchange
(b) Initial Public Offering
(c) Government securities
(d) Carbon credits
33. Anti-trust cases recently seen in news relates to cases against
(a) Big construction companies accused of building poor quality roads
(b) Big mining firms accused of violating tribal rights
(c) Big digital firms accused of abusing their dominant position to curb fair competition
(d) None of the above
34. G-20 Agriculture Meet 2021 organised as part of the G20 Leaders Summit 2021 will be hosted by?
(a) Russia (b) Italy
(c) France (d) India"
35. Recently an integrated apparel park and a future mobility park was announced to be setup in?
(a) Tamil Nadu (b) Karnataka
(c) Maharashtra (d) Orissa"
36. Fukutoku-Okanoba Submarine Volcano was sometime in news, it is located in?
(a) Pacific ocean (b) Atlantic Ocean
(c) Arctic Ocean. (d) Indian Ocean"
37. With reference to the snow leopard. Consider the following statement
1. *Grus nicricollis* is the scientific name
2. It has been categorized as "vulnerable" in the IUCN red list.
3. It has been recently adopted as the state animal of Ladakh.
Choose the correct option from below:
(a) 1 & 2 only (b) 2 & 3 only
(c) only 2 (d) 1 & 3 only"

- 38.** With reference to Ramon Magsaysay Award 2021. Consider the following statement
1. The Ramon Magsaysay awards are regarded as Asia's version of the Nobel Prize.
 2. The Ramon Magsaysay Award was established in 1957.
- Choose the correct option from below:
- (a) 1 only (b) Both 1 & 2
(c) 2 only (d) neither 1 nor 2
- 39.** Consider the following statements.
1. The northern Indian Ocean experiences a quarter of world's tropical storms.
 2. The impact of tropical storms on the Indian subcontinent is severe due to a dense population and poor capacity to absorb large quantities of rainfall in a short period.
- Which of the above statements is/are correct?
- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2
- 40.** With reference to Pradhan Mantri Formalisation of Micro food processing Enterprises (PMFME) Scheme, consider the following statements:
1. It is a central sector scheme launched under the Aatmanirbhar Bharat Abhiyan.
 2. It aims to enhance the competitiveness of existing individual micro-enterprises in the unorganized segment of the food processing industry.
- Which of the above statements is/are correct?
- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2
- 41.** Consider the following statements regarding scheme to promote medical device parks:
1. The initiative is launched by the ministry of Health and Family Welfare.
 2. Its objective is to provide easy access to standard testing and infrastructure facilities.
- Which of the above statements is/are correct?
- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2
- 42.** With reference to Global Innovation Index 2021, consider the following statements:
1. It is published by the World Bank.
