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Prelims

NATIONAL

Sabarmati River Front Development project

(Source: Indian Express)

Context: *The Ahmedabad Municipal Corporation, in its draft budget for 2021-22, has set aside Rs 1,050 crore for the Sabarmati River Front Development phase 2, work on which is to begin soon. Here is what the project seeks to achieve.*

How much land has been reclaimed so far to develop the Sabarmati Riverfront?

- By channelling the river to a constant width of 263 m along the part that passes Ahmedabad city, 204 hectares have been reclaimed along the 11-km stretch of the Sabarmati Riverfront in the first phase of the project, on both the banks.
- This land is excluding the Central Business District (CBD) area of 126 hectares. The reclaimed land includes roads, both upper and lower promenades, as well as the land to be developed.
- As per the Ahmedabad Municipal Corporation's Special Purpose Vehicle, the Sabarmati River Front Development Corporation Ltd (SRDFCL), the main considerations in allocating land uses for the reclaimed portions have been existing land use along the river; extent, location and configuration of reclaimed land available; potential for development; the structural road network and form of the city; bridges; and the possibility of providing adequate infrastructure in the new development.

While the permissible height of buildings in the CBD would depend upon the road width, the maximum permissible is 100 metre or what the Airport Authority of India (AAI) permits, whichever is less.

Which part of the Riverfront is the Central Business District (CBD)?

- The 5-6 km stretch along Ashram Road, which is the city's commercial artery, from Usmanpura to Ellisbridge on the west bank covering 126 hectares, and 52 hectares on the east bank from Gandhi bridge to Dadhichi bridge (Shahpur to Dudheshwar), is slated to be the new commercial hub.
- The development here, on the lines of the Town Planning (TP) scheme applied across the city, will witness pedestrian-friendly roads, by requiring buildings to align their façades along the road side, wider roads requiring 6-metre wide arcade, and active frontage for pedestrians.

- Both the AMC and AUDA (Ahmedabad Urban Development Corporation) will work on creating avenues for new development and redevelopment.

How will the Sabarmati be different from riverfronts abroad (like Austin, Singapore, S Korea)?

- Sabarmati being a rain-fed river, its banks provides a huge canvas to developers, as the river runs dry most of the year. Therefore, SRFDCL officials say it cannot be compared to other riverfronts.
- The river front has charted spaces for the traditional activities along the river, such as for a dhobi ghat and a Gujri bazaar, which is the Sunday flea market, that are lifelines for hundreds of city dwellers.
- To keep the river along the riverfront flowing with water, the Gujarat government feeds it waters of the Narmada river, from the Narmada canal that crosses the Sabarmati a few kilometres away from Ahmedabad.
- The government is working on a more sustainable alternative to divert the treated sewage from the treatment plants into the Sabarmati river.

Uniform Civil Code

(Source: Indian Express)

Context: *Chief Justice of India (CJI) S A Bobde on Saturday (March 27) lauded Goa's Uniform Civil Code, and encouraged "intellectuals" indulging in "academic talk" to visit the state to learn more about it.*

What is a Uniform Civil Code?

- A Uniform Civil Code is one that would provide for one law for the entire country, applicable to all religious communities in their personal matters such as marriage, divorce, inheritance, adoption etc.
- Article 44 of the Constitution lays down that the state shall endeavour to secure a Uniform Civil Code for the citizens throughout the territory of India.
- Article 44 is one of the Directive Principles of State Policy. These, as defined in Article 37, are not justiciable (not enforceable by any court) but the principles laid down therein are fundamental in governance.
- Fundamental Rights are enforceable in a court of law. While Article 44 uses the words "state shall endeavour", other Articles in the 'Directive Principles' chapter use words such as "in particular strive"; "shall in particular direct its policy"; "shall be obligation of the state" etc.
- Article 43 mentions "state shall endeavour by suitable legislation", while the phrase "by suitable legislation" is absent in Article 44. All this implies that the duty of the state is greater in other directive principles than in Article 44.

What are more important — Fundamental Rights or Directive Principles?

- There is no doubt that Fundamental Rights are more important. The Supreme Court held in Minerva Mills (1980): "Indian Constitution is founded on the bed-rock of the balance between Parts III (Fundamental Rights) and IV (Directive Principles). To give absolute primacy to one over the other is to disturb the harmony of the Constitution".
- Article 31C inserted by the 42nd Amendment in 1976, however, lays down that if a law is made to implement any Directive Principle, it cannot be challenged on the ground of being violative of the Fundamental Rights under Articles 14 and 19.

Does India not already have a uniform code in civil matters?

- Indian laws do follow a uniform code in most civil matters — Indian Contract Act, Civil Procedure Code, Sale of Goods Act, Transfer of Property Act, Partnership Act, Evidence Act, etc.

- States, however, have made hundreds of amendments and, therefore, in certain matters, there is diversity even under these secular civil laws. Recently, several states refused to be governed by the uniform Motor Vehicles Act, 2019.
- If the framers of the Constitution had intended to have a Uniform Civil Code, they would have given exclusive jurisdiction to Parliament in respect of personal laws, by including this subject in the Union List. But "personal laws" are mentioned in the Concurrent List.
- Last year, the Law Commission concluded that a Uniform Civil Code is neither feasible nor desirable.

Is there one common personal law for any religious community governing all its members?

- All Hindus of the country are not governed by one law, nor are all Muslims or all Christians. Not only British legal traditions, even those of the Portuguese and the French remain operative in some parts.
- In Jammu and Kashmir until August 5, 2019, local Hindu law statutes differed from central enactments. The Shariat Act of 1937 was extended to J&K a few years ago but has now been repealed. Muslims of Kashmir were thus governed by a customary law, which in many ways was at variance with Muslim Personal Law in the rest of the country and was, in fact, closer to Hindu law.
- Even on registration of marriage among Muslims, laws differ from place to place. It was compulsory in J&K (1981 Act), and is optional in West Bengal, Bihar (both under 1876 Act), Assam (1935 Act) and Odisha (1949 Act).
- In the Northeast, there are more than 200 tribes with their own varied customary laws. The Constitution itself protects local customs in Nagaland. Similar protections are enjoyed by Meghalaya and Mizoram. Even reformed Hindu law, in spite of codification, protects customary practices.

How does the idea of a Uniform Civil Code relate to the fundamental right to religion?

- Article 25 lays down an individual's fundamental right to religion; Article 26(b) upholds the right of each religious denomination or any section thereof to "manage its own affairs in matters of religion"; Article 29 defines the right to conserve distinctive culture.
- An individual's freedom of religion under Article 25 is subject to "public order, health, morality" and other provisions relating to fundamental rights, but a group's freedom under Article 26 has not been subjected to other fundamental rights.
- In the Constituent Assembly, there was division on the issue of putting Uniform Civil Code in the fundamental rights chapter.
- The matter was settled by a vote. By a 5:4 majority, the fundamental rights sub-committee headed by Sardar Vallabhbhai Patel held that the provision was outside the scope of Fundamental Rights and therefore the Uniform Civil Code was made less important than freedom of religion.

What was the view of Muslim members in the Constituent Assembly?

- Some members sought to immunise Muslim Personal Law from state regulation. Mohammed Ismail, who thrice tried unsuccessfully to get Muslim Personal Law exempted from Article 44, said a secular state should not interfere with the personal law of people.
- B Pocker Saheb said he had received representations against a common civil code from various organisations, including Hindu organisations. Hussain Imam questioned whether there could ever be uniformity of personal laws in a diverse country like India.
- Dr B R Ambedkar said "no government can use its provisions in a way that would force the Muslims to revolt". Alladi Krishnaswami, who was in favour of a Uniform Civil Code, conceded that it would be unwise to enact Uniform Civil Code ignoring strong opposition from any community. Gender justice was not mentioned in these debates.

How did the debate on a common code for Hindus play out?

- In June 1948, Rajendra Prasad, president of the Constituent Assembly, warned Jawaharlal Nehru that to introduce "basic changes" in personal law was to impose "progressive ideas" of a "microscopic

minority" on the Hindu community as a whole. Others opposed to reforms in Hindu law included Sardar Patel, Pattabhi Sitaramayya, M A Ayyangar, M M Malaviya and Kailash Nath Katju.

- When the debate on the Hindu Code Bill took place in December 1949, 23 of 28 speakers opposed it. On September 15, 1951, President Prasad threatened to use his powers of returning the Bill to Parliament or vetoing it. Ambedkar eventually had to resign. Nehru agreed to trifurcation of the Code into separate Acts and diluted several provisions.

Article 244 (A)

(Source: Indian Express)

Context: *In a video message, Congress leader Rahul Gandhi promised to implement Article 244 (A) of the Constitution to safeguard the interests of the people in Assam's tribal-majority districts.*

What is Article 244(A) of the Constitution?

- Article 244(A) allows for creation of an 'autonomous state' within Assam in certain tribal areas.
- Inserted into the Constitution in 1969 by the then Congress government, it also has a provision for a Legislature and a Council of Ministers.

How is it different from the Sixth Schedule of the Constitution?

- The Sixth Schedule of the Constitution — Articles 244(2) and 275(1) — is a special provision that allows for greater political autonomy and decentralised governance in certain tribal areas of the Northeast through autonomous councils that are administered by elected representatives.
- In Assam, the hill districts of Dima Hasao, Karbi Anglong and West Karbi and the Bodo Territorial Region are under this provision.
- Article 244(A) accounts for more autonomous powers to tribal areas.

How did the demand arise?

- In the 1950s, a demand for a separate hill state arose around certain sections of the tribal population of undivided Assam. In 1960, various political parties of the hill areas merged to form the All Party Hill Leaders Conference, demanding a separate state. After prolonged agitations, Meghalaya gained statehood in 1972.
- The leaders of the Karbi Anglong and North Cachar Hills were also part of this movement. They were given the option to stay in Assam or join Meghalaya. They stayed back as the then Congress government promised more powers, including Article 244 (A).
- Since then, there has been a demand for its implementation.
- In the 1980s, this demand took the form of a movement with a number of Karbi groups resorting to violence. It soon became an armed separatist insurgency demanding full statehood.
- While 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 Chief Minister Sarbananda Sonowal, the entire political discourse here still revolves around the demand for grant of 'autonomous state' status to the region.

Overseas Citizens of India

(Source: The Hindu)

Context: *People of Indian origin and the Indian diaspora having Overseas Citizens of India (OCI) cards will not have to carry their old, expired passports for travel to India, as was required earlier, according to a government notification.*

Details:

- The OCI card issued to people of Indian origin globally gives them almost all the privileges available to an Indian national, except for the right to vote, employment in government service and buying agricultural land.
- The OCI card gives them a visa free travel to India.
- The Overseas Citizenship of India (OCI) Scheme was introduced by amending the Citizenship Act, 1955 in August 2005 in response to demands for dual citizenship by the Indian diaspora, particularly in developed countries. It was launched during the Pravasi Bharatiya Divas convention at Hyderabad in 2006.

Who is called an Overseas Citizen of India?

- An Overseas Citizen of India (OCI) is a person who is technically a citizen of another country having an Indian origin. They were citizens of India on 26th January 1950 or thereafter except who is or had been a citizen of Pakistan, Bangladesh or such other country.
- Multi-purpose and life-long visa are provided to the registered Overseas Citizen of India for visiting India and are also exempted from registration with Foreign Regional Registration Officer or Foreign Registration Officer for any length of stay in India.

What is an OCI Card?

- Launched in 2005, under the Citizenship (Amendment) Act, the OCI card was introduced for fulfilling the demands for dual citizenship among the Indians living in different developed countries.
- The OCI card provides Overseas Citizenship of India to live and work in India for an indefinite period of time but does not provide the right to vote, hold constitutional offices or buy agricultural properties.

Overseas Citizen of India (OCI) Card: Eligibility

A person must meet the following eligibility criteria before applying for the OCI scheme:

1. He/She is a citizen of another country having an Indian origin. He/She was a citizen of India on or before the commencement of the constitution; or
2. He/She is a citizen of another country, but was eligible for the citizenship of India at the time of the commencement of the constitution; or
3. He/She is a citizen of another country and belonging to a territory that became a part of India after the 15th August 1947; or
4. He/She is a child/grandchild/great grandchild of such a citizen; or
5. He/She is a minor child, whose parents are both Indian citizens or one parent is a citizen of India and
6. is a spouse of foreign origin of an Indian citizen or of an OCI cardholder

- **Any person having citizenship of Bangladesh or Pakistan is not eligible to apply for the OCI card**. Even a person having a background of serving any foreign military are also not eligible for the scheme.

Conferment of Rights

The registered Overseas Citizens of India are not entitled to several rights that are conferred on a citizen of India.

1. Right to equality of opportunity under article 16 of the Constitution with regard to public employment.

2. Right for election as President and Vice-President under article 58 and article 66 respectively.
3. They are not entitled to the rights under article 124 and article 217 of the Constitution.
4. Right to register as a voter under section 16 of the Representation of the People Act, 1950(43 of 1950).
5. Rights with regard to the eligibility for being a member of the State Council/Legislative Assembly/Legislative Council.
6. For an appointment to the posts of Public Services and Union Affairs of any State.

Mahendragiri Biosphere reserve

(Source: Down to Earth)

Context: *The Odisha government has proposed a second biosphere reserve in the southern part of the state at Mahendragiri, a hill ecosystem having rich biodiversity.*

Details:

- The 5,569-square kilometre Similipal Biosphere Reserve is Odisha's first such reserve and was notified May 20, 1996.
- The area of the proposed Mahendragiri Biosphere Reserve is around 470,955 hectares and is spread over Gajapati and Ganjam districts in the Eastern Ghats.
- The hill ecosystem acts as a transitional zone between the flora and fauna of southern India and the Himalayas, making the region an ecological estuary of genetic diversities. This is according to a feasibility report prepared by the Biosphere Reserve Committee for the proposed project.
- Once the protected archeological remains of Mahendragiri were listed in the tentative list of Unesco World Heritage Sites, it would be easy to declare the spot as one.
- He said almost all criteria to accord Mahendragiri the status of a biosphere reserve had been completed. The state should now submit its proposal to the Centre, he added.
- Mahendragiri is inhabited by the Soura people, a particularly vulnerable tribal group as well as the Kandha tribe.
- The hills have diverse vegetation, according to the report of the proposed Mahendragiri Biosphere Reserve. The rich flora in Mahendragiri represents 40 per cent of the reported flora of Odisha, with around 1,358 species of plants.
- Twenty-nine of the 41 species of threatened medicinal plants found in Odisha according to the International Union for the Conservation of Nature are found in the biosphere reserve area, according to the report.
- The faunal diversity of the hills consists of 388 species of animals, including 27 species of mammals, 165 species of birds, 23 species of snakes, 15 species of amphibians, three species of turtles and 19 lizards.

Dadasaheb Phalke for Rajinikanth

Source: (The Hindu)

Context: *The Centre announced the prestigious Dadasaheb Phalke Award for Rajinikanth for his contribution as an actor, producer and screenwriter.*

About the Dada Saheb Phalke Award (Dadasaheb Phalke Award):

- It is an annual award given by the Indian government for lifetime contribution to Indian cinema.
- It was instituted in 1969, the birth centenary year of **Dadasaheb Phalke**, considered the **father of Indian cinema**. Phalke directed the first Indian film 'Raja Harischandra' (a silent film released in 1913).
- The award is given along with the National Film Awards every year.
- The first awardee was Devika Rani (1969).
- The award comprises a Swarna Kamal (Golden Lotus medallion), a shawl and a cash prize of Rs.1,000,000.

VAJRA PRAHAR 2021

(Source: PIB)

Context: *Indian and US Special Forces conclude Joint Training Exercise.*

About Vajra Prahar 2021:

- The 11th edition of the Indo-US Joint Special Forces Exercise VAJRA PRAHAR 2021 was conducted at Special Forces Training School located at Bakloh, Himachal Pradesh.
- It is a bilateral exercise between the special forces of India and the US
- The military forces that participate in Vajra Prahar are:
    - The US – The Special Forces and
    - India – The Southern Command of Indian Armed Forces
- The aim of Vajra Prahar is to enhance military cooperation between the two countries and also to capitalise on the rich repository of experiences of each other armies
- The exercise Vajra Prahar takes place alternately between the two countries – India and US
- In 2021, it took place in India. In 2019, the Vajra Prahar exercise took place in Joint Base Lewis-McChord (JBLM), Seattle (The US), while in 2018, it took place in Jodhpur, Rajasthan (India)
- The joint military exercise Vajra Prahar between India and the US started off in 2010
- Between 2012 and 2015, the exercise Vajra Prahar did not take place. In 2020, Vajra Prahar did not take place.

PLI Scheme for Food Processing Industry

(Source: PIB)

Context: *Cabinet approves Production Linked Incentive Scheme for Food Processing Industry.*

Details:

- Cabinet approves Production Linked Incentive Scheme for Food Processing Industry to support the creation of global food manufacturing champions commensurate with India's natural resource endowment and support Indian brands of food products in the international markets.
- The scheme has been launched with an outlay of Rs. 10900 crore.
- It is a Central Sector Scheme.

About the Scheme

- Production Linked Incentive or PLI scheme is a scheme that aims to give companies incentives on incremental sales from products manufactured in domestic units.

- The scheme invites foreign companies to set up units in India, however, it also aims to encourage local companies to set up or expand existing manufacturing units and also to generate more employment and cut down the country's reliance on imports from other countries.
- It was introduced as a part of the National Policy on Electronics by the IT Ministry to give incentives of 4-6% to electronic companies, manufacturing electronic components like mobile phones, transistors, diodes, etc.
- The main aim of this scheme was to invite foreign investors to set up their manufacturing units in India and also promote the local manufacturers to expand their units and generate employment
- The first sector which the PLI scheme had targeted was the Large Scale Electronics Manufacturing in April 2020, and by the end of the year (November 2020), 10 more sectors including food processing, telecom, electronics, textiles, speciality steel, automobiles and auto components, solar photovoltaic modules and white goods such as air conditioners and LEDs were also expanded under the PLI scheme
- As far as the eligibility is concerned, all electronic manufacturing companies which are either Indian or have a registered unit in India will be eligible to apply for the scheme
- In the Union Budget 2021, Finance Minister Nirmala Sitharaman mentioned the inclusion of thirteen more sectors under the PLI Scheme for a period of five years and Rs. 1.97 lakh crores have been allocated for this scheme from Financial Year 2022

AIM-PRIME

(Source: PIB)

Context: *Atal Innovation Mission launches 'AIM-PRIME', in partnership with BMGF & Venture Center*.

About the Program:

- **AIM-PRIME (Program for Researchers on Innovations, Market-Readiness & Entrepreneurship)** is an initiative to promote and support science-based deep-tech startups & ventures across India.
- It has been launched by the Atal Innovation Mission (AIM) in partnership with the Bill & Melinda Gates Foundation (BMGF). The initiative will be implemented by Venture Center – a non-profit technology business incubator.
- The first cohort of the program is open to technology developers (early-stage deep tech start-ups, and scientists/engineers/clinicians) with strong science-based deep tech business ideas. The program is also open to CEOs and senior incubation managers of AIM Funded Atal Incubation Centres that are supporting deep tech entrepreneurs.
- The AIM-PRIME program is specifically tailored for the rapid scaling up of deep-tech science ventures in India, providing not just the necessary intellect and support but also the exposure they rightly deserve.
- The benefits of this program are aimed at addressing specific issues through training and guidance over a period of 12 months.
- Candidates selected for the program will get access to in-depth learning via a comprehensive lecture series, live team projects, exercises, and project-specific mentoring.
- They will also have access to a deep tech startup playbook, curated video library, and plenty of peer-to-peer learning opportunities.

Hypnea Indica and Hypnea Bullata

(Source: The Hindu)

Context: *Two new species of seaweed have been discovered by a group of marine biologists from Central University of Punjab, Bathinda. Named Hypnea indica (after India) and Hypnea bullata (because of the blisterlike marks on its body – bullate), the seaweeds are part of the genus Hypnea or red seaweeds.*

Adding to the number

- The genus Hypnea consists of calcareous, erect, branched red seaweeds. There are 61 species of which 10 were reported in India. With our two new species, the total number of species now would be 63.
- While Hypnea indica was discovered Kanyakumari in Tamil Nadu, and Somnath Pathan and Sivrajpur in Gujarat, Hypnea bullata was discovered from Kanyakumari and Diu island of Daman and Diu.
- To rule out the possibility that the species had been around earlier, but that now had been documented, the researchers compared characteristics of these specimens with all the 61 currently accepted species of Hypnea one by one.

Food industry

- Species of Hypnea contain the biomolecule carrageenan, which is widely used in the food industry.
- As the two species have been found on the west and south east coasts of India, it suggests good prospects for their cultivation which can be put to good use economically.
- The study also reports one other species of Hypnea for the first time in Indian coasts, Hypnea nidifica.
- The extensive calcareous deposits on the body that has been observed also provides room for thought. Several recent studies have shown that algae with calcareous mineral deposits are prone for the damage from ocean acidification – an aftermath of climate change.
- As carbon dioxide in the atmosphere gets dissolved in ocean waters, the seawater becomes more acidic. Algae like Hypnea cannot survive in acidic seawater, hence, the only way to help these species is to reduce atmospheric carbon dioxide levels by adopting sustainable lifestyle choices.

Exercise SHANTIR OGROSHENA 2021

(Source: PIB)

Context: *Indian Army to participate in Exercise SHANTIR OGROSHENA, a multinational military exercise in Bangladesh.*

About Ex Shantir Ogroshena:

- Multinational Military Exercise SHANTIR OGROSHENA 2021 (Front Runner of the Peace) will be held at Bangladesh to commemorate the birth centenary of Bangladesh 'Father of the Nation' Bangabandhu Sheikh Mujibur Rahman.
- The DOGRA Regiment will participate in the exercise along with a contingent of the Royal Bhutan Army, the Sri Lankan Army and the Bangladesh Army in April 2021.
- The theme of the exercise is "Robust Peace Keeping Operations".
- Military observers from the USA, UK, Turkey, Kingdom of Saudi Arabia, Kuwait and Singapore will also be in attendance throughout the exercise.

Utkala Dibasa

(Source: PIB)

Context: *The PM greeted the people of Odisha on Utkala Dibasa.*

Details:

- Utkala Dibasa or Odisha Day is observed on 1 April every year to mark the formation of the state as a separate state out of Bihar and Orissa Province in 1936.
  - At that time, Koraput and Ganjam were also added from the Madras Presidency.
  - The leaders of the movement demanding a separate state for all the Odia-speaking regions were Madhusudan Das, Gopabandhu Das, Maharaja Sri Ram Chandra Bhanj Deo and others.
  - This Day is also known as Vishuva Milan.

INTERNATIONAL

Neutrino Telescopes

(Source: Indian Express)

Context: *Russian scientists launched one of the world's biggest underwater neutrino telescopes called the Baikal-GVD (Gigaton Volume Detector) in the waters of Lake Baikail, the world's deepest lake situated in Siberia.*

Details:

- The construction of this telescope, which started in 2016, is motivated by the mission to study in detail the elusive fundamental particles called neutrinos and to possibly determine their sources.
- Studying this will aid scientists' understanding of the origins of the universe since some neutrinos were formed during the Big Bang, others continue to be formed as a result of supernova explosions or because of nuclear reactions in the
- The Baikal-GVD is one of the three largest neutrino detectors in the world along with the IceCube at the South Pole and ANTARES in the Mediterranean Sea.

What are fundamental particles?

- So far, the understanding is that the universe is made of some fundamental particles that are indivisible. Broadly, particles of matter that scientists know about as of now can be classified into quarks and leptons.
- But this only applies to "normal matter" or the matter that scientists know that five per cent of the universe is made up of.
- In their book We Have No Idea, cartoonist Jorge Cham and particle physicist Daniel Whiteson have said that these particles make up matter that accounts for only five per cent of the universe.
- Not much is known about the remaining 95 per cent of the universe, which is classified by the authors into dark matter (27 percent) and the remaining 68 per cent of the universe of which scientists have "no idea" about yet.
- But in the universe scientists know about, exploration in the field of physics so far has led to the discovery of over 12 such quarks and leptons, but three of these (protons, neutrons and electrons) is what everything in the world is made up of.
- Protons (carry a positive charge) and neutrons (no charge) are types of quarks, whereas electrons (carry a negative charge) are types of leptons. These three particles make what is referred to as the building block of life– the atom.
- In different combinations, these particles can make different kinds of atoms, which in turn make up molecules that form everything– from a human being, to a wooden chair, a plastic plate, a mobile phone, a dog, a termite, a mountain, a planet, water, soil and so on.

Why do scientists study fundamental particles?

- Studying what humans and everything around them is made up of gives scientists a window into understanding the universe a better way, just how it is easy to grasp what a cake is once one knows the ingredients it is made up of.
- This is one reason why scientists are so keen on studying neutrinos (not the same as neutrons), which are also a type of fundamental particle. Fundamental means that neutrinos, like electrons, protons and neutrons cannot be broken down further into smaller particles.

- What makes neutrinos especially interesting is that they are abundant in nature, with about a thousand trillion of them passing through a human body every second.
- In fact, they are the second most abundant particles, after photons, which are particles of light. But while neutrinos are abundant, they are not easy to catch, this is because they do not carry a charge, as a result of which they do not interact with matter.
- One way of detecting neutrinos is in water or ice, where neutrinos leave a flash of light or a line of bubbles when they interact.
- To capture these signs, scientists have to build large detectors. An underwater telescope such as the GVD is designed to detect high-energy neutrinos that may have come from the Earth's core, or could have been produced during nuclear reactions in the Sun.

BIMSTEC

(Source: The Hindu)

Context: *India expressed commitment about taking the Bay of Bengal community to "new heights". The statement was made by External Affairs Minister S. Jaishankar at the ministerial meet of the BIMSTEC (Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation), which was held virtually. The meeting drew participation from all the seven-member States, including Myanmar which is witnessing a large-scale crackdown against anti-military protesters. This meeting, the 17th BIMSTEC Ministerial,* ***chaired by Sri Lanka****, however, avoided any reference to Myanmar's current crisis.*

What is BIMSTEC?

- The Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) is a regional multilateral organisation.
- Its members lie in the littoral and adjacent areas of the Bay of Bengal constituting a contiguous regional unity.
- The 7 members,
    - **Bangladesh**
    - **Bhutan**
    - **India**
    - **Nepal**
    - **Sri Lanka**
    - **Myanmar**
    - **Thailand**
- BIMSTEC not only connects South and Southeast Asia, but also the ecologies of the Great Himalayas and the Bay of Bengal.
- It mainly aims to create an enabling environment for rapid economic development; accelerate social progress; and promote collaboration on matters of common interest in the region.

Genesis of BIMSTEC

- This sub-regional organization came into being in 1997 through the **Bangkok Declaration**.
- Initially, it was formed with four Member States with the acronym **'BIST-EC'** (Bangladesh, India, Sri-Lanka and Thailand Economic Cooperation).
- It became renamed **'BIMST-EC'** in 1997, following the inclusion of Myanmar.
- With the admission of Nepal and Bhutan in 2004, the name of the grouping was changed to 'Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation' **(BIMSTEC)**.

Objectives

- Creating an enabling environment for the rapid economic development of the sub-region.
- Encouraging the spirit of equality and partnership.
- Promoting active collaboration and mutual assistance in the areas of common interests of the member countries
- Accelerating support for each other in the fields of education, science, and technology, etc.

Asteroid Apophis

(Source: Indian Express)

Context: *The USA's NASA space agency has ruled out the possibility of the dreaded asteroid Apophis causing any damage to the Earth for the next 100 years.*

Details:

- Named after the ancient Egyptian god of chaos and darkness, it was discovered in 2004, after which NASA had said that it was one of the asteroids that posed the greatest threat to Earth.
- Apophis measures 340 metres across– comparable to the size of the huge ship that has currently blocked the Suez Canal.

What NASA has said about Apophis

- Apophis was predicted to come threateningly close to us in the years 2029 and 2036, but NASA later ruled these events out. There were still fears about a possible collision in 2068, however.
- This year, the asteroid flew past Earth on March 5, coming within 17 million km of our planet. During this approach, scientists used radar observations to study in detail the asteroid's orbit around the sun.
- In order to track Apophis' motion, astronomers used the 70-metre radio antenna at the Deep Space Network's Goldstone Deep Space Communications Complex near Barstow, California. They also used the 100-metre Green Bank Telescope in West Virginia which showed imaging of Apophis. The two systems were used together in a "bistatic" experiment that doubled the strength of the received signal.
- Based on these findings, they were able to rule out any impact risk to Earth from Apophis in 2068 and long after.
- "A 2068 impact is not in the realm of possibility any more, and our calculations don't show any impact risk for at least the next 100 years," said of NASA's Center for Near-Earth Object Studies (CNEOS).
- The "risk list" refers to the Sentry Impact Risk Table maintained by CNEOS, which includes all the asteroids with orbits close to Earth.
- As said, the large asteroid will now approach Earth again in 2029, when it is expected to come as near as 32,000 km– only one-tenth of the distance between the Earth and the Moon.
- That year, the asteroid would be visible to star gazers in Asia, Africa and parts of Europe, without the need to use binoculars or telescopes.

What are asteroids?

- Asteroids are rocky objects that orbit the Sun, much smaller than planets. They are also called minor planets. According to NASA, 994,383 is the count of known asteroids, the remnants from the formation of the solar system over 4.6 billion years ago.
- Asteroids are divided into three classes. First, those found in the main asteroid belt between Mars and Jupiter, which is estimated to contain somewhere between 1.1-1.9 million asteroids.
- The second group is that of trojans, which are asteroids that share an orbit with a larger planet. NASA reports the presence of Jupiter, Neptune and Mars trojans. In 2011, they reported an Earth trojan as well.
- The third classification is Near-Earth Asteroids (NEA), which have orbits that pass close by the Earth. Those that cross the Earth's orbit are called Earth-crossers. More than 10,000 such asteroids are known, out of which over 1,400 are classified as potentially hazardous asteroids (PHAs).

- Apophis is categorised as a PHA.

British National Overseas Passport

(Source: Indian Express)

Context: *China and the pro-Beijing Hong Kong government told 14 countries to stop accepting the British National (Overseas) passport, which as of early this year can be used by some 3 million Hong Kong citizens to get UK citizenship. Instead, they have asked these states to use the Hong Kong Special Administrative Region (HKSAR) passport. The British government, however, has rejected Hong Kong's authority to have a say in determining if the BNO passport is valid or not, prolonging the row between the UK and China.*

What is this about?

- Earlier this year, the British government opened a special visa scheme as part of which Hong Kong residents get a chance to migrate to the UK and eventually apply for citizenship.
- These visas are issued to those in Hong Kong who hold a BN(O) passport and their immediate dependents, offering them a fast track option to get UK citizenship.
- Applicants who get the visa can live and work in the UK for 5 years, after which they can apply for settlement. Twelve months after this period lapses, they can apply for citizenship.

What is the British National Overseas Passport?

- According to an article in The South China Morning Post, the BN(O) was first issued in 1987, 10 years before the return of sovereignty over Hong Kong from Britain to China.
- The document replaced the British Dependent Territories citizens' passport. Anyone who was a British Overseas Territories Citizen (BOTC) by connection with Hong Kong was able to register as a British national (overseas) before July 1, 1997.
- Further, a BOCT from Hong Kong who did not register as British nationals (overseas) and had no other nationality or citizenship on June 30, 1997 became British overseas citizens on July 1, 1997. Essentially, these passports are issued to those born in Hong Kong before the 1997 handover.

Mains

GS I

Why India is no country for working women

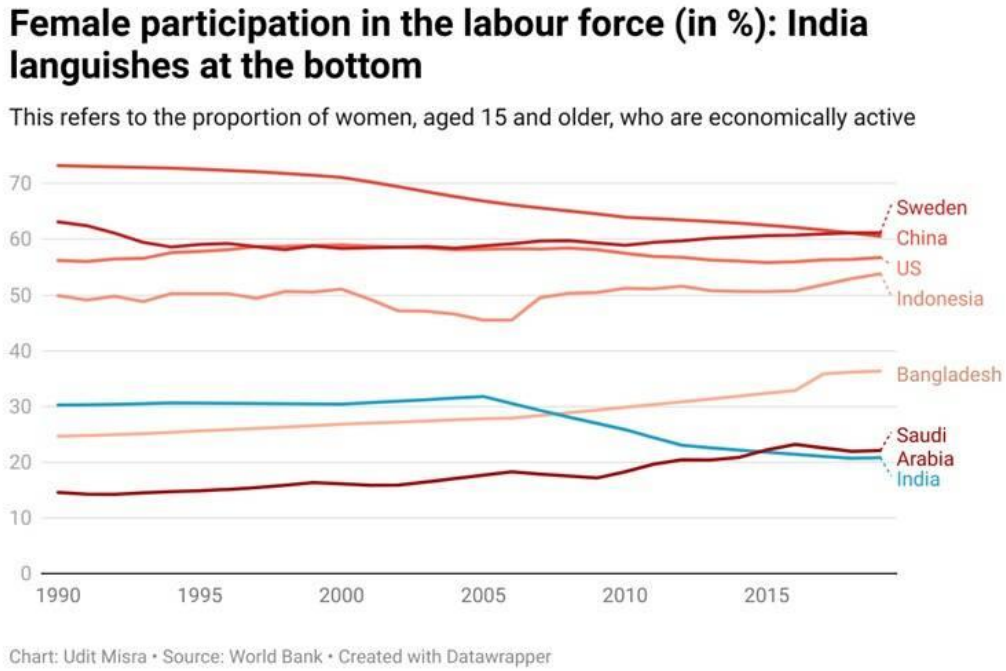
(Source: Indian Express)

Context: *A few days ago, a comment by the BJP's* ***newly-appointed Uttarakhand Chief Minister Tirath Singh Rawat*** *about* ***women wearing ripped jeans*** *created massive outrage in social media. But, from the perspectives of the economy and public policy, perhaps the more salient comment was made by Rawat's cabinet colleague Ganesh Joshi, who reportedly said: "Women talk about all the things they want to do in life, but the most important thing for them is to look after their family and kids."*

To be sure, this understanding of a woman's role in Indian society is not limited to any one group or political party. Such conservative/orthodox beliefs, as well as violence against women, are often held as the main reasons why very few women seek any employment. That is why India has one of the worst labour force participation rates (LFPR) by women.

The Labour force participation of women

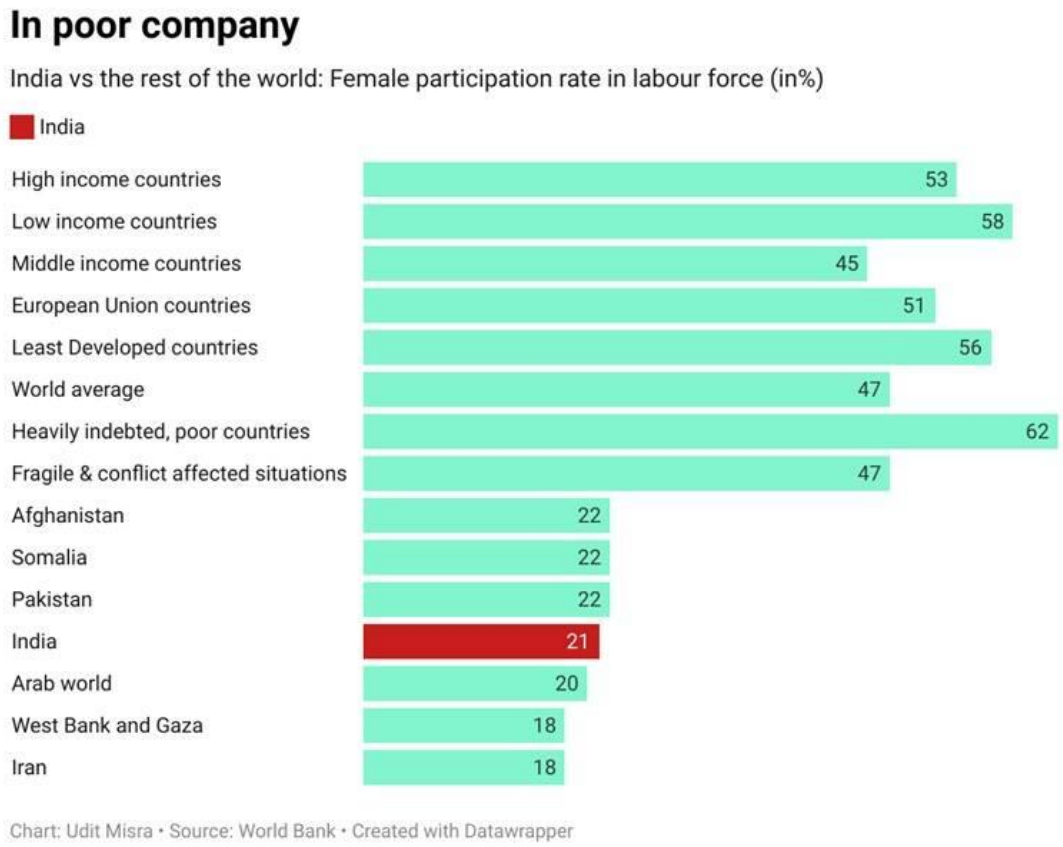
- The LFPR basically tells what percentage of the total women within the working-age are seeking work; it includes both those who are employed as well as those who are as yet unemployed but seeking work.
- As the chart below shows, at 21% India has one of the lowest female participation rates in the world. In other words, 79% of Indian women (aged 15 years and above) do not even seek work.



- India has one of the lowest female participation rates in the world
- Countries with which Indian typically compares itself — such as China, the US, Indonesia, and Bangladesh — have two-to-three times higher participation rates for women.
- Worse still, it is not the case that India is behind just a handful of countries.
- As the chart below shows, no matter which cluster of countries one compares with — high income or low, highly indebted or least developed — India comes off worse. India's 21% female LFPR is not even

half the global average (47%). The bottom of this chart further underscores the poor company India keeps in terms of freedom for women.

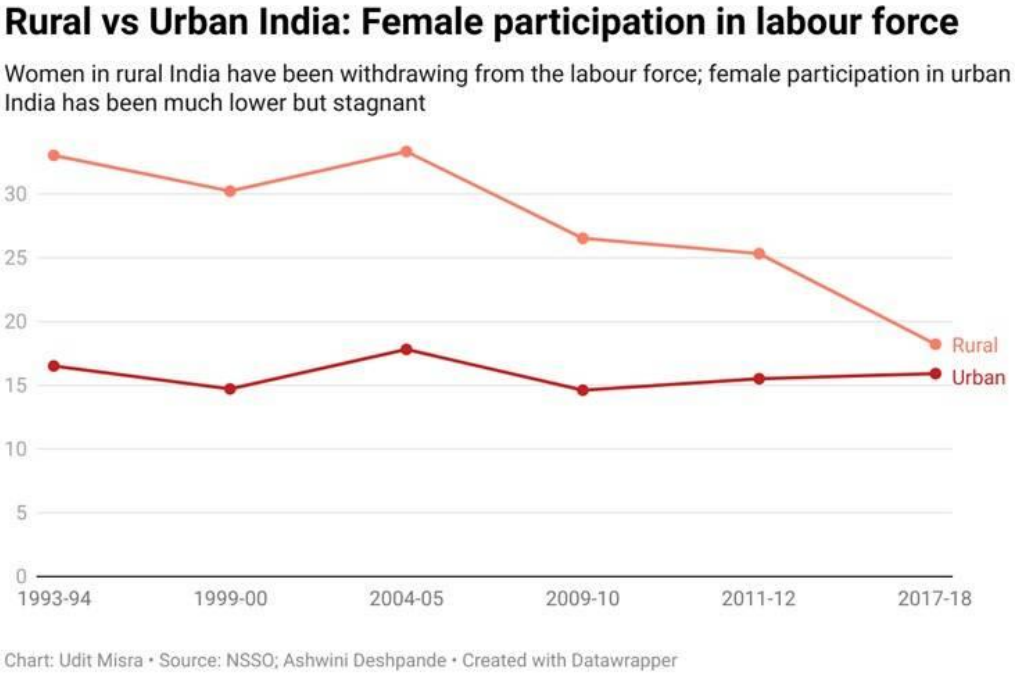
- However, the truth about women's participation in India's economy is more complicated.



India vs rest of the world: Female participation rate in labour force (in%)

- In a recent paper, titled "Paid work, unpaid work and domestic chores: Why are so many Indian women out of the labour force?", Ashwini Deshpande, professor of economics at Ashoka University, makes a couple of nuanced but significant points.
- One, she argues that the LFPR does not accurately capture the participation of Indian women in the economy. She says that the majority of women in South Asia are between the two extremes — namely, those women who work outside their homes for a salary and those who are exclusively involved within their own homes (caring for their family) of their own volition.
- "These are women whose involvement in economic work (activities that are within the standard boundaries of the System of National Accounts, that is counted as economic activities when national income or GDP is measured) lies in a grey zone," she states.
- "These are women who might work in the house or outside, and whose work might be paid or unpaid, and whose work might be continuous throughout the year or seasonal, and it might be full-time or part-time…For example, she could be involved in livestock rearing or farming or helping the kirana shop, or involved in artisanal activity, such as making baskets, weaving or pottery. If these are family activities, then her contribution to economic work (over and above her 'care' work) would not be paid. In such a case, it is highly likely that she would not be seen as a worker, neither by her family nor by herself," explains Deshpande, as she lists out several jobs where women's contribution to economic work is missed by the formal surveys that calculate LFPR.
- The other point Deshpande makes is that "the whole focus on labour force participation reduces the issue of women's involvement to a labour supply issue".
- In other words, while there are factors such as social norms or violence against women that hold them back from joining the labour force, little is said about the demand for their work.
- To better understand this, she points to the urban and rural break-up of female LFPR.

- As the chart below shows, the fall in India's overall female LFPR is almost fully because of the fall in rural India. It is another matter that urban female LFPR was always pretty low but the dip has been caused by fewer women in rural India being counted as part of the labour force.



Fall in India's overall female LFPR is almost fully because of the fall in rural India

- "The fall in rural women's LFPR should make us turn the spotlight on the nature of work availability, especially non-farm opportunities," she states.
- "Education levels of Indian women are rapidly increasing (faster than those for men), and while the share of agriculture work has declined for both men and women, men have been able to find employment in other sectors. But this is not the case for women," says Deshpande.
- "A man with class 10 education can be a postal carrier, a truck driver or a mechanic; these opportunities are not open to women. Hence, it is not surprising that education is associated with a lower WPR for women," Deshpande quotes Sonalde Desai, professor of Sociology, University of Maryland.
- Some people may still wonder why it matters whether women "work". They may find the Bhagwat kind of social contract quite efficient.
- There is also a hefty opportunity cost. Women who work are the most reliable source of economic growth. When they are kept home because there is no affordable childcare—or because their husbands won't let them out of the house—they lose and so do their countries.
- Many societies invest heavily in female education, especially in the West, and then push women out of the workforce—wasting a valuable resource, losing a chance at sustained growth, and widening a skills gap that already threatens their future.
- With a deliberate global effort to lift the constraints on the Double X Economy, some of the world's most tragic problems can be solved. Women's economic empowerment has been shown, many times, to be the best available weapon against poverty. Economically autonomous women can walk away from abuse. Providing young women with the means to earn shields them from human trafficking. Gender equality reduces violence of all kinds.
- The beneficial effects of full inclusion for women would be visible at the institutional and national levels. Including women in the financial system contributes to institutional profit and also reduces risk, increases transparency and also adds stability for the entire economy. Allowing women to participate in international trade increases a nation's resilience and innovation.
- Because of its power to generate growth and reduce costs, the Double X Economy, when included, pays for itself. Investments made in affordable childcare, for instance, would be offset by an influx of women into the labor force who otherwise would have to stay home, leading to a rise in GDP, and therefore an

increase in tax revenues. Yet data shows that men will not lose jobs if women come into the workforce, because the resulting growth drives the creation of more jobs. Men benefit in other ways when they share economic responsibilities with women: overwork, male-dominant workplaces, and the lone responsibility to provide take a profound toll on men worldwide.

- Economic results are best when men and women work in a gender-balanced way, whether at work or at home. Studies show consistently that teams of males and females make better investments, produce better products, generate higher returns, and have fewer failures. At home, couples who share housework and paid work have closer relationships with children, more egalitarian values, less interpersonal tension, and more productivity.

GS II

Indian education system must stop chasing 'learning outcomes'

(Source: Indian Express)

Context: *In the present context, which seeks to demonstrate, measure and quantify learning, learning outcomes (LO) have become a fetish with policymakers and textbook developers, an idea popularised by large-scale assessment surveys, such as the Annual Status of Education Report (ASER), in India. LO essentially refers to grade-appropriate, basic competencies in numeracy and literacy, which schoolgoing children are supposed to acquire.*

Details:

- The National Council of Educational Research and Training (NCERT), the apex body responsible for making curriculum, syllabus and textbooks, has already come out with two documents listing learning outcomes at elementary and secondary stages, while the one for the higher secondary stage is underway.
- This is because the new National Education Policy 2020 underscores the importance of foundational skills as being central to a child's schooling. State Councils of Educational Research and Training (SCERT) will be soon expected to toe the line. However, the government of Andhra Pradesh has already initiated the exercise.
- Besides deciding to convert all government schools from Classes I to X to English medium, the state education department was directed to prepare "mirror image" textbooks — with lessons printed in English and Telugu, side by side. This seems to be more of a mechanical exercise without any sound pedagogic rationale.
- A quick review of the new textbooks shows that they centre around LO and follow a didactic approach of essentially presenting information/facts that children are supposed to passively consume and memorise. Such books typically deny the agency of both the teacher and the student, making them subservient to the printed text. They are physically heavy but conceptually terse.
- It was with great difficulty that National Curriculum Framework, prepared by NCERT in 2005, changed the form and nature of textbooks. Any change of government at the Centre or state level was/is usually followed by a change in textbooks, particularly history. Besides blatant misuse as a political tool, textbooks suffer from other limitations.