 2. India performed better in innovation outputs than innovation inputs in 2021.
 3. India ranks first among 34 lower middle-income group economies.
- Which of the above statements is/are correct?
- (a) 1 and 2 only (b) 2 only
(c) 3 only (d) 1, 2 and 3
- 43.** With reference to the State Food Safety Index, consider the following statements:
1. It is developed by NITI Aayog.
 2. Among the larger states Kerala ranks first in food safety parameters.
- Which of the above statements is/are correct?
- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2
- 44.** In which of the following situation(s) we can say that monsoon has withdrawn from northwest India?
1. If there is cessation of rainfall activity over the area for three consecutive days.
 2. An anti-cyclonic wind has formed over the lower troposphere and there is considerable reduction in moisture content.
- Select the correct answer code:
- (a) 1 only (b) Both 1 and 2
(c) 2 only (d) Neither 1 nor 2
- 45.** Which of the following country is not a part of Mura-Drava-Danube Biosphere Reserve, seen recently in news?
- (a) Austria (b) Slovenia
(c) Switzerland (d) Croatia
- 46.** With regard to the Grants-in-Aid to the Panchayati Raj Institutions, choose the correct statement(s) from the following:
1. Out of the total grants, 40% are tied and 60% are untied/discretionary grants.
 2. Tied grants are tied to the national priorities such as security, development of critical infrastructure and so on.
 3. Untied grants are at the discretion of the State government under which the PRI falls.
- (a) 1 only (b) 2 only
(c) 3 only (d) None of the above
- 47.** With regard to the Border Area Development Programmes, choose the correct statement(s) from the following:
1. It was introduced in 1993-94, initially covering the States bordering China
 2. Allocation of funds is determined by the Ministry of Finance, based of recommendation of the Finance Commission
 3. Funds are allocated on the basis of length of the border, population and area of border blocks
- (a) 1 only (b) 2 only
(c) 3 only (d) None of the above
- 48.** With regard to the ethnically communities, pick the incorrectly matched paired:
- (a) Karbi – Assam
(b) Bru – Tripura
(c) Kuki – Nagaland
(d) Shompen – Arunachal Pradesh
- 49.** Which of the following organisation(s) is/ are statutory body?
1. Press Council of India
 2. Advertising Standards Council of India
 3. Central Board of Film Certification
- (a) 1 and 2 (b) 1 and 3
(c) 2 and 3 (d) All of the above are statutory bodies
- 50.** With reference to Sea Cucumber, consider the following statements:
1. Sea cucumbers are part of a larger animal group called echinoderms.
 2. Sea cucumbers are of small size only.
 3. All sea cucumbers are ocean dwellers.
- Which of the statements given above is/are correct?
- (a) 1 and 3 only (b) 2 and 3 only
(c) 1 and 2 only (d) 1, 2 and 3