- They reproduce social inequalities by either omission of diverse social groups or their misrepresentation. The landmark Learning Without Burden (LWB) committee (1993) identified dense, poorly written and weakly conceptualised textbooks as being primarily responsible, in addition to unwieldy syllabi and rote-based exam system, for burdening children's school lives.
- The NCF 2005, with its roots in LWB, redirected the meaning of quality education to curricular, pedagogic and assessment practices being followed inside the classrooms. It sought to connect the life of the child outside school with learning in the classroom.
- Soon after, NCERT developed "exemplar/model" textbooks which were conceptually sound and used a variety of pedagogic techniques to bring in real-life issues in the book. The social science textbooks particularly acknowledged social conflicts which children experienced in their lives and helped make sense of them.
- They also gave fresh life to the meaning of learning which was no longer a one-way track of passing on information to children but became a process of constructing knowledge meaningfully by both the teacher and the student.
- A few states took the lead and initiated the formation of state curricular frameworks, position papers and the development of textbooks. Undivided Andhra Pradesh was one of them. However, with the revision of the earlier written books, which were both pedagogically sound and collaboratively developed, it seems like the state is bent on undoing its own achievements.

Conclusion

- There is no denying that textbooks, just like curricular frameworks, syllabus, and assessment practices, need to be revised periodically. However, textbooks tailored to measure the acquisition of LO on part of children is a self-defeating exercise.
- This singular focus on LO will take the teaching-learning processes away from the possibility of a meaningful co-construction of knowledge to a teacher teaching to the test. Since teachers' own appraisal is contingent on children's performance in these tests, they feel pressured to ensure that children know the basic minimum and somehow pass the test.
- The choice is ours — whether we will allow testing to take precedence over learning or celebrate learning as a meaning-making exercise by both the teacher and the student.

The Afghan endgame

(Source: The Hindu)

Context: *As the May 1 deadline for pulling out all American troops from Afghanistan nears, United States President Joe Biden faces some difficult decisions. The U.S. could abide by the promise made in the U.S.-Taliban agreement signed in February 2020 to withdraw the last of the around 2,500 American marines stationed in Afghanistan, but Mr. Biden has said it would be tough given the levels of violence there. The U.S. could negotiate with the Taliban for an extension of the agreement, offering other incentives like the release of more prisoners and the delisting of sanctioned Taliban terrorists, although the Taliban has thus far rejected that suggestion. The other option is that the U.S. could scrap the 2020 agreement and back the Ashraf Ghani government to continue towards a negotiated settlement, even as U.S. troops remain in Afghanistan to stabilise the security situation.*

What is the U.S. likely to do?

- During his visit to Delhi last week, U.S. Defence Secretary Lloyd Austin said an extensive review of the U.S.'s plans for Afghanistan is still under way and that "no decision on the length of stay or troop numbers have been made to this point".

- At a press conference, Mr. Biden said he did not foresee U.S. troops staying in Afghanistan "for a long time" or until 2022, but that adhering to the May 1 commitment at this point would be "hard". No U.S. troops have been targeted by Taliban militants in the past year, but violence against Afghan civilians, particularly women, journalists, students and activists has gone up manifold, and despite the peace agreement, more than 3,000 civilians were killed in 2020.
- The U.S. has shown some impatience with the Ghani government as well, believing that it is dragging its feet on intra-Afghan negotiations that began last year in Doha but have stalled for the moment. U.S. Secretary of State Antony Blinken wrote in a letter, which has been leaked and not denied, that Mr. Ghani must understand the "urgency of [his] tone" as he proposed a new peace plan.
- The plan proposes that Mr. Ghani step up negotiations with the Taliban for "power-sharing", discuss principles of future governance with the Taliban, and step aside eventually for a "more inclusive" or interim government.
- The tone of the letter seems to make it clear that the U.S. is not in favour of completely scrapping the 2020 agreement. Therefore, it is most likely to pursue the option of negotiating for an extension of the agreement, according to experts, as it builds other dialogue platforms.

What are those platforms?

- Apart from the intra-Afghan negotiations in Doha, the U.S. revealed this month that it has been part of a "Troika" with Russia and China that have met several times since March 2019 along with Pakistan in search of a regional solution.
- The extended Troika met last on March 18 in Moscow, where Turkey, Qatar and Afghan and Taliban leaders were also invited.
- In his letter, Mr. Blinken proposed another mechanism for regional envoys to be led by the United Nations, which would include India and Iran as well. The next round of intra-Afghan Negotiations will be hosted in Istanbul in April, according to Mr. Blinken's proposal.

What is President Ghani's plan?

- Mr. Ghani has proposed his own peace plan. The plan was announced by Afghan Foreign Minister Haneef Atmar during his visit to Delhi this week, where he reached out for support.
- It would involve a full ceasefire, inviting the Taliban to participate in early elections in Afghanistan, and then for Mr. Ghani to hand over power to the elected government.
- Mr. Atmar told The Hindu that the proposal was a "generous" offer from Mr. Ghani, who has completed just a little over a year in his present term as President. He also said no regional talks could be successful if they did not include India, which is a development partner and a stakeholder, and called the Troika meet in Moscow that did not include India, ostensibly due to objections from Pakistan and China, a mistake.

Where does India stand?

- India's position has been to back an "Afghan-owned, Afghan-led, Afghan-controlled" peace process, backing the elected government in Kabul, and it has not yet held talks with the Taliban directly.
- As a result, its option remains to stand with the Ghani government and support the constitution that guarantees a democratic process and rights of women and minorities, over any plans the Taliban might have if they come to power.
- At the same time, India has not foreclosed the option of talking to the Taliban if it does join the government in Afghanistan, and, in a first step, External Affairs Minister S. Jaishankar addressed the Doha inauguration of intra-Afghan talks last year.
- The government has not yet announced a special envoy on Afghanistan who could be a part of the UN-led process for regional countries, but it has made it clear that it seeks to be an integral part of the process, as the outcomes will have a deep impact on India's security matrix as well.

Tackling the period taboo

(Source: The Hindu)

Context: *In February 2020, college authorities, including the principal, of the Shree Sahajanand Girls Institute (SSGI) in Bhuj, Gujarat, allegedly forced over 60 girls to remove their undergarments to check if they were menstruating. This shocking act, which rightly caused outrage, followed complaints that the girls had entered the temple and kitchen in the premises while on their period, which is against the institute's rules. Four persons were later arrested.*

Notions of purity and pollution

- The stigma attached to menstruation and restrictions in the private and public sphere for the duration of menstruation have long been part of women's lives in India. The stigma finds its roots in the notion of purity and pollution attached historically to menstruation.
- This was explained exceptionally by Justice D.Y. Chandrachud in Indian Young Lawyers Association v. The State of Kerala (2018), known popularly as the Sabarimala case, a decision that India is still struggling to accept.
- He reasoned — and rightly so — that any social practice which excludes women from participation in public life as a result of their menstruation is discriminatory on the ground of their sex. This is because it is drawn from the notion of menstruating women being "impure", a notion which targets the physiological feature of being women.
- The first ground for rejecting such practices is thus differential treatment, which directly discriminates women on the ground of their sex and is impermissible under Article 14 of the Constitution. Viewed from another lens, it is also against the notion of substantive equality adopted by the Constitution. In fact, it supports a more formal notion of equality of 'separate but equal treatment'.
- Women are treated differently because they have distinct physiological features than men but are nevertheless equal to men. An attractive explanation also used to justify caste discrimination previously is nothing but a guise to perpetuate and exacerbate regressive patriarchal notions of our society and must also be readily dismissed under Article 14.
- That apart, such social exclusion can be attacked on the ground of privacy. Incidents such as what took place in SSGI not only attack the 'sex' of women, but also impact a deeply personal and an intrinsic part of their privacy, namely, their menstrual status.
- Restrictions of movement imposed on these students are one of the many attempts of state and non-state actors to take control of their person. It is an outrageous exercise of power to prevent them from leading a dignified life during their period. It is undoubtedly an excessive invasion of a biological feature that makes them women. This surely cannot be the intent of our Constitution and its values we adopted, and needs to change.

Court intervention

- Taking cognisance of the incident at SSGI, the Gujarat High Court, in early March this year, proposed to introduce a set of guidelines that prohibit the social exclusion of menstruating women from private, public, religious and educational places.
- The court also emphasised on the negative impact created by such practices on a woman's emotional state, lifestyle and, most significantly, her health. While surely a ray of hope, the effect of court intervention is yet to be seen in a society where previous decisions of courts categorically holding menstruation to be a part of the fundamental right to (private) life have failed to change societal notions surrounding it.
- The hope for women is that society will slowly but surely get past the taboo around menstruation, and abhorrent practices discriminating against menstruating women will be considered abnormal. That will be a society where no exclusion will be practiced and tolerated, and no discrimination will be perpetrated.

- It will be a society where women can freely live dignified lives, nurturing all facets of their womanhood. And it will be a society where women will be considered neither polluted nor impure during their menstruation, but will be treated with respect.

Indo-Myanmar relations

(Source: Indian Express)

Context: *The unfolding tragedy in Myanmar, occasioned by the military (the Tatmadaw) overturning the election results last month, portends a new cycle of political repression, humanitarian disaster and geopolitical instability. India, because of its proximity to Myanmar, its geopolitical role, and its interests, will inevitably be drawn into the train of events. The most immediate challenge is, of course, dealing with the refugee crisis that this coup occasions.*

Details:

- The Chief Minister of Mizoram, Zoramthanga, was correct in writing to the Centre that India cannot ignore the humanitarian crisis unfolding in our backyard, and remain "indifferent" to the suffering of those crossing the border.
- The Manipur government has, thankfully, withdrawn a shameful circular that would have prohibited providing meaningful assistance to victims of political persecution. This circular, if enacted, would have been terrible for India's image.
- But how we deal with the victims of this crisis should not be just driven by an exercise in image management, but take the larger humanitarian and political view.
- To state that the rich and powerful nations have not pulled their weight in crafting an adequate multilateral response to the global refugee crisis is to state the obvious. Myanmar's other neighbours, and especially ASEAN countries, are also unlikely to do the minimal decent thing.
- Helping refugees is also not costless, and the burden has to be shouldered by the nation, not just a few states. But India now risks moving from what B S Chimni, India's most important scholar on refugee law, once called the transition from "strategic ambiguity to exclusion".
- This is in keeping with the ideological temper of our times, where the complexities of people's very human predicaments are effaced by xenophobia, paranoia, and discrimination. No group that is not of use to our new interpretation of nationalism will deserve any consideration.
- The humanitarian case for providing some kind of safe haven for refugees is too obvious to be stated.
- Surely the real test of "Vasudhaiva Kutumbakam" is not opportunistic displays of noblesse oblige, it is adherence to basic norms of decency.
- The principle of non-refoulement, which has been described as the equivalent of the Magna Carta in treatment of those fleeing persecution, has to be the cornerstone of any civilised state's response to a politically induced humanitarian disaster. It is not clear where India stands on this.
- But there is also a more political case for crafting a more generous and imaginative policy.
    - First, the protests for democracy are widespread, involve young people, and are driven by a genuine opposition to military rule. India has to decide whether it is on the side of the future.
    - Second, Northeastern states like Manipur and Mizoram which will immediately bear the costs of helping refugees, are all, rightly, calling for a more generous and imaginative policy. As Avinash Paliwal, one of the most insightful writers on Myanmar, had argued in an important article, "A Cat's Paw of Indian Reactionaries: Strategic Rivalry and Domestic Politics at the India-China-Myanmar Tri Junction," the concerns of the Northeast states have often been historically sidelined in India's handling of the "trijunction". This was partly because of counterinsurgency fears, and partly because of suspicion of political forces in the Northeast. But at this historical

juncture, to ignore reasonable and accommodative sentiments in the Northeast, would be to potentially signal their marginality in shaping India's calculations. \

- Third, the counterinsurgency and subversion fears have to be intelligently handled. For one thing, if we are relying only on cooperation with the Myanmar military, without support for the local population, we will once again be setting ourselves up for long-term problems. A broadbased reputation for humanitarian concerns and the welfare of people is a strategic asset, not a liability if you are a long-term player. India should also now have the confidence that it can both politically and militarily handle any risks that occasionally arise in the context of doing the decent thing. But by closing down its borders, it is not sending a signal of strength but one of weakness; that its position is so fragile, that even an adherence to a principle of non-refoulement poses risks.
- Fourth, it is not yet clear what India's position on political developments inside Myanmar will be. With every major power, from Russia to China now seeing Myanmar in terms of geopolitical terms, the stakes for India are going to be high. Admittedly, the choices are not easy. The Myanmar military, belying all analyses, has remained mostly united and oppressive.

- We know from historical experience that unless there is significant elite division in military structures, they can hang on for a long time through brutal repression. Myanmar's tragedy seems to be that its people seem more ready for democracy. But its military seems more repressive, and its elites, including
- Aung San Suu Kyi, have been more conservative in harnessing democratic and progressive impulses. There is also the brute fact that now with even Russia in the mix, the Myanmar military may have more options for support.
- So under such circumstances, it will be tempting for the so-called realists in India to deeply engage with the military. There is also a great deal of exaggeration about Myanmar's economic importance to India. Certainly, connectivity and trade with Myanmar provide momentum for India's eastward interests.
- But frankly, it will be a stretch to say that somehow the benefits from engagement with Myanmar are so great that India cannot put them aside, if the need arises, to act on a modicum of principle.
- Presumably, India wants to be a key interlocutor in two contexts. It wants to be a key player in shaping a global response to the crisis. And it wants to have, perhaps, some role in, if possible, helping with a settlement towards a less repressive transition within Myanmar.
- But for both of those roles, it is important that India has widespread credibility with the different groups and movements inside Myanmar. That is what will give India potential advantage. But it is also important that your own positions are not seen just as a product of strategic cynicism, willing to trade any larger consideration for small short-term gains.
- For both of these contexts, the exemplariness of India's conduct matters. That is how we differentiate ourselves from the crowded geopolitical pack. By sidelining even the most basic humanitarian impulses, under a myopically realist or xenophobic impulse, India will neither realise its ideals nor its strategic objectives.

A step that enhances cooperative federalism

(Source: The Hindu)

Context: *On January 17, 2017, the Lieutenant Governor of Delhi wrote to the Speaker of the Legislative Assembly of Delhi stating that the President of India had considered the Delhi Netaji Subhas University of Technology Bill, 2015 and directed that it be returned to the Legislative Assembly of Delhi. One of the reasons stated for the return was the inconsistent definition of the term "Government." In June 2015, when the Legislative Assembly of Delhi had passed the Delhi Netaji Subhas University of Technology Bill and sent it for the President's assent, it had defined the term "Government" as the "Government of the National Capital Territory of Delhi."*

Formalises the definition

- After the Bill was returned, the Delhi Assembly sent a modified version of the Bill for the President's assent where the definition of "government" was described as: "Lieutenant Governor of NCT Delhi appointed by the President."
- Last week, both Houses of Parliament voted overwhelmingly in favour of the amendments to the Government of the National Capital Territory (NCT) of Delhi Act.
- The aim of the amendments were to clear such ambiguities in the roles of various stakeholders and provide a constructive rule-based framework for stakeholders within the Government of Delhi to work in tandem with the Union Government. One of the changes made was to bring consistency in the definition of the term "Government".
- In this instance, the government was only formalising the definition of a term that the Delhi Assembly itself had already accepted. This rule-based framework is especially important given that Delhi is also India's national capital and the symbolism that comes with being the seat of the sovereign power.

Partners not adversaries

- The National Democratic Alliance Government, under the leadership of the Prime Minister, has completely transformed Centre-State relationships.
- At the core of this transformation is the outlook that States — and by extension the Chief Ministers of the States — are partners in the national agenda, and hence must have platforms and frameworks available to work together.
- In earlier governments we saw State Chief Ministers queuing up in front of unelected officials in the erstwhile Planning Commission supplicating for grants.
- The creation of NITI Aayog, the establishment of the Goods and Services Tax Council, the restructuring of central schemes and accepting the Fifteenth Finance Commission's recommendations for greater devolution are clear examples of the Union Government viewing States as equal partners.

A legislative right

- This partnership requires an environment of trust and mutual co-operation. A necessary condition for such an environment is the distinct delineation of roles and responsibilities, the removal of ambiguities, and the definition of a clear chain of command among stakeholders.
- In this regard, it was important to define, without doubt, who represents the Government in the unique case of Delhi.
- On December 20, 1991, Home Minister S.B. Chavan tabled the Constitution Amendment Bill in the Lok Sabha to add Articles 239AA and 239AB into the Constitution that paved the way for the creation of a Legislative Assembly and a Council of Ministers for the National Capital Territory (NCT) of Delhi.
- This amendment passed in 1991 empowers Parliament to enact laws supplementing constitutional provisions. Similarly, the Government of NCT Delhi also has the power to enact laws regarding matters specified under the State list and Concurrent list, to the extent these are applicable to a Union Territory.
- It becomes important to ensure there is complete synchronisation between the Union Government and the Government of NCT Delhi and that there is no encroachment in legislative matters. In the case of the Government of NCT Delhi, it has no legislative competence in matters pertaining to the police, public order, and land. The risk of incremental encroachments on these subjects in the legislative proposals under consideration of the Delhi Legislative Assembly can have severe ramifications for Delhi.
- Thus, for the Opposition to portray a government exercising its constitutional responsibilities as an undemocratic act shows a wilful lack of understanding.
- The national capital hosts the country's legislature, the seat of the Union Government, the judiciary, diplomatic missions, and other institutions of national importance. It deserves smooth functioning and cannot be subject to misadventures arising from the ambiguities in the roles and responsibilities of its stakeholders.

A functioning relationship

- While some in the Opposition have accused the government of undermining the federal structure of the country, others have painted an even darker picture proclaiming the death of democracy itself. Nothing can be farther from the truth.
- Making Delhi Assembly rules consistent with the rules of the Lok Sabha or ensuring that the opinion of the Lieutenant Governor is taken can only ensure clarity and foster an environment of co-operation. In no manner do these amendments dilute or affect the powers of the Delhi Legislative Assembly.
- Various court judgments have also observed the ambiguities and lack of clarity. The people of Delhi deserve a functioning government, and the amendments made aid in creating such an environment.

Enactment of the Places of Worship Act, 1991

(Source: The Hindu)

Context: *A public interest litigation (PIL) in the Supreme Court (WP(C) 619 of 2020, which was filed earlier but notice was issued later vide order of the Supreme Court dated March 26, 2021), challenged Sections 3 and 4 of the Places of Worship Act, 1991 being unconstitutional, void ab initio, and against the Basic Structure of the Constitution of India.*

No precedential value

- Mr. Dave has relied mainly on the Supreme Court's observation in the Ram Janmabhoomi Case of November 9, 2019 (M. Siddiq vs. Mahant Suresh Das) with respect to the Places of Worship Act, 1991. However, there was no application of the provisions of the Places of Worship Act, 1991 to the case (Shri Ram Janmabhoomi dispute).
- Section 5 of the Places of Worship Act, 1991 clearly states that nothing in the Act shall apply to any suit, appeal or other proceedings relating to the said place or place of worship, i.e. the Ram-Janmabhoomi-Babri Masjid situated in Ayodhya, in the State of Uttar Pradesh. Thereby, the 2019 judgment of the Supreme Court's (Shri Ram Janmabhoomi dispute (2020 1 SCC 1)) observation(s) with respect to the Places of Worship Act, 1991 lacks any precedential value.
- The pith and substance of the Act of 1991 is that it is ultra vires the fundamental rights enshrined in the Constitution since it bars the jurisdiction of the Supreme Court and furthermore nullifies the Fundamental Right(s) guaranteed by the Constitution of India as elucidated in Article 32 of "enforcement of fundamental rights" which cannot be suspended except as otherwise stated in the Constitution.
- This importance of Article 32 can be understood by the words of the Chairman of the Constitution Drafting Committee, B.R. Ambedkar who asserted, inter alia, that Article 32 is the very soul of the Constitution and the most important Article in the Constitution.
- Under Article 32 of the Constitution of India, the Supreme Court has the power to issue writs appropriate for enforcement of all the Fundamental rights conferred by Part III of the Constitution.
- The top court, on various instances, ruled that in view of the constitutional scheme and the jurisdiction conferred on the Supreme Court under Article 32 and on the High Courts under Article 226 of the Constitution that "the power of judicial review being an integral part of the basic structure of the Constitution, no Act of Parliament can exclude or curtail the powers of the Constitutional Courts with regard to the enforcement of fundamental rights".
- The Act of 1991, is appropriately called an Act of colourable legislation. As the Courts have held, "you cannot do indirectly which you are prohibited from doing directly".

A weakening

- The Preamble in the Constitution gives prominent importance to liberty of belief, faith and worship to all citizens, and the same is sought to be weakened and effectively nullified or severely damaged by the enactment of the Act of 1991 in its current format.
- The concepts of faith, belief and worship are the foundations of Articles 25 and 26 of the Constitution of India. Therefore, prohibiting citizens from approaching appropriate courts with respect to suit or any other proceedings to handover the land of any temple of certain essential significance (such as being the birthplace of Lord Rama in Ayodhya and Lord Krishna in Mathura or Lord Shiva sending his fiery Jyotirlinga in the Gyanvapi premises of Varanasi), is arbitrary, unreasonable and mala fide in the context of the fundamental rights to pray and perform religious practice as guaranteed by Articles 25 and 26 of the Constitution of India.
- The intent of the Act of 1991 under Section 5, i.e. exception extended to the "Ram-Janmbhoomi matter" identifies the need and importance of resolution of such a controversy and settling long on-going disputes before the courts. But such an exception should be made for other two matters of dispute stated above.

Other disputes

- The exclusion of the Mathura and Varanasi disputes as being additional exceptions from the Act of 1991 is wholly unacceptable and against what is given by the people of India to the makers of the Constitution, enshrined in the Preamble, which is part of the Basic Structure of the Constitution.
- Those who rely on the Act of 1991 to avoid the settlement of the dispute in Varanasi Mathura have failed to anticipate the legal principles enunciated in the judgment of the top court (in Ismail Faruqui vs. Union of India (1994 6 SCC 360)), on the religious significance of mosques and temples.
- Even in countries like Saudia Arabia, only Mecca and Medina have the immutable religious protection from demolition. And only authorised demolition is permitted.
- Section 4 (1) of the Act declaring that religious character of a place of worship existing on the 15th day of August, 1947 shall continue to be the same as it existed on that day, is no longer good law after this Court's judgment in ((1994) 6 SCC 360) which held that a mosque is not an essential part of the practice of the religion of Islam and namaz (prayer) by Muslims can be offered anywhere, even in the open maidan, on the road, railway platforms or airports.
- Ultimately, students of law are also students of history and we must not lose sight of the past. We must learn from it. But we accept one sentiment of Mr. Dave — that we cannot open the flood gates of rebuilding all 40,000 temples which were demolished on firmans of the Mughal emperors.
- Yet, where by faith Hindus believe there was a forcible demolition of an irreplaceable non-shiftable temple, it has to be rebuilt. There are only two more such temples in the list of 40,000 — the Gyanvapi Kashi Vishwanath Temple in Varanasi and the Krishna Janmabhoomi Temple in Mathura.
- Hence, by the doctrine of casus omissus, the Supreme Court can in an appropriate case before it order that the number of exceptions in Section 5 of the Places of Worship Act, 1991, be three as an alternative solution. The Supreme Court under Article 142 of the Constitution can pass any order to carry out for doing complete justice being in the public interest, while upholding the Constitution of India.

GS III

NGT order on pollution control bodies

(Source: Down to Earth)

Context: *The National Green Tribunal (NGT), in a landmark judgement, directed Haryana State Pollution Control Board (HSPCB) March 23, 2021 to strengthen its capacity, both in terms of human resource and*

setting up of modern laboratories. The order was to ensure better monitoring for improved compliance of environmental norms. NGT also directed the Central Pollution Control Board (CPCB) to prepare recruitment rules to be followed by all states, mechanism for annual performance audit of SPCBs or pollution control committees (PCC), among other things.

Highlights of the order

- Inspection at higher frequencies
- Capacity enhancement of SPCBs/PCCs with consent funds
- Capacity enhancement of CPCB utilising environment compensation funds
- Annual performance audit of state PCBs/PCCs
- CPCB to prepare a format containing qualifications, minimum eligibility criteria and required experience for key positions
- The important part of the judgement is asking CPCB to come out with standard recruitment rules which can be followed by all states. The existing SPCBs recruitment rules have not been updated for decades. The result is if they want to hire a communication officer or health officer, they cannot do so as recruitment rules do not allow. Also, the salary structure mentioned in decade old recruitment rules is not appropriate even for the position of the clerk, forget about qualified graduates and engineers.
- The order is the latest among a slew of similar directives from the green court. In February, NGT asked all the states and Union territories to fill up vacant posts, commission and upgrade laboratories using environmental compensation funds.

Case background

- In 2018, a case was filed with NGT's principal bench for revising existing monitoring mechanism by SPCBs. This included interval of mandatory inspections of 'highly polluting 17 category', 'red', 'orange' and 'green' category industries and policy for auto renewal of consent to operate (CTO) certificate under Water (Prevention and Control of Pollution) Act, 1974 as well as the Air (Prevention and Control of Pollution) Act, 1981.
- The plea pointed out that an earlier report of the Central Ground Water Board (CGWB) had established deterioration of the ground water quality in Haryana. The Comptroller and Auditor General of India's 2016 report also recorded operation of several projects without valid consent to establish or CTO certificates, showing ineffectiveness of monitoring mechanism.
- In response, the tribunal sought a report from a joint committee of the CPCB, Haryana State PCB, Central Ground Water Authority and District Administration. Their report pointed out that the existing inspection intervals for industries in 'highly polluting 17', 'red' and 'orange' categories are three, five and seven years, respectively.
- The units also have provisions for auto-renewal of CTO. The report highlighted large-scale violation of environmental norms.
- The NGT passed an order for the Haryana government to revisit its inspection policy and make it adequate to ensure effective enforcement of law.
- The Haryana government, in compliance to the NGT order, proposed a revised policy with increased frequency of inspection, installation of online monitoring devices to capture real-time data and pre-verification of documents before issuing renewal.

Proposed frequency of inspection by Haryana government

Periodicity/frequency of Inspection					
	Highly polluting 17 category and red category of units	**Red category other the 17 category**	**Orange category**	**Green Category**	**CBWTF/ CHWSRDF/ CMSWTDF/ CETP/STP**
Existing policy	3 years	5 years	7 years	7 years	Once in three months
Provisions suggested in the CS meeting held on 25.05.2019	**1 year**	**1 year**	**2 years**	**3 years**	**Once in three months**

However, the NGT was of the opinion that the interval period between inspections be further reduced for 'highly polluting 17 category', 'red category' and 'orange category' industries.

Frequency of mandatory inspections directed by NGT

Industry Category	Frequency of Inspection
Highly polluting 17 Category	3 months
Other Red Category	6 months
Orange Category	1 year
Green Category	2 years
CBWTF/CHWSRDF/ CMSWTDF/CETP/STP	3 months

(Source: NGT order dated March 23, 2021)

- The NGT directed CPCB to follow these timelines for other states as well. To meet this increased frequency of inspections, the NGT additionally directed SPCBs/PCCs to undertake capacity enhancement.

Removing bottlenecks

- Various reports, committees and meetings have been organised since the formation of SPCBs to strengthen it. Lack of human resource at SPCB and CPCB was the highlighted issue but neither the central government nor the state government made efforts to resolve this.
- In the name of 'ease of doing business', powers and authorities of SPCB have been compromised. The latest judgement of NGT is a fresh start to the long-delayed initiative of strengthening CPCB/SPCBs/PCCs.
- "The judgment of NGT could be termed as landmark. The NGT have tried to erase the bottlenecks, which were being used to halt the strengthening of environmental regulatory," said Nivit Kumar Yadav, director, industrial pollution research, Centre for Science and Environment, a Delhi-based non-profit.

Permanent commission for women in Army

(Source: The Hindu)

Context: *The Supreme Court in Secretary, Ministry of Defence vs. Babita Puniya last February directed the government to ensure that women officers in the Army are granted permanent commission (PC) as well as command postings in all services other than combat. Later, questioning the compliance of the Army with the directions in the judgment, around 80 women short service commission officers approached the Supreme Court challenging the arbitrary process, including unjust medical standards, applied to deny permanent commission to women officers. On March 25, the Supreme Court in Lt. Col. Nitisha vs. Union of India held that the Army's selective evaluation process discriminated against and disproportionately affected women officers seeking permanent commission.*

What did the Supreme Court observe?

- A Bench led by Justice D.Y. Chandrachud observed that the pattern of evaluation inherently caused economic and psychological harm to women short service commission officers. The judgment, authored by Justice Chandrachud, said the evaluation criteria set by the Army constituted "systemic discrimination" against the petitioners.
- The Bench found several deviations in the standards adopted by the Army for evaluating women officers.
- "This disproportionate impact is attributable to the structural discrimination against women, by dint of which the facially neutral criteria of selective ACR [annual confidential reports] evaluation and fulfilling the medical criteria to be in SHAPE-1 at a belated stage, to secure PC [permanent commission] disproportionately impacts them vis-à-vis their male counterparts," the court said in its judgment.
- Fitness is assessed under five categories, under the code letter SHAPE that includes psychological including cognitive function abnormalities, hearing, appendages, physical capacity and eyesight.
- The court observed that the reliance placed on women officers' ACRs for determining the grant of permanent commission was unfair.

What is the procedure for granting permanent commission?

- In 1992, the Union Government issued a notification making women eligible for appointment as officers in select non-combat branches. In 2008, the government extended the permanent commission to women in two branches — Judge Advocate General (JAG) and Army Educational Corps (AEC).
- In a long legal battle for equality, 322 women officers had approached the top court for granting permanent commission, and the Supreme Court delivered its landmark verdict in February 2020.
- In July 2020, the Defence Ministry issued the government sanction letter, specifying grant of permanent commission to women officers in all streams in which they are presently serving — Army Air Defence (AAD), Signals, Engineers, Army Aviation, Electronics and Mechanical Engineers (EME), Army Service Corps (ASC), Army Ordnance Corps (AOC) and Intelligence Corps.

How did the Army respond to the sanction letter?

- Following the sanction letter, the Army constituted a special selection board for screening women officers for grant of permanent commission who joined the service through the Women Special Entry Scheme (WSES) and Short Service Commission Women (SSCW).
- Of the 365 optee officers who were considered fit for permanent commission by the Special No. 5 Selection Board, 277 women short service commission officers (WSSCOs) were granted permanent commission after medical scrutiny.
- However, some petitioners said the process followed was arbitrary and challenged it in the top court.

What are the fresh directives?

- The Supreme Court noted that the Army's process of benchmarking women officers against the officers lowest in merit in the corresponding male batch is "irrational and arbitrary", and said this requirement should be removed.
- All women officers who have fulfilled the cut-off grade of 60% in the Special Selection Board held in September 2020 shall be entitled to the grant of permanent commission, the judgment said, subject to their meeting the prescribed medical criteria and receiving disciplinary and vigilance clearance.
- "In the spirit of true equality with their male counterparts in the corresponding batches, the WSSCOs must be considered medically fit for grant of PC by reliance on their medical fitness, as recorded in the 5th or 10th year of their service," the court said.
- Other than "non-optees", the cases of all WSSCOs, including the petitioners who have been rejected on medical grounds, shall be reconsidered within a month and orders for the grant of permanent commission must be issued within two months.
- Further, the court directed that the method of evaluation of ACRs and the cut-off must be reviewed for future batches to assess a disproportionate impact on WSSCOs who became eligible for the grant of permanent commission in the subsequent years of their service.
- Also, for the Babita Puniya case, the court held that for officers within the service bracket of 10 to 14 years who have been denied permanent commission, it has allowed them to continue in service till they attain 20 years of pensionable service.

Current Affairs Quiz

1) Tiau River divides boundary of India with -

a) Myanmar
b) Pakistan
c) Nepal
d) Bangladesh

Answer: a

2) Consider the following statements with respect to Mahatma Gandhi National Rural Employment Guarantee Scheme:

1. It provides 100 days of guaranteed wage employment to rural unskilled labour
2. Recently it was announced that the workers under the MGNREGA would get a hike of Rs. 2000 each on an average

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

Answer : c

3) Which of the following statements is/are correct with respect to POCSO Act?

1. "Children" according to the Act are individuals aged below 18 years.
2. The Act is gender-specific and gives more emphasis on female children.

Select the correct answer code:

a. 1 only
b. 2 only
c. Both 1 and 2
d. Neither 1 nor 2

Answer : a
The Act is gender-neutral.

4) Consider the following statements with respect to Overseas Citizen of India (OCI):

1. An Overseas Citizen of India (OCI) is a person who is technically a citizen of another country having an Indian origin.
2. They were citizens of India on 26th January 1950 or thereafter living in any country around the globe.

Which of the statements given above are correct?

a) 1 only
b) 2 only
c) Both 1 and 2
d) Neither 1 nor 2

Answer : a
They were citizens of India on 26th January 1950 or thereafter except who is or had been a citizen of Pakistan, Bangladesh.

5) The 6th schedule of Indian Constitution deals with-

a) provisions in relation to the allocation of seats for States and Union Territories in the Rajya Sabha
b) provisions in relation to the administration and control of scheduled areas and scheduled tribes
c) provisions in relation to the administration of tribal areas in the states of Assam, Meghalaya, Tripura and Mizoram
d) provisions relating to disqualification of the members of Parliament and State Legislatures on the ground of defection.

Answer: c

6) Article 244(A), recently in news, deals with-

a) creation of an 'autonomous state' within Assam in certain tribal areas.
b) creation of an 'autonomous state' within Nagaland in certain tribal areas.
c) Both a and b
d) Neither a nor b

Ans. a)

7) Whitsun reef, recently in news is located in -

a. Brunei
b. Myanmar
c. Malaysia
d. Philippines

Answer : d

China's aggressive expansion in the region has found a new ground, Whitsun Reef, where 220 Chinese vessels are currently moored though the area, which comes under the Philippines' Exclusive Economic Zones (EEZ).

8) Prakash Singh Judgment, recently in news is related to-

a) Police reforms
b) Electoral Reforms
c) Educational Reforms
d) Civil Service Reforms

Answer : a

9) Which of these is/are not included in the Eight Core Sector Industries?

1. Crude Oil
2. Iron Ore
3. Fertilizers

Select the correct answer code:

a) 1 and 2 only
b) 2 only
c) 1 and 3 only
d) 3 only

Ans. b)

Eight Core Industries are Electricity, steel, refinery products, crude oil, coal, cement, natural gas and fertilizers.

10) Consider the following statements regarding International Atomic Energy Agency (IAEA).

1. IAEA is entrusted with the task of upholding the principles of the Nuclear Non-Proliferation Treaty of 1970.
2. IAEA works with its member states and multiple partners worldwide to promote the safe, secure and peaceful use of nuclear technologies.
3. Established under the UN treaty, the agency reports to both the UN General Assembly and the UN Security Council.

Which of the above statements is/are correct?

a. 1 and 2 only
b. 2 and 3 only
c. 3 and 4 only
d. All of the above

Answer : a
Though established independently of the UN through its own international treaty, the agency reports to both the UN General Assembly and the Security Council.

11. Consider the following statements with respect to military farms:
1. The farms were set up with the sole requirement of supplying hygienic cow milk to troops in garrisons across British India.
2. The first military farm was raised on February 1, 1889, at Madras.

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

Answer. a)
The **first military farm was raised on February 1, 1889, at Allahabad**.

12) Consider the following statements with respect to inflation targeting in India:
1. The inflation target for the period April 1, 2021, to March 31, 2026 has been kept at the same level as it was for the previous five years.
2. The Centre has decided to retain the inflation target of 4% without any tolerance band.

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

Answer. a)
The **Centre has decided to retain the inflation target of 4%, with a tolerance band of +/- 2 percentage points** for the Monetary Policy Committee of the RBI for the coming five years

13) Which of the following statements is/are correct with respect to PRISM Scheme which has been launched recently?

1. It is an initiative to promote and support science-based deep-tech startups & ventures across India.
2. It was launched by the Department of Scientific and Industrial Research (DSIR), Ministry of Science and Technology.

Select the correct answer code:

a. 1 only
b. 2 only
c. Both 1 and 2
d. Neither 1 nor 2

Answer : b

- It aimed at transforming an individual innovator into a successful technopreneur by promoting, supporting, and funding implementable and commercially viable innovations created for the society.
- Under the initiative, an innovator of Indian nationality - student, professional and common citizen - is provided technical, strategic, and financial assistance by DSIR-PRISM for idea development, prototype development and pilot scaling, and patenting.

14) Which of the following statements is/are correct with respect to the recently launched AIM-PRIME Programme?

1. It is an initiative to promote and support science-based deep-tech startups & ventures across India.
2. It was launched by the Atal Innovation Mission (AIM) and NITI Aayog.

Which of the statement(s) given above is/are correct?

a. 1 only
b. 2 only
c. Both 1 and 2
d. Neither 1 nor 2

Answer : c

15. Global Gender Gap Report, 2021 was released by?

a. UNESCO
b. World Bank
c. World Economic Forum
d. UN Development Programme

Answer : c

16. Which of the following describes the provisions of Article 244 (A) of Indian Constitution?

a. Grant of Special Funds to Tribal Areas
b. Functioning of Panchayats in Tribal Areas
c. Autonomous powers to Tribal Areas
d. Regulations for certain Union Territories

Answer : c

17. Who among the following is being awarded with the Dadasaheb Phalke Award for the year 2021?

a) Amitabh Bacchan
b) Dharmendra
c) Asha Bhosle
d) Rajinikanth

Answer. d)

18 Consider the following statements with respect to Dadasaheb Phalke Award:

1. Instituted in 1969, the award is the highest honour for an artiste in Indian cinema.
2. It is presented annually at the National Film Awards Ceremony by the Directorate of Film Festivals, an organisation of the Ministry of Information and Broadcasting.
3. After Amitabh Bachchan received the award in 2018, there had been no nominee for the past three years

Which of the statements given above is/are correct?

a) 1 and 2 only
b) 1 and 3 only
c) 2 and 3 only
d) 1, 2 and 3

Ans. d)

19) Which of the following countries is/are not a member of Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation?

3. Bangladesh
4. Myanmar
5. Thailand
6. India
7. Pakistan
8. China

Select the correct answer code:

a) 1, 2, 3 and 5 only
b) 3, 4 and 5 only
c) 4, 5 and 6 only
d) 5 and 6 only

Answer : d
Member states

- Bangladesh
- Bhutan
- India
- Nepal

- Sri Lanka
- Myanmar
- Thailand

20. Consider the following statements with respect to Bills passed in Parliament:

1. Any member of the Parliament can oppose the introduction of a bill by stating that it initiates legislation outside the legislative competence of the Parliament.
2. All Government bills automatically go to Parliamentary committees for examination.

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

Answer : a

Government bills do not automatically go to committees for examination. Ministers get an option to refer their bill to a select committee.

April (Week 2)

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Prelims

NATIONAL

Asian desert dust & Indian summer monsoon

(Source: The Hindu)

Context: *A new study details how dust coming from the deserts in the West, Central and East Asia plays an important role in the Indian Summer Monsoon.*

Reverse effect

- The researchers also explain how the Indian Summer Monsoon has a reverse effect and can increase the winds in West Asia to produce yet more dust.
- Dust swarms from the desert when lifted by strong winds can absorb solar radiation and become hot. This can cause heating of the atmosphere, change the air pressure, wind circulation patterns, influence moisture transport and increase precipitation and rainfall.
- A strong monsoon can also transport air to West Asia and again pick up a lot of dust..
- Lead author Qinjian Jin, lecturer and academic program associate at the University of Kansas explains a new hypothesis formulated by the team.
- Not just the dust from the Middle East [West Asia], the Iranian Plateau also influences the Indian Summer Monsoon.
- The hot air over the Iranian Plateau can heat the atmosphere over the plateau, strengthen the circulation over the deserts of the Arabian Peninsula and increase dust emission from the Middle East [West Asia].
- But why is it important to study dust? Many studies have shown that the dust emission scheme is extremely sensitive to climate change and the team writes that understanding these mechanisms and effects of dust will help understand our monsoon systems in the face of global climate change.

Pre-pack under Insolvency and Bankruptcy Code

(Source: Indian Express)

Context: *The central government has promulgated an ordinance allowing the use of pre-packs as an insolvency resolution mechanism for Micro, Small and Medium Enterprises (MSMEs) with defaults up to Rs 1 crore, under the Insolvency and Bankruptcy Code.*

What are pre-packs?

- A pre-pack is the resolution of the debt of a distressed company through an agreement between secured creditors and investors instead of a public bidding process.
- This system of insolvency proceedings has become an increasingly popular mechanism for insolvency resolution in the UK and Europe over the past decade. Under the pre-pack system, financial creditors will agree to terms with a potential investor and seek approval of the resolution plan from the National Company Law Tribunal (NCLT).

- The approval of a minimum of 66 per cent of financial creditors that are unrelated to the corporate debtor would be required before a resolution plan is submitted to the NCLT.
- Further NCLTs are also required to either accept or reject any application for a pre-pack insolvency proceeding before considering a petition for a CIRP.

What are the benefits of pre-packs over the Corporate Insolvency Resolution Process (CIRP)?

- One of the key criticisms of the CIRP has been the time taken for resolution. At the end of December 2020, over 86 per cent of the 1717 ongoing insolvency resolution proceedings had crossed the 270-day threshold.
- One of the key reasons behind delays in the CIRPs are prolonged litigations by erstwhile promoters and potential bidders.
- The pre-pack in contrast is limited to a maximum of 120 days with only 90 days available to the stakeholders to bring the resolution plan to the NCLT.
- Another key difference between pre-packs and CIRP is that the existing management retains control in the case of pre-packs while a resolution professional takes control of the debtor as a representative of financial creditors in the case of CIRP. Experts note that this allows for minimal disruption of operations relative to a CIRP.
- The pre-pack is expected to be rolled out to all corporations over time as legal issues around the provisions are settled through case law, according to experts.

Why RBI's Monetary Policy Committee kept rates unchanged

(Source: Indian Express)

Context: *The Reserve Bank of India's Monetary Policy Committee, in its meeting over the last three days, has decided to keep its short term lending rate or the repo rate unchanged at 4 per cent, in line with market expectations.*

Growth vs inflation trade-off

- The RBI's decision comes amid a surge in Covid-19 cases that has prompted many states to impose fresh curfew restrictions this week, triggering concerns over the economic recovery that is underway.
- The MPC voted unanimously to keep rates steady and retain the accommodative monetary policy stance, Das said adding that it would do so while keeping a leash on inflation.
- The annual Consumer Price Index-based retail inflation rate rose to a three-month high of 5.03 per cent in February. "The MPC judged that monetary policy should remain accommodative till prospects of sustained recovery are well secured," Das said.

Projections on growth and inflation

- Retail inflation is projected to stay around 5 per cent next year: 5% in Q4 of FY'21; 5.2% in Q1 and Q2 FY'22; down to 4.4% in Q3 FY'22 and 5.1% in Q4 FY'22.The RBI maintained its GDP growth forecast at 10.5 per cent for 2021-22.
- The central bank has slashed the repo rate — benchmark lending rate — by a total of 115 basis points (one basis point is one-hundredth of a percentage point) since March 2020, coming on top of the 135 bps of cumulative cuts since early 2019.

Other measures

- Das said the RBI will ensure ensure orderly conduct of government borrowing programme. In this respect, the central bank announced a secondary market government securities (G-sec) acquisition plan

worth Rs 1 lakh crore for April-June. These measures are announced amid a tightening in the G-sec bond market, with yields hardening and expanding debt requirement of the central and state governments.

- Amid the government plans to support a new asset reconstruction company being set up by banks, the RBI has decided to set up a committee to review the working of ARCs to ensure how better these entities can support the financial sector.
- In the policy review, the RBI decided to extend the RTGS and NEFT payments platforms to prepaid payment instruments, white label ATMs as well.

Pre-pack: Insolvency resolution option for MSMEs

(Source: Indian Express)

Context: *The central government has promulgated an ordinance* ***allowing the use of pre-packs as an insolvency resolution*** *mechanism for Micro, Small and Medium Enterprises (MSMEs) with defaults up to Rs 1 crore, under the Insolvency and Bankruptcy Code.*

What are pre-packs?

- A pre-pack is the resolution of the debt of a distressed company through an agreement between secured creditors and investors instead of a public bidding process.
- This system of insolvency proceedings has become an increasingly popular mechanism for insolvency resolution in the UK and Europe over the past decade. Under the pre-pack system, financial creditors will agree to terms with a potential investor and seek approval of the resolution plan from the National Company Law Tribunal (NCLT).
- The approval of a minimum of 66 per cent of financial creditors that are unrelated to the corporate debtor would be required before a resolution plan is submitted to the NCLT. Further NCLTs are also required to either accept or reject any application for a pre-pack insolvency proceeding before considering a petition for a CIRP.

What are the benefits of pre-packs over the Corporate Insolvency Resolution Process (CIRP)?

- One of the key criticisms of the CIRP has been the time taken for resolution. At the end of December 2020, over 86 per cent of the 1717 ongoing insolvency resolution proceedings had crossed the 270-day threshold. One of the key reasons behind delays in the CIRPs are prolonged litigations by erstwhile promoters and potential bidders.
- The pre-pack in contrast is limited to a maximum of 120 days with only 90 days available to the stakeholders to bring the resolution plan to the NCLT.
- Another key difference between pre-packs and CIRP is that the existing management retains control in the case of pre-packs while a resolution professional takes control of the debtor as a representative of financial creditors in the case of CIRP. Experts note that this allows for minimal disruption of operations relative to a CIRP.

National Policy for Rare Diseases, 2021

(Source: PIB)

Context: *Union Health Minister approves National Policy for Rare Diseases, 2021.*

About the National Policy for Rare Diseases, 2021:

- The Rare Diseases Policy aims to lower the high cost of treatment for rare diseases with increased focus on indigenous research with the help of a National Consortium to be set up with the Department of Health Research, Ministry of Health & Family Welfare as convenor.
- Increased focus of research and development and local production of medicines will lower the cost of treatment for rare diseases.
- The policy also envisages the creation of a national hospital based registry of rare diseases so that adequate data is available for definition of rare diseases and for research and development related to rare diseases within the country.
- The Policy also focuses on early screening and prevention through primary and secondary health care infrastructure such as Health and Wellness Centres and District Early Intervention Centres (DEICs) and through counselling for the high-risk parents.
- A provision for financial support up to Rs. 20 lakhs under the Umbrella Scheme of Rashtriya Arogya Nidhi is proposed for treatment of those rare diseases that require a one-time treatment (diseases listed under Group 1 in the rare disease policy).
- Beneficiaries for such financial assistance would not be limited to BPL families, but the benefit will be extended to about 40% of the population, who are eligible under Pradhan Mantri Jan Arogya Yojana.