51. With reference to Indian Coast Guard, consider the following statements:
1. The organization is headed by the Defence minister.
 2. Maritime Zones of India are divided into five Coast Guard Regions.
- Which of the statements given above is/are correct?
- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2
52. With reference to Poshan 2.0, consider the following statements:
1. Mission Poshan 2.0 is an umbrella scheme covering the Integrated Child Development Services (ICDS).
 2. Its objective is to implement a comprehensive, unified strategy to strengthen nutritional content, delivery, outreach and outcome.
- Which of the statements given above is/are correct?
- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2
53. With reference to Poshan Vatika, consider the following statements:
1. It means that small piece of land where the people of the house grow vegetables.
 2. It aims to ensure supply of nutrition through home grown vegetables and fruits.
 3. It involves intense use of fertilizers and pesticides.
- Which of the statements given above is/are correct?
- (a) 1 and 2 only (b) 3 only
(c) 2 and 3 only (d) 1, 2 and 3
54. With reference to Poshan Abhiyan, consider the following statements:
1. It directs the attention of the country towards the problem of malnutrition and addresses it in a mission-mode.
 2. Ministry of Health and Family Welfare is the nodal Ministry for POSHAN Abhiyan.
 3. It aims to ensure holistic development and adequate nutrition for pregnant women, mothers and children.
- Which of the statements given above is/are correct?
- (a) 1 and 2 only (b) 3 only
(c) 1 and 3 only (d) 1, 2 and 3
55. With reference to Shikshak Parv, consider the following statements:
1. The theme of the 'Shikshak Parv-2021' is "Quality and Sustainable Schools: Learnings from Schools in India".
 2. The National Award to Teachers was conferred by the Prime Minister through a webinar on 5th September.
- Which of the statements given above is/are correct?
- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2
56. With reference to New Education Policy, consider the following statements:
1. The National Policy on Education was previously framed in 1986.
 2. It is Built on the foundational pillars of Access, Equity, Quality, Affordability and Accountability.
 3. It aims to transform India into a vibrant knowledge society and global knowledge superpower.
- Which of the statements given above is/are correct?
- (a) 1 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3
- (c) 1 and 3 only (d) 1, 2 and 3
57. With reference to Cabinet Committee on Economic Affairs, consider the following statements:
1. It directs and coordinates all policies and activities in the economic field including foreign investment.
 2. CCEA facilitates finalization of factual reports on the accomplishments of the Ministries, Agencies and Public Sector Undertakings.
 3. The CCEA also lays down priorities for public sector investment and considers specific proposals for investment of not less than 2 billion at present.
- Which of the statements given above is/are correct?
- (a) 1 only (b) 1 and 2 only
(c) 3 only (d) 1, 2 and 3
58. With reference to MSP, consider the following statements:
1. The minimum support prices are announced by the Government of India at the end of the sowing season.
 2. It is declared on the basis of the recommendations of the Commission for Agricultural Costs and Prices (CACP).
 3. Government announces minimum support prices (MSPs) for 22 mandated crops and fair and remunerative price (FRP) for sugarcane.
- Which of the statements given above is/are correct?
- (a) 1 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3
59. With reference to Swachh Survekshan Grameen, 2021, consider the following statements:
1. It is a survey of cleanliness, hygiene and sanitation.
 2. The Department of Drinking Water and Sanitation had commissioned the 'Swachh Survekshan Grameen' in 2018 and 2019.
 3. The weight of Direct Observation of sanitation at public places among different elements of the SSG 2021 is the highest.
- Which of the statements given above is/are correct?
- (a) 1 and 2 only (b) 3 only
(c) 2 and 3 only (d) 1, 2 and 3
60. With reference to Atmanirbhar Bharat Corner, consider the following statements:
1. In collaboration with the Ministry of Rural Development, TRIFED is going to set up an Atmanirbhar Bharat corner
 2. The first 'Atmanirbhar Bharat' corner was inaugurated Gujarat.
- Which of the statements given above is/are correct?
- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2
61. With reference to TRIFED, consider the following statements:
1. TRIFED is under the administrative control of the Ministry of Rural Development, Government of India.
 2. It was established in 1987.
 3. It has the mandate to bring socio-economic development to the tribals of the country.
- Which of the statements given above is/are correct?
- (a) 1 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3