Civil defence volunteers

(Source: Indian Express)

Context: *Due to their identical khaki uniform, it often becomes difficult for people to distinguish between police and civil defence personnel, leading to arguments. One such incident recently turned into a full blown fist-fight between a group of civil defence personnel and general public near IIT-Delhi.*

Who are civil defence volunteers?

- In Delhi, these are men and women who work under the command of the district magistrates.
- The overall command lies with the divisional commissioner, to which the DMs report.
- These volunteers are governed by the Civil Defence Act, 1968 which has undergone multiple amendments, with the latest being in 2010, when disaster management was added as one of their roles.
- With the Centre invoking the Disaster Management Act in the wake of the Covid-19 outbreak in 2020, the role of these volunteers came under the spotlight.

What is the primary role of civil defence volunteers?

- According to the Civil Defence Act, 1968, civil defence is defined as any measure "not amounting to actual combat, that protects persons, property and places in India from hostile attack".
- The 2010 amendment expanded the definition by including disaster management as one of the responsibilities.
- The basic role of the volunteers is to assist the local administration. During the pandemic, the volunteers assumed the role of frontline workers by way of participating in screening hotspots and distributing food for the needy.
- In the recent months, DCD volunteers have also been deployed to ensure social distancing in markets and other crowded places and also at vaccination sites.
- Before the Covid outbreak, a large number of DCD personnel were deployed as marshals in public buses to ensure safety of women.

How are civil defence volunteers recruited?

- Recruitment drives are carried out from time to time by the Delhi government. Anyone aged above 18 years with primary level educational qualification can apply. In most cases, those who have passed Class 8 are preferred.
- But, people with higher qualifications also apply, a Delhi government officer said. The candidates found eligible are made to undergo a week-long basic training course.
- At later stages, specialised training is also imparted. A person who intends to apply must also be a citizen of India or a "subject of Sikkim or Bhutan or Nepal", according to the Act.

Why does it say 'subject' of Sikkim?

- The language, which state governments across the country continue to use in laying down recruitment rules for civil defence volunteers, is a verbatim reproduction of the Civil Defence Regulations, framed under the Civil Defence Act, 1968.
- While the Act, through a gazette notification dated September 8, 1975, was extended to cover Sikkim, which became a part of India on May 16, 1975, the regulations pertaining to the eligibility conditions remain unamended, which is why governments continue to use the same language.
- One such recruitment notice by the Delhi government had sparked a controversy in 2020. Sikkim CM Prem Singh Tamang had publicly termed it as "regrettable, objectionable and harmful".
- The officer who had cleared the ad was suspended by LG Anil Baijal. However, he has been reinstated now.

Film Certification Tribunal

(Source: Indian Expres)

Context: *The government by an ordinance abolished the Film Certificate Appellate Tribunal (FCAT), which heard appeals by filmmakers seeking certification for their films. The Tribunals Reforms (Rationalisation And Conditions Of Service) Ordinance, 2021, which came into effect on April 4, amends the Cinematograph Act, 1952 by omitting some sections and replacing the word "Tribunal" with "High Court" in other sections.*

The Tribunal

- FCAT was a statutory body constituted set up by the Ministry of Information & Broadcasting in 1983, under Section 5D of the Cinematograph Act, 1952. Its main job was to hear appeals filed under Section 5C of the Cinematograph Act, by applicants for certification aggrieved by the decision of the Central Board of Film Certification (CBFC).
- The tribunal was headed by a chairperson and had four other members, including a Secretary appointed by the Government of India to handle. The Tribunal was headquartered in New Delhi.

What it did

- In India, all films must have a CBFC certificate if they are to be released theatrically, telecast on television, or displayed publicly in any way. The CBFC — which consists of a Chairperson and 23 members, all appointed by the Government of India — certifies films under four categories:
  - **U:** Unrestricted public exhibition (Suitable for all age groups)
  - **U/A:** Parental guidance for children under age 12
  - **A:** Restricted to adults(Suitable for 18 years and above
  - **S:** Restricted to a specialised group of people, such as engineers, doctors or scientists.
- The CBFC can also deny certification a film. On several occasions when a filmmaker or producer has not been satisfied with the CBFC's certification, or with a denial, they have appealed to the FCAT. And in many cases, the FCAT has overturned the CBFC decision.

- The abolition means filmmakers will now have to approach the High Court whenever they want to challenge a CBFC certification, or lack of it.

What is net-zero?

(Source: Indian Express)

Context: *In its bid to reclaim the global climate leadership, the US is widely expected to commit itself to a net-zero emission target for 2050 at the summit. Several other countries, including the UK and France, have already enacted laws promising to achieve a net-zero emission scenario by the middle of the century. The European Union is working a similar Europe-wide law, while many other countries including Canada, South Korea, Japan and Germany have expressed their intention to commit themselves to a net-zero future. Even China has promised to go net-zero by 2060.*

The net-zero goal

- Net-zero, which is also referred to as carbon-neutrality, does not mean that a country would bring down its emissions to zero. Rather, net-zero is a state in which a country's emissions are compensated by absorption and removal of greenhouse gases from the atmosphere.
- Absorption of the emissions can be increased by creating more carbon sinks such as forests, while removal of gases from the atmosphere requires futuristic technologies such as carbon capture and storage.
- This way, it is even possible for a country to have negative emissions, if the absorption and removal exceed the actual emissions. A good example is Bhutan which is often described as carbon-negative because it absorbs more than it emits.
- A very active campaign has been going on for the last two years to get every country to sign on to a net-zero goal for 2050. It is being argued that global carbon neutrality by 2050 is the only way to achieve the Paris Agreement target of keeping the planet's temperature from rising beyond 2°C compared to pre-industrial times. Current policies and actions being taken to reduce emissions would not even be able to prevent a 3–4°C rise by the turn of the century.
- The goal of carbon neutrality is only the latest formulation of a discussion going on for decades, on having a long-term goal. Long-term targets ensure predictability, and continuity, in policies and actions of the countries. But there has never been a consensus on what this goal should be.
- Earlier, the discussions used to be on emission-reduction targets, for 2050 or 2070, for rich and developed countries, whose unregulated emissions over several decades are mainly responsible for global warming and consequent climate change. The net-zero formulation does not assign any emission reduction targets on any country.
- Theoretically, a country can become carbon-neutral at its current level of emissions, or even by increasing its emissions, if it is able to absorb or remove more. From the perspective of the developed world, it is a big relief, because now the burden is shared by everyone, and does not fall only on them.

India's objections

- India is the only one opposing this target because it is likely to be the most impacted by it. India's position is unique. Over the next two to three decades, India's emissions are likely to grow at the fastest pace in the world, as it presses for higher growth to pull hundreds of millions of people out of poverty.
- No amount of afforestation or reforestation would be able to compensate for the increased emissions. Most of the carbon removal technologies right now are either unreliable or very expensive.

- But on principle as well as practice, India's arguments are not easy to dismiss. The net-zero goal does not figure in the 2015 Paris Agreement, the new global architecture to fight climate change. The Paris Agreement only requires every signatory to take the best climate action it can.
- Countries need to set five- or ten-year climate targets for themselves, and demonstrably show they have achieved them. The other requirement is that targets for every subsequent time-frame should be more ambitious than the previous one.
- Implementation of the Paris Agreement has begun only this year. Most of the countries have submitted targets for the 2025 or 2030 period.
- India has been arguing that instead of opening up a parallel discussion on net-zero targets outside of the Paris Agreement framework, countries must focus on delivering on what they have already promised. New Delhi is hoping to lead by example. It is well on its way to achieving its three targets under the Paris Agreement, and looks likely to overachieve them.
- Several studies have shown that India is the only G-20 country whose climate actions are compliant to the Paris Agreement goal of keeping global temperatures from rising beyond 2°C. Even the actions of the EU, which is seen as the most progressive on climate change, and the US are assessed as "insufficient". In other words, India is already doing more, relatively speaking, on climate than many other countries.
- New Delhi also repeatedly points to the fact that the developed nations have never delivered on their past promises and commitments. No major country achieved the emission-cut targets assigned to them under the Kyoto Protocol, the climate regime preceding the Paris Agreement.
- Some openly walked out of the Kyoto Protocol, without any consequences. None of the countries has delivered on the promises they made for 2020. Even worse is their track record on their commitment to provide money, and technology, to developing and poor countries to help them deal with the impacts of climate change.
- India has been arguing that the 2050 carbon-neutrality promise might meet a similar fate, although some countries are now binding themselves in law. It has been insisting that the developed countries should, instead, take more ambitious climate actions now, to compensate for the unfulfilled earlier promises.
- At the same time, it has been saying that it does not rule out the possibility of achieving carbon-neutrality by 2050 or 2060. Just that, it does not want to make an international commitment so much in advance.

Lab on Wheels programme

(Source: Indian Express)

Context: *Delhi Education Minister Manish Sisodia inaugurated Delhi Technological University's 'Lab on Wheels' programme. It will have students of the university travelling in a bus across Delhi to teach government school students and underprivileged children.*

What is the concept?

- The idea is to impart education in the fields of Mathematics and Science to those students who come from marginalised and poor economic backgrounds, in order to pique their interests in these subjects while pursuing higher education.
- In the end, the hope is that it becomes mutually beneficial, if some of these students decide to take admission in DTU once they finish schooling.
- The 'Lab on Wheels' will comprise 16 computers, two televisions, one 3D printer, one laptop, cameras and one printer. It will be Wi-Fi enabled, with 100 per cent power back up and fully air-conditioned.

- Since DTU is a technological university, the focus will be on Mathematics and Science. Some of the things that will be covered include basic computer training to students, regular classwork for Class 10 and 12 students, and 3D printing training.

Durbar Move

(Source: Indian Express)

Context: *A tradition of a century and a half is set to be broken in Jammu and Kashmir, with only "sensitive records" being taken from Jammu to Srinagar this summer, unlike in previous years when the entire administration and records would be shifted during "Durbar Move".*

The tradition

- Durbar Move is a bi-annual shifting of the Civil Secretariat and other offices of the state government from Jammu to Srinagar in summer, and vice versa in winter. This is done as Jammu & Kashmir has two capitals: Kashmir during summer and Jammu during winter.
- In Jammu, offices shut on the last Friday and Saturday of April and reopen in Srinagar on the first Monday after a gap of a week. In Kashmir, offices shut on the last Friday and Saturday of October, to reopen in Jammu on the first Monday after a week's gap, in November.
- Durbar Move is a tradition started 149 years ago started by the erstwhile Dogra rulers who hailed from Jammu, but had expanded their boundaries to Kashmir including what is now Pakistan-occupied Kashmir, and Ladakh.
- Jammu, Kashmir and Ladakh are very different from one another geographically, linguistically and culturally, and in those days were poorly connected by road. It is generally understood that the Durbar Move was started to take the administration to the doorstep of the people of Kashmir which is closer to Ladakh. During summer, ruling from Kashmir also helped in ensuring adequate supplies to Ladakh, which is closer to Kashmir than Jammu, before the winter snowfall would cut off Ladakh.
- The practice also enabled greater interaction and bonding among the people of Jammu, Kashmir and Ladakh.

Wolf–Rayet stars

(Source: PIB)

Context: *Indian astronomers have tracked a rare supernova explosion and traced it to one of the hottest kind of stars called Wolf–Rayet stars or WR stars.*

What are Wolf-Rayet Stars?

- The rare Wolf–Rayet stars are highly luminous objects a thousand times that of the Sun.
- They are massive stars and strip their outer hydrogen envelope which is associated with the fusion of helium and other elements in the massive core.
- They are a heterogeneous set of stars with unusual spectra showing prominent broad emission lines of ionised helium and highly ionised nitrogen or carbon.
- The surface temperatures of known Wolf-Rayet stars range from 30,000 K to around 210,000 K, hotter than almost all other kinds of stars.
- They were previously called W-type stars.

Madhu Kranti Portal

(Source: PIB)

Context: *Union Minister for Agriculture and Farmers' Welfare launched Madhu Kranti portal.*

About Madhu Kranti Portal:

- Madhu Kranti portal is an initiative of the National Bee Board (NBB), Ministry of Agriculture and Farmers' Welfare under the National Beekeeping & Honey Mission (NBHM).
- This portal is being developed for online registration to achieve traceability source of honey and other beehive products on a digital platform.
- Necessary functionalities are being developed on the portal to create a database of all stakeholders involved in honey and other beehive products' production, sales and marketing chain.
- There is a provision for the online registration of beekeepers.
- In the second phase, all sales transactions in honey trading in the country shall be captured through a mobile app to achieve desired results in the area of honey source traceability.
- This will help in keeping a check on the adulteration of honey.

Anamaya

(Source: PIB)

Context: *Union Minister launched tribal health cooperative 'Anamaya'.*

About Anamaya:

- Anamaya is a tribal health collaborative supported by Piramal Foundation and Bill and Melinda Gates Foundation (BMGF).
- It will converge efforts of various government agencies and organisations to enhance the health and nutrition status of the tribal communities of India.
- The initiative is committed to ending preventable deaths in the tribal communities.
- Starting with 50 tribal aspirational districts, the Tribal Health Collaborative (THC) would help to accelerate TB activities and achieve India's target of TB Elimination by 2025 through the launch of a "Jan Andolan for TB" along with focus on addressing key determinants like alcohol dependence and under-nutrition in tribal areas.

Freedom of Navigation Operations, US's 7th Fleet and India's EEZ

(Source: Indian Express)

Context: *The US Navy announced on April 7 that the USS John Paul Jones from its 7th Fleet had "asserted navigational rights and freedoms approximately 130 nautical miles west of Lakshadweep Islands, inside India's exclusive economic zone, without requesting India's prior consent, consistent with international law".*

Details:

- It said "India requires prior consent for military exercises or maneuvers in its exclusive economic zone or continental shelf, a claim inconsistent with international law", and the "freedom of navigation operation ("FONOP") upheld the rights, freedoms, and lawful uses of the sea recognized in international law by challenging India's excessive maritime claims".
- The Ministry of External Affairs responded that the government's stated position on the UN Convention on the Law of the Sea (UNCLOS) "is that the Convention does not authorise other States to carry out in the Exclusive Economic Zone and on the continental shelf, military exercises or manoeuvres, in particular those involving the use of weapons or explosives, without the consent of the coastal state".

FONOP:

- Simply put, the Freedom of Navigation Operations involves passages conducted by the US Navy through waters claimed by coastal nations as their exclusive territory. According to the US Department of Defense (DoD), the FON Program has existed for 40 years, and "continuously reaffirmed the United States' policy of exercising and asserting its navigation and overflight rights and freedoms around the world".
- The DoD says these "assertions communicate that the United States does not acquiesce to the excessive maritime claims of other nations, and thus prevents those claims from becoming accepted in international law".
- While this is not the first time something like this has happened, this is the first time the US Navy has issued a public statement giving details of the operation. Usually, in the past, the DoD has mentioned all FONOP challenges and assertions in its annual report to Congress.

7TH FLEET:

- It is the largest of the US Navy's forward deployed fleets.
- According to its website, "at any given time there are roughly 50-70 ships and submarines, 150 aircraft, and approximately 20,000 Sailors in Seventh Fleet", which is commanded by a 3-star Navy officer.
- India had a close encounter with the 7th fleet during the 1971 war with Pakistan. According to military historian Srinath Raghavan, US President Richard Nixon and Henry Kissinger "believed that there was an outside chance for a ceasefire before the Pakistan army caved in on the eastern front".
- Nixon instructed his Chief of Navy "to assemble an impressive naval task force and move it off the coast of South Vietnam, into the Malacca Straits, and onward to the Bay of Bengal". Task Group 74 included the largest aircraft carrier in the US navy, the USS Enterprise. (1971: A Global History of the Creation of Bangladesh)

EEZ:

- According to UNCLOS, the EEZ "is an area beyond and adjacent to the territorial sea, subject to the specific legal regime" under which "the rights and jurisdiction of the coastal State and the rights and freedoms of other States are governed by the relevant provisions of this Convention".
- As per India's Territorial Waters, Continental Shelf, Exclusive Economic Zone and Other Maritime Zones Act, 1976, the EEZ of India "is an area beyond and adjacent to the territorial waters, and the limit of such zone is two hundred nautical miles from the baseline".
- India's "limit of the territorial waters is the line every point of which is at a distance of twelve nautical miles from the nearest point of the appropriate baseline".
- Under the 1976 law, "all foreign ships (other than warships including sub-marines and other underwater vehicles) shall enjoy the right of innocent passage through the territorial waters", innocent passage being one that is "not prejudicial to the peace, good order or security of India".

SARTHAQ

(Source: PIB)

Context: *'Students' and Teachers' Holistic Advancement through Quality Education (SARTHAQ) launched as part of the AmritMahotsav celebrations*

About SARTHAQ:

- SARTHAQ has been developed through wide and intensive consultative process with States and UTs, autonomous bodies and suggestions received from all stakeholders.
- The major focus of SARTHAQ is to define activities in such a manner that they clearly delineate goals, outcomes and timeframe i.e., it links recommendations of NEP with 297 Tasks along with responsible agencies, timelines and 304 outputs of these Tasks.
- SARTHAQ is a working document and is broadly indicative in nature and will be updated from time to time based on inputs/feedback from all stakeholders.
- States and UTs are given the flexibility to adopt this plan with local contextualisation and also modify it as per their needs.

Non-Fungible Tokens

(Source: The Hindu Businessline)

Context: *Connected with the cryptocurrency boom, Non-Fungible Tokens (NFTs) are the latest multi-million-dollar internet concept making the headlines in 2021.*

What is it?

- NFTs are transaction records captured on the blockchain — the web version of a physical ledger. Non-Fungible Tokens allow people to trade the ownership of digital entities such as memes, media, tweets, arts, articles in 'token' form.
- As NFTs are supported by blockchain, these transaction records are permanent, verified multiple times and cannot be erased or changed. Each non-fungible token is uniquely identifiable.
- So, no two digital entities can have the same token. A NFT is essentially a certificate of authenticity or a digital autograph that can be attached to digital property.
- All the NFT headlines screaming millions, usually paid in cryptocurrencies, are for this certificate. When you buy an NFT, you do not necessarily own the connected piece of art, meme or music.
- This is because a NFT doesn't convey copyright or usage rights unless there is an explicit licence mentioning it. The right that an NFT confers on you is a digital bragging right.
- Multi-million-dollar NFT sales have lately been attracting social media eye-balls. For instance, an NFT for an animated Gif of a meme of a flying pop-tart cat sold for more than $500,000.
- An NFT for a single red pixel is selling for over $800,000. Christie's sale of an NFT by a digital artist called Beeple set the record for digital art, as it was snapped up by two Indian-origin crypto enthusiasts for a whopping $69 million.
- NFTs don't offer any cash flow and are not real assets. The only way one can make money is by luring others into buying the NFT off you.
- Remember, before you sell an NFT, you need to create one. Unless you are a blockchain enthusiast, creating an NFT will require spending real money in the order of $100 which will go into the crypto economy.

Why is it important?

- The Covid pandemic has further devastated the poorly-paid lives of innumerable artists, musicians and creators. The digital world offers a creative outlet, but in it, any creation can be easily duplicated. This is where NFTs come in.

- With NFTs, any creation can be tokenised to create a digital certificate of ownership, helping creators get a life-changing price for their art.
- Theoretically, artists with NFTs for their creations can access a global market, retain ownership rights over their work and claim benefits like resale royalties directly.
- But in the real world, new-fangled innovations seldom work the way it is claimed. Some even think that NFTs will fix the shattered economics of streaming music and restore the power-balance between art creators and art mediators.
- But all this is mere conjecture at this point. The NFT eco-system after all, is connected to the largely unregulated world of cryptocurrencies.

INTERNATIONAL

UK's Police, Crime, Sentencing and Courts Bill 2021

(Source: Indian Express)

Context: *In the UK, thousands of people have been protesting against a new legislation introduced in the British Parliament called the Police, Crime, Sentencing and Courts Bill 2021. The BBC reported that there have been violent protests in the city of Bristol over the Bill, which will allow the police to take a more proactive approach in managing "highly disruptive protests" causing "serious disruption to the public.*"

What is the Bill?

- The various provisions of the Bill will widen the range of conditions that the police can impose on static protests to match the existing police powers that it is able to impose on marches.
- This means that the police will be able to impose conditions such as start and finish times and maximum noise levels during static protests. The police can already impose such conditions on marches.
- Other provisions of the bill will broaden the range of circumstances in which the police can impose conditions on a protest, "including a single person protest, to include where noise causes a significant impact on those in the vicinity or serious disruption to the running of an organisation."
- Further, as per the recommendation of the Law Commission, the Bill will introduce a statutory offence of public nuisance, which means there will be clarity about the kinds of conduct that are forbidden such as producing excessive noise or smells, or offensive or dangerous behaviour in public, such as hanging from bridges.

What have critics of the Bill said?

- People have criticised the legislation on the basis that its provisions give more rights to the police to monitor and control protests.
- Fair Trials, a global criminal justice watchdog, has said the Bill "risks undermining the public's confidence in the criminal justice system, and undermine equality and the right to a fair trial."
- It has also emphasised the Bill's extension of powers to the police.
- The Labour Party has also opposed the Bill on the grounds that it criminalises making noise and that a person found guilty of causing "serious annoyance" or "serious inconvenience" could be imprisoned for a period of upto ten years.
- Some critics have also pointed out that the Home Secretary has been in a rush to pass the legislation instead of scrutinising it.

NATO

(Source: The Hindu)

Context: *Ukrainian President Volodymyr Zelensky urged NATO to speed up his country's membership in the alliance, saying it was the only way to end fighting with pro-Russia separatists.*

What is the North Atlantic Treaty Organization (NATO)?

- NATO stands for the North Atlantic Treaty Organization which is also called the North Atlantic Alliance.
- It is an intergovernmental military alliance based on the North Atlantic Treaty which was signed on 4 April 1949.

- The organization constitutes a system of collective defence whereby its member states agree to mutual defence in response to an attack by a non-member external party.
- NATO's headquarters are located at Boulevard Leopold III in the city of Brussels, Belgium, where the Supreme Allied Commander resides.

Why was NATO formed?

- The organisation was formed as a means to ensure collective security in western Europe.
- Even though World War 2 had come to an end, the deteriorating relations between two former allies, the United States and the USSR would eventually lead to the Cold War.
- The USSR sought to expand its influence in Europe through the spread of communism, while the US saw the ideology of the USSR as a threat to its way of life. Hence it saw the need to form NATO.

NATO Members

- NATO has 30 member countries with North Macadonia as its newest member. It became a part of NATO in 2020

NATO Member Countries		
Albania (2009)	Greece (1952)	Poland (1999)
Belgium (1949)	Hungary (1999)	Portugal (1949)
Bulgaria (2004)	Iceland (1949)	Romania (2004)
Canada (1949)	Italy (1949)	Slovakia (2004)
Croatia (2009)	Latvia (2004)	Slovenia (2004)
Czech Republic (1999)	Lithuania (2004)	Spain (1982)
Denmark (1949)	Luxembourg (1949)	Turkey (1952)
Estonia (2004)	Montenegro (2017)	The United Kingdom (1949)
France (1949)	Netherlands (1949)	The United States (1949)
Germany (1955)	Norway (1949)	North Macadonia (2020)

E9 Initiative

(Source: PIB)

Context: *India to join eight other countries to accelerate digital learning.*

About the E9 Initiative:

- Nine countries including India, China and Brazil will explore possibility of **co-creating and scaling up digital learning** to achieve UN sustainable goal on quality education.
- Called E9 initiative, the consultation is the "first of a three-phased process to co-create an initiative on digital learning and skills, targeting marginalised children and youth, especially girls. The initiative aims to accelerate recovery and advance the Sustainable Development Goal 4 agenda by driving rapid change in education systems."
- The E9 countries are India, Bangladesh, Brazil, China, Egypt, Indonesia, Mexico, Nigeria and Pakistan.
- The countries together will drive change in support to teachers; investment in skills; and narrowing of the digital divide.
- This Consultation will highlight progress, share lessons and explore opportunities for collaboration and scale-up to expand digital learning and skills.
- This is being done in the wake of the COVID pandemic which saw a huge disruption in learning and as per the UNESCO, offers an opportunity to enhance interconnected and digitised economies.

- **Note:-** The E9 is a forum of nine countries, which was formed to achieve the goals of UNESCO's Education For All (EFA) initiative.
    - E-9 Initiative was launched in 1993 at the EFA Summit in New Delhi, India.
    - E-9 Initiative has become a forum for the countries to discuss their experiences related to education, exchange best practices, and monitor EFA-related progress.

Mains

GS II

Reversing H-1B ban

(Source: The Hindu)

Context: *The 46th and current U.S. President, Democrat Joe Biden, has allowed the ban on H-1B visa issuance to expire, potentially bringing relief to a large number of Indian nationals, especially IT workers who are prospective applicants for the visa.*

What was the context for the Trump administration issuing rules tightening immigration policy?

- Immigration reforms in favour of protecting U.S. jobs for Americans and favouring legal over undocumented migration was a major policy thrust for Mr. Trump even during his days campaigning for the 2016 presidential election.
- In April 2020, the final year of Mr. Trump's term in office, the White House announced a 60-day halt on legal migration, effectively a ban on "green card" issuance.
- Then came the proclamation of June 22, which was justified by the White House on the grounds that the COVID-19 pandemic "significantly disrupted Americans' livelihoods", to the extent that the overall unemployment rate in the country nearly quadrupled between February and May 2020 to a little over 13%.
- Later, the Trump administration also announced that it would stop issuing visas for incoming students who had enrolled in programmes that were entirely online.
- Lawsuits filed by top U.S. universities challenging this policy resulted in the White House partially walking back on the new rules.

Was it economics or politics that prompted the ban?

- It is unlikely that any significant economic benefits of the skilled-worker visa ban, in terms of protecting U.S. jobs from foreigners, could have been realised during 2020 and early 2021 given the pressures of the COVID-19 pandemic on the U.S. economy.
    - Firstly, the ban did not apply to visa-holders already within the U.S., or those outside the country for whom a valid visa was already issued.
    - Second, given that the ban remained in force only during the pandemic and that there had been a slowdown in economic activity during this period, U.S. firms relying on skilled foreign nationals may have anyway been unable to make new hires. Given this, it is hard to see the Trump White House's policy as anything other than a political manoeuvre.
- Mr. Biden has sought to nudge the broader immigration ethos of the U.S. back towards one that is consistent with Democratic values. In allowing the H-1B visa ban to expire, he is walking a fine line between restoring the inflow of skilled workers into the U.S., a source of productivity-increase for its labour force, and not being seen as overly aggressive in unwinding Trump-era immigration crackdowns.
- After all, around 74 million people voted for Mr. Trump in the 2020 presidential election, and they will continue to be vocal advocates for a political system that puts 'America First', even if their leader no longer occupies the Oval Office.

What was the economic fallout of the visa ban?

- Even more than Mr. Biden, it turned out that America Inc., the employers of perhaps millions of non-immigrant foreign workers, from Wall Street to Silicon Valley, was at the vanguard of the backlash against the skilled worker visa ban.

- For example, Google CEO Sundar Pichai lashed out at the policy, saying at the time of its announcement, "Immigration has contributed immensely to America's economic success, making it a global leader in tech, and also Google the company it is today.
- Disappointed by today's proclamation — we'll continue to stand with immigrants and work to expand opportunity for all." SpaceX founder and Tesla CEO Elon Musk and Apple CEO Tim Cook posted similar messages on social media.
- Until now, the U.S. issued 85,000 H-1B visas annually, of which 20,000 went to graduate students and 65,000 to private sector applicants, and Indian nationals would garner approximately 70% of these.
- Analysts predicted that around 2,19,000 workers around the world might have been prevented from taking up work in the U.S. as a result of Mr. Trump's visa ban.

What will be the impact of the ban's expiry on Indian corporations?

- Given that the order banning H-1B visa issuance expired on Thursday, all H-1B applicants will now be in a position to receive a visa and travel to the U.S. to begin or resume work as full-time employees or independent contractors.
- In time, that will lead to a steady increase in the size of the talent pool available to IT companies with U.S. operations. This would also benefit Indian IT companies with U.S. operations.
- The opening up of H-1B visa availability is also premised on U.S. diplomatic missions worldwide resuming new visa issuance to appropriately qualified skilled workers.

The pillars of an equitable post-COVID India

(Source: The Hindu)

Context: *COVID-19 in the last one year has once again reminded us of the growing inequalities in India. A recent Pew Research Report shows that India's middle class may have shrunk by a third due to the novel coronavirus pandemic while the number of poor people earning less than ₹150 per day more than doubled. The Pew report also warned that the situation may actually be worse than estimated because of worsening inequalities. International organisations like the World Bank, the International Monetary Fund and the International Labour Organization have also warned about rising inequalities in several countries including India due to the pandemic.*

Made worse now

- Inequalities in India have been high even in the pre-COVID-19 period. The economic shock due to the pandemic has been much more severe for the country for two reasons.
    - First, pre-COVID-19, the economy was already slowing down, compounding existing problems of unemployment, low incomes, rural distress, malnutrition, and widespread inequality.
    - Second, India's large informal sector is particularly vulnerable. Inequalities were increasing earlier also but the pandemic has widened them further. For example, the share of wages declined as compared to that of profits. The big companies and a large part of the corporate sector could manage the pandemic. The quarterly net profit of the BSE200 companies reached a record high of ₹1.67 trillion in the third quarter of FY21 and was up by 57% year-on-year. But the informal sector and workers have suffered a lot with loss of incomes and employment in the last one year. In other words, the recovery is more k-shaped with rising inequalities.
- The economy recovered in the third quarter of FY21 with a positive GDP growth of 0.4% as compared to minus 24.4% in the first quarter and minus 7.3% in the second quarter.
- For the year FY21, the economy would contract by 8%. GDP growth is likely to increase by 10%-11% in FY22. But the levels of GDP show that it will grow only around 1.1% in FY22 as compared to FY20 levels.

- According to the Centre For Monitoring Indian Economy, the employment rate is still 2.5 percentage points lower now as compared to the level before the lockdown last year. Women lost more jobs and many are out of the workforce. Inequalities have increased in health care and education.

A three-step plan

- As the British economist Anthony Atkinson says, "much is written about the 1 per cent and the 99 per cent. But, if we are serious about reducing income inequality, what can be done?"
- Reduction in inequalities is important for its own sake and for improving demand which can raise private investment, consumption and exports for higher and sustainable economic growth.
- We concentrate here on a three-pronged approach for reducing inequalities. These are: focus on employment and wages; raising human development, and quasi universal basic income and other social safety nets.
    - First, creation of quality or productive employment is central to the inclusive growth approach. At the macro level, the investment rate which declined from 39% in 2011-12 to 31.7% in 2018-19 has to be improved. Investment in infrastructure including construction can create employment. In the recent Budget, the central government has rightly focused on capital expenditure for infrastructure.
        - There are seven challenges in employment: creating productive jobs for seven to eight million per year; correcting the mismatch between demand and supply of labour (only 2.3% of India's workforce has formal skill training as compared to 96% in South Korea, 80% in Japan, and 52% in the United States; Structural change challenge (manufacturing should be the engine of growth.
        - Here, labour-intensive exports are important and manufacturing and services are complementary); focusing on micro, small & medium enterprises and informal sectors including rights of migrants; Getting ready for automation and technology revolution; Social security and decent working conditions for all; raising real wages of rural and urban workers and guaranteeing minimum wages.
    - The second approach is in creating equality of opportunity by improving human development. Increasing public expenditure on health and education is another form of redistributive measure. COVID-19 has supplied us several lessons on the health sector. Public expenditure on health is only 1.5% of GDP.
        - Apart from spending on vaccines and other related measures, we need to move towards universal health care and spend 2%-3% of GDP on health. Education and health achievements are essential for reducing inequality of opportunities.
        - Much dichotomy exists in both these sectors. In education, there are islands of excellence that can compete internationally even as a vast majority of masses of children are churned out with poor learning achievement. We also have the experience of a digital gap in education during the pandemic. One has to fix this dichotomy in health and education.
    - The third approach is in providing a quasi-universal basic income and other safety nets. For example, C. Rangarajan and I had suggested three proposals on minimum income for the poor and the vulnerable in the post-pandemic period.
        - These are: cash transfers to all women above the age of 20 years; expanding the number of days provided under the Mahatma Gandhi National Rural Employment Guarantee Act and a national employment guarantee scheme for urban areas. In all these proposals, there is no problem of identification. A combination of cash transfers and an expanded guarantee scheme would provide income support to the needy.
- Apart from the ideas above, increasing farmers' income especially for small and marginal farmers is needed to reduce inequalities and create demand. Farmer producer organisations should be strengthened.
- States have to be given a bigger role in agri-marketing reforms. The terms of trade for agriculture have to be improved.

Tax base, budgets

- Enhancing tax and non-tax revenues of the government is needed to spend on the above priorities. The tax/GDP ratio has to be raised, with a wider tax base. Richer sections have to pay more taxes.
- Similarly, the inequalities between the Centre and States in finances should be reduced. State budgets must be strengthened to improve capital expenditures on physical infrastructure and spending on health, education and social safety nets.
- Apart from economic factors, non-economic factors such as deepening democracy and decentralisation can help in reducing inequalities. Unequal distribution of development is rooted in the inequalities of political, social and economic power.
- We have to find opportunities and spaces where the power can be challenged and redistributed. In the post-COVID-19 world, addressing inequality is important for higher and sustainable economic growth and the well-being of the population.

National migrant policy

(Source: Down to Earth)

Context: *For someone who has been working on circular migration in India for decades, the news of the new draft National Migrant Policy being framed by NITI Aayog is an extremely welcome development. The need to do this has evidently been precipitated by the enormous suffering endured by the country's circular migrants (those who migrate short term primarily to earn and remit money back home) during the novel coronavirus disease (COVID-19) lockdown in 2020.*

Details:

- As a draft copy of the policy, prepared in January 2021, acknowledges, circular migrants are the backbone of our economy and contribute at least 10 per cent of India's gross domestic product (GDP).
- Yet, tens of millions are employed in precarious jobs in the informal sector without contracts or documents to prove their identity, and claim state support in the event of a crisis.
- This reality was driven home through horrific scenes of migrants left without earnings or any source of social protection as the employers and contractors that they depended on for their survival, were hurt by the lockdown themselves and unable to fulfil promises of patronage.
- The draft policy is clear in highlighting the vulnerability of migrants to such crises and describes the experience of migrants during the lockdown as a "humanitarian and economic crisis".
- Clearly there is strong political will and intent to never let this kind of tragedy happen again. The draft contains several radical recommendations that build on those made in 2017 by the working group on migration appointed by the then Ministry of Housing and Urban Poverty Alleviation, as well as recent research and policy analyses by leading thinkers in the field.
- It seeks to take a rights-based approach and discusses the importance of collective action and unions to help migrants bargain for better conditions and remuneration.

Involvement of line agencies

- The draft policy makes efforts to bring together different sectoral concerns related to migration, including social protection, housing, health and education. In doing so, it will lay the foundations for the ministries and line departments overseeing these sectors to work together in a more harmonious fashion, speaking the same language and operating on the same underlying assumptions.
- The draft mentions the need for convergence across different line departments and proposes the establishment of a special unit at the Ministry of Labour and Employment which will work closely with other ministries.
- It proposes new management bodies for interstate migration and stresses the need to improve the data on migration, especially data on seasonal and circular migration.

- All of these steps promise to create a policy environment that can better support migration and one that is based on sound data. The remit of the policy is broad, seeking to bring even the most marginalised groups under its umbrella. However, a more explicit mention of important categories of less-visible occupations is needed.
- The International Labour Organization has drawn attention to the need to reach invisible workers such as domestic workers who number between 2.5 and 90 million in India.
- Although, in theory, the broad categories of interstate migrant and internal migrant would include domestic workers, it is too easy for them to fall through the gaps as they are not covered by protective law since India has not ratified the International Labour Organization's Domestic Workers Convention, 2011.
- The draft policy also conveys a willingness within government to recognise that the numerous laws and legislation that are in existence have not succeeded in protecting migrants as intended and recommends better implementation. This goal has been expressed in numerous policy analyses before.
- There is a need to recognise that implementation has been very problematic and, carry out serious assessments to understand the microprocesses that lead to mistargeting, lack of uptake and various irregularities in the implementation of schemes, and, understand the political economy of migrant labour recruitment, placement and employment in key industries and why there is a strong vested interest in keeping migrants away from the purview of the law.
- Employers use recruiters to find and manage workers and thereby absolve themselves from any responsibility for protecting their rights and providing decent working conditions.
- It is not enough to say that laws should be implemented better. The same can be said of improving access to the Aadhaar card and other schemes.

Tribal migrants sans agency?

- There are some aspects of the draft policy that show it has not quite made up its mind about the ability of labour migrants to think for themselves and decide how they access the opportunities offered by migration.
- Early in the draft we see a commitment to recognising migrant agency and language that portrays migration as an opportunity. But later in the document, this is less clear, especially in the section where tribal migration policies are discussed.
- Tribal migration is constructed as a process whereby profiteering, "unfair" and immoral brokers or intermediaries are "luring", or worse still, trafficking, unsuspecting tribals away from their villages. There is a conceptually problematic fudging of trafficking and economic migration and also a lack of clarity on how the migrants themselves perceive these processes.
- Domestic work, which is named as one of the occupations into which tribals are trafficked, has now become an important source of income for tens of thousands of women and adolescents from impoverished backgrounds in eastern Indian states working in the metropolises.
- There is no doubt that there are instances of abuse and other crimes against these women. However, such incidents do not represent the majority experience and they cannot be cited as the reason for controlling the entirety of such migration. There is an urgent need to distinguish cases of extreme exploitation from the rest, and better understand how migrants themselves weigh up the costs and risks against potential benefits of working in the city.
- The draft policy lists a number of government programmes and laments their failure in checking migration from tribal areas. The underlying assumption appears to be that migration is an expression of agency among other sections of society but not among tribals on account of their extreme poverty and dependency. The fact that they may be trying to escape that situation through migration is overlooked.
- While there are occupations such as brick kiln work where extreme exploitation and cycles of dependency are clear, not all tribal migrants can be viewed in an undifferentiated way as ignorant, gullible people who are incapable of making choices to further their own aspirations and strategies for advancement. Suggesting that we need to curtail their migration goes against the stated objectives of the draft policy to recognise migrant agency.

Brokers: profiteers or facilitators?

- While migrants and their families recognise that brokers exploit them and earn relatively large amounts from their migration, they also recognise that without them, they would be unable to access employment outside the village.
- Recruiters, whether from their own community or from outside, are key in helping migrants to negotiate the huge cultural and economic divide between their own worlds and the world of modern urban employment.
- They may do so by paying them advances which bond them to the job for several months—in the worst cases this results in perpetuating dependency and indebtedness, whereas in others it can release them from more humiliating borrowing from traditional patrons.
- It is, therefore, a complex process that cannot be simplified and while it clearly needs to be regulated to avoid extreme exploitation, any effort to do so must be based on a thorough understanding of migrants' perspective on the process.
- The draft policy goes on to highlight other areas where migrants could be better supported including financial services, skills development, political inclusion and education, among others.
- All these suggestions are well received but they are not new, and there is a need to understand past failures and suggest a way of doing things differently. For example, efforts by banks to reach migrants for remittance services have had mixed results.
- One imagines that a mixture of irregular earnings, reluctance to engage with formal institutions, discrimination faced and the lack of identity documents are the barriers to such inclusion.
- Informal service providers do not ask for papers or proof of identity. Overall, the draft policy is in the right direction but there are areas where a more innovative and workable way needs to be found. Otherwise migrants will be stuck in the same rut—having to carry the risks of migration in a hostile policy environment all by themselves.

Abortion is a woman's right to decide

(Source: The Hindu)

Context: *Given the phenomenal expansion in feminist jurisprudence over the last decade, particularly on the issue of a woman's right to choose to have an abortion, it now appears quite plain that the central government's amendment to the abortion laws not only retains the traditional notion that the state must intervene and decide for women as to when and in what circumstances abortions may be carried out, but even the pathetic measures set out in the Medical Termination of Pregnancy (Amendment) Act 2021 are too little and have come too late.*

After much stonewalling

- This government seems to be incompetent in understanding a woman's right over her own body. The government's conduct is particularly appalling since it comes after over a decade of procrastination and obstruction where indigent women in difficult circumstances tried to have abortions done and were stonewalled by government officials and prosecutors.
- The passing of this Act marks a new phase of the struggle to assert the absolute right of a woman over her body.
- The Medical Termination of Pregnancy Act, 1971 (MTP) may have been considered progressive at that time considering that provisions in the Indian Penal Code regarding termination of pregnancy were enacted over a century ago in keeping with the British law on the subject.
- Abortions were made a crime and the woman concerned and her doctor would invariably land up in jail. Section 3 put an outer limit of 20 weeks on the length of the pregnancy and required two doctors to certify that the continuation of the pregnancy would involve a risk to the life of the woman or grave

injury to her physical or mental health or that there was a substantial risk that the child born would suffer from such physical or mental abnormalities as to be seriously handicapped.

- Explanation 1 dealt with rape cases where it was to be presumed that the anguish caused would constitute a grave injury to the mental health of the woman.
- Explanation 2 laid down that any pregnancy occurring as a result of failure of contraception would likewise be presumed to constitute a grave injury. Account needed to be taken of the pregnant woman's actual or reasonably foreseeable environment. Section 5 created an exception to the 20 week limit whenever such an abortion was immediately necessary to save the life of the pregnant woman.
- The 1971 Act was based on "The Report of the Shantilal H. Shah Committee to Study the Question of Legislation of Abortion" 1967, which set out the limitations of technology which made it hazardous for women to have abortions done after the 20th week.
- This limitation disappeared with the phenomenal improvement in technology and processes rendering it possible to carry out abortions safely right up to full term. Thus the excuse of "safety of the woman" was no longer tenable to be used for restricting women's rights.

The after-effect

- The central government has been criminally negligent in allowing the law to stand as it has for five decades. It has pushed women seeking abortions underground where terminations are carried out in unhygienic and dangerous places, and in horrific situations.
- Even today about 800,000 illegal and unsafe abortions are performed every year in India, many of them resulting in morbidities and death. The government has not cared. Political parties of all hues had one thing in common; women dying do not matter.
- The decision of the Bombay High Court in Nikita Mehta vs State of Maharashtra, saying that it was not open for the courts to double guess the statutory restrictions, sparked the debate around the right to abortion in India.
- From 2008 onwards, over 300 petitions were filed in the Supreme Court and the High Courts. Given the gruesome context from which these petitions sprung the Supreme Court generally responded well by ignoring the statutory provisions as it was patent that not allowing abortions to take place would have caused grave injustice to the woman.
- The Court then routinely allowed abortions way past the 20 week limit. In Murugan Nayakkar vs Union of India & Ors, the abortion was permitted at 31 weeks, very close to full term.
- **The Medical Termination of Pregnancy (Amendment) Act 2021 fails miserably on the main count while introducing few collateral progressive measures.**
    - **First,** the Act fails to recognise the absolute right of a woman over her body in taking decisions regarding abortions and reproductive health. It still reserves to the state the right to dictate to the woman that she cannot have an abortion at will.
    - **Second,** even though the limit has been pushed back from 20 to 24 weeks, this comes with the same state conditionalities as before.
    - **Third,** 24 weeks is not rational given today's technology where abortions can be done safely up to full term.

Medical boards are obstacles

- By far the biggest failure of the government lies in enacting section 3(2B) which requires the pregnant woman to approach a medical board in cases of substantial foetal abnormalities and where she has crossed the 24 week limit.
- These boards impose insurmountable obstacles to the woman seeking late abortions.
    - First, what used to be an exchange between the pregnant woman and her gynaecologist who would take a decision as to safety, has now been replaced by a board of a minimum of three doctors. This is totally unnecessary and breaches privacy.
    - Second, and this is indicative of complete non-application of mind, the Act provides in section 3(2C) for a single board for a State. Given the millions of abortions taking place in India past the deadline, it is impossible for one board to handle all cases.

  - Third, assuming multiple boards will be established, the records show that no State has the finances or the human resources to maintain the operation and functioning of these boards.
  - Fourth, the right to seek termination is restricted to "such category of women as may be prescribed by rules". One wonders what categories of women would be permitted termination of pregnancies!
- The main objection remains; that boards are totally unnecessary and an invasion of privacy, and pregnant women, like they used to do, should be left alone to consult their gynaecologist in late term pregnancies and carry out their abortion under the certificate of their own gynaecologist that the abortion can be performed safely.
- This is the trend worldwide and in the courts. The Indian government needs to wake up and educate itself on women's emancipation worldwide.

Lok Adalats

(Source: The Hindu)

Context: *Justice delayed is justice denied. Access to justice for the poor is a constitutional mandate to ensure fair treatment under our legal system. Hence, Lok Adalats (literally, 'People's Court') were established to make justice accessible and affordable to all. It was a forum to address the problems of crowded case dockets outside the formal adjudicatory system. The first National Lok Adalat (NLA) of 2021 will be held on April 10.*

Background

- As of now, Lok Adalats have been functioning for 38 years, but have they performed efficiently? Do they empower the poor or coerce them to accept unjust compromises? Do they trade justice off for high settlement numbers and speed, ignoring the old dictum that justice hurried is justice buried? Have we tailored a dual system of justice dispensation, where the formal legal system, i.e., the court, is meant only for the rich and powerful, as was recently stated by former Chief Justice of India Ranjan Gogoi? These questions are worth consideration.
- Lok Adalats had existed even before the concept received statutory recognition. In 1949, Harivallabh Parikh, a disciple of Mahatma Gandhi, popularised them in Rangpur, Gujarat.
- The Constitution (42nd Amendment) Act, 1976, inserted Article 39A to ensure "equal justice and free legal aid".
- To this end, the Legal Services Authorities Act, 1987, was enacted by Parliament and it came into force in 1995 "to provide free and competent legal services to weaker sections of the society" and to "organise Lok Adalats to secure that the operation of the legal system promotes justice on a basis of equal opportunity".