- 62.** With reference to Digital Agriculture, consider the following statements:
1. It is the use of digital technology to integrate agricultural production from the paddock to the consumer.
 2. It can support trade in agriculture and food products, by connecting private sector suppliers to new markets.
 3. It can support the goal of achieving more resilient, productive, and sustainable agriculture and food systems.
- Which of the statements given above is/are correct?
- (a) 1 and 2 only (b) 3 only
(c) 2 and 3 only (d) 1, 2 and 3
- 63.** With reference to National Crime Record Bureau (NCRB), consider the following statements:
1. It was set up in 2001 to function as a repository of information on crime and criminals.
 2. It was established on the recommendations of the Tandon Committee.
 3. It has been entrusted with the responsibility for monitoring, coordinating and implementing the Crime and Criminal Tracking Network & Systems (CCTNS) project.
- Which of the statements given above is/are correct?
- (a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3
- 64.** Offences against the State' include cases related to sedition and waging war against the nation, those falling under provisions of which of the following:
1. Unlawful Activities Prevention Act (UAPA)
 2. Official Secrets Act
 3. Damage to Public Property Act
- Which of the statements given above is/are correct?
- (a) 1 only (b) 2 only
(c) 1 and 3 only (d) 1, 2 and 3
- 65.** With reference to SPIN scheme, consider the following statements:
1. SPIN is a specially designed program to make potters self-sustainable.
 2. Under this scheme, KVIC will facilitate potters to get easy loans from banks.
 3. The new Kashi pottery cluster will help traditional potters in increasing their skills under this scheme.
- Which of the statements given above is/are correct?
- (a) 1 and 2 only (b) 2 only
(c) 2 and 3 only (d) 1, 2 and 3
- 66.** With reference to Pradhan Mantri Mudra Yojana, consider the following statements:
1. MUDRA is an Scheduled Commercial Bank supporting development of the micro enterprise sector in the country.
 2. MUDRA provides refinance support to Banks / MFIs for lending to micro units having loan requirement upto 10 lakh.
 3. Kishor loans cover loans above 50,000/- and upto 5 lakh.
- Which of the statements given above is/are correct?
- (a) 1 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3
- 67.** With reference to NITI Ayog, consider the following statements:
1. It is a statutory body.
 2. NITI Aayog is the premier policy think tank of the Government of India, providing directional and policy inputs.
 3. The Governing Council of NITI Aayog is chaired by the Hon'ble Prime Minister and comprises Chief Ministers of all the States.
- Which of the statements given above is/are correct?
- (a) 1 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3
- 68.** With reference to Mai Bhi Digital Drive, consider the following statements:
1. It was jointly launched by the Housing and Urban Affairs Secretary and the Electronics and IT Secretary.
 2. BharatPe, Mswipe, PhonePe, Paytm, Aceware are participating in this drive to issue UPI IDs, QR codes and provide digital training.
- Which of the statements given above is/are correct?
- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2
- 69.** With reference to PM Street Vendor's AtmaNirbhar Nidhi (PM SVANidhi), consider the following statements:
1. It was launched on June 1, 2020 as a Central Sector Scheme.
 2. The street vendors are not required to pay any collateral for the loan.
 3. An Integrated IT Platform has been developed to provide an end-to-end solution for the paperless loan processing.
- Which of the statements given above is/are correct?
- (a) 1 only (b) 2 only
(c) 2 and 3 only (d) 1, 2 and 3
- 70.** With reference to Street Vendors (Protection of Livelihood and Regulation of Street Vending) Act, 2014, consider the following statements:
1. It was enacted to regulate street vendors in public areas and protect their rights.
 2. The Act doesnot define a "street vendor".
 3. The Act envisages the formation of Town Vending Committees in various districts.
- Which of the statements given above is/are correct?
- (a) 1 and 2 only (b) 2 only
(c) 1 and 3 only (d) 1, 2 and 3
- 71.** With reference to Mokshagundam Visvesvaraya, consider the following statements:
1. He was known as the father of Modern Mysore for his outstanding contribution to society.
 2. He was also conferred the British knighthood.
 3. He designed and patented automatic water floodgates in 1903, which were first installed at the Khadakwasla reservoir, in Pune.
- Which of the statements given above is/are correct?
- (a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3

- 72.** With reference to Pradhan Mantri Kaushal Vikas Yojana, consider the following statements:
1. It is the flagship scheme for skill training of youth and is implemented by the new Ministry of Skill Development and Entrepreneurship.
 2. Under this Scheme, Training and Assessment fees are completely paid by the Government.
 3. Training as per National Skills Qualification Framework (NSQF) is provided to those who are either school/college dropouts or unemployed.
- Which of the statements given above is/are correct?
- (a) 1 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3
- 73.** With reference to Apprentices Act, 1961, consider the following statements:
1. Its prime objective to fully utilize the facilities available in industry for imparting practical training.
 2. Directorate General of Training under Ministry of Skill Development and Entrepreneurship, State Apprenticeship Advisers and Department of Education are responsible for monitoring the implementation.
 3. It aims to regulate the programme of training of apprentices in the industry.
- Which of the statements given above is/are correct?
- (a) 1 and 2 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3
- 74.** With reference to Central Apprentice Council, consider the following statements:
1. It is a non-statutory body.
 2. It is tripartite by constitution with members from Government both Central and States/UTs, Employers etc.
 3. It advises the Government on laying down policies and prescribing norms & standards in respect of Apprenticeship Training.
- Which of the statements given above is/are correct?
- (a) 1 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3
- 75.** With reference to Rashtriya Gokul Mission (RGM), consider the following statements:
1. RGM was launched in December 2014 for development and conservation of indigenous as well as foreign breeds.
 2. The scheme comprises two components namely National Programme for Bovine Breeding (NPBB) and National Mission on Bovine Productivity (NMBP).
 3. Rashtriya Gokul Mission will be implemented through a National Implementing Agency.
- Which of the statements given above is/are correct?
- (a) 1 and 3 only (b) 2 only
(c) 2 and 3 only (d) 1, 2 and 3
- 76.** With reference to Gokul Gram, consider the following statements:
1. Gokul Gram will function as a state of the art ex situ training centre.
 2. The Gokul Gram will maintain milch and unproductive animals in the ratio of 60:40.
 3. It aims to optimize modern Farm Management practices and promote Common Resource Management.
- Which of the statements given above is/are correct?
- (a) 1 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3
- 77.** With reference to National Health ID System, consider the following statements:
1. It will be a repository of all health-related information of a person.
 2. Each Health ID will be linked to a health data consent manager — such as National Digital Health Mission (NDHM).
 3. The Health ID is created by using a person's basic details and mobile number or Aadhaar number.
- Which of the statements given above is/are correct?
- (a) 1 and 3 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3
- 78.** Which of the following are among the benefits of Ayushman Bharat Digital Mission:
1. Choice for People
 2. Better Access to patient Medical History
 3. Better Monitoring and Decision Making
 4. Efficiency and Accountability
- Which of the statements given above is/are correct?
- (a) 1 and 4 only (b) 1, 2 and 4 only
(c) 2, 3 and 4 only (d) 1, 2, 3 and 4
- 79.** With reference to Heat Wave, consider the following statements:
1. A heat wave is a period of unusually hot weather that typically lasts two or more weeks.
 2. Heat wave is considered if the maximum temperature of a station reaches at least 40 degree Celsius or more for Plains and at least 30 degree Celsius or more for Hilly regions.
 3. Heat waves generally occur over plains of northwest India, Central, East & north Peninsular India during March to June.
- Which of the statements given above is/are correct?
- (a) 1 only (b) 1 and 3 only
(c) 2 and 3 only (d) 1, 2 and 3
- 80.** With reference to Western Ghats, consider the following statements:
1. The Western Ghats are internationally recognized as a region of immense global importance for the conservation of biological diversity.
 2. The Ghats traverse the States of Kerala, Tamil Nadu, Andhra Pradesh, Karnataka, Goa, Maharashtra and Gujarat.
 3. The mountains of the Western Ghats and their characteristic montane forest ecosystems influence the Indian monsoon weather patterns.
- Which of the statements given above is/are correct?
- (a) 1 and 3 only (b) 2 and 3 only
(c) 1 and 2 only (d) 1, 2 and 3
- 81.** With reference to Botanical Survey of India, consider the following statements:
1. It is the apex taxonomic research organization of the country.
 2. It is under the Ministry of Earth Sciences.
 3. It was established on 13th February 1890 under the direction of Sir George King.
- Which of the statements given above is/are correct?
- (a) 1 only (b) 1 and 2 only
(c) 1 and 3 only (d) 1, 2 and 3