A dispute resolution avenue

- As an alternative dispute resolution tool, Lok Adalats are regularly organised to help parties reach a compromise. Motor-accident claims, disputes related to public-utility services, cases related to dishonour of cheques, and land, labour and matrimonial disputes (except divorce) are usually taken up by Lok Adalats.
- The State Legal Services Authorities (SLSAs) have been organising Lok Adalats on a daily, fortnightly and monthly basis. Data from the National Legal Services Authority (NALSA) show that Lok Adalats organised across the country from 2016 to 2020 disposed of 52,46,415 cases.

- Similarly, National Lok Adalats (NLAs) organised under the aegis of NALSA settle a huge number of cases across the country in a single day. For instance, NLAs conducted on February 8, 2020, disposed of 11,99,575 cases. From 2016 to 2020, NLAs have disposed of a total of 2,93,19,675 cases.
- The Indian judicial system is often lambasted, perhaps justifiably, for its endemic delays and excessive backlogs.
- As per the National Judicial Data Grid, 16.9% of all cases in district and taluka courts are three to five years old; for High Courts, 20.4% of all cases are five to 10 years old, and over 17% are 10-20 years old. Furthermore, over 66,000 cases are pending before the Supreme Court, over 57 lakh cases before various HCs, and over 3 crore cases are pending before various district and subordinate courts.
- Justice V.V.S. Rao, former judge of the Andhra Pradesh High Court, calculated a few years ago that it will take around 320 years to clear the existing backlog of cases.
- As a result, litigants are forced to approach Lok Adalats mainly because it is a party-driven process, allowing them to reach an amicable settlement.
- When compared to litigation, and even other dispute resolution devices, such as arbitration and mediation, Lok Adalats offer parties speed of settlement, as cases are disposed of in a single day; procedural flexibility, as there is no strict application of procedural laws such as the Code of Civil Procedure, 1908, and the Indian Evidence Act, 1872; economic affordability, as there are no court fees for placing matters before the Lok Adalat; finality of awards, as no further appeal is allowed. This prevents delays in settlement of disputes.
- More importantly, the award issued by a Lok Adalat, after the filing of a joint compromise petition, has the status of a civil court decree.
- As per data from NALSA, subject matter-specific NLAs were organised in 2015 and 2016 on a monthly basis.
- Therefore, each NLA dealt with a specific type of dispute on a single day, each month. However, from 2017, this practice was discontinued. Thereafter, each NLA has been handling all types of cases on a single day.
- This was done to reduce the costs of organising the NLAs, and more importantly, to allow parties more negotiation time. But this, in turn, led to a significant drop in the number of cases settled.
- In 2015 and 2016, ten NLAs were held each year that disposed of 1,83,09,401 and 1,04,98,453 cases respectively. In 2017 and 2018, the number of NLAs dropped to five, with 54,05,867 and 58,79,691 cases settled respectively. In 2019, four NLAs were organised, and they disposed of 52,93,273 cases.
- In 2015, the average number of cases settled per NLA was 18,30,940, which came down to 10,81,174 in 2017, but rose to 11,75,939 in 2018, and 13,23,319 cases in 2019. This throws up questions about the efficiency of NLAs.
- The data show that the average number of cases disposed of per NLA since 2017 has gone up even when the number of NLAs organised each year has reduced. This proves that on average, the system is certainly efficient.
- To overcome the challenges posed by the COVID-19 pandemic, e-Lok Adalats were organised at both national and State level.
- However, the first national e-Lok Adalat was conducted both physically and virtually using videoconferencing tools, and it disposed of 10,42,816 cases. But this was less than the average of settled cases in 2017, 2018, and 2019. This suggests that the performance of the NeLA was less efficient than physical National Lok Adalats organised in 2017, 2018, and 2019.
- Justice D.Y. Chandrachud, who chairs the SC's e-Committee, recently published the draft of phase three of the e-Courts project. Once implemented, it may prove to be a game-changer in improving the efficiency of the adjudicatory process.

Conciliatory role

- However, besides efficiency and speed, Lok Adalats both online and offline should focus on the quality of justice delivered. The Supreme Court, in State of Punjab vs Jalour Singh (2008), held that a Lok Adalat is purely conciliatory and it has no adjudicatory or judicial function.

- As compromise is its central idea, there is a concern, and perhaps a valid one, that in the endeavour for speedy disposal of cases, it undermines the idea of justice. In a majority of cases, litigants are pitted against entities with deep pockets, such as insurance companies, banks, electricity boards, among others.
- In many cases, compromises are imposed on the poor who often have no choice but to accept them. In most cases, such litigants have to accept discounted future values of their claims instead of their just entitlements, or small compensations, just to bring a long-pending legal process to an end.
- Similarly, poor women under the so-called 'harmony ideology' of the state are virtually dictated by family courts to compromise matrimonial disputes under a romanticised view of marriage. Even a disaster like the Bhopal gas tragedy was coercively settled for a paltry sum, with real justice still eluding thousands of victims.
- A just outcome of a legal process is far more important than expeditious disposal. With Justice N.V. Ramana's elevation as the new Chief Justice of India, it is hoped that he would take some concrete and innovative steps in improving the quality of justice rendered by National Lok Adalats.

India's Refugee Problem

(Source: The Hindu)

Context: *The current plight of the Myanmarese has been preceded by that of another group of Myanmarese, the Rohingya. And not too long ago, the debate was dominated by the Citizenship (Amendment) Act, 2019 and its impact on those seeking refuge in India, even though new refugees would not be benefited by the law since the cut-off year of the CAA is 2014. In any case, refugee flows to India are unlikely to end any time soon given the geopolitical, economic, ethnic and religious contexts of the region. There is, therefore, an urgent need today to clinically address the issue of refugee protection in India and put in place appropriate legal and institutional measures.*

Refugees versus immigrants

- India has emphatically argued over time, particularly in the recent past, that illegal immigration from the neighbouring countries to India must come to an end.
- There is little doubt that illegal immigration is a threat to the socio-political fabric of any country, including India, with potential security implications.
- And yet, in this growing debate about the sources and implications of illegal immigration into the country, the issue of refugees tends to get subsumed under it or at best relegated to the backburner, neither of which do justice to the helpless people fleeing from persecution at home.
- While the reality is that much of the debate in the country is about the illegal immigrants, not refugees, the two categories tend to get bunched together.
- And because we have jumbled up the two issues over time, our policies and remedies to deal with these issues suffer from a lack of clarity as well as policy utility.

Ambiguity in the framework

- The main reason why our policies towards illegal immigrants and refugees is confused is because as per Indian law, both categories of people are viewed as one and the same and are covered under the Foreigners Act, 1946 which offers a simple definition of a foreigner — "foreigner" means "a person who is not a citizen of India".
- Needless to say that there are fundamental differences between illegal immigrants and refugees, but India is legally ill-equipped to deal with them separately due to a lack of legal provisions. Recall that India is not a party to the 1951 Refugee Convention (https://bit.ly/2Qej4hF) and its 1967 Protocol, the key legal documents pertaining to refugee protection.

- The absence of such a legal framework also leads to policy ambiguity whereby India's refugee policy is guided primarily by ad hocism which, of course, often has its own 'political utility'.
- Ad hoc measures enable the government in office to pick and choose 'what kind' of refugees it wants to admit for whatever political or geopolitical reasons, and what kind of refugees it wants to avoid giving shelter, for similar reasons.
- At the same time, the absence of a legal framework increases the possibility of the domestic politicisation of refugee protection and complicates its geopolitical faultlines.
- The absence of a clearly laid down refugee protection law also opens the door for geopolitical considerations while deciding to admit refugees or not. Consider the most recent case of Myanmarese refugees fleeing to India for protection from the junta at home.
- New Delhi's concern is that if it takes a decision that irks the Generals in Naypyitaw, Beijing would get closer to the junta and use the opportunity to hurt India's interests in Myanmar. This fear, at least partly, is what has prompted India's decision not to admit the refugees.
- However, hypothetically speaking, if New Delhi had a domestic legislation regarding refugees, despite not being a signatory to the relevant international conventions, it could have tempered the expectations of the junta to return the fleeing Myanmarese.

Legal, moral complexities

- India, for the most part, has had a stellar record on the issue of refugee protection, a moral tradition that has come under great stress of late. New Delhi has been one of the largest recipients of refugees in the world in spite of not being a party to the 1951 Refugee Convention and its 1967 Protocol.
- Whether or not India should be a party to these international legal instruments has been a matter of some debate in the country.
- A proper interpretation of the text of the 1951 Convention and the less-than-perfect western practice of refugee protection could lead one to conclude that a country like India, given its track record of refugee protection as well as a vulnerable geopolitical and socio-economic situation, need not unreservedly accede to the convention and the protocol in the way they currently stand.
- For one, as is often discussed in India, the definition of refugees in the 1951 convention only pertains to the violation of civil and political rights, but not economic rights, of individuals, for instance. Put differently, a person, under the definition of the convention, could be considered if he/she is deprived of political rights, but not if he/she is deprived of economic rights.
    - If the violation of economic rights were to be included in the definition of a refugee, it would clearly pose a major burden on the developed world.
    - On the other hand, however, this argument, if used in the South Asian context, could be a problematic proposition for India too. And yet, this lop-sidedness is something New Delhi has traditionally highlighted, and justifiably so, as a reason for its non-accession to the treaty. The West's lopsided obsession with civil and political rights at the cost of economic rights is a convenient excuse with little moral backing.
- Second, as scholar B.S. Chimni has argued, "India should not accede to the 1951 convention at a time when the North is violating it in both letter and spirit… India should argue that their accession is conditional on the Western States rolling back the non-entrée (no entry) regime they have established over the past two decades.
    - The non-entrée regime is constituted by a range of legal and administrative measures that include visa restrictions, carrier sanctions, interdictions, third safe-country rule, restrictive interpretations of the definition of 'refugee', withdrawal of social welfare benefits to asylum seekers, and widespread practices of detention."
    - In other words, India must use its exemplary, though less than perfect, history of refugee protection to begin a global conversation on the issue.
- Let us return to the Indian context. So if we have a refugee problem, as we do, and the accession to the refugee convention, in the manner it exists today, is neither desirable nor pragmatic, what other options do we have to respond to the refugee situation we are faced with and which is increasingly getting mixed up with the raging political debate on illegal immigration into the country?

New domestic law needed

- The answer perhaps lies in a new domestic law aimed at refugees. The CAA, however, is not the answer to this problem primarily because of its deeply discriminatory nature: it is morally untenable to have a discriminatory law to address the concerns of refugees who are fleeing their home country due to such discrimination in the first place. More fundamentally, perhaps, the CAA is an act in refugee avoidance, not refugee protection.
- What is perhaps equally important is that such a domestic refugee law should allow for temporary shelter and work permit for refugees.
- This is crucial because in the absence of proper legal measures, refugee documentation, and work permit, refugees may end up becoming illegal immigrants using illicit means. Put differently, the absence of a refugee law incentivises illegal immigration into the country.
- New Delhi must also make a distinction between temporary migrant workers, illegal immigrants and refugees and deal with each of them differently through proper legal and institutional mechanisms.
- Our traditional practice of managing these issues with ambiguity and political expediency has become deeply counterproductive: It neither protects the refugees nor helps stop illegal immigration into the country.

GS III

Maintaining the inflation target at 4%

(Source: The Hindu)

Context: *On the last day of the financial year 2020-21, the Finance Ministry announced that the inflation target for the five years between April 2021 and March 2026 will remain unchanged at 4%, with an upper tolerance level of 6% and a lower tolerance level of 2%. This is the retail inflation target that will drive the country's monetary policy framework and influence its decision to raise, hold or lower interest rates.*

Why is this important?

- India had switched to an inflation target-based monetary policy framework in 2015, with the 4% target kicking in from 2016-17.
- Many developed countries had adopted an inflation-rate focus as an anchor for policy formulation for interest rates rather than past fixations with metrics like the currency exchange rate or controlling money supply growth. Emerging economies have also been gradually adopting this approach.
- In adopting a target for a period of five years, the central bank has the visibility and the time to smoothly alter and adjust its policies in order to attain the targeted inflation levels over the medium term, rather than seek to achieve it every month.

What is the rate of consumer price inflation?

- Terming India's inflation trends "worrisome", Moody's Analytics recently pointed out that volatile food prices and rising oil prices had already driven India's consumer price index (CPI)-based inflation past the 6% tolerance threshold several times in 2020 and that core inflation trends were rising again.
- Retail inflation has remained below 6% since December 2020. However, it accelerated from 4.1% in January 2021 to 5% in February. D.K. Srivastava, chief policy adviser at Ernst and Young India, reckoned that core CPI inflation also increased to a 78-month high of 6.1% in February 2021.
- While inflation headwinds remain, especially with oil prices staying high, there was some speculation that the Central government, whose topmost priority now is to revive growth in the COVID-19

pandemic-battered economy, may ease up on the inflation target by a percentage point or two. This would have given the Reserve Bank of India (RBI) more room to cut interest rates even if inflation was a tad higher.

- That the government has desisted from doing this and left the inflation target untouched has been welcomed by economists who believe that the new framework has worked reasonably well in keeping inflation in check over the last five years.
- They attribute the few recent instances when the upper target was breached to the exceptional nature of the COVID-19 shock.

What is the RBI's position on this?

- The RBI had, in recent months, sought a continuance of the 4% target with the flexible tolerance limits of 2%.
- The 6% upper limit, it argued, is consistent with global experience in countries that have a large share of food items in their consumer price inflation indices.
- Accepting inflation levels beyond 6% would hurt the country's growth prospects, the central bank had asserted.

Why should this concern consumers?

- Suppose the inflation target were to be raised to 5% with a 2% tolerance band above and below it, for consumers, that would have meant that the central bank's monetary policy and the government's fiscal stance may not have necessarily reacted to arrest inflation pressures even if retail price rise trends would shoot past 6%.
- For instance, the central bank has been perhaps the only major national institution to have made a pitch for both the Centre and the States to cut the high taxes they levy on fuels that have led to pump prices for petrol crossing ₹100 a litre in some districts.
- As high oil prices spur retail inflation higher, the central bank is unhappy as its own credibility comes under a cloud if the target is breached.
- If the upper threshold for the inflation target were raised to 7%, the central bank may not have felt the need to seek tax cuts (yet). Thus, the inflation target makes the central bank a perennial champion for consumers vis-à-vis fiscal policies that, directly or indirectly, drive retail prices up.

The big push for digital currency in China

(Source: The Hindu)

Context: *China in February launched the latest round of pilot trials of its new digital currency, with reported plans of a major roll-out by the end of the year and ahead of the Winter Olympics in Beijing in February 2022. While several countries have been experimenting with digital currencies, China's recent trials in several cities have placed it ahead of the curve and offered a look into how a central bank-issued digital tender may impact the world of digital payments***.**

How does China's digital currency work?

- Officially titled the Digital Currency Electronic Payment (DCEP), the digital RMB (or Renminbi, China's currency) is, as its name suggests, a digital version of China's currency.
- It can be downloaded and exchanged via an application authorised by the People's Bank of China (PBOC), China's central bank.
- China is among a small group of countries that have begun pilot trials; others include Sweden, South Korea and Thailand.

How is it different from an e-wallet?

- Unlike an e-wallet such as Paytm in India, or Alipay or WeChat Pay, which are the two dominant apps in China, the Digital RMB does not involve a third party. For users, the experience may broadly feel the same.
- But from a "legal perspective", points out Santosh Pai, an Honorary Fellow at the Institute of Chinese Studies (ICS) in New Delhi and a corporate lawyer who researches Chinese regulations, the digital currency is "very, very different".
- This is legal tender guaranteed by the central bank, not a payment guaranteed by a third-party operator. There is no third-party transaction, and hence, no transaction fee.
- Unlike e-wallets, the digital currency does not require Internet connectivity. The payment is made through Near-field Communication (NFC) technology.
- Also, unlike non-bank payment platforms that require users to link bank accounts, this can be opened with a personal identification number, Dong Ximiao, a think-tank researcher with the Asian Financial Cooperation Association, told Chinese media, which means "China's unbanked population could potentially benefit".

How widely is it being used in China?

- Following trials launched last year shortly after the COVID-19 pandemic struck, 4 million transactions worth $300 million had used the Digital RMB, the PBOC said in November.
- In the latest round of trials in February to coincide with the Chinese New Year holiday, Beijing distributed around $1.5 million of the currency to residents via a lottery, with "virtual red envelopes" worth 200 RMB each (around $30) sent to each resident.
- Shenzhen and Suzhou were other cities that distributed currency as part of pilot trials, which the Ministry of Commerce said will be expanded in coming months, with a wider roll-out expected before the Winter Olympics.

What are the reasons behind the push?

- The trials coincided with moves by Chinese regulators to tame some of its Internet giants, including Alibaba, which is behind Alipay, and Tencent, which owns WeChat Pay.
- "While digital payment platforms have helped to facilitate commerce in China, they have placed much of the country's money into the hands of a few technology companies," said a recent report from the Center for Strategic and International Studies (CSIS). "In the fourth quarter of 2019, Alibaba controlled 55.1% of the market for mobile payments in China. Tencent controlled another 38.9%."
- A "key objective of China's sovereign digital currency" was "to maintain financial stability should 'something happen' to Alipay and WeChat Pay," Mu Changchun, the director-general of the PBOC's digital currency institute, was quoted as saying by the South China Morning Post. Chinese regulators have also warily viewed the rise of cryptocurrencies.
- The central bank-issued digital RMB will turn the logic of decentralised cryptocurrencies on its head, without the privacy and anonymity they offer, by giving regulators complete control over transactions.
- There are global motivations as well. "Beyond China's borders, DCEP could help facilitate the internationalisation of the renminbi," the CSIS report said.

Reworking net-zero for climate justice

(Source: The Hindu)

Context: *In 2015, at the UN General Assembly when the Sustainable Development Agenda 2030 was adopted and at the Paris Conference, Prime Minister Narendra Modi stressed a reframing of climate change to climate justice, arguing that just when countries such as India were becoming major industrial*

and middle class nations, they should not pay the price for the pollution caused by the West. The Paris Agreement, explicitly recognises that peaking will take longer for such countries and is to be achieved in the context of "sustainable development and efforts to eradicate poverty". This balance is now being upset for a common target and timetable, with non-governmental organisations (mostly foreign funded) in support and negotiators (mostly public servants) opposing the pressure. India will meet its Paris Agreement target for 2030, its per-capita emissions are a third of the global average, and it will in future remain within its share of ecological space. The pressure arises from the way the agenda has been set.

Treaty's inequity

- First, inequity is built into the Climate Treaty. Annual emissions make India the fourth largest emitter, even though climate is impacted by cumulative emissions, with India contributing a mere 3% compared with 26% for the United States and 13% for China.
    - According to the United Nations, while the richest 1% of the global population emits more than two times the emissions of the bottom 50%, India has just half its population in the middle class and per capita emissions are an eighth of those in the U.S. and less than a third of those of China.
- **Second, the diplomatic history of climate negotiations shows that longer term goals without the strategy to achieve them, as in the case of finance and technology transfer, solve a political problem and not the problem itself.**
    - The focus on physical quantities, emissions of carbon dioxide and increase in global temperature, measures impacts on nature whereas solutions require an analysis of drivers, trends and patterns of resource use. The current framework considers symptoms, emissions of carbon dioxide, and was forced onto developing countries to keep the discussion away from the causes of the problem , the earlier excessive use of energy for high levels of well-being.
- Third, models on which global policy recommendations for developing countries are based consider achieving 'reasonable' not 'comparable' levels of well-being to show that early capping of energy use will not affect their growth ignoring costs on the poor. The different means to achieve the goals are not on the agenda because the rising prosperity of the world's poor does not endanger the planet and the challenge is to change wasteful behaviour in the West.

Role of infrastructure

- The vaguely worded 'net zero' emissions, balancing emissions and removals, could be disastrous for development latecomers like India because the current frame fails to recognise that more than half the global cumulative emissions arose from infrastructure, essential for urban well-being.
    - First, infrastructure has a defining role in human well-being both because of the services it provides outside the market and the way it shapes demand distinct from manufacturing (production) and lifestyles (consumption), which alone are captured in model projections.
    - Second, the global trend is that in an urbanised world, two thirds of emissions arise from the demand of the middle class for infrastructure, mobility, buildings and diet. There is no substitute to cement, steel and construction material, and worldwide they will need half the available carbon space before comparable levels are reached around 2050, while developed countries use most of the rest. For developed countries, peaking of emissions came some 20 years after infrastructure saturation levels were reached and net-zero emissions are being considered some two decades even later to take advantage of aging populations and technology.
    - Third, because of its young population and late development, much of the future emissions in India will come from infrastructure, buildings and industry, and we cannot shift the trajectory much to reach comparable levels of well-being with major economies. For example, China's emissions increased three times in the period 2000-2015, driven largely by infrastructure.

New framework

- A global goal-shaping national strategy requires a new understanding. India must highlight unique national circumstances with respect to the food, energy and transportation systems that have to change.

- For example, consumption of meat contributes to a third of global emissions. Indians eat just 4 kg a year compared with around 68 kg per person for the European Union and twice that in the U.S. where a third of the food is wasted by households.
- Transport emissions account for a quarter of global emissions, are the fastest growing emissions worldwide and have surpassed emissions from generation of electricity in the U.S., but are not on the global agenda.

Coal use

- Coal accounts for a quarter of global energy use, powered colonialism, and rising Asia uses three-quarters of it as coal drives industry and supports the renewable energy push into cities.
- India with abundant reserves and per-capita electricity use that is a tenth that of the U.S. is under pressure to stop using coal, even though the U.S. currently uses more coal. India wants to eliminate the use of oil instead with renewable energy and hydrogen as a fuel for electrification, whose acceleration requires international cooperation around technology development and transfer.
- In the Paris Agreement, 'climate justice' was relegated to the preamble as a political, not policy, statement. It needs to be fleshed out with a set of 'big ideas'.
    - The first is a reframing of the global concern in terms of sustainable development for countries with per capita emissions below the global average, in line with the Paris Agreement.
    - Second, the verifiable measure should be well-being within ecological limits.
    - Third, international cooperation should centre on sharing technology of electric vehicles and hydrogen as a fuel, as they are the most effective response to climate change.

Redefining combatants

(Source: The Hindu)

Context: *A report in The New York Times on the October 2020 breakdown of the Mumbai power distribution system points a finger at Chinese cyber hackers. While the truth may remain hidden, the discussion points to a macro issue. When, and under what conditions, would a non-kinetic strike, say a cyberattack, be considered an attack on the state? And under international rules of self-defence, what response would be considered legal? Would only a cyber counter-attack be justifiable or a kinetic response also be acceptable? Would a pre-emptive strike be kosher? These and other questions are knocking at our door, even as the definition of combat and combatants undergoes fast mutation.*

Changing definitions

- The universally accepted Lieber Code of 1863 defines a combatant. It says, "So soon as a man is armed by a sovereign and takes the soldier's oath of fidelity, he is a belligerent..."; all others are non-combatants.
- An organised group of "belligerents" constitutes a regular armed force of a state. The 1899 Hague Convention brings in further clarity of what constitutes a regular force.
    - First, the force should be commanded by a person responsible for his subordinates.
    - Second, it must have a distinctive emblem recognisable at a distance.
    - Third, it must carry arms openly.
    - And last, it must conduct operations in accordance with laws and customs of war.
- Those who conducted the (yet unproven) Mumbai 'cyberattack' or the 2007 attack on Estonia's banking system did not meet any of the four conditions of being called combatants, but still wreaked havoc.
- A combatant, thus, needs to be redefined due to three reasons.

  - First, a cyber 'army' need not be uniformed and may consist of civilians. After the cyberattack on Estonia, the government set up a voluntary Cyber Defence Unit whose members devote their free time towards rehearsing actions in case of a cyberattack. A rogue nation could well turn these non-uniformed people into cyber 'warriors'.
  - Second, cyber 'warriors' do not carry arms openly. Their arms are malicious software which is invisible.
  - And finally, the source of the attack could be a lone software nerd who does not have a leader and is up to dirty tricks for money, blackmail or simply some fun. None of these meet the requirements of The Hague Convention but the actions of these non-combatants fall squarely in the realm of national security.
- This raises two very basic inquiries that need deliberation.
  - First, would the nation employing civilians in computer network attacks not be in violation of the laws of war?
  - And second, if these people are considered as combatants, would the target country have the right to respond in self-defence? A response would be reactive, after the attacker has conducted his operation; hence, as a right of self-defence, would an act of pre-emption (through kinetic means and/or through cyber) be in order?
- This argument may appear far-fetched now but needs to be examined as India seems to have a new view on the concept of the right to self-defence.

View of the right to self-defence

- In a February 24, 2021 UN Arria Formula meeting on 'Upholding the collective security system of the UN Charter', the Indian statement says, "...a State would be compelled to undertake a pre-emptive strike when it is confronted by an imminent armed attack from a non-state actor operating in a third state."
- It adds that "this state of affairs exonerates the affected state from the duty to respect, vis-a-vis the aggressor, the general obligation to refrain from the use of force."
- In a perceptive analysis of the statement, in Opinio Juris, Srinivas Burra, an Assistant Professor, opines that in a clear departure from established practices, "India... expressly contextualises its position on the question of the right of self-defence against the acts of non-state actors in international law."
- Though used with reference to an "armed attack", the implications of the statement, when viewed vis-à-vis cyberattacks done by faceless persons who are non-combatants as per international law, open up an avenue that requires careful examination; cyberattacks may not kill directly but the downstream effects can cause great destruction.
- International actions against hackers have been generally limited to sanctioning of foreign nationals by target nations. In 2014, for the first time, a nation (the U.S.) initiated criminal actions against foreign nationals (five Chinese operatives of Unit 61398 of the People's Liberation Army) for computer hacking and economic espionage.
- The question is, how long before this escalates to covert and/or overt kinetic retaliation. India seems to have made its intentions clear at the UN meet, but this is a game that two can play; if not regulated globally, it could lead to a wild-west situation, which the international community should best avoid by resolute action.

Current Affairs Quiz

1. Consider the following statements with respect to the International Criminal Court:
   1. It is governed by the Roman Statute
   2. The ICC is the world's first permanent international criminal court.
   3. India is a party to the Rome Statute and hence ICC's decisions are binding on it.

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

Ans. a)
India is not a party to Rome Statute along with US and China.

2. Taklamakaan desert is located in -

   a) China
   b) South Africa
   c) Sudan
   d) Saudi Arabia

Ans. a)

3. Consider the following statements with respect to Diptheria:
   1. There is no vaccine for Diptheria
   2. It is caused by a virus.

Which of the statement(s) given above is/are correct?
   a. 1 only
   b. 2 only
   c. Both 1 and 2
   d. Neither 1 nor 2

Answer : d
It is a vaccine preventable disease.
It is caused by a bacterium called Corynebacterium diphtheria.

4. Consider the following statements with respect to inflation:
   1. Demand pull inflation is caused due to an increase in aggregate demand in the economy.
   2. When there is a decrease in the aggregate supply of goods and services stemming from an increase in the cost of production, we have cost push inflation.

Which of the statements give above is/are incorrect?
   a) 1 only
   b) 2 only
   c) Both 1 and 2
   d) Neither 1 nor 2

Answer : d
Both statements are correct

5. Renminbi is the currency of
   a) Japan
   b) South Korea
   c) North Korea
   d) China

Answer : d

6. Consider the following statements:

1. Exercise Varuna is an Indo-French naval exercise.
2. All the QUAD members will also participate in Varuna exercise.
3. Varuna exercise will be conducted in the Indian Ocean Region.

Which of the statements given above is/are not correct?

   a) 1 only
   b) 2 only
   c) 3 only
   d) None of the above

Ans. b)

7. Consider the following statements:

1. International Maritime Organization (IMO) is a specialized agency of the United Nations.
2. India is a member of IMO.

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

Ans. c

Both statements are correct

8. Food Corporation of India comes under which Ministry?

a) Ministry of Agriculture

b) Ministry of Commerce and Industry

c) Ministry of Consumer Affairs, Food and Public Distribution

d) None of the above

Ans. c)

9. Chenab bridge, the world's highest railway bridge was in news recently. It is located in which state?

a) Uttarakhand

b) Chattisgarh

c) Sikkim

d) Jammu and Kashmir

Ans. d)

10. Consider the following statements with respect to INS Viraat:

1. INS Viraat was originally commissioned by the British Royal Navy asHMS Hermes in 1959
2. It is in the process of being decommissioned.

Which of the above statements is/are correct?

a) 1 only
b) 2 only
c) Both 1 and 2
d) Neither 1 nor 2

Ans. c)

11. Consider the following statements with respect to Indian Farmers:

1. The share of small and marginal farmers in India have decreased from the year 1980-81 to 2015-16.
2. The Centre has encouraged farmer producer organisations (FPOs) under the Small Farmers' Agri-Business Consortium (SFAC), NABARD, state governments and NGOs.

Which of the above statements is/are correct?

a) 1 only
b) 2 only
c) Both 1 and 2
d) Neither 1 nor 2

Ans. b)

The share of small and marginal farmers increased from 70 per cent in 1980-81 to 86 per cent in 2015-16.

12. Which of the following countries are members of E9 countries?

1. India
2. Egypt
3. China
4. Pakistan

5. Bangladesh

Select the correct answer code:

a) 1, 3, 4 and 5 only
b) 1, 2, 3 and 4 only
c) 2, 3, 4, and 5 only
d) 1, 2, 3, 4 and 5

Ans. d)

All of the above are members of E9 countries. The initiative aims to accelerate recovery and advance the Sustainable Development Goal 4 agenda by driving rapid change in education systems.

13. Consider the following statements with respect to Exercise La Perouse:

1. It is a multi-lateral maritime exercise led by the French Navy in the Eastern Indian Ocean Region.
2. The Indian Navy is participating in the exercise for the first time.

Which of the statement/s given above is/are correct?

a) 1 only
b) 2 only
c) Both 1 and 2
d) Neither 1 nor 2

Ans. c)

Both statements are correct

14. Which of the following statements is/are correct with respect to National Security Act (NSA)?

1. Under this act a person can be detained for up to 12 months without a charge and no FIR is registered on the detained person.
2. A person can be held any number of days without being told the charges against them, but will be allowed a lawyer during the trial.

Select the correct answer code:

a) 1 only
b) 2 only
c) Both 1 and 2
d) Neither 1 nor 2

Ans. a)

A person can be held for 10 days without being told the charges against them.

15. Consider the following statements with respect to Non-Fungible Token (NFT):

1. It is a unit of data on a digital ledger called a block chain, where each NFT can represent a unique digital item, and thus they are not interchangeable.
2. They can be used to commodify digital creations, such as digital art, video game items, and music files.

Which of the statements given above is/are incorrect?

a) 1 only
b) 2 only
c) Both 1 and 2
d) Neither 1 nor 2

Ans. d)

Both statements are incorrect.

16. Chenab Arch Bridge is constructed between which of the following railway line?

a) Udhampur to Katra
b) Banihal to Qazigund
c) Qazigund to Baramulla
d) Katra-Banihal

Ans. d)

17. Consider the following statements :
1. In India, the copyright regime is governed by the Copyright Act, 1957 and the Copyright Rules, 2013.
2. Under the amended rules, Copyright societies will be required to draw up and make public a Transparency Report for every five years.
3. The Copyright (Amendment) Rules, 2021 merged the Copyright Board with the Appellate Board.

Which of the statements given above are correct?
a. 1 and 2 only
b. 1 and 3 only
c. 2 and 3 only
d. 1, 2 and 3

Answer : b

- To reinforce transparency in working of copyright societies a new rule has been introduced, whereby the copyright societies will be required to draw up and make public an Annual Transparency Report for each financial year.

18. Consider the following statements with respect to Muons:
1. They are subatomic particles similar to electron but heavier than it.
2. It is one of the member of lepton group and are more unstable.

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

Answer : c

19. Which of the following statements is/are correct with respect to Disqualification of MLAs under Representation of People Act (1951)?

1. An MLA can be disqualified when he holds any office of profit under union or state government.
2. Under the Parliament disqualifications rules, the detention of a person under a preventive detention law is not a disqualification.
3. He/she will be disqualified for failing to lodge an account of his election expenses within the time.

Select the correct answer code:

a. 1 and 2 only
b. 2 and 3 only
c. 1 and 3 only
d. All of the above

Answer : b

Under the Constitution, a person shall be disqualified for being chosen as and for being a member of the legislative assembly or legislative council of a state If he holds any office of profit under the Union or state government (except that of a minister or any other office exempted by state legislature),

20. Which of the statements given below is/are correct with respect to Central Vigilance Commission (CVC) ?

1. It is a constitutional body which submits its report annually to the parliament.
2. Recent CVC Guidelines mandates tenure of vigilance personnel who have completed 3 years in one destination can be extended for another 3 years in same destination.

Select the correct answer code:

a. 1 only
b. 2 only
c. Both 1 and 2
d. Neither 1 nor 2

Answer : d

- It is a statutory body.
- The tenure of personnel in a vigilance unit at one place including lower level functionaries, should be limited to three years only.
- The tenure may be extended to three more years, although at a different place of posting.
- The personnel, who have completed more than five years in vigilance units at the same place, should be shifted on top priority basis.

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Prelims

NATIONAL

Indus and Ganges river dolphins

(Source: The Hindu)

Context: *Detailed analysis of South Asian river dolphins has revealed that the Indus and Ganges River dolphins are not one, but two separate species.*

Divergent species

- Currently, they are classified as two subspecies under Platanista gangetica and this needs a revision. The study estimates that Indus and Ganges river dolphins may have diverged around 550,000 years ago.
- The international team studied body growth, skull morphology, tooth counts, colouration and genetic makeup and published the findings last month in Marine Mammal Science.
- The paper notes that "comparative studies of animals in the two river systems are complicated by the fact that they occur in neighboring countries separated by an unfriendly international border...Thus, sharing of samples or data between countries is extremely challenging."
- The Ganges dolphin is a Schedule I animal under the Indian Wildlife (Protection) Act 1972, and has been included in Annexure – I of Convention on International Trade in Endangered Species (CITES), so you cannot transfer any tissue or sample to foreign countries without getting CITES permission from the Competent Authority of Government of India.
- Another reason was that finding dead animals were uncommon because they either float downstream or sink, and museum collections worldwide contain only a few specimens and most of them are damaged.

Conservation status

- The Indus and Ganges River dolphins are both classified as 'Endangered' species by the International Union for Conservation of Nature (IUCN).
- Physical barriers such as dams and barrages created across the river reduced the gene flow to a great extent making the species vulnerable;
- River flow is also declining very fast as river water is being diverted through the barrages and this has affected the dolphin habitats.
- Previously fishermen used to hunt dolphins and use their oil as bait, but though that practice of directed killing has stopped and they are not being hunted intentionally they end up as accidental catches. Also, before the 1990s, we had oar boats and country boats; but now mechanised boats are also causing accidental injury to the dolphins."

Uttarakhand's Char Dham Board

(Source: Indian Express)

Context: *The Uttarakhand government in December 2019 had tabled the Uttarakhand Char Dham Shrine Management Bill, 2019, in the state Assembly amid protests – within and outside the Vidhan Sabha. The bill*

was aimed at bringing the Char Dham of Badrinath, Kedarnath, Gangotri and Yamunotri and 49 other temples under the purview of a proposed shrine board. The bill was passed in the Assembly and became the Uttarakhand Char Dham Devasthanam Management Act, 2019.

Details:

- Under the same Act, the BJP government led by then CM Trivendra Singh Rawat constituted the Uttarakhand Char Dham Devasthanam Board on January 15, 2020.
- The Chief Minister is the chairman whereas the minister for religious affairs is the vice-chairman of the board. Two MLAs of Gangotri and Yamunotri are members on the board along with the Chief Secretary. A senior IAS officer is the Chief Executive Officer.
- Under this board, at present there are 53 temples, including four shrines – Badrinath, Kedarnath, Gangotri and Yamunotri – and other temples located around these shrines.
- The shrine board is the highest governing body for the management of the temples with powers to frame policies, make decisions to give effect to the provisions of this Act, of budget formulation and to sanction expenditure, among others.
- The board may also give directions for the safe custody, prevention and management of funds, valuable securities, jewellery and properties vested in the temples.
- So far, the board has met only three times under former CM Trivendra Singh Rawat and discussions were held regarding development around char dharma shrines and char dham yatra.

What was the previous arrangement?

- Earlier, the Shri Badrinath-Shri Kedarnath Act, 1939 was in place for the management of two shrines – Badrinath and Kedarnath – and 45 temples by Shri Badrinath- Shri Kedarnath Mandir Samiti.
- The Samiti was chaired by a government appointed person whereas an official of all India service used to be the CEO.
- All the decisions related to utilization of the donations, funds and development works in and around those 45 temples including Badrinath and Kedarnath were taken by that committee and the government did not intervene into it. But through the Devasthanam board, the government has taken control over the financial and policy decisions.
- Most of these provisions of this Act (Shri Badrinath-Shri Kedarnath Act, 1939) are no longer relevant in the present context. In view of this, the Uttarakhand Char Dham Shrine Management Bill, is proposed. This Bill thus will provide to be a milestone for the rejuvenation of Shri Badrinath, Shri Kedarnath, Gangotri, Yamunotri and other famous temples.
- In Gangotri and Yamunotri, management of the shrines was earlier in the control of local trusts and the government was not getting any share from the donations made by devotees.

Odisha Itihaas

Context: *Prime Minister Narendra Modi released the Hindi translation of the book, 'Odisha Itihaas', written by former chief minister Harekrushna Mahatab. Releasing the book, which is already available in Oriya and English, the Prime Minister said, "It is important that the diverse and comprehensive history of Odisha should reach the people of the country."*

Who was Harekrushna Mahtab?

- Dr Mahatab was born in 1899 to a poor family at Agarpada village in Balasore. He was inspired by the ideals of Bagha Jatin and was influenced by Ramakrishna Mission.

- At a very young age, Mahatab joined the freedom struggle and even accompanied Mahatma Gandhi to various districts during his visit to the state in 1921. He eventually left his family to devote his life for the uplift of the Congress organisation.
- He went on to become the first chief minister of the state from 1946 to 1950 and was re-elected in 1956. He also earned the sobriquet 'Utkal Keshari'.
- He is also credited with setting up Bhubaneswar as the capital of the state, along with the construction of the Secretariat building, Raj Bhawan and Assembly buildings.
- Considered a historian, during his term in jail, Mahatab translated a lot of History books. He translated Valmiki's Ramayan from Sanskrit into Oriya and also wrote the Oriya version of the Gita. In 1946, during his stay at Patna camp jail, he published poems collected from political prisoners called "Bedira Jan Jan".

The history of the book 'Odisha Itihaas'

- The idea behind publishing a book on the history of Odisha took shape when Mahatab was imprisoned in Ahmadnagar for participating in the Quit India Movement.
- Dr Hemanta Kumar Mohapatra, in an article on Dr Mahatab published in the 2015 edition of Odisha review magazine by the Government of Odisha, writes about Mahatab's term in Ahmadnagar: "Nehru showed Mahatab some lines from Edward Thomson's book 'The Beginning of Indian Princes'.
- In this book, Thomson depicted Jagannath Temple as a 'notorious Shrine, the uncouth temple where an incomprehensible people reverenced ugliness as the personification of divine attribute and Brahminism seems to flaunt its differences from all other religions of the modern world.'
- Mahtab was sorry because he had little historical knowledge to counter such an "uncalled for" view of a foreign historian. Even he could not name a standard book on Odisha history for reference to refute such a humiliating version in the book of Thomson.
- It was then that Mahatab decided to explore the history of Odisha, especially to know about the ancient history of Lord Jagannath. He studied a lot of historical writings, including that of Toynbee, Gibbon and other historians, and published the Oriya version of his 'History of Odisha' in 1948.
- To take it further, he also conducted a special session of the Indian Historical Record Commission in Odisha to address important historical issues from the state and initiate a dialogue between historians and prominent people from across the state.

Goa's newly introduced Advanced Antiquities Mgmt System

(Source: Indian Express)

Context: *The Directorate of Archives and Archaeology (DAA) of the Goa government inaugurated the Advanced Antiquities Management System on March 30 that it claimed was the first such system in the country for storage of antiquities. The system that catalogues 83 antiquities at present is aimed at providing quick information about an antiquity linked to the software, saving storage space and ensuring improved preservation of the objects of historical significance.*

What is the Advanced Antiquities Management System?

- The AAMS is a software-driven automated storage used for the storage of various objects. So far it has been used for storage of industrial equipment but the decision of Goa's DAA to use it for storing valuable antiquities is the first such in the country, it said.
- The AAMS will ensure safety of antiquities, clean storage space, access control and data management and also enhance utilisation of space.
- With antiquities preserved within the system, it will provide access to these in one place with the help of a screen on which the preserved antiquities can be searched and accessed within the system for viewing.

It will also provide information about the age of the antiquity, the material it is made of and its brief history.

Who will be able to use the AAMS?

- The system will mostly benefit researchers and students permitted access by the Directorate of Archives and Archaeology (DAA) in Goa and officials of the department. Students researching various archaeological subjects often seek access to antiquities in the care of the Directorate.
- Unlike a manual log of these antiquities, a click on the screen attached to the system will give the user information about the antiquity immediately and it can also be updated based on latest information about the antiquity.
- This is also expected to benefit the DAA as it will save storage space, provide protection from dust and temperature control.
- Inaugurating the system that cost Rs 27 lakh, Goa deputy chief minister Chandrakant Kavlekar said there was a need for advanced technology for the maintenance of heritage objects. He also said that the Goa government plans to introduce similar storage for six crore archival documents in the state.

Last two rhinos translocated under IRV 2020

(Source: The Hindu)

Context: *The ambitious Indian Rhino Vision 2020 (IRV 2020) came to a close with the release of two rhinos — an adult male and a female — in Assam's Manas National Park transported from Pobitora Wildlife Sanctuary about 185 km east.*

Background

- Designed in 2005, the IRV2020 is believed to have achieved its target of attaining a population of 3,000 rhinos in Assam. But the plan to spread the Rhinoceros unicornis across four protected areas beyond Kaziranga National Park, Orang National Park and Pobitora could not materialise.
- Assam had at least five rhino-bearing areas till the 1980s. Better conservation efforts helped maintain the population of the one-horned herbivore in Kaziranga, Orang and Pobitora, but encroachment and poaching wiped the animal out of Manas and Laokhowa Wildlife Sanctuary.
- The lesser-known Laokhowa slipped under the radar of international watchdogs. Manas, in focus for the near-extinction of the pygmy hog, lost the World Heritage Site tag it received in 1985 along with Kaziranga from the UNESCO.
- The translocated rhinos helped Manas National Park get back its World Heritage Site status in 2011. It can be expected that the translocation programme will set up a healthy, breeding population for the future of the species.

BIS Hallmark for Gold jewellery

(Source: The Hindu)

Context: *The Centre will go ahead with its plan to mandate hallmarking of gold jewellery from June 1. The plan had been delayed due to the COVID-19 pandemic.*

Details:

- Last year, the then Union Minister for Consumer Affairs Ram Vilas Paswan had announced January 2021 as the deadline, but jewellers had been given an extension.
- No further extension has been sought, Consumer Affairs Secretary Leena Nandan said at a virtual press conference. Gold hallmarking is a purity certification and is voluntary at present.
- About 40% of gold jewellery is sold with a hallmark.
- As per the new rules, if jewellery or an artefact made of 14-, 18- or 22-carat gold is sold without the BIS hallmark, the jeweller could be penalised five times the cost of the object or imprisoned for up to one year.

What is hallmarking?

- BIS, a government body, certifies the purity of gold bought by you. The process of certifying the purity of gold is called hallmarking. According to the BIS website, there are two principle objectives of the hallmarking scheme:
  - To protect the public against adulteration
  - To obligate manufacturers to maintain legal standards of fineness/purity
- There are four components that one should look for on the hallmarked gold ..
  - BIS Mark;
  - Purity in Karat and fineness;
  - Assaying and Hallmarking Centre's identification mark/number;
  - Jeweller's Identification mark/number

The falling Rupee

(Source: Indian Express)

Context: *The Indian Rupee hit a nine-month low of 75.4 against the US Dollar on 13th April 2021 and has lost nearly 4.2 per cent over the last three weeks — one of the biggest losers among the emerging market currencies.* ***The Rupee came*** *under severe pressure over the last three weeks in line with the sharp rise in Covid-19 cases and RBI's announcement, last week, to maintain fairly accommodative monetary policy and that it will inject liquidity through the Government Securities Acquisition Programme* ***(G-SAP)*** *programme — starting with Rs 1 lakh crore in the current quarter. As concerns are growing over the delay in recovery of the economy and normalisation, the Rupee has taken a hit.*

What are the key reasons for the decline?

- Rising Covid numbers — over 1.6 lakh fresh daily cases — have emerged as a key concern. As several states are now considering more stringent lockdown measures, market participants are concerned over delay in the recovery of the economy, that was hit hard in 2020-21 by the pandemic.

Currency movement against USD

	Mar 22	Mar 22	Change Since Mar 22
Turkish New Lira	7.80	8.14	4.36
Indian Rupee	**72.38**	**75.42**	**4.20**
Brazilian Real*	5.51	5.73	3.99
Russian Ruble	74.77	77.20	3.25
Thai Baht	30.87	31.59	2.33
Indonesian Rupiah	14403.00	14620.00	1.51
Chinese Yuan Reniminbi	6.51	6.55	0.61
Malaysian Ringgit	4.11	4.14	0.51
Euro	0.84	0.84	0.36
Philipines Peso	48.52	48.55	0.06
South African Rand	14.72	14.60	-0.82
Pakistan Rupee	156.05	152.13	-2.51

The Indian EXPRESS

*April 12; Source: Market

- Besides, the strengthening of dollar in line with expectations of better growth in the US economy, has also put pressure on the Rupee. While the Dollar was trading at 1.233 to a Euro in early January 2021, it is currently trading at 1.189 to a Euro and has gained over 3.5 per cent. Since March 1, 2021, the Dollar has gained close to 1.5 per cent against the Euro.
- Last week, RBI's announcement of G-SAP programme to infuse liquidity has also put additional pressure on the Rupee. This is being read as a sort of quantitative easing policy the global central banks had followed, in which the RBI will support the government's elevated borrowing programme through infusion of liquidity.
- Another factor that is putting additional pressure is the dwindling support of the foreign portfolio investors, who pumped huge inflows into Indian equity markets between October and February. While the FPIs invested a net of Rs 1.94 lakh crore between October and February (in the Indian markets) in the month of April they have pulled out a net of Rs 2,263 crore (till date).

What is a currency chest?

(Source: Indian Express)

Context: *The theft to the tune of Rs 4.04 crore by a private security guard from the currency chest of Axis Bank in Chandigarh's Sector 34 has put the affairs of currency chests in the spotlight. It is for the first time in Chandigarh when such a huge amount was stolen from inside a bank. Although a few crimes have been*

reported involving the robbery of jewellery items. In 2012, jewellery worth Rs 12 crore was stolen from a leading jewellery showroom.

What is currency chest? Which authority monitors it?

- Currency chest is a place where the Reserve Bank of India (RBI) stocks the money meant for banks and ATMs.
- These chests are usually situated on the premises of different banks but administrated by the RBI.
- Representatives of the RBI inspect currency chests time-to-time, and update their senior officers about it.
- The money present in the currency chest belongs to the RBI and the money, kept in the strong room outside the currency chest belongs to the bank. In the case of Axis Bank, Sector 34, the stolen amount of Rs 4.04 crore was the property of the RBI. Before sanctioning the currency chests, the RBI personnel inspect the premises of the applicant banks.

What is the security arrangement for the chests?

- The security of currency chests is the subject of the bank in which chests are situated. The Reserve Bank of India (RBI) reimburses the security expenses to the bank as per the set norms.
- The expenses includes the cost of transportation of cash from one bank to another.
- In the current case, the management of Axis Bank-34 has hired Punjab police personnel for the security of currency chest. A bank may stock in the currency chest as per its Cash Balance Limit (CBL), which differs in every bank.

Aahaar Kranti

(Source: PIB)

Context: *Dr Harsh Vardhan will launch a new mission called `Aahaar Kranti'*

Objective

- The initiative '*Aahaar Kranti'* will focus on addressing the problem of hunger and diseases in abundance across India and the world.
- The initiative will shine a light on the richness and value of India's traditional diet, the miracles of local fruits and vegetables, and the healing powers of a balanced diet.
- During the online launch of the mission, the Union Health Minister Dr. Harsh Vardhan noted that the first day of Ma Annapurna's Chaitra Navratri is an apt day for launching a welfare programme such as *'Aaahar Kranti'.*

Aahaar Kranti Mission: Key Highlights

- The mission 'Aaahar Kranti' was launched by Dr. Harsh Vardhan, Union Minister, Health and Family Welfare, Government of India on April 13, 2021.
- This motto of the mission is **'*Uttam Aahaar, Uttam Vichaar*' that translates to '*Good Diet, Good Cognition*'.**
- The mission aims at raising awareness about a nutritionally balanced diet in India. It **focuses on addressing the problem of hunger and diseases in abundance across India and the world.**
- **The initiative will shine a light on the richness and value of India's traditional diet, the miracles of local fruits and vegetables, and the healing powers of a balanced diet.**
- The initiative will give training to teachers, who will pass on the wisdom to the students, and this will create a flow of information from the children to their families and the society at large.
- The initiative will set a model for the world to follow and portray India as a 'Vishwa guru'.

e-SANTA

(Source: PIB)

Context: *Union Commerce and Industry Minister Shri Piyush Goyal virtually inaugurated **e-SANTA**, an electronic marketplace providing a platform to connect aqua farmers and the buyers.*

What is e-SANTA?

- E-Santa is an electronic marketplace providing a platform to connect aqua farmers and buyers.
- The term e-SANTA was coined for the web portal, meaning Electronic Solution for Augmenting NaCSA farmers' Trade in Aquaculture.
    - National Centre for Sustainable Aquaculture (NaCSA) is an extension arm of the Marine Products Export Development Authority (MPEDA), Govt. of India, Ministry of Commerce & Industry.
- e-SANTA is a Digital Bridge to end the market divide and will act as an alternative marketing tool between farmers & buyers by eliminating middlemen.
- It will revolutionize traditional aquafarming by providing cashless, contactless and paperless electronic trade platform between farmers and exporters.
- The farmers have the freedom to list their produce and quote their price while the exporters have the freedom to list their requirements and also to choose the products based on their requirements such as desired size, location, harvest dates, etc.

MANAS

(Source: PIB)

Context: *Community Mental-Health Digital platform MANAS launched.*

About MANAS:

- MANAS App is a well-being App that stands for Mental Health and Normalcy Augmentation System.
- It is endorsed as a national program by the Prime Minister's Science, Technology, and Innovation Advisory Council (PM-STIAC).
- MANAS is a comprehensive, scalable, and national digital wellbeing platform and an app developed to augment the mental well-being of Indian citizens.
- MANAS App integrates the health and wellness efforts of various government ministries, scientifically validated indigenous tools with gamified interfaces developed/researched by various national bodies and research institutions.
- MANAS was initiated by the Office of the Principal Scientific Adviser to the Government of India. It was jointly executed by NIMHANS Bengaluru, AFMC Pune and C-DAC Bengaluru.

INTERNATIONAL

What is Monkeydactyl?

(Source: Indian Express)

Context: *The pterosaur species were reptiles, close cousins of dinosaurs and the first animals after insects to evolve powered flight, the American Museum of Natural History says. They evolved into various species; while some were as large as an F-16 fighter jet, others were as small as paper airplanes.*
The new pterosaur fossil was discovered in the Tiaojishan Formation of Liaoning, China, and is thought to be 160 million years old. It has now been described by an international team of researchers from China, Brazil, UK, Denmark and Japan, and has been named Kunpengopterus antipollicatus, also dubbed "Monkeydactyl".

What has the team of researchers found?

- "Antipollicatus" in ancient Greek means "opposite thumbs", and it was attached to the name because the researchers' findings could be the first discovery of a pterosaur with an opposed thumb.
- "The research team scanned the fossil of K. antipollicatus using micro-computed tomography (micro-CT), a technique making use of X-ray to image an object. By studying its forelimb morphology and musculature, they suggest that K. antipollicatus could have used its hand for grasping, which is likely an adaptation for arboreal life," a press release issued by the University of Birmingham stated.

- The recently found pterosaur fossil is far older than the one identified in 2019. Paleontologists had identified that species as a pterosaur that lived over 77 million years ago in what is Western Canada today.

- The Center for Academic Research and Training in Anthropogeny defines opposability of the thumb as being able to "simultaneously flex, abduct and medially rotate the thumb" in a way that one is able to bring the tip of the thumb to touch the tips of the other fingers.
- Along with humans, some ancient monkeys and apes also had opposable thumbs. Humans, however, have a relatively longer and distally placed thumb, and larger thumb muscles.
- This means that humans' tip-to-tip precision grip when holding smaller objects is superior to non-human primates. This is the reason that humans are able to hold a pen, unscrew an earring stopper, or put a thread through a needle hole.
- As per the American Museum of Natural History, the grasping hands of primates developed as a result of their life in the trees — an opposable thumb made it easier for the common ancestor of all primates to cling on to tree branches.

Quasars

(Source: The Hindu)

Context: *Astronomers have discovered a dozen quasars that have been warped by a naturally occurring cosmic "lens" and split into four similar images. Quasars are extremely luminous cores of distant galaxies that are powered by supermassive black holes. This rare discovery increases the number of known quasars or quads by about 25% and can help determine the expansion rate of the universe and address other mysteries.*

Definition:

- Quasi Stellar radio sources, abbreviated QUASARS, are the most dynamic and far-off objects in a collective known as active galactic nuclei (AGN).
- These radiant sources were formed approximately twelve billion years ago. Quasar formations take place by collision of galaxies, i.e., the central black holes merge to form a super-massive black hole.
- Quasars were foremost identified as red shift sources of electromagnetic energy, including radio waves and visible light that are akin to stars in appearance. Its spectrum consisted of wide emission lines, unlike stars, thus the name "quasi-stellar."

Description:

- Initially, Quasars were indistinguishable from stars as they appeared as point sources. With the advent of infrared telescopes and the Hubble telescope, Quasars were finally detected. The luminosity of various quasars is lower in the optical range and higher in the X-ray range.
- Quasars are fueled by accumulation of material into the nucleus of super-massive black hole, which are faraway galaxies.
- About 2,00,000 Quasars are known till date and all of them have similar properties. All Quasar spectra have red shifts in the range .056 and 7.085. As per the Hubble law, all these are 28.85 billion years away
- The power of these Quasars arises from the super-massive black-holes that are assumed to exist at the core of galaxies.
- They are the most luminous objects in the universe, the brightest in the constellation Virgo. Quasars reside in the center of active, young galaxies, and are amongst the most luminous, powerful, and vibrant objects known in the universe, emitting up to a thousand times the energy output of the Milky Way, that constitutes 200–400 billion stars.

Antarctica's 'Doomsday Glacier'

(Source: Indian Express)

Context: *The melting of Antarctica's Thwaites Glacier – also called the "Doomsday Glacier"– has long been a cause of concern because of its high potential of speeding up the global sea level rise happening due to climate change. Researchers at Sweden's University of Gothenburg are now saying that fears related to Thwaites's melting are worse than previously thought, owing to the supply of warm water flowing underneath at a rate underestimated in the past.*

What is the glacier and why is it important?

- Called the Thwaites Glacier, it is 120 km wide at its broadest, fast-moving, and melting fast over the years.
- Because of its size (1.9 lakh square km), it contains enough water to raise the world sea level by more than half a metre. Studies have found the amount of ice flowing out of it has nearly doubled over the past 30 years.
- Today, Thwaites's melting already contributes 4% to global sea level rise each year. It is estimated that it would collapse into the sea in 200-900 years.
- Thwaites is important for Antarctica as it slows the ice behind it from freely flowing into the ocean. Because of the risk it faces — and poses — Thwaites is often called the Doomsday Glacier

The discovery of a 3,000-year-old 'lost golden city' in Egypt

(Source: Indian Express)

Context: *Egypt announced the discovery of what is being touted as the most important find since the unearthing of King Tutankhamun's tomb almost 100 years ago. A three-millennia-old "lost golden city" from the era of 18th-dynasty king Amenhotep III, who ruled ancient Egypt from 1391 to 1353 B.C., was found in the southern province of Luxor, near some of the country's best-known monuments.*

What have archaeologists in Egypt discovered?

- The newly discovered city is located on the west bank of the Nile river, close to the Colossi of Memnon, Medinet Habu and the Ramesseum, or mortuary temple of King Ramses II, all of which are popular tourist destinations.
- Last year in September, archaeologists had been excavating in this area to look for a mortuary temple of King Tutankhamun, who is among the best-known figures from ancient Egypt.
- The legend of Tutankhamun, whose tomb was discovered almost intact in the Valley of the Kings in 1922 by British archaeologists Howard Carter and Lord Carnarvon, is famous on account of the vast treasure discovered at the location.
- Although their search was originally devoted to the famous ancient king, the archaeologists ended up discovering mud-brick formations "in all directions", which eventually turned out to be a well-preserved city, an Associated Press report stated.

Why is the find significant?

- While unearthing the city, archaeologists are said to have found city walls and even rooms filled with utensils used in daily life. They have found clay caps of wine vessels, rings, scarabs, coloured pottery, and spinning and weaving tools, the AP report said.
- Some mud bricks discovered here bear the seal of Tutankhamun's granfather King Amenhotep III, who is considered to be one of Egypt's most powerful pharaohs. The city is also believed to have been used

by Tutankhamun and his successor Ay during a period widely believed to be the golden era of ancient Egypt.

- According to a Reuters report, the site contains a large number of ovens and kilns for making glass and faience, along with the debris of thousands of statues. As per Egypt's antiquities ministry, a bakery, ovens and storage pottery were found in the southern part of the city, while the northern part — which is yet to be fully unearthed — includes administrative and residential districts.

'REGEN-COV

(Source: The Hindu)

Context: *Regeneron will seek U.S. approval for its COVID-19 antibody cocktail as a preventative treatment after a trial showed it helped reduce the risk of symptomatic infections in households where someone else is ill.*

Details:

- REGEN-COV, as the combination shot of casirivimab and imdevimab is called, reduced the overall risk of progressing to symptomatic COVID-19 by 31%, and by 76% after the third day.
- The trial also demonstrated that it shortened symptom duration and markedly lowered viral levels, Regeneron said in a statement.
- The drug has emergency U.S. approval for mild to moderate COVID-19 patients, and the company is hoping the latest trial convinces regulators to expand its deployment. EU regulators have voiced some support and are letting countries decide if they want to use it.
- Beyond reducing symptomatic infection risk, the total number of weeks patients experienced symptoms was nearly halved (45%) with REGEN-COV, and the viral burden was cut by 90%-plus, potentially helping halt the disease's spread.

Raisina Dialogue-2021

(Source: PIB)

Context: *The 6th Edition of the prestigious Raisina Dialogue, jointly organised by the Ministry of External Affairs and the Observer Research Foundation,will be held virtually from 13-16 April, 2021*

Overview of Raisina Dialogue

- The Raisina Dialogue is an annual Geo-political event organised by the Ministry of External Affairs in collaboration with Observer Research Foundation.
- Named after Raisina Hill, where the seat of the Government of India is located, the conference has emerged as India's premier conference on geo-politics and geo-economics.
- The Raisina Dialogue is designed as a multi-delegate, discussion platform which is attended by a wide range of global policymakers including, cabinet ministers, heads of state, private corporations executives etc. Members of the media and academia are also invited to to attend the Raisina Dialogue.
- It was structured on the lines of the Shangri-La Dialogue.
- As far as India is concerned, the objective of the Raisina Dialogue are as follows:

  - To explore future opportunities for Asian integration and further advancement of Asia's integration with the world at large.
  - The Raisina Dialogue also asserts the crucial role played by India in the Indian Ocean Region and how it can build a stable regional/ world order with its partners.
- The theme for the 2021 conference is "#ViralWorld: Outbreaks, Outliers and Out of Control".
- During the four-day event, talks will be based on five subjects namely, WHOse multilateralism? Reconstructing the UN and beyond; Securing and diversifying supply chains; Global 'Public Bads': Holding actors and nations to account; Infodemic: Navigating a 'No-Truth' world in the age of Big Brother; and The Green stimulus: Investing in gender, growth, and development.
- 150 speakers from 50 countries and multilateral organisations will attend the event virtually.

Narrow-Line Seyfert 1 (NLS1) galaxy

(Source: PIB)

Context: *Astronomers have discovered a new active galaxy identified as the farthest gamma-ray emitting galaxy that has so far been stumbled upon. This active galaxy called the Narrow-Line Seyfert 1 (NLS1) galaxy, which is about 31 billion light-years away, opens up avenues to explore more such gamma-ray emitting galaxies that wait to meet us.*

Details:
- Astronomers have discovered a new active galaxy identified as the farthest gamma-ray emitting galaxy that has so far been stumbled upon.
- This active galaxy called the Narrow-Line Seyfert 1 (NLS1) galaxy, which is about 31 billion light-years away, opens up avenues to explore more such gamma-ray emitting galaxies.
- Scientists from ARIES, an autonomous institute of the Department of Science & Technology (DST), Government of India, in collaboration with researchers from other institutions, studied around 25,000 luminous Active galactic nuclei (AGN) from the Sloan Digital Sky Survey (SDSS) and found a unique object that emits high-energy gamma rays located at a high redshift (more than 1). They identified it as a gamma-ray emitting NLS1 galaxy, which is a rare entity in space.
  - SDSS is a major optical imaging and spectroscopic survey of astronomical objects in-operation for the last 20 years. It was founded by the University of Chicago.

Significance:
- The detection of gamma-ray emission from NLS1 challenges the idea of how relativistic jets are formed because NLS1s are a unique class of AGN that are powered by black hole of low mass and hosted in spiral galaxy.
- As of today, gamma-ray emission has been detected in about a dozen NLS1 galaxies, which are a separate class of AGN identified four decades ago.
- All of them are at redshifts lesser than one, and no method was present till date to find NLS1 at redshifts larger than one.
- This discovery opens up a new way to find gamma-ray emitting NLS1 galaxies in the early Universe.

UNFPA's population report launched

(Source: The Hindu)

Details:

- Nearly half the women from 57 developing countries do not have the right to make decisions regarding their bodies, including using contraception, seeking healthcare or even on their sexuality, according to the United Nations Population Fund's (UNFPA) flagship State of World Population Report 2021 titled 'My Body is My Own'.
- This is the first time a United Nations report has focused on bodily autonomy, defined as the power and agency to make choices about your body without the fear of violence or having someone else decide for you.
- The report shows that in countries where data is available, only 55% of women are fully empowered to make choices over healthcare, contraception and the ability to say yes or no to sex. It also highlights that only 75% of countries legally ensure full and equal access to contraception.
- Some examples of violation of bodily autonomy include, child marriage, female genital mutilation, a lack of contraceptive choices leading to unplanned pregnancy, unwanted sex exchanged for a home and food or when people with diverse sexual orientations and gender identities cannot walk down a street without fearing assault or humiliation. Under its ambit also fall people with disabilities stripped of their rights to self-determination, to be free from violence and to enjoy a safe and satisfying sexual life.

The 'whitest ever' paint that can reflect 99% of sunlight

(Source: Indian Express)

Context: *Engineers from Purdue University in the US have created what they are calling the whitest paint yet. Buildings coated with this paint may be able to cool them off enough to reduce the need for air conditioning, the researchers have said.*

What is the whitest paint?

- The team of researchers at the university created an ultra-white paint in October pushing the limits of how white paint can be. This older formulation was made of calcium carbonate, while the new one is made up of barium sulphate, which makes it more white.
- The newer paint is whiter and keeps the surface areas it is painted on cooler than the formulation before this could. If this new paint was used to cover a roof area of 1,000 square feet, it may be able to get a cooling power of 10 kilowatts, the team has said.
- Most ovens use up about 2.3 kilowatts to run for an hour and a 3 ton 12 Seasonal Energy Efficiency Ratio (SEER) air conditioner uses up about 3 kilowatts to run for an hour.
- The team has also claimed that this paint may be the closest equivalent to the blackest black paint called "Vantablack" that is able to absorb up to 99.9 per cent of visible light.
- Typical commercial white paint gets warmer rather than cooler and that paints currently available in the market that are designed to reject heat reflect only 80-90 per cent of the sunlight and therefore, they can't make surfaces cooler than their surroundings.

How do we see colours and what determines if a colour absorbs or reflects light?

- To understand how this works one needs to note that whenever an object is seen by the eye, it is either because of sunlight or the artificial light in the room.
- This light is made up of seven different colours (Violet, Indigo, Blue, Green, Yellow, Orange and Red or VIBGYOR). Specifically, light is made up of wavelengths of different colours.
- If an individual is looking at a sofa that is green, this is because the fabric or material it is made up of is able to absorb all the colours except green. This means that the molecules of the fabric reflect the green coloured wavelengths, which is what the eye sees.

- Therefore, the colour of any object or thing is determined by the wavelength the molecules are not able to absorb. Which is to say that whichever wavelength of colour is not absorbed by an object, will be the colour that the eye sees.
- For instance, if a person is looking at a bowl of vanilla ice cream or a plain white wall, it is because the molecules that make up these two are absorbing none of the wavelengths of light. This means, the entire spectrum of these coloured wavelengths if reflected from the surface, results in the white colour that the eye notices.

What determines which wavelength of light will be reflected and absorbed?

- This is dependent on how electrons are arranged in an atom (the building block of life, an atom is made up of electrons, protons and neutrons.
- These three particles make up everything in the known universe from mountains, planets, humans to pizza and cake). In contrast, if an object is black, it is because it has absorbed all the wavelengths and therefore no light is reflected from them.
- This is the reason that darker objects, as a result absorbing all wavelengths tend to heat up faster (during absorption the light energy is converted into heat energy).

Mains

GS II

What exactly is Atmanirbhar Bharat?

(Source: The Hindu Businesssline)

Context: *Unless Atmanirbharta is defined properly, the BJP government will fail to effectively implement its economic philosophy.*

What is it?

- It is not protectionism. It is not inward looking. It is not just import substitution and it is not economic nationalism. This is how NDA government has chosen to explain and defend its Atmanirbhar Bharat policy.
- The Modi government's latest and most passionate economic philosophy has been at best defined negatively. We all know what it is not but very few know what it actually means.
- Amitabh Kant, CEO of NITI Aayog, attempted to throw more light on the philosophy in an article. He wrote that it (Atmanirbhar Bharat) will "make India self-reliant by creating an eco-system that will allow Indian companies to be highly competitive on the global stage". The key element here is the "need to create an eco-system" that will allow Indian companies to be globally competitive and thus making India self-reliant.
- As a first step, the government has come out with performance-linked incentive (PLI) schemes for sectors that are extensively import dependent. This should help India build the supply-chain within the country for products that are critical in the future — electronic products (including mobile phones) and active ingredients for the pharmaceutical sectors, to name a few.
- It has also extended the scheme to top exporting sectors like textiles which lacks knowledge when it comes to man-made fibres. If economists are to be believed, the PLI scheme is expected to drive India's manufacturing growth in the next few years.
- That is a good start. But creating the necessary ecosystem for India Inc to dominate the world does not mean just plugging the gaps in supply chain. This is where a better understanding of what Atmanirbharta means will help.
- Indian companies are weighed down by multiple factors that put them in a clear disadvantage vis-a-vis their competitors elsewhere in the world, apart from dependence on imports. They need to be addressed too.

Manufacturing costs:

- India is not exactly a low cost production base. It may be cheaper than developed economies but other emerging countries fare better. Take the power cost. It costs 11 cents a unit in India compared to 8 cents in Vietnam and 9 in China.
- Labour cost, in real terms, is low but if one has to factor productivity, it falls way below China, Brazil or South Korea.
- That apart, when it comes to skillset India is ranked a distant 107 in the Global Competitiveness Index compared to China's 64th rank and South Korea's 27th rank. Vietnam and Brazil are ranked 93 and 96 respectively. Indian companies are forced to spend more on training its workforce.

Logistics costs:

- At 14 per cent of GDP, India's logistics cost is way above its peers in the developed world (6-8 per cent).
- What is discomforting is that even this data is skewed. In India logistics cost typically means transportation costs whereas in advanced economies it includes planning, procurement and warehousing on account of very high level of outsourcing.
- India's logistics cost is at least 3x compared to developed countries.

Compliance costs:

- Indian companies suffer from high regulatory and other compliance costs. Even though the government has been working to reduce this through digitalisation, it remains high and puts them at a disadvantage in the world stage.

Investment in R&D:

- Total investment in Research & Development and innovation has been on the decline over the years. It was 0.84 per cent of GDP in 2008 and in 2018 it was 0.6 per cent. Bulk of R&D spending happens in the defence and space sectors.
- In the private sector it is in auto and pharmaceutical industries. But here too, much of it is 'catching-up' with what others have already developed. Investment in cutting-edge technologies is clearly missing.

High interest rates:

- While India may be enjoying a period of low interest rates, what companies pay to borrow here is relatively much higher than say in US or Japan. Indian products can compete across the world only if interest costs drop.

Trade policies:

- Countries like Bangladesh and Vietnam are signing trade deals to become more competitive and attract investments. India's record when it comes to such deals is pathetic.
- The India-EU Free Trade Agreement, after 16 rounds of talks, is stuck in a logjam for the last seven years. Comprehensive Economic Co-operation Agreement with Australia is going no where after nine rounds of talks over the last eight years.

No easy solutions

- These issues have no easy solutions. Reducing power cost would mean forcing State governments to give up cross-subsiding power. It will also call for investment to evacuate coal from the mines quickly and economically. Skilling and re-skilling needs a renewed focus.
- There is a need to identify emerging skill sets and train people. Labour reforms have to be pushed forward to improve productivity.
- The government should encourage and incentivise outsourcing to reduce logistics costs. Companies that outsource more than just transportation are seeing good results thanks to better visibility and better utilisation of assets. It must also invest in infrastructure. Turnaround time at Indian ports need to be reduce sharply from 2.62 days. It is less than a day in China.
- To reduce interest costs, governments (both Centre and States) have to live within their means and more importantly, eschew populism. It should also ensure that strong companies have unfettered access to cheap funds across the globe. It must adopt a policy of 'give & take' to sign trade deals and not get bogged down by domestic lobbies.\\\
- Without tackling these issues, India will not be competitive in the global stage. In other words, Atamanirbharta will remain a pipe dream. If the government is serious in implementing this economic philosophy, it should clearly list out areas which need improvement to make Indian manufacturing

competitive. It should also go a step further and announce the quantum of improvement and the time line to achieve it.

- Only then will required policies get framed and executed to bring about the change. Also, such a statement will clear all confusion in the minds of trade partners, investors and others who have been finding it difficult to understand the policy.

The abolition of FCAT

(Source: The Hindu)

Context: *On April 4, the Centre notified the Tribunals Reforms (Rationalisation and Conditions of Service) Ordinance, 2021, issued by the Ministry of Law and Justice. The Tribunals Reforms Bill was introduced in the Lok Sabha in February, but was not taken up for consideration in the last session of Parliament. The President later issued the ordinance, which scraps the Film Certification Appellate Tribunal (FCAT), a statutory body that had been set up to hear appeals of filmmakers against decisions of the Central Board of Film Certification (CBFC), and transfers its function to other existing judicial bodies. Eight other appellate authorities have also been disbanded with immediate effect. The ordinance has amended The Cinematograph Act, 1952, and replaced the word 'Tribunal' with 'High Court'.*

When did the FCAT come into being?

- In 1983, a decision was taken to establish the FCAT, a statutory body under The Cinematograph Act, headed by a member from the legal fraternity.
- Before the FCAT, filmmakers had no option but to approach the court to seek redressal against CBFC certifications or suggested cuts.
- So, the FCAT acted like a buffer for filmmakers, and decisions taken by the tribunal were quick, though not always beyond reproach.

How important was the FCAT in the certification process?

- Films meant for distribution in theatres require to be certified as 'U' (unrestricted public exhibition), 'UA' (unrestricted public exhibition subject to parental guidance for children below the age of 12), 'A' (restricted to adult audiences) or 'S' (restricted to specialised audiences such as doctors or scientists) by the CBFC, which has an examining committee and a revising committee.
- According to observers, the CBFC was increasingly getting stacked with people close to the ruling dispensation, both the Congress and the BJP. Of late, the body has been headed by chairpersons who have ruled with a heavy hand and ordered cuts to films critical of the government.
- The clash between the film fraternity and the certification body became more pronounced in 2015 with the appointment of Pahlaj Nihalani as the chairman of the CBFC, and the FCAT had to step in often to sort out disputes.

Why has the tribunal been abolished?

- The move to abolish the FCAT along with other tribunals follows a Supreme Court order in Madras Bar Association vs. Union of India.
- In November last year, a two-member Bench directed the government to constitute a National Tribunals Commission. It said the Commission would "act as an independent body to supervise the appointments and functioning of Tribunals, as well as to conduct disciplinary proceedings against members of Tribunals and to take care of administrative and infrastructural needs of the Tribunals, in an appropriate manner".

- The top court, addressing the issue of dependence of tribunals on the executive for administrative requirements, recommended the creation of an umbrella organisation that would be an independent supervisory body to oversee the working of tribunals.
- The move to abolish the FCAT is surprising as it comes in the backdrop of the recommendations of two influential panels — the Mudgal Committee and the Benegal Committee — both of which suggested an expansion of the body's jurisdiction.

What happens now?

- Now that the FCAT has been disbanded, it will be left to the already overburdened courts to adjudicate. With the government tightening its control on over-the-top (OTT) content and ordering players in this area to set up a grievance redressal body to address the concerns of the viewers, many observers point out that the courts will have to play a greater role as an avenue of appeal.
- With cases pending for years, it is anybody's guess how long the same courts will take to adjudicate on matters of film certification.
- The role played by the FCAT, which used to handle at least 20 cases a month, will now have to be performed by courts. That includes watching and reviewing films in their entirety to understand the process of certification.

The Personal Data Protection Bill

(Source: The Hindu)

Context: *The Personal Data Protection Bill, 2019, now under scrutiny by a Joint Parliamentary Committee, could play a big role in providing robust protections to users and their personal data.*

No effective protection

- How different entities collect and process users' personal data in India is mainly governed by the Information Technology Act, 2000, and various other sectoral regulations. However, this data protection regime falls short of providing effective protection to users and their personal data.
- For instance, entities could override the protections in the regime by taking users' consent to processing personal data under broad terms and conditions. This is problematic given that users might not understand the terms and conditions or the implications of giving consent.
- Further, the frameworks emphasise data security but do not place enough emphasis on data privacy. In essence, while entities must employ technical measures to protect personal data, they have weaker obligations to respect users' preferences in how personal data can be processed.
- As a result, entities could use the data for purposes different to those that the user consented to. The data protection provisions under the IT Act also do not apply to government agencies. This creates a large vacuum for data protection when governments are collecting and processing large amounts of personal data.
- Finally, the regime seems to have become antiquated and inadequate in addressing risks emerging from new developments in data processing technology.
- The need for a more robust data protection legislation came to the fore in 2017 post the Supreme Court's landmark judgment in Justice K.S. Puttaswamy (Retd) v. Union of India that established the right to privacy as a fundamental right.
    - In the judgment, the Court called for a data protection law that can effectively protect users' privacy over their personal data. Consequently, the Ministry of Electronics and Information Technology formed a Committee of Experts under the Chairmanship of Justice (Retd) B.N.

Srikrishna to suggest a draft data protection law. The Bill, in its current form, is a revised version of the draft legislative document proposed by the Committee.

The upcoming regime

- The proposed regime under the Bill seeks to be different from the existing regime in some prominent ways.
    - First, the Bill seeks to apply the data protection regime to both government and private entities across all sectors.
    - Second, the Bill seeks to emphasise data security and data privacy. While entities will have to maintain security safeguards to protect personal data, they will also have to fulfill a set of data protection obligations and transparency and accountability measures that govern how entities can process personal data to uphold users' privacy and interests
    - Third, the Bill seeks to give users a set of rights over their personal data and means to exercise those rights. For instance, a user will be able to obtain information about the different kinds of personal data that an entity has about them and how the entity is processing that data.
    - Fourth, the Bill seeks to create an independent and powerful regulator known as the Data Protection Authority (DPA). The DPA will monitor and regulate data processing activities to ensure their compliance with the regime. More importantly, the DPA will give users a channel to seek redress when entities do not comply with their obligations under the regime.
- The Bill seeks to bring a massive and meaningful change to personal data protection in India through this regime. However, the reality could be different. Several provisions in the Bill create cause for concern about the regime's effectiveness. These provisions could contradict the objectives of the Bill by giving wide exemptions to government agencies and diluting user protection safeguards.
- For instance, under clause 35, the Central government can exempt any government agency from complying with the Bill. Government agencies will then be able to process personal data without following any safeguard under the Bill. This could create severe privacy risks for users.
- Similarly, users could find it difficult to enforce various user protection safeguards (such as rights and remedies) in the Bill. For instance, the Bill threatens legal consequences for users who withdraw their consent for a data processing activity. In practice, this could discourage users from withdrawing consent for processing activities they want to opt out of.
- Additional concerns also emerge for the DPA as an independent effective regulator that can uphold users' interests.

The way forward

- The time is ripe for India to have a robust data protection regime. The Joint Parliamentary Committee that is scrutinising the Bill has proposed 86 amendments and one new clause to the Bill – although the exact changes are not in the public domain.
- The Committee is expected to submit its final report in the Monsoon Session of Parliament in 2021. Taking this time to make some changes in the Bill targeted towards addressing various concerns in it could make a stronger and more effective data protection regime.

BIMSTEC needs to reinvent itself

(Source: The Hindu)

Context: *The foreign ministers of BIMSTEC (the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation) met virtually on April 1. That they made time to hold their 17th meeting is good news. They advanced the agenda, which had been arrested by the pandemic, since the last ministerial*

meeting held in August 2018. Their major task was to pave the way for the next summit, the grouping's fifth, due to be held in Sri Lanka in the "next few months".

Unfolding rejuvenation

- Established as a grouping of four nations — India, Thailand, Bangladesh and Sri Lanka — through the Bangkok Declaration of 1997 to promote rapid economic development, BIMSTEC was expanded later to include three more countries — Myanmar, Nepal and Bhutan. It moved at a leisurely pace during its first 20 years with only three summits held and a record of modest achievements.
- But it suddenly received special attention as New Delhi chose to treat it as a more practical instrument for regional cooperation over a faltering SAARC. The BIMSTEC Leaders' Retreat, followed by their Outreach Summit with the BRICS leaders in Goa in October 2016, drew considerable international limelight to the low-profile regional grouping. This also opened up the path for its rejuvenation.
- The fourth leaders' summit, held in Kathmandu in August 2018, devised an ambitious plan for institutional reform and renewal that would encompass economic and security cooperation. It took the important decision to craft a charter to provide BIMSTEC with a more formal and stronger foundation. The shared goal now is to head towards "a Peaceful, Prosperous and Sustainable Bay of Bengal Region".
- At the second swearing-in of the Modi government in May 2019, the leaders of BIMSTEC, not SAARC, were invited as honoured guests. Soon thereafter, External Affairs Minister S. Jaishankar observed that India saw a mix of "energy, mindset and possibility" in BIMSTEC.

Recent decisions

- Two and a half years after the Kathmandu Summit, the grouping stands ready to move forward. The foreign ministers cleared the draft for the BIMSTEC charter, recommending its early adoption. They endorsed the rationalisation of sectors and sub-sectors of activity, with each member-state serving as a lead for the assigned areas of special interest.
- The ministers also conveyed their support for the Master Plan for Transport Connectivity, which will be adopted at the next summit. Preparations have been completed for the signing of three agreements relating to mutual legal assistance in criminal matters, cooperation between diplomatic academies, and the establishment of a technology transfer facility in Colombo.
- What has been missing from recent deliberations is a reference to the lack of progress on the trade and economic dossier. A January 2018 study by the Federation of Indian Chambers of Commerce and Industry had suggested that BIMSTEC urgently needed a comprehensive Free Trade Agreement to be a real game changer.
- Ideally it should cover trade in goods, services and investment; promote regulatory harmonisation; adopt policies that develop regional value chains; and eliminate non-tariff barriers. Also lacking was an effort to enthuse and engage the vibrant business communities of these seven countries, and expand their dialogue, interactions and transactions. On this score, BIMSTEC remains a work in progress.
- Over 20 rounds of negotiations to operationalise the BIMSTEC Free Trade Area Framework Agreement, signed in 2004, are yet to bear fruit.
- In contrast, much has been achieved in Humanitarian Assistance and Disaster Relief and security, including counterterrorism, cyber security, and coastal security cooperation. India has led through constant focus and follow-up — to the extent that some member-states have complained about the 'over-securitisation' of BIMSTEC.
- The trick to ensure balance is not to go slow on security but to accelerate the pace of forging solid arrangements for economic cooperation.
- Similarly, while national business chambers are yet to be optimally engaged with the BIMSTEC project, the academic and strategic community has shown ample enthusiasm through the BIMSTEC Network of Policy Think Tanks and other fora.

Hurdles

- The goal now should be to overcome the obstacles leading to BIMSTEC's success.

  - First, a strong BIMSTEC presupposes cordial and tension-free bilateral relations among all its member-states. This has not been the case, given the trajectory of India-Nepal, India-Sri Lanka, and Bangladesh-Myanmar ties in recent years.
  - Second, uncertainties over SAARC hovers, complicating matters. Both Kathmandu and Colombo want the SAARC summit revived, even as they cooperate within BIMSTEC, with diluted zeal.
  - Third, China's decisive intrusion in the South-Southeast Asian space has cast dark shadows. A renowned Bangladeshi scholar argued at a recent conference that BIMSTEC would make progress if China is accepted as its principal interlocutor and partner. This perspective has hardly any takers in India and its friendly partners in the grouping.
  - Finally, the military coup in Myanmar, brutal crackdown of protesters and continuation of popular resistance resulting in a protracted impasse have produced a new set of challenges. Despite them, the BIMSTEC foreign ministers could meet virtually — but will it be as easy for the summit to be held, with the much-maligned Commander-in-Chief Min Aung Hlaing in attendance at Colombo?
- As BIMSTEC readies itself to celebrate the silver jubilee of its formation next year, it faces a serious challenge: to effect "a paradigm-shift in raising the level of our cooperation and regional integration", as Mr. Jaishankar said on April 1. The grouping needs to reinvent itself, possibly even rename itself as 'The Bay of Bengal Community'. It should consider holding regular annual summits.
- Only then will its leaders convince the region about their strong commitment to the new vision they have for this unique platform linking South Asia and Southeast Asia.

Navigation with permission

(Source: The Hindu)

Context: *On April 7, the U.S.'s 7th Fleet Destroyer, the USS John Paul Jones, conducted a 'Freedom of Navigation Operation' 130 nautical miles west of the Lakshadweep Islands inside India's Exclusive Economic Zone (EEZ). Not only was this exercise conducted without requesting India's consent, but the U.S. 7th Fleet noted in its press release that India's requirement of prior consent is "inconsistent with international law". In its response, India asserted that the UN Convention on the Law of the Sea (UNCLOS) "does not authorize other States to carry out in the Exclusive Economic Zone and on the continental shelf, military exercises or manoeuvres, in particular those involving the use of weapons or explosives, without the consent of the coastal state". Owing to the different positions of the two countries, legal questions emerge here. The question is, can countries carry out military exercises in another country's EEZ and if yes, subject to what conditions?*

Understanding the law

- UNCLOS binds all its signatories and customary international law binds all states, subject to exceptions like the doctrine of persistent objector.
- Most of the provisions of the UNCLOS are the result of codification of the existing rules of customary international law. India is a party to the UNCLOS while the U.S. is not.
- As per the UNCLOS, EEZ is an area adjacent to the territorial waters of a coastal state where the sovereign coastal state has rights and duties relating to management of natural resources; establishment and use of artificial islands, installations and structures; marine scientific research; and protection of the marine environment.
- The present difference in legal interpretation brings into the picture Articles 58 and 87 of the UNCLOS. Article 58 (1) provides that in the EEZ, all States, whether coastal or landlocked, enjoy, subject to the relevant provisions of this Convention, the freedoms referred to in Article 87 of navigation and

overflight and of the laying of submarine cables and pipelines as well as other internationally lawful uses of the sea.

- Article 87 provides for freedom of the high seas under which all states have the freedom of navigation. However, the freedom of navigation is subject to the conditions laid down under the UNCLOS and other rules of international law.
- In addition to it, Article 58 (3) stipulates another qualification: "In exercising their rights and performing their duties under this Convention in the exclusive economic zone, States shall have due regard to the rights and duties of the coastal State and shall comply with the laws and regulations adopted by the coastal State..."
- The relevant Indian law in this regard is the Territorial Waters, Continental Shelf, Exclusive Economic Zone and Other Maritime Zones of India Act, 1976. Section 7 sub-section 9 of this Act recognises the freedom of navigation of the ships of all States but makes them subject to the exercise of rights by India within the zone.
- The declaration by India in 1995 also states that India "understands that the provisions of the Convention do not authorize other States to carry out in the exclusive economic zone and on the continental shelf military exercises or manoeuvres, in particular those involving the use of weapons or explosives, without the consent of the coastal State".
- An ancillary question that emerges is the legal effect of such declarations. Article 310 of the UNCLOS does permit states to make declarations in order to explain the relationship between the Convention and their own laws, but such declarations should not "purport to exclude or to modify the legal effect of the provisions of this Convention in their application to that State".

Negotiating concerns

- On a conjoint reading of Articles 58, 87 and 310, it can be argued that freedom of navigation cannot be read in an absolute and isolated manner.
- Given the nature of EEZ and the activities that a coastal state conducts in its EEZ, non-consensual military activities that hinder the lawful enjoyment of such rights need not be permissible. Also, a coastal state is naturally concerned about military exercises and manoeuvres posing a risk to its coastal communities, its installations or artificial islands, as well as the marine environment.
- Thus, any state which wishes to conduct such exercises must do so only in consultation with the coastal state since the coastal state is the best judge of its EEZ.
- Both India and the U.S. should negotiate such concerns for the maintenance of international peace and security.
- Riding roughshod over international obligations premised either in an erroneous interpretation of the law or the scope of its application will not only threaten friendly relations but also undermine the progress made towards codification and development of international law in an area such as the law of the sea, which is particularly complex.

Siras Act

(Source: The Hindu)

Context: *A law to accord an ex post facto pardon to those who were convicted under Section 377 of the Indian Penal Code (IPC) would do poetic justice to the LGBTQ+ community and Professor Ramachandra Siras. What happened to Siras is a perfect example of the persecution faced by the LGBTQ+ community in India. He was a Professor and head of the Department of Modern Indian Languages at Aligarh Muslim University. On a winter night in 2010, two men trespassed into Siras' house and caught him having consensual sex with another man. Siras was suspended by AMU for "gross misconduct". Hansal Mehta's critically acclaimed biopic, Aligarh (2015), portrayed the social ostracism and mental trauma suffered by*

Siras. Even though he won his case against the university in the Allahabad High Court and got his job back, Siras died a mysterious death on April 7, 2010.

Alan Turing law

- From Oscar Wilde to Alan Turing, many well-known as well as unknown people were haunted by anti-LGBTQ+ laws, and many jurisdictions repented later. A memorial in honour of the gay and lesbian victims of National Socialism stands in the city of Cologne in Germany today.
- The U.K. passed the Alan Turing law in 2017, which grants amnesty and pardon to those convicted of consensual same-sex relationships. The law is named after Alan Turing, the computer scientist who was instrumental in cracking intercepted coded messages during World War II and was convicted of gross indecency in 1952.
- The Alan Turing law provides not only a posthumous pardon but also an automatic formal pardon for living people.
- R. Raj Rao, in Criminal Love?: Queer Theory, Culture and Politics in India (2017), says homosexuality has always been looked upon with disfavour by three agencies universal to mankind: religion, law and medicine. Among them, the law committed the "most unkindest cut of all".
- From 1862, when Section 377 of the IPC came into effect, until September 6, 2018, when the Supreme Court of India ruled that the application of Section 377 of the IPC to consensual homosexual behaviour between adults was "unconstitutional, irrational, indefensible and manifestly arbitrary", the LGBTQ+ community was treated as a criminal tribe in India.

Resurrection of Naz Foundation

- The Delhi High Court's verdict in Naz Foundation v. Govt. of NCT of Delhi (2009) resulted in the decriminalisation of homosexual acts involving consenting adults. The Court held that Section 377 offended the guarantee of equality enshrined in Article 14 of the Constitution, because it creates an unreasonable classification and targets homosexuals as a class.
- Justice A.P. Shah observed in the judgment that discrimination is the antithesis of equality and that it is the recognition of equality which will foster the dignity of every individual.
- In a retrograde step, the Supreme Court, in Suresh Kumar Koushal vs. Naz Foundation (2013), reinstated Section 377 in the IPC. Fortunately India witnessed the resurrection of Naz Foundation through the apex court's judgment in Navtej Singh Johar & Ors. v. Union of India (2018).
- The spirit of Navtej Singh Johar should be pushed further. To make amends for the excesses committed against the LGBTQ+ community in the past and present, the Indian state should enact a 'Siras Act' on the lines of the Alan Turing law.
- Ex post facto pardon may be a novel concept in India, but it would do justice, even though delayed, to the prisoners of sexual conscience and Siras.

US exit from Afghanistan

(Source: Indian Express)

Context: *The announcement by President Joe Biden that the US will withdraw all its troops from Afghanistan by September 11, 2021, the 20th anniversary of the 9/11 attacks, has sent tremors through the region's fault-lines.*

Details:

- Unlike the Trump Administration, which made its troop withdrawal by May 1 conditional — on Taliban taking steps to prevent al-Qaeda or any other group from sheltering in Afghanistan, and agreeing to a dialogue on power sharing with the Afghan government — the Biden plan has no strings attached.

- There are about 2,500-3,500 US troops in Afghanistan at present, plus a NATO force of under 8,000. A co-ordinated withdrawal is expected to begin soon.
- The impact of this announcement on various actors within Afghanistan and outside is bound to be far-reaching. It can be said with certainty that no country in the region will remain untouched.

Afghanistan: advantage Taliban

- Biden's announcement has removed all incentives for the Taliban to agree for a dialogue with the Afghan government.
- The Taliban indicated as much: "The Islamic Emirate will under no circumstance ever relent on complete independence and establishment of a pure Islamic system, and remain committed to a peaceful solution to the Afghan problem following the complete and certain end of occupation.
- The proposal by US Secretary of State Anthony Blinken in March is now almost certainly dead in the water. It included a 90-day ceasefire; talks under the auspices of the UN for a consensus plan for Afghanistan among the US, Russia, China, Pakistan, Iran and India; and a meeting in Turkey between the Taliban and Afghan government towards an "inclusive" interim government, an agreement on the foundational principles of the future political order and for a permanent ceasefire.
- Turkey has scheduled the talks for April 24, and the Biden Administration has said it remains committed to finding a political solution. But the Taliban are now in a different zone.
- The Taliban declared in the statement that the "American officials have understood the Afghan situation" but as the withdrawal had been put off "by several months" to September, rather than stick to the Doha Agreement (signed between the Trump Administration's special envoy Zalmay Khalilzad and the Taliban last March) date of May 1, America had violated the agreement. This had "opened the way" for the Taliban to take "counter-measures", and the American side "will be held responsible for all future consequences, and not the Islamic Emirate".
- According to the Long War Journal (a project of the US-based Foundation for the Defense of Democracies), of Afghanistan's 325 districts, the Taliban are in control of 76 or 19%, and government forces 127 or 32%.
- The remaining are contested. According to the Council of Foreign Relations, the Taliban are stronger now than at any point since 2001, when US forces invaded Afghanistan.
- After the full withdrawal of troops, Taliban are likely to see the war, which they believe they have already won, to its completion. The recently published US Threat Assessment Report, an annual US intelligence briefing, said prospects for a peace deal are dim, the Taliban are confident of victory in the battlefield, and the Afghan government will struggle to hold them at bay.
- President Ashraf Ghani tweeted the stoic message that his government "respects the US decision and we will work with our US partners to ensure a smooth transition". But he and others who have invested in a democratic Afghanistan know the country is close to losing all the gains of the last 15 years.
- There is deep apprehension of a return to the 1990s, although there is also a view that the Taliban too have changed over 25 years, and would not want to alienate the international community as they did when they ruled Afghanistan during 1996-01.
- Earlier, Ghani had proposed that if the Taliban were ready to talk, he would give up what remained if his presidential term, and hold a re-election in which the Taliban were free to participate. The Taliban have always rejected elections as un-Islamic, and the government of Afghanistan as a "puppet" of the US. Ghani's proposal gained no traction.