82. With reference to India's Flora, consider the following statements:
1. India has about 45,000 species of plants, already identified and classified, which account for about 7% of the total plant species of the world.
 2. About 28% of the Indian plants are endemic to the country.
 3. The Indian flora is mainly concentrated in three major centres of floristic diversity viz., the Himalayas, the Western Ghats and Andaman & Nicobar Islands
- Which of the statements given above is/are correct?
- (a) 1 and 3 only (b) 2 only
(c) 2 and 3 only (d) 1, 2 and 3
83. With reference to Blue Flag Certification, consider the following statements:
1. The certification is awarded by the Denmark-based non-profit Foundation for Environmental Education.
 2. The Blue Flag programme was started in France in 1985 and in areas outside of Europe in 2001.
 3. It can be obtained by a beach, marina, or sustainable boating tourism operator, and serves as an eco-label.
- Which of the statements given above is/are correct?
- (a) 1 and 3 only (b) 2 only
(c) 2 and 3 only (d) 1, 2 and 3
84. Which of the following have been awarded Blue flag certification in India:
1. Kovalam beach
 2. Eden
 3. Kappad
 4. Rushikonda
- Which of the statements given above is/are correct?
- (a) 1 and 3 only (b) 2 and 4 only
(c) 1, 2 and 4 only (d) 1, 2, 3 and 4
85. With reference to GLOBAL AIR QUALITY GUIDELINES, consider the following statements:
1. It was released by IPCC.
 2. The guidelines recommend new air quality levels to protect the health of populations, by reducing levels of key air pollutants.
 3. 6 pollutants so-called classical pollutants includes particulate matter (PM), ozone (O₃), nitrogen dioxide (NO₂), sulfur dioxide (SO₂) and carbon monoxide (CO).
- Which of the statements given above is/are correct?
- (a) 1 only (b) 2 and 3 only
(c) 1 and 3 only (d) 1, 2 and 3
86. Which of the following are possible effect of Air Pollution on Human Health:
1. Reduced lung growth in Children
 2. Ischaemic heart disease
 3. Premature Death
 4. Diet related issues.
- Which of the statements given above is/are correct?
- (a) 1 and 2 only (b) 2 and 3 only
(c) 1, 2 and 3 only (d) 1, 2, 3 and 4
87. With reference to Air quality in different parts of the country, consider the following statements:
1. In 2020, even in Delhi, the citywide average was below half of the standard on 50 day.
 2. The cleanest cities are concentrated in Kerala and southern Karnataka.
- Which of the statements given above is/are correct?
- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2
88. With reference to National Ambient Air Quality Standards (NAAQS), consider the following statements:
1. Ambient air quality refers to the condition or quality of air surrounding us in the outdoors.
 2. National Ambient Air Quality Standards are the standards for ambient air quality set by the Central Pollution Control Board (CPCB).
 3. The CPCB has been conferred this power by the Environment Protection Act.
- Which of the statements given above is/are correct?
- (a) 1 and 2 only (b) 3 only
(c) 1 only (d) 1, 2 and 3
89. Which one of the following committee published its report on reforms in the Criminal Justice system of India (CJS) in 2003?
- (a) GK Pillai Committee (b) Rajiv Mehrishi Committee
(c) Malimath Committee (d) Abhijeet Sen Committee
90. With reference to Textile Industry consider the following statements:
1. Only 20% of the Indian textile sector is listed on the stock exchange.
 2. Government recently approved a Production-Linked Incentive (PLI) Scheme worth Rs 10,683 crore for the textiles sector.
- Which of the statements given above is / are correct?
- (a) 1 only (b) 2 only
(c) Both 1 and 2 (d) Neither 1 nor 2
91. With reference to Bad Bank consider the following statements:
1. NARCL-IDRCL structure is the new bad bank.
 2. PSBs will acquire 49% ownership in NARCL.
 3. A bad bank is an Asset Management Company (AMC).
 4. The bad bank is involved in lending and taking deposits
- Which of the statements given above is / are correct?
- (a) 1 and 3 only (b) 2, 3 and 4 only
(c) 2 and 4 only (d) 1, 2 and 3 only
92. Consider the following statements:
1. Montreal Protocol was adopted under the 1985 Vienna Convention for the Protection of the Ozone Layer.
 2. Kigali Amendment was adopted globally in 2016 to limit the use of Hydrofluorocarbons.
 3. Anthropogenic emission of nitrous oxide as it plays a significant role in stratospheric ozone depletion.
- Which of the statements given above is / are correct?
- (a) 2 and 3 only (b) 1 and 2 only
(c) 1 and 3 only (d) 1, 2 and 3
93. With reference to the Ayushman Bharat Digital Mission consider the following statements:
1. State Health Agencies (SHA) have been entrusted with the role of implementing the National Digital Health Mission.
 2. Helthcare Facility Registry (HFR) is a comprehensive repository of health facilities of the nation across different systems of medicine.
 3. Each Health ID will be linked to a health data consent manager.
- Which of the statements given above is / are correct?
- (a) 1 and 3 only (b) 1 and 2 only
(c) 2 and 3 only (d) 1, 2 and 3