Pakistan: gains, concerns

- This is a moment of both vindication and concern in Islamabad. The Taliban are a creation of the Pakistani security establishment. After the US invasion of Afghanistan, they removed themselves to safe havens in Pakistan territory, and the Taliban High Council operated from Quetta in Balochistan.
- It was Pakistan that persuaded the Taliban to do a deal with the Trump Administration. For the Pakistani Army, which has always seen Afghanistan in terms of "strategic depth" in its forever hostility with India,

a Taliban capture of Afghanistan would finally bring a friendly force in power in Kabul after 20 years. India, which has had excellent relations with the Karzai and Ghani governments, would be cut to size.

- But a US withdrawal also means Pakistan will need to shoulder the entire burden of the chaos that experts predict. Civil war is not ruled out and with it, the flow of refugees into Pakistan once again, even as the country struggles with refugees from the first Afghan war.
- All this at a time when the economy is flailing, and Pakistan stays afloat on an IMF loan with strict conditionalities. Plus, the Taliban are not a monolith, and have recently shown streaks of independence from Pakistan.
- It has to guard against instability in Afghanistan from spilling over the border. Pakistan's eastern front with India is quiet at the moment, so that is one headache less, but it would remain a concern for the Pakistan Army.

India: time to be wary

- New Delhi, which was hoping to be part of the Blinken initiative, would be nervous about the US withdrawal. India was on the outer edges of the Trump drive to exit Afghanistan that culminated in the Doha Accord, and was a reluctant supporter of the "intra-Afghan talks" between the Taliban and Afghan government.
- When the Biden Administration came in, India was hopeful of a US reset. The Blinken proposal gave India a role, by recognising it as a regional stakeholder, but this proposal seems to have no future.
- The Haqqani group, fostered by the ISI, would have a large role in any Taliban regime. Another concern would be India-focused militants such as Laskhar- e-Toiba and Jaish-e-Mohamed, which the Indian security establishment already believes to have relocated in large numbers to Afghanistan.

Russia, China & Iran

- China would have much to lose from instability in Afghanistan as this could have an impact on the China Pakistan Economic Corridor.
- A Taliban regime in Afghanistan might end up stirring unrest in the Xinjiang Autonomous region, home to the Uighur minority. Conversely, as an ally of Pakistan, it could see a bigger role for itself in Afghanistan.
- The US exit is for Russia a full circle after its own defeat at the hands of US-backed Mujahideen and exit from Afghanistan three decades ago. In recent years, Russia has taken on the role of peacemaker in Afghanistan.
- But both the Taliban and the Afghan government have been wary of its efforts. After a conference in March of Russia, US, China and Pakistan, along with Taliban and Afghan delegates, a joint statement by the four principals said they did not support the establishment of an Islamic Emirate, leaving the Taliban angry.
- Russia's growing links with Pakistan could translate into a post-US role for Moscow in Afghanistan.
- As a country that shares borders with Pakistan and Afghanistan, Iran perceives active security threats from both. And a Taliban regime in Kabul would only increase this threat perception. But Iran, with links to the Hazaras in Afghanistan, has of late played all sides. Despite the mutual hostility and the theological divide between the two, Iran opened channels to the Taliban a few years ago, and recently, even hosted a Taliban delegation at Tehran.

The roots of a decentred international order

(Source: The Hindu)

Context: *The International Institute for Strategic Studies puts the overall estimate of China's military budget at $230 billion). The intentions for global supremacy are apparent, chiefly to outrun the Pentagon. The primary geopolitical rivals, namely Russia and China may possibly provide the strategic and tactical*

counterbalance to the hegemony of America. Moreover, the international order is under threat of the rising economic power of the BRICS nations, with China dominating in its economic and military capacity.

Rising powers and an agenda

- Though it is a far cry from surpassing the United States in its military prowess, particularly Russia which has no ambitions of a global outreach, it is apparent that the future of global politics requires a significant programmatic agenda in the hands of the rising powers that are aggressively building a parallel economic order envisaging new centres of hegemonic power.
- It forebodes the final decline of American ascendency that began after the end of British imperialism in the aftermath of the Suez Crisis (1956) when a wrap on the knuckles by America led to the withdrawal of Britain and France. Pax Britannica gave way to Pax Americana.
- From the Renaissance period onwards, 14th-15th century Europe began its hegemonic ambitions through trade and commerce, taking almost 500 years to colonise and influence nations across the world. The tectonic shifts in the postcolonial era saw the interrogation of Eurocentrism and its biased accounts of the East, especially with the appearance of Fanon's The Wretched of the Earth and Edward Said's Orientalism which began to propel freedom struggles against western-centric perspectives inherently inadequate and biased for the understanding of the emerging new world order.
- It was the Bandung Conference of 1955, a meeting of Asian and African states, most of which were newly independent, that set the schema for the rise of Asia, politically and economically. The confrontational stance was therefore the expected corollary in third world struggles to create a parallel order.

Dents to American supremacy

- Nevertheless, in all likelihood, America will continue to play a prime role in international affairs though its image representing universal brotherhood has sharply declined under the Trump regime, particularly his foreign policy of threatening to withdraw from the North Atlantic Treaty Organization (NATO) and withdrawing from the Paris Agreement on climate change.
- Furthermore, his bare-faced racist obsession and his handling of the marginalised immigrants has left the democratic world aghast.
- The rising tide of far-right ultra-nationalism and ethnic purity experienced in the Brexit phenomena, in Trumpism and in the promotion of the right-wing agenda in India, has set in motion the wearing down of liberal democracy.
- Other threats such as terrorism, ethnic conflicts and the warning of annihilation owing to climate change necessarily demand joint international action where American "exceptionalism" becomes an incongruity and an aberration. This indeed has chipped away at the American global supremacy.
- The world is, as a result, witness to a more decentred and pluralistic global order, a rather compelling vision of the empowerment of liberal forces standing up for an international order incentivised by long-term structural shifts in the global economy, indicating the evolving nature of power and status in international politics, especially in the context of the rising impact of Asian Regionalism on international trade and commerce.

Direction by China

- This is the evolutionary path the developing nations are already embarking on, though the current raging novel coronavirus pandemic has retarded economic development and sent many economies such as Brazil, India, Turkey and South Africa into a downward spiral.
- It is hoped that in the post-pandemic period, these economies would rise to meet the American-led liberal hegemonic world order. With China spearheading Asian regionalism, a serious challenge is possible but there is deep scepticism about China's self-enhancing economic and military greed reflecting its personal economic rise.
- China must strengthen the opposition to the West through the promotion of regional multilateral institutions . Its self-centered promotion of building its own stature through the recent concentration on

principle of the Belt and Road Initiative and the Silk Road project has, indeed provoked an understandable clash with India and Japan.

- More than having individual partners or allies, China must embrace and give a push to multilateral affiliations in order to not further exacerbate regional tensions.
- Power rivalry in a multipolar world would remain a possibility with military conflict not ruled out. It would be overly optimistic to imagine that the threat of war is behind us, though it can be safely said that it is unlikely. Regional military activity can be seen in Russia's assertion of power in Georgia and Ukraine, Turkey in the east of the Mediterranean, India's disputes with Pakistan and China's infiltration into India as well as its rivalry within its periphery.
- History is a witness to nations beginning to flex their muscles once economic rise is assured and recognised across the world. Indeed, the international state of affairs is rather fuzzy and frenzied.
- However, the capabilities of the rising economies cannot be underestimated. China and India clearly have the age-old potential to lead as, historically, they have been pioneers of some of the oldest civilisations in the world.
- Whereas, China's military capabilities must not make China lose its bearings, economically it must spearhead the challenge to the established western world that has ingrained its superiority in the consciousness of the developing world for centuries.
- China indeed is a valuable bedfellow for the launching of a union which could be a formidable challenge to the West at a stage when multifaceted transnational threats confront the world and need the collective universal attention. The fragmentation of global governance consequently can no longer be handled solely by America.
- Thus, a more nuanced understanding of power in the circumstance of the declining authority of the West has to be arrived at especially when China is still far from approaching U.S. power in just about any area, particularly in its economic or military strengths, its multinationals that lead just about in every category. Its defence advantages that are unparalleled.
- China, on the other hand, is indisputably a serious rival to the U.S. in the South China Sea, a world leader in renewable energy, and a formidable actor on the global stage of investment and trade, penetrating India, Israel, Ethiopia and Latin America.
- As Tongdong Bai writes in his book Against Political Equality, China has risen in its global power by "adopting the idea of absolute sovereignty and following the nation-state model, which is in conflict with the Western ideal that human rights override sovereignty…. But it cannot continue to rise by doing what it has been doing and it must eventually follow the liberal democratic models".
- China must remember that its growing power has compelled Anthony Blinken, the current U.S. Secretary of State, to encourage NATO members to join the U.S. in viewing China as an economic and security threat.
- Thus, a kind of dualism persists in the world order with no clear hegemony that can be bestowed on one single nation.
- Global power gradually extends across a wider range of countries, restoring contestation necessary for the smooth working of a balanced world order, thereby allowing multiple narratives to co-exist on the international level. This has implications for the functioning of a civilisation that is not controlled by the indomitable will of one.

On sharing and treaties

- The emphasis, therefore, would be a move towards restructuring and advancement, as well as adopting an oppositional posture as a robust replacement of subservience to western hegemony.
- The challenges of the 21st century can be met head on through mutual sharing of knowledge and more ground-breaking inclusive treaties.
- It is feared that there could be a possibility of a multipolar world turning disordered and unstable, but it is up to the rising nations to attempt to overcome territorial aspirations and strike a forceful note of faith on cultural mediation, worldwide legitimacy, and the appeal of each society in terms of its democratic

values. Interestingly, the sun is now setting on the empire and the rising nations are gradually waking up to a new experience of freedom and self-confidence.

GS III

Role of India amid Climate change

(Source: The Hindu)

Context: *The recent visit to India by United States Special Presidential Envoy for Climate John Kerry gave an opportunity for both sides to discuss cooperation on climate change and the balance between near-term priorities and long-term targets.*

Details:

- One thing is clear: Climate action and climate leadership are being increasingly measured against a planetary imperative of emissions reducing to net-zero by 2050. This presents a conundrum for fast-growing developing countries such as India.
- They need the carbon space to develop but they are also among the most vulnerable countries to climate change. Is there an equitable way to achieve net-zero greenhouse gas emissions for the planet?
- Recent debates on whether India should declare a net-zero year or withstand mounting pressure have centred around two alternative strategies.
- The first is to delegitimise long-term targets. This view proposes focusing on measurable near-term progress, and paints the long-term (the year 2050 and beyond) as too far to be meaningful in terms of progress towards a deeply decarbonised world. The alternative approach argues that without long-term targets, the path to decarbonisation has little certainty.

Fine points

- This polarised debate needs some nuance. Consider the analogy of a retirement plan. It is a must for everyone. However young, we need to start saving now to meet the goals of a financially secure retirement.
- It would be foolish to not have a retirement plan on the grounds that it is in the distant future, that medical sciences might advance, or that we could consider retirement properly when we are richer in middle age.
- To only focus on smaller savings in our youth would ignore the compounding effect that actions today have in the long run. Planning for emissions mitigation is similar: The short- and the long-term cannot be delinked.
- Ambitious renewable energy targets, improvements in energy efficiency and fast penetration of electric vehicles are among India's critical low-carbon objectives in the next decade. Yet, rapid advances in these do not substitute for the need to set a clear direction of travel with the aim to reduce emissions to net-zero.
- Avoiding this choice makes India look like a climate laggard when its actions actually speak louder than the words of many developed countries.

India needs to replan

- India should, instead, reframe the net-zero debate from the perspective of the planet and for the prosperity of its people. India had ensured that "climate justice" was inserted in the preamble to the Paris Agreement.
- As the climate crisis unfolds, climate justice should imply that humanity respects the planetary boundary of permissible greenhouse gases but also ensures that countries assume equitable responsibility based on their past and future emissions.
- This approach would be different from merely blaming developed countries for historical emissions and, instead, would establish the criteria by which economic advancement and climate responsibility could go hand-in-hand.
- We propose a formulation that combines per capita income and aggregate emissions. The World Bank classifies a high-income economy as one with gross national per capita income of $12,536 or more in 2019 prices.
- Any high-income country should not get more than 15-20 years to achieve net-zero emissions from 2020 onwards. This would imply that the European Union or the United States reach net-zero no later than 2035-40, rather than 2050 as they currently propose.
- China will enter this income category after 2025, so it should achieve net-zero by 2045, rather than 2060 as it proposes. India is expected to become a high-income economy around 2050, and it should target net-zero close to 2070. As a recent Council on Energy, Environment and Water report shows, today's high-income countries would still have a much longer transition period between peaking emissions and net-zero than India would get.

Issue of aggregrate emissions

- However, per capita income cannot be an excuse for inaction in correcting emissions-intensive development pathways.
- Aggregate emissions also matter. The historical (past century) and future (this century) aggregate emissions of each country not yet in the high-income category should aim to be progressively smaller than those which have achieved high-income status.
- This approach acknowledges the potential to tap into technological advances and cost reductions and reinforces the need to give a long-term net-zero signal. (This is how India benefited from falling solar costs over the past decade and was able to aim higher for its renewable energy ambitions.)
- This approach would trigger a rethink about each country's sustainable development priorities and sectoral pathways — and create the conditions for further innovation and investment in climate-friendly infrastructure, technologies, business models, and lifestyle and behavioural changes. As the suite of mitigation technologies becomes more widely available and cheaper, all countries could achieve net-zero much earlier.
- The debate between prioritising only near-term actions versus announcing long-term net-zero goals presents a false binary. Both are needed to establish certainty of action, credibility of promises and create incentives for markets to respond.
- The real debate should be about climate justice for people and the planet. India would do well to propose alternative formulations that establish equity, differentiate the pace of desired action, and yet be progressive in its ambitions.

Petro to Electro: A new transition that will change the world

(Source: Down to Earth)

Context: *The geopolitics of the world will shift from oil producing countries to the rare earth and other critical mineral producing countries in the coming years*

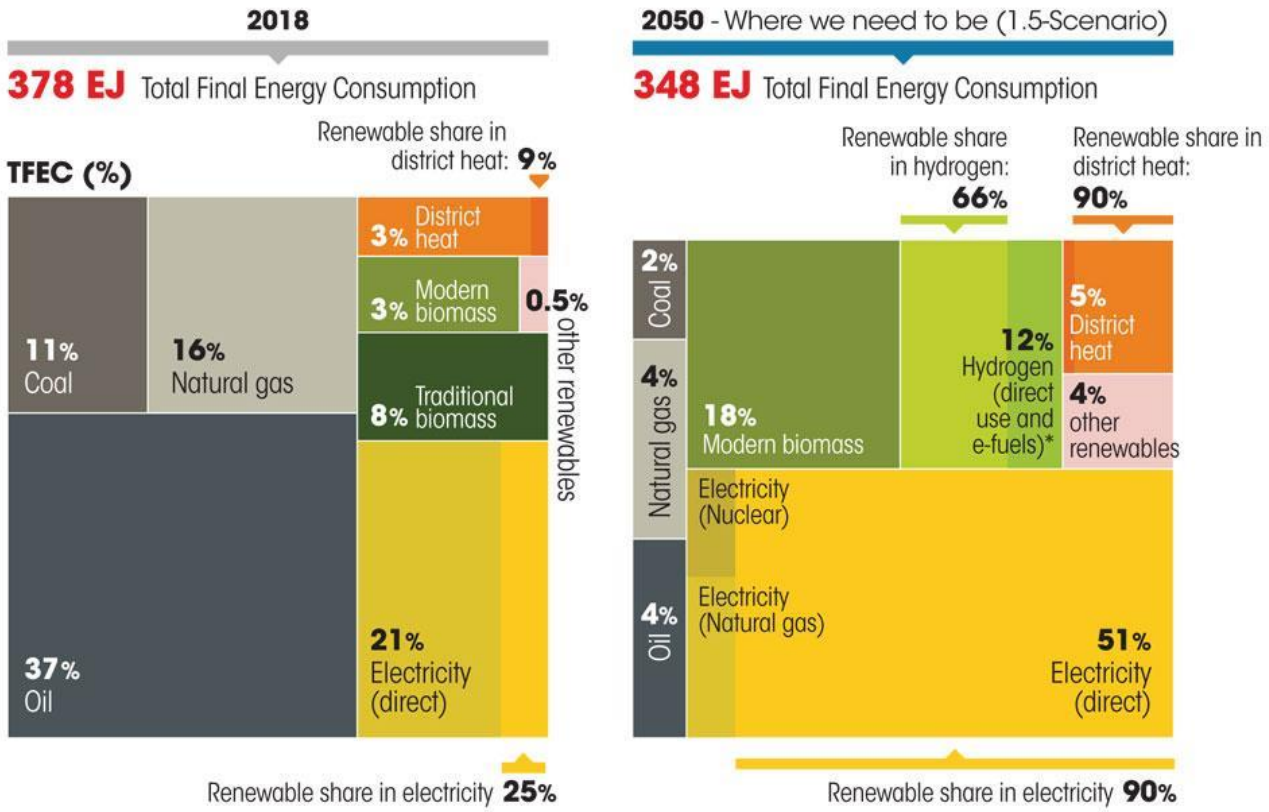
Details:

- The signals are clear. The first meeting of the heads of the four-nation Quad alliance, held virtually on March 12, 2021 pointed at the shifting sands of geopolitics. Global competition, cooperation and conflicts are no longer about missile stockpiles, nuclear arms and oil well acquisition.
- The leaders of India, Australia, Japan and the United States spent considerable time talking about "cooperation on the critical technologies of the future" to ensure that innovation is consistent with a free, open, inclusive and resilient Indo-Pacific.
- On the face of it, the summit was a show by "techno-democracies" to counter the dominance of "technoautocrats", particularly China, in supplying materials crucial to almost every technology, from smartphones to electric vehicles (EVs) to missiles.
- Experts on international relations, however, say the sudden transformation of Quad from a fringe idea born in 2004 to a centrepiece in the countries' Indo-Pacific strategy signals a desperation to maintain supply of these materials.
- The world is already experiencing the Fourth Industrial Revolution, an age of advanced technology based on information and communication, where artificial intelligence, self-driving cars and the internet of things are not just sweeping across businesses and societies but also evolving rapidly.
- The novel coronavirus disease (COVID-19) pandemic, which has created an urgent need for both remote work and healthcare, has accelerated deployment of these advanced applications along with 5G — the fifth generation of mobile communication — earlier than anticipated.
- Sixty-five per cent of the world's gross domestic prouduct (GDP) is set to be digitalised by 2022, with global spending on digital transformation reaching a staggering $6.8 trillion between 2020 and 2023, says a December 2020 forecast by International Data Corporation, a market research company based in Massachusetts, US.
- At the same time, the worsening climate crisis dictates that the global economy must quickly decarbonise. Global carbon dioxide emissions (CO_2) need to drop to net zero by 2050 to limit the temperature rise to 1.5 degrees Celsius ($^{\circ}C$) above pre-industrial levels, says the Intergovernmental Panel on Climate Change's (IPCC's) Special Report on Global Warming of 1.5$^{\circ}C$, released in 2018.
- Since fossil fuels account for 80 per cent of global energy consumption and 75 per cent of greenhouse gas emissions, according to IPCC, countries are transitioning to cleaner energy systems like renewables and promoting energy efficiency.
- According to the United Nations's statement in November 2020, close to 115 countries have already pledged carbon neutrality by 2050. This means 50 per cent of the world's GDP and half of global CO_2 emissions are now covered by a net-zero commitment.
- The International Energy Agency in its Global EV Outlook 2020 states 17 countries have announced 100 per cent zero-emission vehicle targets to phase out internal combustion engine vehicles by 2050. Even the US, which sources 80 per cent of its energy from oil, coal and natural gas, is eager to pursue 100 per cent electrification under President Joe Biden and invest in the electro-economy.
- While these announcements send unmistakable market signals to investors ready to fund a faster global transition to renewables, there is mounting pressure from intergovernmental bodies to ensure that economies, as they recover from the COVID-19 pandemic, follow green recovery plans. The UN Environment Programme in its Emissions Gap Report 2020 advocates measures, including direct support to zero-emission technologies, to keep the world on a 2$^{\circ}C$ pathway.
- The growing pressure to decarbonise the transport sector in particular is so huge — the sector burns most of the world's petroleum — that it has upended the oil industry. In its Energy Outlook 2020, UK oil major BP says that the demand for oil may have already peaked (after over 150 years of almost uninterrupted growth) and now faces an unprecedented decades-long decline.

- The demand for oil may never recover from the impact of the pandemic and may begin to fall in absolute terms for the first time in modern history. This will be replaced by clean electricity, with renewables emerging as the fastest growing energy source on record, notes the report.
- In a world where countries work towards limiting global temperature rise to 1.5°C, oil and coal production will need to decline by 85 per cent and 100 per cent respectively by 2050, while it is expected that natural gas consumption will peak around 2025 and decline thereafter, projects the International Renewable Energy Agency (IRENA), an intergovern mental body, in its World Energy Transition Outlook released this March.
- These fossil fuels will be replaced by clean electricity and by 2050, electricity would be the main energy carrier, with over 50 per cent (direct) share of total final energy use — up from 21 per cent currently, it states.
- Almost 90 per cent of the total electricity needs would be supplied by renewables, followed by six per cent from natural gas and the rest from nuclear. Transport would see the most accelerated electrification in the coming decades, with the share of EVs reaching 49 per cent by 2050, up from just one per cent currently.

Clean switch

Electricity will be the main carrier in energy consumption by 2050; the share of renewables in electricity will be 90 per cent for the world to stay on the 1.5 °C trajectory



Note: The figures above include only energy consumption, excluding non-energy uses. For electricity use, 25 per cent in 2018 and 90 per cent in 2050 is sourced from renewable sources; for district heating, these shares are 9 per cent and 90 per cent, respectively; for hydrogen (direct use and e-fuels), the RE shares (green hydrogen) would reach 66 per cent by 2050. The category "Hydrogen (direct use and e-fuels)" accounts for total hydrogen consumption (green and blue) and other e-fuels (e-ammonia and e-methanol). Electricity (direct) includes all sources of generation: renewable, nuclear and fossil fuel based. DH = district heat; EJ = exajoules; RE = renewable energy.

Source: International Renewable Energy Agency

- Investors and financial markets are anticipating this transition and moving capital from fossil fuels to energy sources like renewables.
- In 2020, the stocks of S&P Global Clean Energy Index, which lists 30 companies from around the world that are involved in clean energy-related businesses, were up by 138 per cent as compared to the fossil fuel-heavy S&P Energy Index which was down by 37 per cent.

- In August 2020, the valuation of the global e-vehicle giant Tesla reached $380 billion and became more than the next 10 automakers combined; its valuation is now more than ExxonMobil, Shell and BP combined — the three big oil giants of the last century.
- Such massive momentum for energy transition will, along with the need to attain technology supremacy, increase countries' dependence on materials necessary for the technological marvels of tomorrow.
- The direction of global trade is already shifting from oil-bearing regions to mineral-bearing regions. The scramble to control the trade cycle by companies, countries and alliances like Quad will only intensify as the demand rises and countries become more committed to the 1.5°C pathway.
- The geopolitics of the world — its scramble for natural resources to drive its energy requirements — will shift from oil producing countries (the petro-economies) to the rare earth and other critical mineral producing countries (the electro-economies).

Current Affairs Quiz

1) Natanz Nuclear Complex is located in -
   a. Iraq
   b. Pakistan
   c. North Korea
   d. Iran

Answer : d

2) Consider the following statements with reference to river dolphins:
   1. The Indus and Ganges River dolphins are same species but found in different waters.
   2. Both Indus and Ganges River Dolphins are classified as 'Endangered' by the International Union for Conservation of Nature (IUCN).

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

Answer : b
- A Detailed analysis of South Asian river dolphins has recently revealed that the Indus and Ganges River dolphins are not one, but two separate species.

3) Which of the following statements are incorrect with respect to Municipal Bonds
   1. In India interest rates generated on municipal bonds are exempt from taxation.
   2. It is incentivised by Ministry of Housing and Urban Affairs under Mission AMRUT.

   Which of the statements given above is/are incorrect ?
   a. 1 only
   b. 2 only
   c. Both 1 and 2
   d. Neither 1 nor 2

Answer : d
Both statements are correct

4) Which of the following states have rolled out Advanced Antiquities Management System?
   a. Punjab
   b. Karnataka
   c. Gujarat
   d. Goa

Answer : d

5) Which of the following statements is/are correct with respect to Net-Zero Target?
   1. It is a plan on Co2 emissions formulated in COP15, by which a country would bring down its net carbon emission to zero.
   2. It suggests absorption of the emissions through carbon sinks such as forests, and futuristic technologies such as carbon capture and storage.

Select the correct answer code:
   a. 1 only
   b. 2 only
   c. Both 1 and 2

d. Neither 1 nor 2

Answer : b

- It is also referred to as carbon-neutrality, does not mean that a country would bring down its emissions to zero. Rather, net-zero is a state in which a country's emissions are compensated by absorption and removal of greenhouse gases from the atmosphere.

6) Which of the following passes is/are not located in Himachal Pradesh?

1. Sach Pass
2. Kunzum Pass
3. Asirgarh pass
4. Chanshal Pass
5. Haldighati Pass

Select the correct answer using he codes given below:

a. 3 only
b. 1 and 2 only
c. 2 and 4 only
d. 3 and 5 only

Answer : d

Haldighati Pass – Rajasthan

Asirgarh pass – Madhya Pradesh

7) Consider the following statements with respect to Election Commissioners of India:

1. The Chief Election Commissioner and the two other election commissioners have equal powers and receive equal salary and allowances, similar to those of a judge of the Supreme Court.
2. In case of difference of opinion amongst the Chief Election Commissioner and/or two other Election Commissioners, the matter is decided by the Commission by majority.

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

Answer : c

8) Which of the following statements is/are correct with respect to Brucellosis?

1. It is a fungal disease caused by Blastomyces which causes respiratory disease in human.
2. Brucellosis is often spread when people eat contaminated food, which may include raw meat and unpasteurized milk.

Select the correct answer code:

a. 1 only
b. 2 only
c. Both 1 and 2
d. Neither 1 nor 2

Answer : a

9) Consider the following statements with respect to 100% Sustainable Fuels:

1. It essentially represents the 3rd Generation biofuels which typically are made from by-products of industrial or agricultural waste and Algae.
2. Federation of International Automobile had developed a 100% sustainable fuel which is intended for commercial use by 2026.

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

Answer : c

10) In which one of the following States is Manas National Park located?

a) Assam
b) Sikkim
c) Himachal Pradesh
d) Odisha

Ans. a

11) Consider the following statements with reference to the monsoon:

1. The long period average (LPA) refers to the average all-India monsoon rainfall of 88 cm, which is a 50-year mean.
2. The monsoon in 2019 and 2020 was only the third time in a century of back-to-back years of above normal rainfall during the season in India.

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

Ans. c)

12) Consider the following statements with reference to the Production Linked Incentive (PLI) Scheme for Promotion of Domestic Manufacturing of critical Key Starting Materials (KSMs)/ Drug Intermediates and Active Pharmaceutical Ingredients (APIs):

1. The scheme has been launched by the Department of Pharmaceuticals for promotion of domestic manufacturing of KSMs/APIs.
2. The Indian pharmaceutical industry is the 3rd largest in the world by volume.

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

Ans. c)

13) Consider the following statements with reference to the e-SANTA:

1. It is an electronic marketplace providing a platform to connect aqua farmers and the buyers.
2. It is an initiative of Union Ministry of Agriculture.

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

Ans. a

Union Commerce and Industry Minister inaugurated e-SANTA, an electronic marketplace providing a platform to connect aqua farmers and the buyers.

14) Gangavaram deep-water port is located at:

a) Odisha
b) Andhra Pradesh
c) Tamil Nadu

d) Karnataka

Ans. b)

15) What is Narrow-Line Seyfert 1 (NLS1), recently seen in news?

a) New active galaxy
b) Newly discovered planet
c) Ransomware
d) An ocean boundary line between Europe and USA

Ans. a)

16) With reference to the Poshan Gyan, consider the following statements:

1. It is a national digital repository on health and nutrition.
2. It is an initiative of Union Ministry of Science and Technology.

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

Ans. a)

NITI Aayog, in partnership with Bill and Melinda Gates Foundation and Centre for Social and Behaviour Change, Ashoka University, launched Poshan Gyan, a national digital repository on health and nutrition.

17) Consider the following statements with respect to Aahaar Kranti

1. It is a national digital repository on health and nutrition to tackle the challenges of knowledge awareness and behaviour change in the nutrition sector.
2. It was launched by the NITI Aayog and Bill and Melinda Gates Foundation (BMGF).

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

Answer : d

- Union Health Minister Harsh Vardhan has recently launched the Aahaar Kranti Movement.
- The mission is aimed to spread the message of the need for a nutritionally balanced diet and to understand the importance of accessible to all local fruits and vegetables.

18) Consider the following statements with respect to mRNA vaccines:

1. They are non-infectious, non-integrating in nature, and degraded by standard cellular mechanisms.
2. They are highly efficacious because of their inherent capability of being translatable into the protein structure inside the cell cytoplasm.
3. They are fully synthetic and do not require a host, like eggs or bacteria, for growth.

Which of the statements given above are correct?

a. 1 and 2 only
b. 1 and 3 only
c. 2 and 3 only
d. 1, 2 and 3

Answer : d

19) Consider the following statements with respect to Raisina Dialogue, 2021:

1. It is India's informal strategic dialogue with the United States, Japan, Australia and India.
2. The theme for the 2021 Edition is Viral World: Outbreaks, Outliers and Out of Control.

3. It will be jointly organised by the Ministry of External Affairs and the Observer Research Foundation (ORF).

Which of the statements given above is/are correct?

a. 2 only
b. 3 only
c. 2 and 3 only
d. None of the above

Answer : c

- It is India's premier conference on geopolitics and geo-economics committed to addressing the most challenging issues facing the global community.
- The conference is hosted by the Observer Research Foundation in partnership with the Ministry of External Affairs, Government of India.

20) Gyanvapi Mosque in Varanasi was constructed during the reign of -

a. Muhammad-Bin-Tughlaq
b. Akbar
c. Alla-ud-din Khilji
d. Aurangzeb

Answer : d

April (Week 4)

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Prelims

NATIONAL

Hot Springs and Gogra Post

(Source: Indian Express)

Context: *During the 11th round of discussions between the senior military commanders of India and China on April 9, to resolve the over 11-month long standoff in eastern Ladakh,* ***China had refused to vacate two of the four original friction points****. China, according to the source, informed India that it should be "happy" with what has been achieved regarding the disengagement in the Pangong Tso area. At two friction points,* ***Patrolling Point 15 (PP15) in Hot Springs, and PP17A near Gogra Post****, China still has a platoon-level strength each, along with vehicles.*

What had happened here last year?

- In May 2020 when China had diverted its troops who had come to the Tibetan plateau region for their annual exercise, towards the Line of Actual Control (LAC) in eastern Ladakh, creating a standoff with India, PP15 and PP17A were two of the four points where the soldiers were eyeball-to-eyeball.
- The other points of friction at that time were PP14 in Galwan Valley and the north bank of Pangong Tso. Chinese troops had crossed the LAC at all these points and positioned themselves across.
- The maximum ingress was on the north bank of Pangong Tso, where the Chinese troops were at Finger 4, which is 8 km west of Finger 8 where India says the LAC lies.

What are PP15 and 17A?

- Along the Line of Actual Control (LAC) between India in China, Indian Army has been given certain locations that its troops have to access to patrol the area under its control. These points are known as patrolling points, or PPs, and are decided by the China Study Group (CSG).
- CSG was set-up in 1976, when Indira Gandhi was the prime minister, and is the apex decision-making body on China.
- Barring certain areas, like Depsang Plains, these patrolling points are on the LAC, and troops access these points to assert their control over the territory. It is an important exercise since the boundary between India and China is not yet officially demarcated.
- PP15 and PP17A are two of the 65 patrolling points in Ladakh along the LAC. (Some of these 65 also have an additional Alpha PPs, which are further ahead from the original PPs. So PP17A is different from, but close to, PP17.)
- PP15 is located in an area known as the Hot Springs, while PP17A is near an area called the Gogra post.

Where are these two areas?

- Both of these are close to the Chang Chenmo river in the Galwan sub-sector of the LAC in eastern Ladakh. While Hot Springs is just north of the Chang Chenmo river, Gogra Post is east of the point where the river takes a hairpin bend coming southeast from Galwan Valley and turning southwest.
- The area is north of the Karakoram Range of mountains, which lies north of the Pangong Tso lake, and south east of Galwan Valley, which became a major flashpoint and a violent faceoff in June 2020 had left 20 Indian and at least four Chinese troops dead.

What is the importance of this region?

- The area lies close to Kongka Pass, one of the main passes, which, according to China marks the boundary between India and China. India's claim of the international boundary lies significantly east, as it includes the entire Aksai Chin area as well.
- During the official negotiations on the boundary between India and China in 1960, Yang Kung-su, who was the Tibet Bureau of Foreign Affairs in the Chinese Foreign Office, had stated that the Western Sector of the boundary "is divided into two portions, with Kongka Pass as the dividing point" and the portion "north of Kongka Pass is the boundary between Sinkiang (now Xinjiang) and Ladakh, and the portion south of it is that between Tibet and Ladakh".
- Thus, Hot Springs and Gogra Post are close to the boundary between two of the most historically disturbed provinces of China.

Aditya-L1

(Source: The Hindu)

Context: *The Indian programme to study the Sun and the region between the Sun and the Earth from space – Aditya-L1 – is due to be launched next year. It will carry seven payloads which have been developed by various institutions across the country. Once the mission is launched, there will be a need for a ground support centre to monitor and coordinate the work on its various payloads. This role will be played by the ARIES facility (short for Aryabhata Research Institute for observational Sciences) which is situated near Nainital.*

About Aditya L1 Mission

- D The objective of Aditya L1 mission is to study Sun's Corona, Chromosphere and Photosphere. In addition, it will study the particle flux emanating from Sun, and the variation of magnetic field strength.
- It was launched using the Polar Satellite Launch Vehicle (PSLV) XL
- Unlike other missions lead by ISRO, Mission Aditya L1 comprises few moving components which may be a cause of collision in space
- Given below is a list of payloads which have been used for the mission:
    - Visible Emission Line Coronagraph (VELC)
    - Solar Ultraviolet Imaging Telescope (SUIT)
    - Aditya Solar wind Particle Experiment (ASPEX)
    - Plasma Analyser Package for Aditya
    - Solar Low Energy X-ray Spectrometer (SoLEXS)
    - High Energy L1 Orbiting X-ray Spectrometer (HEL1OS)
    - Magnetometer
- The main objective of the Aditya L1 Mission is that it will help in tracking Earth-directed storms and predict its impact through solar observations

Why did ISRO Rename Aditya 1 Mission as Aditya L1 Mission?

- Aditya-1 mission was planned for observing only the Corona of Sun. The reason behind Corona getting heated to very high temperatures is still a mystery in Solar Physics.
- Aditya -1 mission involved placing the satellite in 800 Km low earth orbit. Later ISRO planned to place the satellite in the halo orbit around the Lagrangian Point (L1). L1 is 1.5 Million Km from the Earth.
- This point provides the advantage of observing the Sun continuously without any disturbance. Hence the mission was renamed as Aditya L1 mission.

Which is the Launch Vehicle that will be Used to Launch Aditya L1 Mission?

- The satellite will be launched by PSLV-XL launch vehicle from Sriharikota.

Eudiscopus denticulus

(Source: The Hindu)

Context: *Meghalaya has yielded India's first bamboo-dwelling bat with sticky discs, taking the species count of the flying mammal in the country to 130.*

Details:

- The disc-footed bat (Eudiscopus denticulus) was recorded in the northeastern State's Lailad area near the Nongkhyllem Wildlife Sanctuary, about 1,000 km west of its nearest known habitat in Myanmar.
- A team of scientists from the Zoological Survey of India (ZSI) and a few European natural history museums stumbled upon this "very specialised" small bat with "disc-like pads in the thumb and bright orange colouration" while sampling in a bamboo patch almost a year ago.
- The newly recorded bat was presumed to be a bamboo-dwelling species, but its flattened skull and adhesive pads helped in identifying it as the disc-footed known from specific localities in southern China, Vietnam, Thailand and Myanmar.
- Scientists analysed the very high frequency echolocation calls of the disc-footed bat, which was suitable for orientation in a cluttered environment such as inside bamboo groves.
- The disc-footed bat has raised Meghalaya's bat count to 66, the most for any State in India. It has also helped add a genus and species to the bat fauna of India.

Rafale Fighter Jets

(Source: The Hindu)

Context: *The Chief of the Air Staff (CAS), Air Chief Marshal R.K.S. Bhadauria, will flag off the next batch of Rafale fighter jets to India, according to a defence source.*

Rafales

- Introduced in 2001, the Rafale is a French twin-engine **and** multirole fighter aircraft designed and built by Dassault Aviation being produced for both the French Air Force and for carrier-based operations in the French Navy.
- India has inked a Rs 59,000-crore deal in 2016 to procure 36 Rafale jets from French aerospace major Dassault Aviation after a nearly seven-year exercise to procure 126 Medium Multi-Role Combat Aircraft (MMRCA) for the Indian Air Force did not fructify.
    - The MMRCA deal was stalled due to disagreements over production in India.
    - In comparison to the earlier deal i.e. MMRCA, Rafale has much technological advancement, lower life cycle cost and specifications according to the warfare needs of India.

Specification

- **Air Supremacy:** Equipped with a wide range of weapons, the Rafale is intended to perform air supremacy, interdiction (act of disrupting), aerial reconnaissance (observation to locate an enemy), ground support, in-depth strike, anti-ship strike and nuclear deterrence missions.
- **Wide Range of Weapons:** Meteor missile, Scalp cruise missile and MICA weapons system will be the mainstay of the weapons package of the Rafale jets.

- **Meteor:** It is the next generation of Beyond Visual Range (BVR) air-to-air missile (BVRAAM) designed to revolutionise air-to-air combat.
  - The Meteor missile can target enemy aircraft from 150 km away. It can destroy enemy aircraft before they actually even get close to the Indian aircraft.
- **SCALP Cruise Missiles:** It can hit targets 300 km away**.**
- **MICA Missile System:** It is a very versatile air-to-air missile**.** It comes with a radar seeker and can be fired for the short-range to long-range as well right up to 100 km.
  - It's already in service with the IAF i.e. Mirages and is the primary weapon system of Rafales as well.

- **Air to Air Target:** The ability to strike air-to-air targets from up to 150 km away and safely hit land targets 300 km within enemy territory make them some of the deadliest fighter jets flying in the world.
- **Flight Hours:** The aircraft has 30,000 flight hours in operations**.**

Asset Reconstruction Companies

(Source: The Hindu)

Context: *The RBI set up a committee to undertake a comprehensive review of the working of asset reconstruction companies (ARCs) in the financial sector ecosystem and recommend suitable measures for enabling them to meet the growing requirements.*

What are Asset Reconstruction Companies (ARCs)?

- An Asset Reconstruction Company is a specialized financial institution that buys the NPAs or bad assets from banks and financial institutions so that the latter can clean up their balance sheets.
- In other words, ARCs are in the business of buying bad loans from banks.

Background

- At the time of the Asian Financial Crisis, India's non-performing assets stood at a whopping 14.4 per cent. It was in this context that the Narasimham Committee (1998) recommended setting up an ARC specifically for purchasing NPAs from banks and financial institutions
- Following this, the Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest **(SARFAESI) Act, 2002 was enacted in December 2002 which provides the legal basis for the setting up ARCs in India**
- The asset reconstruction companies or ARCs are registered under the RBI
- It helps the bank clear up its balance sheets and concentrate in normal banking activities
- The ARCs take over a portion of the debts of the bank that qualify to be recognised as Non-Performing Assets. Thus ARCs are engaged in the business of asset reconstruction or securitisation or both
- The ARC can take over only secured debts which have been classified as a non-performing asset (NPA)

- A few of the existing ARCs in India, which are being regulated by the Reserve Bank of India include:
  - Asset Reconstruction Company (India) Limited (ARCIL)
  - ASREC (India) Limited
  - Reliance Asset Reconstruction Company Limited
  - India SME Asset Reconstruction Company Limited (ISARC)
  - International Asset Reconstruction Company Private Limited; and more

Asset Reconstruction Companies in the Union Budget 2021-22 – Key Points

- Bad loans of Indian lenders have increased in several years. The gross bad loans in the banks could increase to 13.5% by September 2021 (in the worst-case scenario, 14.8% – highest in two decades)
- Thus, ARCs can control this increase by setting up an Asset Management Company (AMC) which would manage and sell bad assets
- The bad bank would be transferring the NPAs to an entity (Asset Management or Asset Reconstruction Company) and dispose of the assets to Alternate Investment Funds (AIF)
- They would basically take over the bad loans in Public Sector Banks and manage the recoveries
- As of 2020, stressed assets of Rs. 2-2.5 lakh crore remain unsolved in approximately 70 large accounts

Capital Needs for Asset Reconstruction Companies

- As per the amendment made in the SARFAESI Act in 2016, an ARC should have a minimum net owned fund of Rs. 2 crores. This was later increased to Rs.100 crores.
- The ARCs also have to maintain a capital adequacy ratio of 15% of their risk-weighted assets

How do ARCs work?

- The banks will transfer the stressed assets to ARC at the net book value.
- The bank will in return receive 15% cash and 85% security receipts against the amount of bad loan from the Asset Management Company.

India at 142nd rank on press freedom index

(Source: The Hindu)

Context: *The World Press Freedom Index, 2021, produced by Reporters Without Borders (RSF), a French non-governmental organisation, has again ranked India at 142nd out of 180 countries. This is despite the fact that for a year, on directions from Cabinet Secretary Rajiv Gauba, an index monitoring cell worked to improve the rankings, even holding a meeting between the Indian Ambassador to France and the RSF officials to lobby for a change in the ranking.*

Details:

- In 2016, India's rank was 133, which has steadily climbed down to 142 in 2020.
- The RSF report says India is one of the world's most dangerous countries for journalists trying to do their job properly. They are exposed to every kind of attack, even police violence against reporters, ambushes by political activists, and reprisals instigated by criminal groups or corrupt local officials.
- In February last year, fearing such an adverse assessment, the cell was set up in 18 Ministries to find ways to improve the position on 32 international indices.
- The Information and Broadcasting Ministry was delegated to look at the freedom of press index.
- The minutes of this September meeting are part of the report of the cell. Mr. Ashraf said the openness of the government to be criticised and questioned with respect to subjects such as economy, international affairs and defence deals such as Rafale were indicators of press freedom.

- The RSF representatives, however, questioned the Internet ban in Jammu and Kashmir from August 5, 2019, which went on for nearly a year. The Ambassador said the shutdown was for the security of the region.

Why India's oil and gas production is falling?

(Source: Indian Express)

Context: *India's crude oil production fell by 5.2 per cent and natural gas production by 8.1 per cent in the FY21 as producers extracted 30,491.7 Thousand Metric Tonnes (TMT) of crude oil and 28670.6 Million Metric Standard Cubic Metres (MMSCM) of natural gas in the fiscal. While Covid-19 related delays are among the key reasons cited by producers behind lower production, India's crude oil and natural gas production have been falling consistently since 2011-12.*

Why is India's crude oil and natural gas production falling?

- Experts have noted that most of India's crude oil and natural gas production comes from ageing wells that have become less productive over time.
- An industry source, who did not wish to be named, noted that "there was no more easy oil and gas" available in India and that producers would have to invest in extracting oil and gas using technologically intensive means from more difficult fields such as ultradeepwater fields.
- Crude oil production in India is dominated by two major state-owned exploration and production companies, ONGC and Oil India.
- These companies are the key bidders for hydrocarbon blocks in auctions and were the only successful bidders in the fifth and latest round of auctions under the Open Acreage Licensing Policy (OALP) regime with ONGC bagging seven of the eleven oil and gas blocks on offer and Oil India acquiring rights for the other four.
- Experts noted that interest from foreign payers in oil and gas exploration in India had been low. The government has asked ONGC to boost its investments in explorations and increase tie-ups with foreign players to provide technological support in extracting oil and gas from difficult oil and gas fields.

Why is there a lack of private participation?

- One of the key reasons cited by experts for low private participation in India's upstream oil and gas sector are delays in the operationalisation of hydrocarbon blocks due to delays in major clearances including environmental clearances and approval by the regulator of field development plans.
- The government official quoted above said the government was reaching out to major foreign players to convey that the current system of auction and regulation was much more "open and transparent" than before.
- Oil Secretary Tarun Kapor had recently noted that the government may consider providing fiscal incentives to attract foreign players to India's upstream sector.
- Industry players have been calling for a reduction in the cess on domestically produced crude oil to 10 per cent from the current 20 per cent. A government official noted that internal maximum production levels set by oil and gas majors to address climate change had also lowered interest by oil majors to expand operations in India.

What is the impact of low oil and gas production?

- Low domestic production of crude oil and natural gas makes India more reliant on imports.
- The share of imports as a proportion of overall crude oil consumption in India has risen from 81.8 per cent in FY2012 to 87.6 per cent in FY2020.

- Boosting oil and gas production has also been a key part of the government's Aatmanirbhar Bharat initiative and its goal to boost the use of natural gas in India's primary energy mix from the current 6.2 per cent to 15 per cent by 2030.

World Heritage Day 2021

(Source: PIB)

Context: *World Heritage Day, also known as International Day for Monuments and Sites, is being observed on 18 April every year.*

About World Heritage Day:

- The day is dedicated to the conservation and promotion of cultural heritage through various activities undertaken by the International Council on Monuments and Sites (ICOMOS).
- To mark World Heritage Day, various programmes and tours are organised by heritage sites.
- In 1982, ICOMOS suggested United Nations Educational, Scientific and Cultural Organization (UNESCO) that April 18 should be celebrated as the International Day for Monuments and Sites.
- UNESCO approved the proposal during the 22nd General Conference in 1983.
- The day is observed to raise awareness about the cultural heritage that we see around us. It is also aimed at promoting historical monuments and sites through which we can actually preserve the cultural integrity of a community as well.
- The theme for World Heritage Day 2021 is "Complex Pasts: Diverse Futures".

UNESCO Natural World Heritage Sites

UNESCO Natural World Heritage sites are those sites with distinctive cultural facets such as geological formations, physical, biological and cultural landscapes.

Natural World Heritage Site	State	Year of Notification
Kaziranga National Park	Assam	1985
Keoladeo Ghana National Park	Rajasthan	1985
Manas Wildlife Sanctuary	Assam	1985
Nanda Devi National Park and Valley of Flowers	Uttarakhand	1988, 2005
Sundarbans National Park	West Bengal	1987
Western Ghats	Maharashtra, Goa, Karnataka, Tamil Nadu and Kerala	2012
Great Himalayan National Park	Himachal Pradesh	2014

UNESCO Cultural World Heritage Sites

UNESCO Cultural World Heritage sites are those sites with unique cultural facets such as Paintings, monuments, architecture, etc.

Cultural World Heritage Site	State	Year of Notification
The Architectural Work of Le Corbusier, an Outstanding Contribution to the Modern Movement	Chandigarh	2016
Victorian and Art Deco Ensemble of Mumbai	Maharashtra	2018
Historic City of Ahmedabad	Gujarat	2017
Jaipur City	Rajasthan	2020
Archaeological Site of Nalanda Mahavihara (Nalanda University)	Bihar	2016
Rani-Ki-Van	Gujarat	2014
Hill Forts of Rajasthan	Rajasthan	2013
The Jantar Mantar	Rajasthan	2010
Red Fort Complex	Delhi	2007
Champaner-Pavagadh Archaeological Park	Gujarat	2004
Chhatrapati Shivaji Terminus	Maharashtra	2004
Rock Shelters of Bhimbetka	Madhya Pradesh	2003
Mahabodhi Temple Complex at Bodh Gaya	Bihar	2002
Mountain Railways of India	Tamil Nadu	1999
Humayun's Tomb, Delhi	Delhi	1993
Qutb Minar and its Monuments, Delhi	Delhi	1993
Buddhist Monuments at Sanchi	Madhya Pradesh	1989
Elephanta Caves	Maharashtra	1987
Great Living Chola Temples	Tamil Nadu	1987
Group of Monuments at Pattadakal	Karnataka	1987
Churches and Convents of Goa	Goa	1986
Fatehpur Sikri	Uttar Pradesh	1986
Group of Monuments at Hampi	Karnataka	1986
Khajuraho Group of Monuments	Madhya Pradesh	1986
Group of Monuments at Mahabalipuram	Tamil Nadu	1984
Sun Temple, Konarak	Orissa	1984
Agra Fort	Uttar Pradesh	1983
Ajanta Caves	Maharashtra	1983
Ellora Caves	Maharashtra	1983
Taj Mahal	Uttar Pradesh	1983

UNESCO Mixed World Heritage Sites
A mixed site comprises components of both natural and cultural importance:

Mixed World Heritage Site	State	Year of Notification
Khangchendzonga National Park	Sikkim	2016

Temples of Khajuraho

(Source: PIB)

Context: *Ministry of Tourism organises webinar on "Khajuraho – Temples of Architectural Splendour" under Dekho Apna Desh.*

About the Khajuraho Historical Temples:

- Khajuraho Temples were built between 950-1050 CE by the Chandela Dynasty.
- The temples are categorised into three groups that is Eastern, Western and Southern.
- These temples display intricate & exceptional carvings and astounding architectural skill which makes Khajuraho one of the most popular tourist destinations among domestic as well as international visitors.
- Some of the most prominent temples here are Kandariya Mahadev Temple, Chaunsat Yogini Temple, Brahma Temple, Chitragupta Temple, Devi Jagdamba Temple, Lakshmana Temple, Matangeshwar Temple and Parsvanath Temple.

RBI plans and an upcoming Bill on Cryptocurrency

(Source: Indian Express)

Context: *Uncertainty over the legal status of cryptocurrencies is unnerving Indian investors who, according to unofficial estimates, hold around $1.5 billion (Rs 10,000 crore) in digital currencies. The government, which plans a law to ban private digital currencies, favours a digital currency backed by the Reserve Bank of India.*

The proposed law

- The Cryptocurrency and Regulation of Official Digital Currency Bill, 2021, which will prohibit all private cryptocurrencies and lay down the regulatory framework for the launch of an "official digital currency", was to be introduced in Parliament's Budget session, but was held up as the government continues discussions with stakeholders.
- A 3-6 month exit period prior to banning the trading, mining and issuing of cryptos has been discussed in inter-ministerial discussions.
- The high-power inter-ministerial committee has previously recommended a ban on all private cryptocurrencies. The final draft Bill is yet to go to the Cabinet, a source said.

RBI and digital currency

- RBI had said central banks are exploring DLT (Distributed Ledger Technology) for application in improving financial market infrastructure, and considering it as a potential technological solution in implementing central bank digital currency (CBDC).
- Sources indicated the government is open to supporting a central bank-backed digital currency.

- A recent survey of central banks conducted by the Bank for International Settlements found that some 80 per cent of the 66 responding central banks have started projects to explore the use of CBDC in some form, and are studying its potential benefits and implications for the economy.
- RBI had expressed concern over other cryptocurrencies, saying they can be used for illegal activities, and pose a threat to financial stability.
- In April 2018, RBI banned banks and other regulated entities from supporting crypto transactions after digital currencies were used for frauds. In March 2020, the Supreme Court struck down the ban as unconstitutional. One of the reasons it gave was that cryptocurrencies, though unregulated, were not illegal in India.
- Various start-ups dealing with cryptocurrency have come up in India, such as Unocoin in 2013 and Zebpay in 2014 (Tracxn, 2019). But volatility in Bitcoin prices and instances of fraud have underlined regulatory concerns, RBI says.
- Both the government and RBI have said they have not authorised or issued regulation for any entity to deal with cryptocurrencies, and individuals dealing with them would bear all risks. RBI has issued several warnings against dealing in cryptocurrencies.

Hospet-Vasco Da Gama project

(Source: Down to Earth)

Context: *A project to double a railway track in the Western Ghats was cleared by the Standing Committee of the National Board for Wildlife (NBWL) on January 5, 2021, despite warnings against it by government-appointed experts.*

Details:

- A committee appointed by the Union Ministry of Environment, Forest and Climate Change (MoEF&CC) raised concerns about clearing the project in one of 'the last remaining wildernesses' in the Western Ghats. The Ghats are one of the world's eight 'hottest hotspots' of biological diversity.
- The committee was appointed to clear the projects in Protected Areas (PAs) of Goa and Karnataka. PAs include national parks, wildlife sanctuaries, conservation and community reserves.

The project

- The project in question is the doubling of the track of the the Hospet-Hubballi-Londa-Vasco Da Gama railway line by the Rail Vikas Nigam Ltd (RVNL).
- The project, sanctioned by the Union Ministry of Railways in 2010-11, involves doubling of the 353-kilometre-long railway track in Karnataka and Goa passing through the Western Ghats.
- The project is divided into two phases with Phase I covering 252 km between Hospet and Tinaighat and Phase II covering the Tinaighat-Vasco stretch.
- Phase I of the project is being funded by the Asian Development Bank (ADB) with Rs 2,127 crore. There is no forest diversion for this part of the project.
- Phase II involves diversion of 9.57 ha forest land in the Dandeli Wildlife Sanctuary (in Karnataka) and 113.857 ha in the Bhagwan Mahaveer Wildlife Sanctuary and Mollem National Park (in Goa). The Dandeli Wildlife Sanctuary is part of the Kali Tiger Reserve (earlier called the Dandeli Anshi Tiger Reserve).
- The Phase II stretch is divided into two parts by the RVNL as separate forest land diversion proposals:
    - The 'Tinaighat-Castlerock-Caranzol Railway Doubling' for the Karnataka stretch.
    - The 'Castlerock-Kulem Railway Doubling' for the Goa stretch.
- According to the ADB's Technical Assistance Consultant's Report from March 2009, the doubling is being done to improve the handling capacity of the track for carrying iron, iron ore and steel to Mormugao Port for export and carrying back imported coal.

INTERNATIONAL

Earth Day 2021

(Source: Indian Express)

Context: *April 22 is Earth Day, an international event celebrated around the world to pledge support for environmental protection. The year 2021 marks the 51st anniversary of the annual celebrations. This year's theme for Earth Day is 'Restore Our Earth'.*

The importance of Earth Day

- Earth Day was first observed in 1970, when 20 million took to the streets to protest against environmental degradation. The event was triggered by the 1969 Santa Barbara oil spill, as well as other issues such as smog and polluted rivers.
- For over the next half century, Earth Day continued to play an important role in environmental activism.
- The landmark Paris Agreement, which brings almost 200 countries together in setting a common target to reduce global greenhouse emissions, was signed on Earth Day 2016.
- According to earthday.org, Earth Day aims to "build the world's largest environmental movement to drive transformative change for people and the planet." The movement's mission is "to diversify, educate and activate the environmental movement worldwide."
- According to the United Nations, International Mother Earth Day is celebrated to remind each of us that the Earth and its ecosystems provide us with life and sustenance.
- This Day also recognizes a collective responsibility, as called for in the 1992 Rio Declaration, to promote harmony with nature and the Earth to achieve a just balance among the economic, social and environmental needs of present and future generations of humanity.
- This day provides an opportunity to raise public awareness around the world to the challenges regarding the well-being of the planet and all the life it supports.

ASEAN

(Source: The Hindu)

Context: *Junta leader Min Aung Hlaing is expected to join a special ASEAN summit on Myanmar on Saturday in Jakarta — his first official overseas trip since the putsch that ousted civilian leader Aung San Suu Kyi.*

ASEAN History

- ASEAN was established on 8th August 1967 in Bangkok, Thailand with the signing of the Bangkok Declaration (a.k.a ASEAN Declaration) by the founding fathers of the countries of Indonesia, Malaysia, Thailand, Singapore, and the Philippines.
- The preceding organisation was the Association of Southeast Asia (ASA) comprising of Thailand, the Philippines, and Malaysia.
- Five other nations joined the ASEAN in subsequent years making the current membership to ten countries.

ASEAN Members

- Thailand (founding member)
- The Philippines (founding member)
- Malaysia (founding member)
- Singapore (founding member)
- Indonesia (founding member)
- Brunei (joined in 1984)
- Vietnam (joined in 1995)
- Lao PDR (joined in 1997)
- Myanmar (joined in 1997)
- Cambodia (joined in 1999)

There are two observer States namely, Papua New Guinea and Timor Leste (East Timor).

ASEAN Fundamental Principles

- Mutual respect for the independence, sovereignty, equality, territorial integrity, and national identity of all nations;
- The right of every State to lead its national existence free from external interference, subversion or coercion;
- Non-interference in the internal affairs of one another;
- Settlement of differences or disputes by peaceful manner;
- Renunciation of the threat or use of force; and
- Effective cooperation among themselves.

ASEAN Headquarters and official language

- The body is headquartered in Jakarta, Indonesia.
- Official Languages: Burmese, Filipino, Indonesian, Khmer, Lao, Malay, Mandarin, Tamil, Thai and Vietnamese
- Working Language: English

Ingenuity, the first helicopter on Mars

(Source: Indian Express)

Context: *Recently NASA announced that Ingenuity had performed its first flight. "…the first flight of a powered aircraft on another planet!" NASA said in a post on Twitter. The helicopter's main task is to carry out a technology demonstration to test the first powered flight on Mars, which it seems to have accomplished today. Since the first flight has succeeded, the Ingenuity team will attempt upto four test flights within a 31-Earth-day window.*

What is Ingenuity?

- Ingenuity, the first helicopter to fly on Mars was carried by NASA's rover called Perseverance that was launched in July last year and will help collect samples from the surface from locations where the rover cannot reach.
- The helicopter got its name because of a high school student Vaneeza Rupani of Alabama. Rupani originally submitted the name for the Mars

2020 rover, which was ultimately called Perseverance.
- But the NASA officials felt that Ingenuity–which means the skill of thinking, performing, or using things in new ways, esp. to solve problems (definition as per the Cambridge dictionary)– was a suitable name for the helicopter whose team had given a lot of creative thinking to get the mission off the ground.

How and when did it get to Mars?
- Perseverance landed at the Jezero Crater of Mars in February year. It will remain on the Red Planet for about two years and look for finding past signs of life.
- The rover is designed to study signs of ancient life, collect samples that might be sent back to Earth during future missions and test new technology that might benefit future robotic and human missions to the planet.

What will it do on Mars?
- The helicopter's mission is experimental in nature and completely independent of the rover's science mission – which is searching for signs of ancient life and collecting samples of rock and sediment in tubes for potential return to Earth by later missions.
- Ingenuity is able to fly using counter-rotating blades that spin at about 2,400 rpm. It has a wireless communication system, and is equipped with computers, navigation sensors, and two cameras. It is solar-powered, able to charge on its own.
- The helicopter project's chief engineer is J (Bob) Balaram, a graduate of IIT Madras who later went on to work at NASA.
- According to NASA, the helicopter was placed on the Martian surface to test — for the first time ever — powered flight in the planet's thin air. Its performance during these experimental test flights will help inform decisions about small helicopters for future Mars missions — where they can perform a support role as robotic scouts, surveying terrain from above, or as full standalone science craft carrying instrument payloads.
- Taking to the air would give scientists a new perspective on a region's geology and even allow them to peer into areas that are too steep or slippery to send a rover, a NASA fact sheet said. In the distant future, they might even help astronauts explore Mars.
- NASA will try and demonstrate rotorcraft flight in the extremely thin atmosphere of Mars with this helicopter, which is why the mission is so crucial.

Dogecoin

(Source: Indian Express)

Context: *Just as the virtual currencies Bitcoin and Ethereum have surged in value this week, so has Dogecoin — a cryptocurrency started in 2013 as an internet parody.*

What is Dogecoin?
- According to CNBC, the digital token was created in 2013 by software engineers Billy Markus and Jackson Palmer as a faster but "fun" alternative to Bitcoin.
- It was started as a satire on the numerous fraud crypto coins that had sprung up at the time, and takes its name and logo from a Shiba Inu meme that was viral several years ago.
- Unlike Bitcoins, whose maximum possible number is fixed at 21 million (a figure that is estimated to be reached by 2040), Dogecoin numbers do not have an upper limit, and there are already more than 100 billion in existence.
- When the crypto coin first took off, the online community that was backing it invited attention by supporting unconventional causes, such as sponsoring Jamaica's bobsled team at the 2014 Winter

Olympics. Also that year, the Dogecoin community gave $55,000 worth of the digital token to a Nascar driver in the US.

Mains

GS II

Why Goa's Civil Code is not as uniform ?

(Source: Indian Express)

Context: *Chief Justice of India S A Bobde recently appreciated the uniform civil code (UCC) in Goa, the only state to have one. This brought the spotlight back on the UCC debate, although the Law Commission had concluded in 2018 that a UCC is neither desirable nor feasible. No expert committee on the lines of the Hindu Law Reforms Committee of 1941 has ever been constituted, nor has any blueprint for a UCC been prepared.*

Example of plurality

- Goa's Portuguese Civil Code, 1867 is basically an alien code given by the Portuguese. Its continuance — and non-enforcement of Hindu Marriage Act, 1955 and Hindu Succession Act, 1956 or Indian Succession Act, 1925 or Shariat (Application) Act, 1937 and Dissolution of the Muslim Marriage Act,1939 etc. in Goa — is an example of legal pluralism, and negation of the very idea of one nation, one law? Is Goa's Civil Code really as uniform as is generally made out?
- Under Article 1 of the Decree of Gentile Hindu Usages and Customs of Goa, 1880, customs of Hindus were preserved and exemptions from the Civil Code were given to gentile Hindus.
- This decree continued the institution of Hindu joint family, named in Portuguese as sociedade, which technically is closer to a partnership rather than the concept of a Hindu joint family.
- The Shariat Act has not been extended to Goa; Muslims are governed by the Code as well as Shastric Hindu law.
- Those who favour love jihad laws would be surprised to know that under Article 1090 of the Goa Code, marriage cannot be annulled on the ground of religion.
- Goa's Civil Code has four parts, dealing with civil capacity, acquisition of rights, right to property, and the breach of rights and remedies. It begins in the name of God and Dom Luis, King of Portugal and Algarves.
- India's Constituent Assembly had rejected H V Kamath's proposal of a similar invocation of God in the Constitution.
- The Code has survived by virtue of Section 5(1) of the Goa, Daman and Diu Administration Act, 1962 that permitted its continuance. On the contrary, the Jammu & Kashmir Reorganisation Act, 2019 has repealed laws based on local Hindu customs; even Kashmiri Muslims were being governed by such non-Islamic laws and customs.

Marriage & property

- It is not clear whether the CJI wants that like Goa's Civil Code, the proposed UCC should put national Transfer of Property Act, Contract Act, Civil Procedure Code, Sale of Goods Act, Partnership Act etc in one code along with family law provisions. But then, having all laws in one code does not necessarily guarantee justice and equality.
- Article 1057 of Goa's Code provides for the registration of marriages. This lacks uniformity between Catholic and non-Catholic marriages.
- First, the intent of marriage is recorded by the would-be spouses before the civil registration authorities and after two weeks, a marriage deed is signed. For Catholics, signature in churches are considered

sufficient for civil registration. Many women are not aware that the UCC requires a second confirmation through signatures, and so, when a dispute arises, their marriages are found invalid. Many cases of bigamy through such frauds have been reported.

- Marriages solemnised in churches can be annulled by the church tribunal in cases of non-consummation. Article 1086 says that ecclesiastical courts alone can nullify Catholic marriages.
- The High Court mechanically approves such annulment, except in extraordinary cases. And yet, non-consummation is not a ground of annulment or divorce for non-Christians. For them, Article 1089 says such a power to annul marriage can be exercised only by the civil courts.
- Article 1204 permits the husband to get a divorce if adultery is committed by the wife, but the wife can get a separation only if the husband commits adultery with public scandal, and a divorce if he keeps a mistress in the conjugal home or abandons her.
- Article 3 of the Decree of Gentile Hindu Usages and Customs of Goa, 1880 provides that a Hindu husband can take a second wife in the absence of an issue, if the wife has attained the age of 25, and also if she has attained age 30 without having a son. The provision is contrary to both the Indian Penal Code and the Hindu Marriage Act.
- Article 1056 terms marriage a perpetual contract between persons of different sex (same sex marriage is not recognised) rather than sacrament. Is the rest of India ready to deny sacramental nature of Hindu marriage in the UCC? In any case, with the addition of the provision of divorce, marriage is no more perpetual even in Goa.
- The Code provides for pre-nuptial contracts; here again, the devil is in the details. There are four types of such contracts — no communion of properties; total separation of assets before and after marriage; Dotal regime under which the bride's share in her father's property is given to the husband; and communion of all assets of husband and wife that are equally divided on divorce or death.
- It is only the fourth that looks equitable, and yet, even here the management of properties is solely vested in the husband. Under Article 1104, the wife is not entitled to deprive the husband by way of ante-nuptial contracts from the administration of assets. She may, however, reserve for herself the right to receive part of income from her assets for pocket expenses provided it does not exceed one-third of the net income. Of course, there is joint ownership, and the husband cannot sell assets without the wife's consent.
- Moreover, what is divided are properties, not ownership of rights/interests. Thus, if the husband was an agricultural tenant, she would not get half the tenurial interests. Many pre-nuptial contracts do provide that there would be no right if the marriage is not solemnised or the wife leaves the marital home within a few months, or even on divorce.
- In cases of parties opting out of joint ownership of properties, the succession order becomes significant. Not only Article 1969 of the Goa Civil Code, but also Goa Succession, Special Notaries Inventory Proceedings Act, 2012 (enacted in 2016) mentions in Section 52 the surviving spouse at number four in the order of preference of legal succession — after descendants, ascendants, and brothers and sisters and their children.
- Unlike the Hindu Succession Act that gives unlimited testamentary powers, Article 1784 of the Goa Code prohibits disposal of more than 50% of assets through a will. This is called legitime. The Goa Succession, Special Notaries and Inventory Proceedings Act too has retained it.
- The provision is similar to one in Muslim Personal Law that says a Muslim cannot make a will of more than one-third of his property and two-thirds must go to the heirs. Is the Hindu right prepared to have such a provision in the UCC as and when it is enacted?
- Are we ready for a provision similar to Article 1876 of the Goa Code that disentitles an heir from inheritance in case of refusal to maintain his or her parents without a good reason or commission of an offence against their person punishable with six months' imprisonment?

States, different laws

- In fact, not all Hindus in the country are governed by one law. Marriage amongst close relatives is prohibited by the Hindu Marriage Act, 1955 but is considered auspicious in the South.

- The Hindu Code Bill recognises customs of different Hindu communities. Even the Hindu Succession Act, 1955 could not make the daughter a coparcener until 2005. The wife is still not the coparcener.
- Even today, property devolves first to class-I heirs, and if there are none, then to class-II heirs. While the heirs of sons are moved to class-I, heirs of daughters are not. Even among class-II heirs, preference is given to male lineage.
- And if a couple is issueless, self-acquired property of both spouses goes to the husband's parents even when they have thrown out the daughter-in-law. The wife's parents do not get anything from the property of their issueless daughter.
- There is no uniform applicability of personal laws among Muslims and Christians either. The Constitution protects the local customs of Nagaland, Meghalaya and Mizoram. Even land laws in a number of states are discriminatory, and daughters do not inherit landed properties in the presence of sons.
- With a 2006 amendment in UP, only an unmarried daughter gets a share in agricultural property. The distinction between married and unmarried daughters is arbitrary. These laws have been exempted from judicial scrutiny by including them in the Ninth Schedule.
- Let the secular laws first be made gender-just before the country undertakes reforms in religious laws. Piecemeal reform rather than enactment of the UCC in one go is the only way forward. In fact, a just code is preferable to a uniform code.

Orginance promulgation and Repromulgation

(Source: The Hindu)

Context: *The central government has repromulgated the ordinance that establishes a commission for air quality management in the National Capital Region, or the Commission for Air Quality Management in National Capital Region and Adjoining Areas Ordinance, 2020. This raises questions about the practice of issuing ordinances to make law, and that of re-issuing ordinances without getting them ratified by Parliament.*

What the data show

- Whereas an ordinance was originally conceived as an emergency provision, it was used fairly regularly. In the 1950s, central ordinances were issued at an average of 7.1 per year. The number peaked in the 1990s at 19.6 per year, and declined to 7.9 per year in the 2010s.
- The last couple of years has seen a spike, 16 in 2019, 15 in 2020, and four till now this year.
- State governments also used this provision very often. The issue was brought up in the Supreme Court through a writ petition by D.C. Wadhwa, a professor of economics, who discovered this fact when he was researching land tenures. He found out that Bihar had issued 256 ordinances between 1967 and 1981, of which 69 were repromulgated several times, including 11 which were kept alive for more than 10 years.
- A five-judge Constitution Bench of the Supreme Court, in 1986, ruled that repromulgation of ordinances was contrary to the Constitutional scheme. It said, "it would most certainly be a colourable exercise of power for the Government to ignore the Legislature and to repromulgate the Ordinance and thus to continue to regulate the life and liberty of the citizens through Ordinance made by the Executive.
- Such a stratagem would be repugnant to the constitutional scheme as it would enable the Executive to transgress its constitutional limitation in the matter of law making in an emergent situation and to covertly and indirectly arrogate to itself the law making function of the Legislature." Interestingly, the Court pointed out that there was not a single instance of the President (i.e., the central government) repromulgating an ordinance.
- The judgment did not stop the practice. Instead, the Centre also started to follow the lead of Bihar. For example, in 2013 and 2014, the Securities Laws (Amendment) ordinance was promulgated three times.

- Similarly, an ordinance to amend the Land Acquisition Act was issued in December 2014, and repromulgated twice – in April and May 2015 (https://bit.ly/32svBkM).

An unconstitutional practice

- The matter came up again in the Supreme Court, and in January 2017, a seven-judge Constitution Bench declared this practice to be unconstitutional. The judgment concluded that, "Re-promulgation of ordinances is a fraud on the Constitution and a subversion of democratic legislative processes."
- Even this judgment has been ignored. The Indian Medical Council Amendment Ordinance was issued in September 2018, and reissued in January 2019, as it was passed by only one House of Parliament in the intervening session. The current case of the Commission for Air Quality Management is even more egregious.
- While the ordinance of October 2020 was laid in Parliament on the first day of the recent Budget Session, a Bill to replace it was not introduced. However, the ordinance has been repromulgated now.
- States have also been using the ordinance route to enact laws. For example, in 2020, Kerala issued 81 ordinances, while Karnataka issued 24 and Maharashtra 21. Kerala has also repromulgated ordinances: one ordinance to set up a Kerala University of Digital Sciences, Innovation and Technology has been promulgated five times between January 2020 and February 2021 (https://bit.ly/2Q6zglJ).

Onus on legislatures, courts

- The legal position is clear, and has been elucidated by constitution Benches of the Supreme Court. Ordinances are to tackle exigencies when the legislature is not in session, and expire at the end of six weeks of the next meeting of the legislature.
- This time period is given for the legislature to decide whether such a law is warranted. Repromulgation is not permitted as that would be a usurpation of legislative power by the executive.
- As governments, both at the Centre and States, are violating this principle, the legislatures and the courts should check the practice.
- That is what separation of powers and the concept of checks and balances means. By not checking this practice, the other two organs are also abdicating their responsibility to the Constitution.

Assessing students amid a pandemic

(Source: The Hindu)

Context: *Faced with a massive surge in COVID-19 cases, the Central government cancelled the Central Board of Secondary Education's (CBSE) Class X examination and postponed the Class XII examination scheduled to be held from May 4. The decision, which will be reviewed by the Ministry of Education on June 1, was followed by the Indian Certificate of Secondary Education (ICSE or Class X) and Indian School Certificate (ISC or Class XII) examinations also being postponed, with a review scheduled in the first week of June. As of Saturday, the International Baccalaureate and several State Boards had taken similar decisions.*

What are the challenges?

- Aligning examinations of various Boards is a practical necessity since admission to higher education courses must be done uniformly and entrance examinations have to be conducted for professional courses.
- While the government has bought itself time to address the wildfire spread of COVID-19 by getting public examinations out of the way, students are left wondering about the nature of formative academic assessment that will be applied to their Class X performance during the year gone by, which was marked by a shift to online classes and TV-based instruction.

- For many, it was a total lack of access without electricity, connectivity, computers and smartphones. The challenge now is to take up formative assessments where pen-and-pencil annual examinations cannot be held.

What is formative assessment?

- The annual high-stakes public school examination is referred to as a summative assessment. It had to be cancelled or deferred this year due to the pandemic, and the academic system had to fall back on continuous evaluation techniques or other metrics.
- This is known as formative assessment. According to the United Nations Educational, Scientific and Cultural Organization (UNESCO), the key aspects of this pattern are use of observation, quizzes, assignments and feedback.
- While summative assessment is described as a 'testing of learning', formative assessment is 'testing for learning,' which helps teachers assess the strengths and weaknesses of individual students and suggest remedial measures.
- The CBSE introduced a formative assessment system through a Continuous and Comprehensive Evaluation (CCE) framework in 2009-10, but abandoned it in favour of a compulsory public examination for Class X, eight years later.
- However, the year 2020-21 stands apart due to the disruption to routine schooling and the use of online and remote instruction. UNESCO says that in such a remote-learning situation, formative assessment has to rely on Learning Management Solutions and digital tools such as the open-source Moodle, Google Classroom and Schoology, and other tools that facilitate the creation of adaptive instructions for personalised learning.
- Many teachers in India used video-calling tools to deliver instructional material and to coach and assess students. The Boards must now come up with a formative assessment framework that fixes clear metrics.

How have schools responded?

- After the latest move by the Centre, prominent CBSE schools say they will not face disruption because they conducted periodic internal examinations, practicals, as well as "pre-Board" testing for Class X. This will be useful to evaluate students.
- However, the switch from a reformist model of formative assessment to the traditional public examination was not seen as a move forward by others. The decision to reintroduce a public examination for Class X in CBSE was defended by the then Human Resource Development Minister, Prakash Javadekar, as the removal of discrimination against 1.93 crore secondary students of State and other Boards who continued to take an exit examination.

Can all schools assess fairly?

- The question of schools' capabilities to conduct sound formative assessments has become important because not all have similar facilities. While CBSE schools may be more urbanised, the picture for other Boards is mixed.
- The Unified District Information System for Education data show that in 2017-18, there were 1,88,742 rural schools and 83,207 urban schools under all managements.
- Data from the National Sample Survey (NSS) for the same year indicate that only 4% of rural households and 23% of urban households had a computer. Internet access was restricted to 15% of rural and 42% of urban households.

What reforms are needed?

- As COVID-19 cases from the first wave dropped, CBSE launched a competency-based assessment plan for Classes VI to X in March this year, aligned with the National Education Policy (NEP), 2020.
- It was prepared jointly with the British Council, for science, mathematics and English. The aim was to strengthen critical thinking and analytical capacity for competency-based learning.
- In fact, even the National Policy on Education, 1986, had de-emphasised rote learning and recommended a CCE-like framework.

- The NEP 2020 emphasises (formative) assessment for learning and critiques existing Board examinations as forcing students "to learn a very narrow band of content/material in a single stream".
- Future reforms would, therefore, have to work on two fronts — to ensure access to learning for every student, in classrooms or remotely, and make formative assessment possible through a scientifically designed set of metrics.

Sharing the burden of care

(Source: The Hindu)

Context: *The resilience of national health services is characterised by their ability to respond appropriately to epidemics, pandemics and disasters. There has been a consistent failure in India to prevent the spread of the COVID-19 pandemic, which has resulted in the second wave. It is the responsibility of the state to first prevent the spread of a pandemic, failing which it needs to be extra vigilant in order to prevent every death from the disease. It is unfortunate that people are dying not because of inadequate solutions (technology and knowledge) for dealing with the virus but due to inadequate access (economic, physical and others) to that knowledge and technology. This is serious injustice.*

Two approaches

- There are two possibilities that exist in strengthening curative care for COVID-19. The first is a reactive approach, which is what is carried out by most of the State governments.
- This is done by transforming a few of the well-performing facilities at the tertiary level into state-of-the art COVID-19 hospitals. However, this comes at a cost: people are not be able to get their routine hospital services from these tertiary facilities.
- At the primary level, most of the facilities created were temporary structures. They were created by hiring buildings and open spaces as COVID-19 treatment centres providing only beds.
- This approach of providing beds without adequate infrastructure was extensively critiqued for its inability to cater to the needs of patients in real-time situations. A slightly modified approach was to create first line treatment centres.
- Most of these facilities were a failure due to their inability to build trust among people as COVID-19 treatment centres. Most of them were shut down when the cases went down.
- The second possibility, less tried out, is to equip the functional facilities of government health services at the secondary level and convert them into exclusive COVID-19 care centres. These could be used to treat those patients who don't need ICU support.
- As the three-tier structure of health services in India envisages, a community health centre (CHC) can potentially become a fulcrum on which the entire health system can bank on, especially during a crisis.
- A CHC is supposed to cover a population of 80,000-1,00,000 in rural areas. A CHC is supposed to have 30 beds with at least four specialty services and is expected to function as a first referral unit for curative care services referred from primary health centres (PHCs).
- Sadly, several States have failed to develop this facility. Many CHCs are grossly underdeveloped. Over 5,000 CHCs exist in rural areas, and can they can add 50,000-75,000 beds if 10-15 beds are added in each.
- This facility can be strengthened to address COVID-19-specific treatment needs (primary and secondary) of the rural population, especially in States with an increasing case load and poor health infrastructure like Bihar, Uttar Pradesh and Chhattisgarh.

Feasible and sustainable solution

- This can be a more feasible solution as specialists for this facility can be directed from district hospitals or medical colleges and the numbers can be managed for four-six CHCs under each district. This can be

a sustainable solution as already there is a certain level of trust and functionality built into these centres as treatment centres. They have the potential to become centres for sample collection and vaccine delivery too.

- These CHCs can also easily be converted into independent standalone centres for COVID-19 treatment.
- After the pandemic ends, they can be converted into normal secondary-level facilities that cater to other needs. This can substantially reduce the overload faced by tertiary facilities as more than the severity of the disease, it is inadequate access to timely treatment that results in several deaths. It is always possible to strengthen the PHCs nearby to cater to the needs of people for other curative care services.
- For urban areas too, there is a need to develop peripheral hospitals at the secondary level within the government sector (100-150 bedded facility for every 3 lakh population), which can cater to the needs of the population during COVID-19 times.
- Instead of placing 500 and 1,000 beds in playgrounds and parking lots, it is important to expand beds which are effectively integrated into the existing health services. Only then will infrastructure facilities be good enough to provide effective care. This can build trust among people and contribute to strengthening health services in the long term.

Arise and rejuvenate the third layer of governance

(Source: The Hindu)

Context: *What is progress? When has a government achieved its goals? What is the true indication that a government is not just planning, but also putting into action those plans? The half-hearted execution of a plan by a government that the people chose is not a sign of achievement. The government must ensure that even the last man sitting in the remote corner of the last row should have access to the benefits of the plan. This is why it is crucial that strong local bodies are formed to enable genuine feasibility and execution. The Cholas were the pioneers in the formation of local bodies as part of a well-organised hierarchy to oversee the implementation of progressive plans.*

The journey of Panchayati raj

- "The voice of the people is the voice of god; The voice of the Panchayat is the voice of the people," is the quote attributed to Mohandas Karamchand Gandhi. Panchayati raj ensures that the voices of the people are heard loud and clear. But, drawing up a path for a brilliant organisational structure like the Panchayat raj, and then travelling along the path is not a simple task.
- Realising that seamless administration is impossible without power sharing, the British, in 1884, passed the Madras Local Boards Act. With this, the British formed unions in both small towns and big cities and began to appoint members to ensure better administration. To a certain extent, this brought about positive changes in basic parameters such as health and hygiene.
- With the advent of gram panchayat laws in 1920, people over 25 years of age were bestowed with the right to vote and choose their panchayat members.
- Even though Gandhiji was constantly laying emphasis on the importance of autonomously ruled villages, the idea received constitutional recognition only in 1992.
- It was only after the 73rd Amendment in the 1990s, that the Panchayati raj law came into force. This was the law that brought about massive turning points such as the initiation of grama sabha, a three-tier Panchayati raj methodology of governance, reservation for the downtrodden and women, consistency in economic development, local body elections once in five years, the formation of the State Election Commission, Finance Commission, and the power to draft the rules and responsibilities of the Panchayat.
- The regions which were better equipped with basic facilities and which were more developed than the villages were brought under one coordinated body, namely, the municipality. The district capitals were

further slotted into a combined parameter, namely, the corporation. Administration was transferred to the people, from the politicians and other officials.

- The lofty dream of Gandhiji to make each village of the independent India a republic organisation, and to reiterate that the autonomous administration of villages should be made the foundation of the entire country's administration was heard and he lay stress on the active participation of the people in governance.

Ideal platform

- For seemingly trivial and easily resolvable issues, the villages did not have to seek the assistance of the State or the Central governments. Grama sabhas could and can be the platform to resolve such issues. According to the rules framed by the Tamil Nadu government, it is mandatory that grama sabhas meet at least four times in a calendar year.
- Besides, grama sabhas can be convened as and when the necessity arises. Every grama sabha meeting ensures the equal right to highlight the issues that disrupt life. In addition to this, the elected members of the Panchayat are obliged to read out the financial statements and balance sheet to ensure transparency.

The reality

- The decisions taken during a grama sabha meeting and the proposed solutions with a feasible deadline are potent and powerful. Unfortunately, the reality today is that grama sabhas have become more like auction houses.
- In Tamil Nadu, for instance, the present government did not even make an attempt to seek the opinions and the consensus of the people on significant issues such as an eight-lane highway project and even a major hydrocarbon project.
- Even though the government announced that people's opinions would be considered, it went ahead and conducted meetings, which were marked by poor attendance and poor representation from the people. Even then, the government went ahead with the approval of projects which are impediments to normal life.
- The truth is that keeping in mind a single goal, of profit, politicians hold 'negotiations' with the officials. Several projects are being implemented for the benefit of private and corporate entities.
- Sadly, in this age, women do not find themselves in major administrative roles in the local bodies, though, on paper, women are shown to be a considerable force.
- The Makkal Needhi Maiam has been laying stress on the importance of grama sabhas and has been extending its support in a very transparent manner to rejuvenate the dying system of Panchayati raj.

The Kerala example

- The neighbouring State of Kerala has been diligently working toward ensuring the proper use of allotted funds, and ensuring the efficiency of administration and eligible member appointments. Thus, it stands tall as being exemplary. If Tamil Nadu wants to stand tall too, it needs to take steps to enable the power of administration to Panchayats, as stated in the Constitution.
- To ensure efficiency, we need to strengthen our grama sabhas, hold area sabhas in cities, form ward committees, hold online Panchayat meetings, ensure decent remuneration to Panchayat chiefs and councillors and also bestow the grama sabha with the power to revoke appointed members and representatives. These steps are what will ensure real growth in the State.
- The State-appointed corporation commissioner faces mammoth challenges when a member of the Opposition party takes charge as a mayor. The constant and meaningless conflicts between the ruling party and the mayor from the Opposition party make it impossible for the corporation commissioner to execute what was agreed upon in a meeting.
- The officials kowtow to pressures from the ruling party. The same treatment is meted out to municipal councillors and district councillors.

In Tamil Nadu

- The Constitution is clear in stating that local body elections must be conducted once in five years. But the ruling party keeps postponing the holding of local body elections, which is a breach of the Constitution. Strangely, this form of disrespect never materialises when it comes to the Assembly elections!
- Local body elections have been held once in five years for the last 25 years, since 1996. But for the first time, the All India Anna Dravida Munnetra Kazhagam government has travelled on without holding a local body election. This is not only an act of escapism but also a stain on the State's political history.
- The recent reconstitution of nine districts in the State is an invalid excuse to postpone the holding of local body elections.
- The government gives a variety of empty and irrelevant excuses to postpone these elections and to cancel grama sabha meetings. The time has come to stop this act — of depriving people of their basic rights.
- The demand for federal rule in the Centre and autonomous rule in the States should resonate along with the need to have autonomous local bodies too. We must collectively ensure that Panchayati raj should be strengthened. This should be the outcome of a peoples' movement.

GS III

The Ken-Betwa project

(Source: The Hindu)

Context: *The Ken-Betwa project is part of the national river linking project which proposes to connect 14 Himalayan and 16 peninsular rivers with 30 canals and 3,000 reservoirs in order to irrigate 87 million hectares of land. It has the status of a national project, as the Centre will contribute 90% of the cost. It is India's first river linking project and will take eight years to complete.*

Background

- First mooted in the 1980s, the Ken-Betwa project was taken up seriously only during former Prime Minister Atal Bihari Vajpayee's regime.
- Since then, former Union Water Resources Minister Uma Bharti has been the torch-bearer of the project. The project, the government says, will enhance the irrigation potential of the water-starved Bundelkhand region in U.P. and M.P., facilitate groundwater recharge and reduce the occurrence of floods.
- According to the Memorandum of Agreement signed, the to-be-built Daudhan dam is expected to irrigate nearly 6,00,000 hectares in four districts in M.P. and 2,51,000 hectares in four districts in U.P. and provide drinking water supply to 41 lakh people in M.P. and 21 lakh in U.P.

Environmental concerns

- However, the excitement of planners and politicians about this project, which costs ₹37,611 crore (2018 figure), is reportedly missing on the ground. The people of the region who are going to be affected by the project seem resigned to their fate.
- In public hearings held in the past, they were divided on political lines and also worried about the loss of the ecosystem and displacement.
- The project was on the drawing board for years mainly due to environmental concerns. Of the 12,500 hectares of land to get submerged by the project, more than 9,000 ha are categorised as forest land. The

submergence area includes a critically important section of the Panna Tiger Reserve. The Reserve is considered as a shining example of conservation after it successfully improved the tiger and vulture populations.

- Echoing the concerns of environmentalists, Congress president Sonia Gandhi wrote to Union Environment Minister Prakash Javadekar asking him not to implement the project.
- She said "around 40% of the area of the tiger reserve will be irretrievably damaged" if the project is implemented. Also, the project may destroy about 7.2 lakh trees. South Asia Network on Dams, River and People convener Himanshu Thakkar fears that this will affect rainfall in the already parched region.

Cost and benefit

- The claims of Ken having surplus water may be unrealistic as the river is not perennial — in the past sometimes, it has slowed to a trickle. Another difficulty will be that the Ken flows 60-70 feet lower than the Betwa and at least 30% of the 103 MW power generated will be used for pumping the water up.
- The Union Ministry and the National Water Development Agency, which is entrusted with the project, have some issues to sort out. These include getting clearance from the Central Empowered Committee of the Supreme Court, which had raised concerns about the project.
- The cost-benefits calculations of the project also don't take into consideration the environmental and social impacts. Thus, the benefits do not seem certain and are far outweighed by the costs on the environment.
- It is surprising that alternatives such as water-conservation and water-harvesting methods without building a dam haven't been seriously considered in the region. Large-scale solutions such as this are not always viable and the best.
- Given the serious doubts about the benefits of the project and the monumental toll that it would have on the ecosystem, including on carefully preserved wildlife, the Ken-Betwa project seems like a huge, costly mistake.

Protecting children in the age of AI

(Source: The Hindu)

Context: *We are now living among history's very first "AI" generation. From the Alexas they converse with, to their robot playmates, to the YouTube wormholes they disappear into, the children and adolescents of today are born into a world increasingly powered by virtual reality and artificial intelligence (AI). AI is not only changing what humans can do, it is shaping our behaviours, our preferences, our perceptions of the world and of ourselves. Older people still remember life before AI and the digital world — our references, anchors and pole stars pre-date the fourth Industrial Revolution. Not so for the millions of children and adolescents who were born into it.*

The task ahead

- Double imperatives — this would mean getting all children on-line and creating child-safe digital spaces
- One of the most pressing concerns is that not everyone can tap into the opportunities offered by this transformation. According to UNICEF and the International Telecommunication Union (ITU), as many as two-thirds of the world's children do not have access to the Internet at home.
- In addition to closing the digital divide, we need to better protect children and adolescents online; but how does one childproof AI? How do we encourage and support the tremendous good AI can do for children's growth and development, while simultaneously mitigating the harm? And how do we equip children and young people with the knowledge, tools and awareness to protect themselves?
- In the old-fashioned physical world, we evolved norms and standards to protect children. For instance, there are policies and protocols for a child travelling alone as an unaccompanied minor. Parents are

understandably reluctant to let their children be photographed by the media, and in many countries, news outlets blur children's faces to protect them. Where are these protections online?

- The virtual world is full of unsupervised "vacations" and "playgrounds" — with other children and, potentially, less-than-scrupulous adults, sometimes posing anonymously as children.
- While video gaming and chat forums like Fortnite: Battle Royale, to name one popular example, offer an online space for children to socialise with their friends, multiple reports identify such virtual playgrounds as "honeypots" for child predators. Short of banning screen time entirely, parents are hard-pressed to keep tabs on just what their children are doing online, and with whom. With online homework, this has become even more difficult.

Right to freedom of attention

- It does not help that the AI systems driving many video games and social networks are designed to keep children hooked, both through algorithms and gimmicks like "streaks", "likes", infinite scroll, etc.
- Even if this is an ancillary consequence of the underlying business model, the damage is done — children, from a tender age through adolescence, are becoming digitally addicted.
- Similarly, right when children and youth are forming their initial views of the world, they are being sucked into virtual deep space, including the universe of fake news, conspiracy theories, hype, hubris, online bullying, hate speech and the likes.
- With every click and scroll, AI is sorting them into tribes, and feeding them a steady diet of specially customised tribal cuisine.
- All this is thrown at our children just when they are starting to try to make sense of who they are and the world they live in; right when it is so important to help them understand and appreciate different perspectives, preferences, beliefs and customs, to build bridges of understanding and empathy and goodwill.

Harvesting, algorithmic bias

- Other insidious pitfalls also lie in the path of the Generation AI child. Today, many AI toys come pre-programmed with their own personality and voice. They can offer playful and creative opportunities for children, with some even promoting enhanced literacy, social skills and language development.
- However, they also listen to and observe our children, soaking up their data, and with no framework to govern its use. Some of these AI toys even perform facial recognition of children and toddlers.
- Germany banned Cayla, an Internet-connected doll, because of concerns it could be hacked and used to spy on children. Yet, most countries do not yet have the legal framework in place to ban such toys.
- Finally, in the field of education, AI can and is being used in fabulous ways to tailor learning materials and pedagogical approaches to the child's needs — such as intelligent tutoring systems, tailored curriculum plans, and imaginative virtual reality instruction, offering rich and engaging interactive learning experiences that can improve educational outcomes.
- But algorithms can also both amplify existing problems with education systems and introduce new challenges — when the pandemic caused the usual tests to be cancelled in the United Kingdom and by the International Baccalaureate board, for instance, the algorithms that served as a fallback meant thousands of students lost out on college admissions and scholarships.
- And unless the educational and performance data on children is kept confidential and anonymous, it can inadvertently typecast or brand children, harming their future opportunities.