- 94.** With reference to AUKUS Consider the following statements:
1. Australia and India entered into a submarine contract for AUKUS.
 2. Australia will be the only country to have nuclear-powered submarines without having a civilian nuclear power industry.
- Which of the statements given above is / are correct?
- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2"
- 95.** With reference to the National Register of Citizen consider the following statements:
1. The register is meant to be a list of Indian citizens living in North Eastern States.
 2. National Register of Citizen is a database of people living in India, citizens or otherwise,
 3. The National Register of Citizens takes its definition of illegal immigrants from the Assam Accord.
- Which of the statements given above is / are correct?
- (a) 2 and 3 only
 - (b) 1 only
 - (c) 1 and 2 only
 - (d) 3 only
- 96.** Which of the statement is not correct regarding International Monetary Fund (IMF)?
- (a) The IMF was set up along with the World Bank after the Second World War to assist in the reconstruction of warravaged countries.
 - (b) IMF makes the general SDR allocation to its members in proportion to their existing quotas in the IMF.
 - (c) Special Drawing Rights is a way of supplementing IMF's member countries' Foreign Exchange Reserve.
 - (d) India joined IMF in 1950."
- 97.** Consider the following statements:
1. ZAPAD is the training events for the Russian military.
 2. Samudra Shakti was a bilateral exercise between India and Japan.
 3. Saurya Kiran is the joint military exercise between Nepal and India.
- Which of the statement given above is / are correct?
- (a) 1 and 3 only
 - (b) 2 and 3 only
 - (c) 2 and 3 only
 - (d) 1, 2 and 3
- 98.** Consider the following statements:
1. Every year the Poshan Maah is celebrated during the month of September.
 2. Poshan 2.0 is announced in the Union Budget 2021-22.
 3. The Ministry of Women and Child Development is the nodal Ministry for POSHAN Abhiyan.
- Which of the statements given above is / are correct?
- (a) 1 only
 - (b) 1 and 2 only
 - (c) 1, 2 and 3
 - (d) None of them
- 99.** With reference to the Rashtriya Gokul Mission consider the following statements:
1. Rashtriya Gokul Mission will be implemented through the National Implementing Agency.
 2. It is launched under the National Programme for Bovine Breeding and Dairy Development (NPBBD).
 3. The Gokul Gram will maintain milch and unproductive animals in the ratio of 40:60.
- Which of the statements given above is / are correct?
- (a) 1 and 2 only
 - (b) 2 only
 - (c) 2 and 3 only
 - (d) 3 only
- 100.** With reference to the Thamirabarani River consider the following statement:
1. The Thamirabarani or Tamraparni or Porunai is a perennial river that originates from the Agastyarkoodam peak.
 2. This river flows towards east direction initially. However, it changes to north direction later.
 3. Recent findings shows that the Thamirabarani River Civilization is 3200 years old.
- Which of the statement given above is / are correct?
- (a) 1 and 2 only
 - (b) 2 and 3 only
 - (c) 1 and 3 only
 - (d) 1, 2 and 3 only



ANSWER KEY

- | | | | | | | | | |
|----------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1. (d) | 2. (c) | 3. (a) | 4. (c) | 5. (c) | 6. (a) | 7. (b) | 8. (b) | 9. (d) |
| 10. (d) | 11. (c) | 12. (d) | 13. (a) | 14. (c) | 15. (c) | 16. (c) | 17. (c) | 18. (c) |
| 19. (a) | 20. (d) | 21. (a) | 22. (c) | 23. (c) | 24. (a) | 25. (a) | 26. (a) | 27. (c) |
| 28. (d) | 29. (b) | 30. (d) | 31. (d) | 32. (b) | 33. (c) | 34. (b) | 35. (a) | 36. (a) |
| 37. (b) | 38. (b) | 39. (b) | 40. (b) | 41. (b) | 42. (b) | 43. (d) | 44. (c) | 45. (c) |
| 46. (d) | 47. (c) | 48. (d) | 49. (b) | 50. (a) | 51. (b) | 52. (c) | 53. (a) | 54. (c) |
| 55. (a) | 56. (d) | 57. (b) | 58. (b) | 59. (a) | 60. (d) | 61. (b) | 62. (d) | 63. (b) |
| 64. (d) | 65. (d) | 66. (b) | 67. (b) | 68. (c) | 69. (d) | 70. (d) | 71. (d) | 72. (d) |
| 73. (d) | 74. (b) | 75. (b) | 76. (b) | 77. (d) | 78. (d) | 79. (c) | 80. (a) | 81. (c) |
| 82. (d) | 83. (d) | 84. (d) | 85. (b) | 86. (d) | 87. (c) | 88. (a) | 89. (c) | 90. (b) |
| 91. (a) | 92. (d) | 93. (c) | 94. (b) | 95. (d) | 96. (d) | 97. (a) | 98. (c) | 99. (b) |
| 100. (c) | | | | | | | | |

Subjective Questions

GS Paper-I

1. "India with growing frequency and intensity of disaster must have built resilience and capability to adapt and mitigate the challenges. Comment."
2. Social reform was a prominent element of Vivekananda's thought. How did the ideologies of Vivekanand help in removing certain social issues?
3. "With an ever-increasing extreme-temperature threshold, a heat resilient future is the need of the hour. Explain."

GS Paper-II

4. With reference to the recent G-20 Agriculture meet 2021. Discuss how India is becoming destination for healthy foods and also highlight the positive outcomes of the meet.
5. Population along the borders is our first line of defence. In this respect, critically evaluate the implementation of the Border Area Development Plan.
6. The composite culture of a pluralistic society in the North-east part of India is subdued by an unethical national integration policy and vested political interest. Critically examine, in the light of recently signed three Peace Accords for the peace in Northeast India.
7. The Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021 are progressive, liberal and contemporaneous that balances the accountability of the social media platforms and rights of users with the misapprehension relating to curbing the constitutional freedom of speech and expression. Discuss.
8. "India's ties with the US in the strategic realm, particularly defence trade and force interoperability, are now at an all-time high, but trade tensions persist. Examine."
9. "The privileges granted to the Members of Parliament are on behalf of the people and are to be exercised on their behalf. But recently there is a lot of Parliamentary disruptions by the MPs. Is it good for a healthy democracy? Explain."
10. Free media is fourth pillar of democracy but it is essential for the media to take some concrete measures to improve their conduct. Analyze.

11. To address the malnutrition problem, India is running the world's largest food-based safety net program, which includes the Public Distribution System and the Mid-Day Meal Scheme. Despite such efforts it is not enough to meet the requirements. Comment. Also give some recent examples.
12. The year 2021 saw unprecedented protests against the three farm laws passed by the Centre. Interestingly, Punjab reported zero cases of agrarian riots. Critically analyze.

GS Paper-III

13. "CRISPR technology is a panacea for genetic problems". In light of recent advancement in this technology critically comment on the statement.
14. Examine how the recently set up first bad bank in India will help resolve its stressed assets. Also discuss the challenges associated with the same.
15. Examine whether the increase of private sector investments can help railways to achieve competitive growth? Also discuss the challenges associated with the privatisation of railways.
16. "India has built a strong ecosystem in cotton apparels, but is lagging in man-made fiber (MMF) apparel manufacturing. How do you think it can be resolved?"
17. "How is the digital agriculture providing the agricultural industry with tools and information to make more informed decisions and improve productivity?"
18. What is Break Through infection? What are the reasons for the Break Through Infection? What is the government doing to control it?
19. How will the new account aggregator network improve an average person's financial life and how is it different from Aadhaar eKYC data sharing?

GS Paper-IV

20. Robots are boon for modern world as they can carry out human operations with much more efficiency and precision. However they at times fail to make ethical decision. In this context discuss the ethical issues around Israel's new RexMKII robot.