Rights, protections

- So, how do we balance the tremendous good AI can do for children, while keeping their unique vulnerabilities topmost in our preoccupations, mitigating inadvertent harm and misuse?
- The next phase of the fourth Industrial Revolution must include an overwhelming push to extend Internet access to all children. Governments, the private sector, civil society, parents and children must push hard for this now, before AI further deepens the pre-existing inequalities and creates its own disparities.

- And on mitigating on-line harms, we need a multi-pronged action plan: we need legal and technological safeguards; we need greater awareness among parents, guardians and children on how AI works behind the scenes; we need tools, like trustworthy certification and rating systems, to enable sound choices on safe AI apps; we need to ban anonymous accounts; we need enforceable ethical principles of non-discrimination and fairness embedded in the policy and design of AI systems — we need "do no harm" risk assessments for all algorithms that interact with children or their data.
- In short, we need safe online spaces for children, without algorithmic manipulation and with restricted profiling and data collection. And we need online tools (and an online culture) that helps prevent addiction, that promotes attention-building skills, that expands children's horizons, understanding and appreciation for diverse perspectives, and that builds their social emotional learning capabilities.

Key first step

- In February, in a landmark decision, the UN Committee on the Rights of the Child adopted General Comment 25, on implementing the Convention on the Rights of the Child and fulfilling all children's rights in the digital environment. This is an important first step on the long road ahead.
- The Government of India has put in place strong policies to protect the rights and well-being of children, including a legislative framework that includes the Right to Education. Laws and policies to prevent a range of abuses and violence, such as the National Policy for Children (2013), can be extended for children in a digital space
- But much more needs to be done, here in India and around the world. And in this interconnected world, the more we can agree upon multilaterally and by multi-stakeholder groups, the easier it may be to implement nationally and locally.
- Just as India proactively helped shape the Universal Declaration of Human Rights and gave the world the principle of Ahimsa, it could also galvanise the international community around, ensuring an ethical AI for Generation AI.

Copyright war

(Source: The Hindu)

Context: *On April 5, the U.S. Supreme Court ruled in favour of Alphabet Inc.'s Google in a case where it was accused by Oracle of violating the country's copyright law. The case, dubbed "the copyright case of the century", began with Oracle's charge in the San Francisco federal district court in 2010 that Google's Android platform infringed upon its copyright in a platform called Java SE. In the process of finally being decided by the U.S. Supreme Court in a 6-2 verdict, this case made its journey through a federal district court and an appellate court twice.*

What is the background of the case?

- Oracle's lawsuit came shortly after it acquired Sun Microsystems, which had developed the Java language.
- Consequently, it came to own the copyright in Java SE (standard edition), a platform that programmers use to build programs that work on any personal computer.
- Oracle's charge was that Google copied a part of this platform's program while developing the Android platform for programmers.

What did the courts find?

- The courts found that Google did negotiate with Sun Microsystems, prior to it being bought by Oracle, to license the use of the Java platform in Android.

- But negotiations fell through. Eventually, as the Supreme Court noted, it created the Android platform software using the services of about 100 engineers who worked for more than three years.
- But Google also wanted the millions of Java programmers around the world to be able to work with Android seamlessly. As Justice Stephen Breyer wrote in the majority opinion, "It also copied roughly 11,500 lines of code from the Java SE program."

What were the legal questions that the Supreme Court had to weigh in on?

- Prior to Google bringing the case to the Supreme Court, the Federal Circuit, an appeals court, had ruled in Oracle's favour. The lower courts had focused on two major questions, something that the Supreme Court had to review.
- The first was whether Oracle could copyright the part of the code that Google copied, and the second was whether the copying constituted fair use, if the answer to the first was in the affirmative.
- In ruling in Oracle's favour, the Federal Circuit had held that the portion of the copied code is copyrightable and that Google's act did not constitute fair use.
- The Supreme Court decided to sidestep the first question, saying, "In reviewing that decision, we assume, for argument's sake, that the material was copyrightable."
- The question of the copyrightability of the code remains significant also because the lower courts gave different judgments on it. But the Supreme Court decided the second question in Google's favour, saying that its copying of a part of the code constituted fair use, and therefore it did not violate the copyright law.

What is fair use?

- According to the U.S. Copyright Office, "Fair use is a legal doctrine that promotes freedom of expression by permitting the unlicensed use of copyright-protected works in certain circumstances."
- So, activities such as "criticism, comment, news reporting, teaching, scholarship, and research" may qualify under fair use. In other words, these activities can be exempt from copyright infringement charges.

How did the court decide that Google's action came under the ambit of fair use?

- Section 107 of the U.S. copyright law provides a framework to judge fair use. It contains four factors, in the following order — the purpose of the use, the nature of the copyrighted work, the substantiality of the portion used in relation to the whole work, and the effect of the usage upon the potential market.
- The court decided to start with the second factor, the nature of the copyrighted work.
- What worked in Google's favour was that the court made a distinction between a code "that actually instructs a computer to execute a task" and the code that Google copied, which were the lines of an API (application programming interface), which "allows programmers to call upon prewritten computing tasks for use in their own programs".
- To understand this, it is best to go back to the district court's explanation of what happened. That court said, "An API is like a library. Each package is like a bookshelf in the library. Each class is like a book on the shelf. Each method is like a how-to-do-it chapter in a book. Go to the right shelf, select the right book, and open it to the chapter that covers the work you need."
- The Supreme Court said Google's copying was transformative, as it "copied only what was needed to allow programmers to work in a different computing environment" (which is Android) using a familiar programming language (Java).

What is the implication of this ruling?

- There is a view that the software industry is relieved that the Supreme Court differentiated between the type of code Google copied, i.e., software interface, and other creative codes.
- Digital rights group Electronic Frontier Foundation said, "This decision gives more legal certainty to software developers' common practice of using, re-using, and re-implementing software interfaces written by others, a custom that underlies most of the internet and personal computing technologies we use every day."

An obituary for the IP Appellate Board

(Source: The Hindu)

Context: *The demise of the Intellectual Property Appellate Board (IPAB), India's specialist tribunal for determining disputes relating to intellectual property (IP) rights, is symbolic of its tenuous life. For an organisation that was created in haste and managed in haste, the end came about, unsurprisingly, in haste.*

Details:

- The patent system is notorious for its bipolar nature. Ever since its inception, public opinion has been divided about the usefulness of the system.
- There have been regular calls for its abolition. The lack of unanimity about the system here was seen in the way Indian parliamentarians deliberated on patent bills in the past.Most of the significant amendments to the Patents Act since 1970 came through, not by way of an Act passed by Parliament, but through an ordinance.
- Just as we pushed through amendments to the Patents Act through ordinances in 1994 and 2005, we have now accorded the IPAB a similar burial. On April 4, the President of India signed the Tribunal Reforms (Rationalisation and Conditions of Service) Ordinance, 2021, shutting down the IPAB and many other tribunals for good.

Troubled life

- Ever since its creation, the IPAB has been treated like an unwanted child. Perennially understaffed and underfunded, it always looked like a jugaad fix for the problems in the innovation system.
- Established under the Trade Marks Act of 1999, its jurisdiction was later extended to hear patent cases after the Patents (Amendment) Act of 2002. Historically, appeals from the Intellectual Property Office (IPO), rectification and revocation applications were heard by the various High Courts.
- However, the Patents (Amendment) Act of 2002 divested these powers from the High Courts and extended it to the IPAB.
- Though the patents side of the IPAB existed in theory since 2002, the Central government notified its functioning only in April 2007 after a rebuke from the Madras High Court. The court was then hearing an appeal from the IPO regarding Novartis' Glivec patent application which ought to have been heard by the IPAB. After the notification, the High Court transferred Novartis' petition and subsequently all other pending patent cases to the IPAB.
- Since its inception, the institution has been involved in controversies. Even though the IPAB has not been performing its adjudicatory function on the patent side regularly due to administrative reasons, it certainly has been the subject matter of judicial review before the various High Courts.
- These cases include a challenge to the constitutionality of the IPAB, petitions seeking filling up of vacancies before the High Court in Delhi and Chennai, and even a petition to the Supreme Court for extension of the term of the chairperson.
- After remaining headless for almost two years, in January 2018, the IPAB was given a head. The then chairperson of the Appellate Tribunal for Forfeited Property was given additional charge. However, there was a substantial delay in the start of hearing of patent cases due to a technical reason.
- The appointment of the technical member for patents, with whom the chairperson sits while deciding cases on patents, who brings the much-needed technical expertise that patent cases usually demand, was delayed. The appointment of the technical member finally came last year after the government was sued by the Indian Drug Manufacturers' Association.

- IPAB's end was foreseen by the leaders who ran it. One of the former chairpersons had publicly raised concerns regarding the judicial and institutional independence of the IPAB, and called for closing it. Not only was the IPAB understaffed, with its administrative staff often being on deputation, it was also underpowered, at times quite literally.
- The tribunal had to bear the brunt of the summer power cuts in Chennai. Imagine the highest authority on protecting technology and innovation working through the scorching Chennai summer during power cuts without any viable backup.
- One lasting memory of the IPAB will be the image of a dimly lit court hall with the presiding judges poring over patent specifications covering high technology using two emergency lights and the counsel arguing the case using the flashlight on his phone. For those who had the misfortune of walking into the tribunal in Guna Complex in Chennai, where the IPAB was housed during those punishing power cuts, this image would have been a teaser of what was to follow.
- The IPAB's jurisdiction of cases was split between trademarks, patents, copyright, and geographical indication, where the predominant business pertained to trademarks.
- Thus, the workload of the IPAB was typically split between trademarks and patents with the former consuming much of the time. Not only did the IPAB juggle its time with the different forms of IP, but it also had sittings in five different cities, with just one chairperson who had to fly between them at times. The chairperson had to summon parties and papers to all these cities, which came at a substantial cost to the public.
- The patents bench of the IPAB would have probably taken longer to constitute had it not been for the limelight brought by the Novartis case. In any case, the disposal rate for patents at the IPAB did not justify its continuance. Patent disputes owing to their technological complexity were the IPAB's predominant time-consuming business after trademarks.
- In our study of the first decade of operation of the patents bench, we saw a paltry disposal rate of about 20 patent cases a year. Nearly 70% of the patent cases filed were either pending at some stage or yet to be taken up for hearing. After the IPAB was set up, not more than 15 cases were transferred from all the High Courts to the IPAB.
- Going by this disposal rate, it would have taken another decade to dispose of the pending applications, leave alone the new ones. The irony was that tribunals were established with the primary aim of speedy disposal of cases by specialised experts.
- The functioning of the IPAB is critical for the innovation ecosystem. Every patent granted by the Patent Office is a potential subject matter in appeal before the IPAB. An unjustified patent grant at the Patent Office, by error or oversight, can only be corrected in appeal. While we know the number of cases filed and disposed, we will never know the number of unjustified patents that went unquestioned for lack of an effective appellate mechanism.

Missed opportunity

- India stands as a shining example for what it has done legislatively in patent law. Be it the retraction of product patents for pharmaceuticals and chemicals between 1970 and 2005, the anti-evergreening provisions or the robust compulsory licensing regime, it has offered the world a host of TRIPS-compliant flexibilities in its statute.
- But when it came to developing a jurisprudence around these provisions – case laws from the highest courts on how these provisions will be worked – it has failed.
- Barring a few bright spots, there has been a reluctance to extend the flexibilities in the Patents Act through judicial interpretation that expands the law.
- The tenure of the IPAB will be remembered as a missed opportunity to develop the home-grown jurisprudence on patent law that is much lacking in India.

A low-carbon future through sector-led change

(Source: The Hindu)

Context: *In the build-up to the 'Leaders' Climate Summit' organised by the United States this week (April 22-23), there has been a flurry of articles about whether India should announce a 'net-zero' emissions target, and by when.*

Details:

- The Intergovernmental Panel on Climate Change (IPCC) 1.5°C report called for global carbon emissions to reach net-zero by 2050, which the pressure cooker of climate diplomacy has quickly transformed into a call for all countries to announce 2050 as the net-zero target year.
- Yet, global net zero may require some countries reaching net-zero before 2050 in order for others to have some additional time. Since a disproportionate share of the carbon space has been used up by developed countries, it is important that they act boldly at home, to match the vigour of their diplomatic efforts.
- Nonetheless, as a climate-vulnerable country, India must also up its game to contribute to limiting global temperature rise, ideally below 1.5°C.
- While doing so, it should not lose sight of the history of global climate negotiations and its own developmental needs. Though a large country and economy, we are still a very poor country with a significant development deficit — for example, our per-capita carbon emissions are less than half the world average.

What India must do

- So, what is the way forward for India? Saying India will take only modest steps until richer countries do more is not viable in the context of a global climate crisis. Yet, announcing an Indian 2050 net-zero commitment risks taking on a much heavier burden of decarbonisation than many wealthier countries, and could seriously compromise India's development needs.
- We suggest a third path, focused on concrete, near-term sectoral transformations through aggressive adoption of technologies that are within our reach, and an earnest effort to avoid high carbon lock-ins.
- This is best accomplished by focusing on sectoral low-carbon development pathways that combine competitiveness, job-creation, distributional justice and low pollution in key areas where India is already changing rapidly.
- This approach is directionally consistent with India moving towards net-zero, which should be our long-term objective.
- Over time, India can and should get more specific about future economy-wide net-zero targets and dates.
- Here, we detail what such an approach would look like, by laying out the contours of an enhanced national pledge for the electricity sector, to illustrate how it can be both ambitious and in India's interest.
- A similar approach should be adopted for other sectors.

De-carbonise power sector

- To achieve net-zero emissions, a key piece of the puzzle is to decarbonise the electricity sector, which is the single largest source (about 40%) of India's greenhouse gas emissions. De-carbonised electricity would also allow India to undertake transformational changes in urbanisation and industrial development, for example by expanding the use of electricity for transport, and by integrating electric systems into urban planning.
- So far, our efforts in the electricity sector have focused on expanding renewable electricity capacity, with targets growing by leaps and bounds from 20GW of solar to 175GW of renewable capacity by 2022, further growing to 450GW of renewable capacity by 2030.
- While useful as a direction of travel, India now needs to shift gears to a comprehensive re-imagination of electricity and its role in our economy and society.
- One way to do this is to go beyond expanding renewables to limiting the expansion of coal-based electricity capacity.

- This will not be easy: coal provides firm, dispatchable power and accounts for roughly 75% of electricity today; supports the economy of key regions; and is tied to sectors such as banking and railways. These connections need to be unravelled to truly shift to a decarbonised future.

Ceiling for coal power

- A first, bold, step would be to pledge that India will not grow its coal-fired power capacity beyond what is already announced, and reach peak coal electricity capacity by 2030, while striving to make coal-based generation cleaner and more efficient.
    - There is a strong rationale for this: coal is increasingly uneconomic and phasing it out over time will bring local gains, such as reduced air pollution, aside from climate mitigation.
    - Such a pledge would give full scope for development of renewable energy and storage, and send a strong signal to investors.
- **A second, necessary step is to create a multi-stakeholder Just Transition Commission representing all levels of government and the affected communities to ensure decent livelihood opportunities beyond coal in India's coal belt. This is necessary because the transition costs of a brighter low-carbon future should not fall on the backs of India's poor.**
- Third, a low-carbon electricity future will not be realised without addressing existing problems of the sector such as the poor finances and management of distribution companies, which requires deep changes and overcoming entrenched interests.
- Finally, India will need to work hard to become a leader in technologies of the future such as electricity storage, smart grids, and technologies that enable the electrification of other sectors such as transportation. Through careful partnership with the private sector, including tools such as production-linked incentives, India should use the electricity transition to aim for job creation and global competitiveness in these key areas.
- Thus, an electricity-supply focused component of India's climate pledge could provide the overarching framework to envision and drive transformative change.

Improve energy services

- Enhancing the efficiency of electricity use is an important complement to decarbonising electricity supply. Growing urbanisation and uptake of electricity services offer a good opportunity to shape energy consumption within buildings through proactive measures.
- Cooling needs are expected to increase rapidly with rising incomes and temperatures. Air conditioners, fans and refrigerators together consume about 60% of the electricity in households.
- Today, the average fan sold in the market consumes more than twice what an efficient fan does, and an average refrigerator about 35% more. India could set aggressive targets of, say, 80% of air conditioner sales, and 50% of fan and refrigerator sales in 2030, being in the most efficient bracket.
- In addition to reducing green house gas emissions, this would have the benefit of lowering consumer electricity bills. India can leverage this transition too as an opportunity to become a global leader in production of clean appliances.
- Such a sector-by-sector approach, which can and should be developed for other sectors, can demonstrate concrete, yet ambitious, domestic action that sets India on the path toward net zero emissions.
- It empowers India to insist that developed countries complement their distant net-zero targets by enacting concrete near-term measures that are less reliant on unsure offsets.
- This approach also allows India to nimbly adapt its sectoral transition plans as technologies mature and enable it to ratchet up its pledges periodically as required by the Paris Agreement.

Forming timelines

- Going further, India may even consider committing to submit plausible pathways and timelines to achieving net-zero emissions as part of its future pledges.
- This would allow India adequate time to undertake detailed assessments of its development needs and low-carbon opportunities, the possible pace of technological developments, the seriousness of the net-

zero actions by developed countries, and potential geo-political and geo-economic risks of over-dependence on certain countries for technologies or materials.

- India can also use this period to develop a strategic road map to enhance its own technology and manufacturing competence as part of the global clean energy supply chain, to gain benefits of employment and export revenues.
- Such an integrated approach, which is ambitious, credible and rooted in our developmental needs — including climate mitigation needs — will represent an ambitious, forward-looking and results-oriented India.

A fresh push for green hydrogen

(Source: The Hindu)

Context: *India will soon join 15 other countries in the hydrogen club as it prepares to launch the National Hydrogen Energy Mission (NHEM). The global target is to produce 1.45 million tonnes of green hydrogen by 2023. Currently, India consumes around 5.5 million tonnes of hydrogen, primarily produced from imported fossil fuels. In 2030, according to an analysis by the Council on Energy, Environment and Water (CEEW), green hydrogen demand could be up to 1 million tonnes in India across application in sectors such as ammonia, steel, methanol, transport and energy storage. However, several challenges in scaling up to commercial-scale operations persist. We propose five recommendations.*

Key steps

- First, decentralised hydrogen production must be promoted through open access of renewable power to an electrolyser (which splits water to form H2 and O2 using electricity).
    - Currently, most renewable energy resources that can produce low-cost electricity are situated far from potential demand centres.
    - If hydrogen were to be shipped, it would significantly erode the economics of it.
    - A more viable option would be wheeling electricity directly from the solar plant.
    - For instance, wheeling electricity from a solar plant in Kutch to a refinery in Vadodara could lower the transportation cost by 60%, compared to delivering hydrogen using trucks.
    - However, the electricity tariffs could double when supplying open-access power across State boundaries.
    - Therefore, operationalising open access in letter and spirit, as envisioned in the Electricity Act, 2003, must be an early focus.
- Second, we need mechanisms to ensure access to round-the-clock renewable power for decentralised hydrogen production.
    - To minimise intermittency associated with renewable energy, for a given level of hydrogen production capacity, a green hydrogen facility will typically oversize the electrolyser, and store hydrogen to ensure continuous hydrogen supply.
    - However, such a configuration would also generate significant amounts of excess electricity.
    - Therefore, as we scale up to the target of having 450 GW of renewable energy by 2030, aligning hydrogen production needs with broader electricity demand in the economy would be critical.
- Third, we must take steps to blend green hydrogen in existing processes, especially the industrial sector. Improving the reliability of hydrogen supply by augmenting green hydrogen with conventionally produced hydrogen will significantly improve the economics of the fuel. This will also help build a technical understanding of the processes involved in handling hydrogen on a large scale.
- Fourth, policymakers must facilitate investments in early-stage piloting and the research and development needed to advance the technology for use in India.

  - The growing interest in hydrogen is triggered by the anticipated steep decline in electrolyser costs.
  - India should not be a mere witness to this. Public funding will have to lead the way, but the private sector, too, has significant gains to be made by securing its energy future.
- Finally, India must learn from the experience of the National Solar Mission and focus on domestic manufacturing.
  - Establishing an end-to-end electrolyser manufacturing facility would require measures extending beyond the existing performance-linked incentive programme.
  - India needs to secure supplies of raw materials that are needed for this technology.
  - Further, major institutions like the DRDO, BARC and CSIR laboratories have been developing electrolyser and fuel-cell technologies.
  - There is a need for a manufacturing strategy that can leverage the existing strengths and mitigate threats by integrating with the global value chain.
- Even before it has reached any scale, green hydrogen has been anointed the flag-bearer of India's low-carbon transition. Hydrogen may be lighter than air, but it will take some heavy lifting to get the ecosystem in place.

From Petro to Electro

(Source: Down to Earth)

Context: *India aims to generate 40 per cent of its energy from renewable sources by 2030 and become a 30-40 per cent electric vehicle (EV) nation. The target gives one the impression that India is well poised for energy transition.*

Details:

- In 2019-20, India imported about Rs8,500 crore worth of Li-ion batteries. Same was the case in 2018-19. This is a six-fold rise from 2014-15. India almost entirely depends on global (especially Chinese) resources and technology for this energy transition. Recent tensions with China have made the country even more aware of this dependence.
- Self-reliance and localisation are, therefore, high on national priority, but this needs firmer strategies. Already, the government has rolled out a subsidy and charging infrastructure-based incentive programme called Faster Adoption and Manufacturing of Electric Vehicles (FAME) in 2015.
- As part of the post-pandemic economic recovery, it has announced Production Linked Incentive (PLI) scheme, under which Rs 18,000 crore have been allocated for developing EV battery chemistry and promoting investment in manufacturing.
- Under PLI, manufacturers would be given a grace period of five years from notification of the scheme to ensure adequate localisation. While the first few years may see large-scale import of cell components, such as electrodes and electrolytes, higher value capture is likely in the years to follow.
- PLI provides incentives between 2 and 12 per cent of the incremental sales revenue and between 4 and 7 per cent of incremental exports revenue. Incentives will be disbursed based on performance in the areas of cell manufacturing.
- India is also setting targets for giga-scale battery storage factories.
- NITI Aayog has proposed to the government that each kilowatt hour of the manufacturing of the Li-ion cell should be given a direct fiscal incentive and that it should be a production-linked direct fiscal incentive. It is believed that 60-70 per cent of the value addition is possible locally.\
- Localisation will require local component and battery development to customise to Indian conditions while reducing the cost of manufacturing, he says and the auto industry is in consultation with the government to suggest refinement to the scheme.
- Though localisation has drawn policy attention, industry is waiting and watching.

States push for cell makers

- Multiple state governments, too, have framed or are framing EV policies and offering capital subsidies to match those of the Union government to help build supply.
- Invest India, the national investment promotion and facilitation agency under the Department for Promotion of Industry and Internal Trade, Ministry of Commerce and Industry, provides information in this regard.
- Gujarat has seen large-scale investments for Li-ion battery manufacturing and is offering subsidised utilities, while Telangana is earmarking land for manufacturing unit at a concessional rate. Andhra Pradesh has announced allocation of land for an electric mobility-focused industrial park and capital subsidies of 50 per cent on fixed capital investments in common infrastructure. Karnataka has focussed on R&D and interest-free loans for EV manufacturing.
- Tamil Nadu is offering subsidised land and incentives. The first five giga-factories in Maharashtra will get capital subsidies on fixed capital investments and the state government will be an equity partner. Haryana, Punjab, Bihar, Uttar Pradesh and Rajasthan are working towards ecosystem required for the industry.
- US-based car manufacturer Tesla is already in Bengaluru to import completely built-up units, but also has plans to start production. This may also bring battery partners Panasonic and LG Chem. Delhi, too, has a comprehensive EV policy.

Industry thinks big in small

- There is more optimism about quicker scale of change in the e-two-wheeler segment. With 40 players, of which 27 are Indian start-ups, the e-two-wheeler market is crowded. Compared to 3,400 e-four-wheelers and 600 e-buses, India sold 152,000 e-two-wheelers in 2019-2020.
- The popularity of e-two-wheelers has a lot to do with their small batteries that are easier to charge at home and do not need public charging. The sheer numbers make e-two-wheelers the immediate candidate for ambitious electrification target.
- Start-ups and non-conventional players in this segment are moving aggressively with innovative business models than the conventional players. Ather Energy Pvt Ltd, an Indian EV company, manufactures all components in-house except battery cells which it imports from China.
- Okinawa Autotech Pvt Ltd, another Indian e-two-wheeler company, is expanding capacity and setting up a manufacturing plant in Rajasthan. Taxi aggregator Ola Electric is setting up an e-two-wheeler manufacturing facility in Tamil Nadu. Even Mahindra & Mahindra plans to launch a product in this segment.
- Integrated business model is a necessity in this segment. Ravneet Phokela, chief business officer, Ather Energy, says they have “taken the route of intertwined ecosystem to build an integrated platform to go beyond just assembling of vehicles”.
- This includes battery management systems, motor, controllers, charging infrastructure and connected dashboard.
- The car industry is slower to respond, as the demand is low. But it is also looking at an ecosystem approach. The Maruti-Suzuki alliance is building supply chain and skills and also setting up battery manufacturing plant. Suzuki Motor Corp, along with Toshiba Corp and Denso Corp, is setting up a Li-ion battery manufacturing plant. But their electrification strategy is likely to be pushed to 2025. Mahindra started early and is building its product line.
- In the bus segment, 55 per cent of the orders under FAME till 2019-20 are said to have been won by Indian industry that partnered with Chinese firms. The dependence on China is more due to the lower costs of materials in China. But the scenario is changing.
- Tata Power, the leader in the sector, is setting up indigenous supply chain including batteries. Tesla Inc may tie up with Tata Power to set up charging infrastructure for EVs. Overall, in the four wheelers segment, lack of competition and a low fleet volume have dampened import substitution efforts so far.

Resource rush is on

- Mirroring the global trend, India is looking at accessing mines globally for tying up sources for battery raw materials. Khanij Bidesh India Ltd, a joint venture of National Aluminium Co, Hindustan Copper Ltd and Mineral Exploration Corp, is acquiring lithium and cobalt mines overseas.
- It is reported that two-thirds of the minerals required to achieve the energy transition goals are already available in the country. For the rest, the government is signing up battery mineral sourcing agreements with Latin American countries and Australia.
- While industry blames "not enough traction" to build consumer demand and infrastructure, consumers rue that there are not many quality products in the market. This "chicken and egg" syndrome can be dispelled only with policy mandates, targets and long-term policy commitments. Consumer awareness on e-models is low, hindering progress.
- Global experience shows the government will have to be the prime mover to jump start the big change in industrial policy and consumer demand. FAME, PLI and state-level policies are steps forward but do not add up to achieve the required scale of change.
- Entrenched in manufacturing of internal combustion engines, the auto industry is resistant to ambitious and urgent electrification targets, especially after recent investment in BS-VI emissions standards.
- Global experience shows India needs targets for electrification, credit-based zero emissions mandate (including sales and purchase mandate), and a holistic industrial and trade policy to build the ecosystem for the massive change. When major global markets are aiming for 100 per cent electrification over the next two decades, can India remain insular?
- But the Indian auto sector is weary of the zero emissions mandate.
- The battery industry is also seeking more support for charging infrastructure. Though the infrastructure expansion will bring more private investment, financial strategies are still needed.
- The overall sense in the industry is that it is important to incentivise players to setup local manufacturing and to have more rational cost structures to lower investment costs. This is needed to build supplies, jobs and skills around EVs while stimulating consumer demand.
- Other large business houses have begun to show interest in the battery sector. Reliance is reportedly looking at energy storage for renewables and other electronics to leverage synergies among the businesses (including mobile phones and cell towers) that use lithium ion batteries. They may offer a future option to diversify into electric vehicles.
- The economics of electric mobility, as opposed to the internal combustion engine economy, is India's chance to stay ahead of the global curve. While there will be restructuring in trade to access battery materials and mines, domestic industry and market development is necessary.
- An electro-economy is an inevitable reality. The quicker India prepares for this change, the bigger will be the economic spin off, along with low carbon and health benefits.

Current Affairs Quiz

1) Which of the following statements is/are correct with respect to System for Assessment, Awareness & Training for the Hospitality Industry (SAATHI)?

1. It aims to assist the hospitality industry in their preparedness to continue operations safely and mitigate risks arising out of the COVID-19 pandemic.
2. It was launched by the Ministry of Tourism in partnership with Quality Council of India (QCI).

Select the correct answer code:

a. 1 only
b. 2 only
c. Both 1 and 2
d. Neither 1 nor 2

Answer : c
Both statements are correct

2) Consider the following statements with respect to the recently released report, Climate Vulnerability Assessment for Adaptation Planning in India Using a Common Framework:

1. It was released by the Department of Science and Technology.
2. It identifies eight states, located mostly in the eastern part of the country, as highly vulnerable to climate change.

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

Answer : c
Both statements are correct

3) Nongkhyllem Wildlife Sanctuary is located in -

a. Sikkim
b. Meghalaya
c. Arunachal Pradesh
d. None of the above

Answer : b

4) Which of the following countries does not share borders with Black Sea?

1. Serbia
2. Russia
3. Greece
4. Bulgaria
5. Romania

Select the correct answer using the codes given below:

a. 2 and 3 only
b. 1, 3 and 5 only
c. 2, 4 and 5 only
d. All of the above

Answer : a

5) Which of the following statement is incorrect about elephants?

a. African elephants and Asian elephants are different species
b. Elephant calves can stand up and walk after one week after birth
c. Males leave their family after puberty and roam with other males or singly

d. Elephants can detect and communicate with seismic signals

Answer : b

- Elephant calves can, in fact, stand a mere 20 minutes after birth.

6) Consider the following statements with respect to Wholesale Price Index:

1. The WPI captures only the average movement of wholesale prices of goods and not services.
2. It is released by the Economic Advisor in the Ministry of Commerce and Industry.

Which of the statements given above is/are incorrect?

a. 1 only
b. 2 only
c. Both 1 and 2
d. Neither 1 nor 2

Answer : d

Both statements are incorrect

7) Consider the following statements with respect to Multisystem Inflammatory Syndrome in Children (MIS-C):

1. It is related to a surge of inflammation triggered by an immune response to the virus, particularly connected to Covid-19
2. Neurological symptoms of the syndrome include hallucinations, confusion, speech impairments, and problems with balance and coordination.

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

Answer : c

Both statements are correct

8) Consider the following statements with respect to Currency Manipulators Watch List:

1. It is a semi-annual report released by World Bank which tracks foreign exchange reserves of a nation.
2. Inclusion in the list does not subject to any kind of penalty and sanctions but it deteriorates the global financial image of the country.

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

Answer : b

The US Department of Treasury releases the semi-annual report where it has to track developments in international economies and inspect foreign exchange rates.

9) Global Diabetes Compact is launched by which of the following group?

a. World Health Organization
b. World Diabetes Foundation
c. Doctors without Borders
d. International Diabetes Federation

Answer : a

10) Which of the following statements is/are incorrect with respect to Ultra White Paint recently created by a team of researchers fro Purdue University?

1. It is made of calcium carbonate and reflects 85% of white light.
2. It remains cooler than the ambient temperature in full sunlight.

Select the correct answer code:

a. 1 only
b. 2 only
c. Both 1 and 2
d. Neither 1 nor 2

Answer : a

The team of researchers from Purdue University have created an ultra-white paint made up of barium sulphate.

Barium Sulphate is used to make photo paper and cosmetics white. Different sized particles of this chemical compound, helps in scattering different amounts of light.

The new ultra white white paint reflects 99% of all light that hits it, remaining significantly cooler than the ambient temperature, even when sitting in full sunlight.

11) Consider the following statements with respect to Khajuraho Temples:

1. It is located in the state of Madhya Pradesh and managed by the Archaeological Survey of India (ASI).
2. It was built between 950-1050 AD by the Chandela Dynasty.
3. The Khajuraho group of monuments have been recognised by UNESCO as a World Heritage Site in 1986.

Which of the statements given above is/are correct?

a. 1 and 2 only
b. 1 and 3 only
c. 2 and 3 only
d. 1, 2 and 3

Answer : d

12) Consider the following statements with respect to energy sector in India:

1. More than half of India's total installed electricity generation is based on renewables.
2. India is the first country to formulate a basic hydrogen strategy.

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

Answer : d

38% of India's total installed electricity generation is based on renewables.

Japan is the first country to formulate a basic hydrogen strategy.

13) Consider the following statements with respect to ALH Mk III?:

1. It is a multirole helicopter with Shakti engine manufactured by Hindustan Aeronautics Limited (HAL).
2. It will be primarily used for Search and Rescue, Special Operations and Coastal Surveillance.

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

Answer : c

Both statements are correct

14) Which of the following statements is/are correct with respect to Startup India Seed Fund Scheme (SISFS)?

1. The fund aims to provide financial assistance to startups which provides proof of concept and a developed prototype.
2. The scheme was launched by the Ministry of Commerce and Industry.

Select the correct answer code:

a. 1 only
b. 2 only
c. Both 1 and 2
d. Neither 1 nor 2

Answer : b

Funding from angel investors and venture capital firms becomes available to startups only after the proof of concept has been provided.
Similarly, banks provide loans only to asset-backed applicants. It is essential to provide seed funding to startups with an innovative idea to conduct proof of concept trials.

15) Consider the following statements with respect to the "Cities combating plastic entering the marine environment" agreement, recently signed by India:

1. The project which aims to enhance practices to prevent plastic entering the marine environment will be undertaken in all India states for a period of three and a half years.
2. The project was signed between India and the Federal Republic of Germany.

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

Answer : b

The project will be undertaken at the national level (at MoHUA), select states (Uttar Pradesh, Kerala and Andaman & Nicobar Islands) and in the cities of Kanpur, Kochi and Port Blair for a period of three and a half years.

16) Consider the following statements with respect to Exotic Animals

1. It usually refers to a wild animal or one that is more unusual and rarer than normal domesticated pets like cats or dogs.
2. Wildlife Protection Act 1972, provides protection to all exotic animals that are in India.

Which of the above statements is/are incorrect?

a. 1 only
b. 2 only
c. Both 1 and 2
d. Neither 1 nor 2

Answer : b

Not all exotic animals are protected under Wildlife Protection Act.

17) Which of the following goods are not components of Wholesale Price Index?

1. Crude Petroleum
2. Fruits
3. LPG
4. Cement
5. Tobacco products

Select the correct answer using the codes given below:

a. 1, 3 & 5 only
b. 4 & 5 only

c. 2, 4 & 5 only
d. None of the above

Answer : d
All of the above are components of WPI.

18) Consider the following statements with respect to Right to Freedom of Movement :
1. It is protected against only state action and not private individuals.
2. It is guaranteed under Article 19 of the Indian Constitution.

Which of the above statements is/are correct?
a. 1 only
b. 2 only
c. Both 1 and 2
d. Neither 1 nor 2

Answer : c

19) Which of the following group has established World Heritage Day?
a. World Monuments Fund (WMF)
b. Indian National Trust for Art and Cultural Heritage (INTACH)
c. Indian National Trust for Art and Cultural Heritage (INTACH)
d. Global Heritage Fund (GHF)

Answer : c
Every year, 18th April is celebrated as 'International Day for Monuments and Sites', also known as 'World Heritage Day'.

20) Which of the following statements is/are incorrect with respect to Centralised & Decentralised Payment Systems?
1. Centralised payment systems will include Cheque Truncation System (CTS) centres and Express Cheque Clearing System (ECCS) centres.
2. Decentralised payment systems will include Real Time Gross Settlement (RTGS) System and National Electronic Fund Transfer (NEFT) system.

Select the correct answer code:
a. 1 only
b. 2 only
c. Both 1 and 2
d. Neither 1 nor 2

Answer : c
The centralised payment systems will include Real Time Gross Settlement (RTGS) System and National Electronic Fund Transfer (NEFT) system and any other system as may be decided by RBI from time to time. The decentralised payment systems will include clearing houses managed by RBI (Cheque Truncation System (CTS) centres) as well as other banks (Express Cheque Clearing System (ECCS) centres) and any other system as decided by RBI from time to time.

April (Week 5)

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Prelims

NATIONAL

Maharashtra's two-child norm for government employees

(Source: Indian Express)

Context: *A woman officer from the Maharashtra Prison Department was dismissed from service after an inquiry revealed that she violated the Maharashtra Civil Services (Declaration of Small Family) rules because she suppressed the information from the authorities that she has three children.*

What is the 'children norm' or Maharashtra Civil Services (Declaration of Small Family) Rules, 2005?

- Maharashtra is one of the few states in the country that have a 'two children' policy for appointment in government jobs or even for the elections of some local government bodies.
- Other states such as Rajasthan, Madhya Pradesh, Andhra Pradesh and Telangana, Gujarat, Odisha, Uttarakhand and Assam being the latest addition to the list in 2019.
- The set of norms came into force in Maharashtra as Maharashtra Civil Services (Declaration of Small Family) Rules on March 28, 2005. The rules mandate filing a small family declaration at the time of applying for a government job.
- The definition of child under these rules does not include adopted children. The rules make the Small Family norm an additional essential requirement for Groups A, B, C, D of Maharashtra government employees.
- A person having more than two children more than two children on the date commencement of the rule (March 28, 2005), shall not be disqualified for appointment under these provisions so long as the number of children on the date of such commencement does not increase.
- Also, provided that one or more than one children are born in a single delivery within an year of the commencement, shall not be considered for the disqualification of the rules.
- The rules also empower the state government to give relaxation in 'just and reasonable' manner and mandates recording such reasons.

Ct value in a Covid-19 test

(Source: Indian Express)

Context: *Among various scientific terms that the Covid-19 pandemic has made part of the public vocabulary, one is the 'Ct value' in RT-PCR tests for determining whether a patient is positive for Covid-19. This was the subject of a recent request sent by the Maharashtra government to the Indian Council of Medical Research (ICMR). The state sought clarity whether it was advisable to treat a person as Covid-negative if the Ct value is more than 24 and the person is asymptomatic. State officials said various ICMR documents had mentioned different Ct values and there were divergent views even among Niti Aayog and the National Centre for Disease Control.*

What is Ct value?

- Short for cycle threshold, Ct is a value that emerges during RT-PCR tests, the gold standard for detection of the SARS-CoV-2 coronavirus.
- In an RT-PCR test, RNA is extracted from the swab collected from the patient. It is then converted into DNA, which is then amplified.
- Amplification refers to the process of creating multiple copies of the genetic material — in this case, DNA.
- This improves the ability of the test to detect the presence of virus. Amplification takes place through a series of cycles — one copy becomes two, two becomes four, and so on — and it is after multiple cycles that a detectable amount of virus is produced.
- According to the ICMR advisory, the Ct value of an RT-PCR reaction is the number of cycles at which fluorescence of the PCR product is detectable over and above the background signal.
- Put simply, the Ct value refers to the number of cycles after which the virus can be detected. If a higher number of cycles is required, it implies that the virus went undetected when the number of cycles was lower.
- The lower the Ct value, the higher the viral load — because the virus has been spotted after fewer cycles.

Why is it important?

- To put that in context, let us look at the ICMR advisory and Maharashtra's letter to ICMR. According to the ICMR, a patient is considered Covid-positive if the Ct value is below 35.
- In other words, if the virus is detectable after 35 cycles or earlier, then the patient is considered positive. If the benchmark were to be lowered to 24 — the value mentioned in Maharashtra's letter — it would mean that Ct values in the range 25-34 would not be considered positive.
- A benchmark of 35, therefore, means that more patients would be considered positive than we would get if the benchmark were 24. The ICMR has said lowering Ct threshold parameter may lead to missing several infectious persons.

What is the significance of the ICMR threshold of 35?

- Globally, the accepted cut-off for Ct value for Covid-19 ranges between 35 and 40, depending on instructions from the respective manufacturers of testing equipment.
- The ICMR has arrived at the Ct value of 35 based on laboratory experiences and inputs taken from several virology labs.
- There was no new advisory, but ICMR informed the Maharashtra government that it was not advisable to use a lower cycle threshold parameter as it would lead to missing several infectious persons and increase disease transmission.

Is there any correlation between a Ct value and severity of disease?

- No. Although Ct value is inversely correlated with viral load, It does not have any bearing on the severity of the disease, experts have said.
- A patient can have a low Ct value, which means her viral load is high enough to be detected rapidly, but she may still be asymptomatic.
- A small study published in the Indian Journal of Medical Microbiology in January this year found that there was no correlation between Ct values and severity of disease or mortality in patients with Covid-19 disease.
- It found that the time since the onset of symptoms has a stronger relationship with Ct values as compared to the severity of the disease.

Project Dantak

(Source: PIB)

Context: *Project DANTAK completes 60 years in Bhutan.*

About Project Dantak:
- Dantak is a BRO project that was initiated in 1961.
- It is headquartered at Simtokha, near Thimphu under a Chief Engineer.
- Project DANTAK has constructed, under GOI funding, over 1500 km of roads through very difficult mountainous terrain in Bhutan.
- Identifying the utmost importance of connectivity in the socio-economic development and growth of Bhutan, DANTAK was mandated with constructing motorable roads in the Himalayan kingdom.
- Project Dantak has built all the major highways such as the East-West highway (548 km) and Thimphu-Phuentsholing highway (181 km), airfields at Paro and Yangphula and airport terminal at Paro, a number of helipads, the Indo- Bhutan microwave link, Bhutan Broadcasting Station, India House Complex, Chhukha Hydroelectric Housing Complex, Power sub-stations, river training works, and several important buildings (including SAARC Convention Centre).
- The medical and educational facilities established by DANTAK in far flung areas were often the first in those locations.

'Large Area Certification' scheme

(Source: PIB)

Context: *Department of Agriculture, Cooperation and Farmers' Welfare (DAC&FW) is working to identify Traditional Organic Areas to transform them into certified organic production hubs.*

What's in the news?
- The Government of India has certified 14,491 ha of such area under Car Nicobar and Nancowry group of islands in the Andaman and Nicobar Islands.
- This area becomes the first large contiguous territory to be conferred with **organic certification under the 'Large Area Certification' (LAC) scheme** of the PGS-India (Participatory Guarantee System) certification programme.
- Under LAC, each village in the area is considered as one cluster/group.
- All farmers with their farmland and livestock need to adhere to the standard requirements and on being verified get certified en mass without the need to go under conversion period.
- Certification is renewed on annual basis through verification by a process of peer appraisals as per the process of PGS-India.
- The LAC is a quick certification programme under the Paramparagat Krishi Vikas Yojana.

Benefits of LAC:
- As per the established norm of organic production systems, the areas having chemical input usage history are required to undergo a transition period of minimum 2-3 years to qualify as organic.
- During this period, farmers need to adopt standard organic agriculture practices and keep their farms under the certification process.

- On successful completion, such farms can be certified as organic after 2-3 years. The certification process also requires elaborate documentation and time to time verification by the certification authorities.
- Whereas under LAC requirements are simple and the area can be certified almost immediately.
- LAC is a quick certification process that is cost-effective and farmers do not have to wait for 2-3 years for marketing PGS organic certified products.

Aditya-L1 Support Cell (AL1SC)

(Source: PIB)

Context: *A community service centre has been set up to bring all data on board India's first dedicated solar space mission to a single web-based interface enabling the users to quickly look at the data and identify the interesting science cases.*

About AL1SC:

- The community service centre is called Aditya-L1 Support Cell (AL1SC).
- It is a joint effort of the Indian Space Research Organisation (ISRO) and the Aryabhatta Research Institute of Observational Sciences (ARIES), an autonomous institute of the Department of Science & Technology, Government of India.
- It will be used by the guest observers in analyzing science data and preparing science observing proposals.
- AL1SC set up at the transit campus of ARIES at Haldwani, Uttarakhand, will jointly work with ISRO to maximize utilization of science data from Aditya-L1 and facilitate India's first dedicated solar space mission, Aditya-L1.
- The centre will act as conduit between the users (student and faculty members from research institutes/universities/colleges, etc.) and payload teams of Aditya-L1 and the solar astronomy research community at large.
- It is slated to develop specific tools to assist guest observers/researchers to prepare observing proposals for Aditya-L1 observations and will assist ISRO with the design and development of the required analysis software for handling scientific data.
- The centre will also provide the co-aligned data from other observatories around the world that can complement the data obtained from Aditya-L1 allowing users to accomplish the science goals beyond the capabilities of the Aditya-L1.
- In addition to this, AL1SC will also build capacity by establishing periodic training of the national user community on data analysis and proposal preparation.

Python-5

(Source: PIB)

Context: *DRDO conducts maiden trial of Python-5 Air to Air Missile.*

About Python-5:

- Python is a family of air-to-air missiles (AAMs) built by the Israeli weapons manufacturer Rafael Advanced Defense Systems.

- Now, India's indigenous Light Combat Aircraft Tejas has added the 5th generation Python-5 Air-to-Air Missile in its air-to-air weapons capability.
- Python 5 is the newest member in the range of Python AAMs.
- The successful trials were conducted by the DRDO in Goa.
    - Prior to these trials, extensive missile carriage flight tests were conducted at Bengaluru to assess integration of the missile with aircraft systems on board the Tejas, like avionics, fire-control radar, missile weapon delivery system and the flight control system.
- The missile can engage enemy aircraft from very short ranges and near beyond visual range.
- Python-5 is considered among the most sophisticated guided missiles in the world.

Exercise Varuna 2021

(Source: PIB)

Context: *Exercise Varuna 2021 concluded recently.*

About Exercise Varuna:

- Exercise Varuna is an Indo-French naval exercise that is held annually since .
- 2021 was the 19th edition of the exercise and it was held in the Arabian Sea.
    - From the Indian Navy's side, INS Kolkata guided missile stealth destroyer, INS Tarkash and INS Talwar guided missile frigates, INS Deepak Fleet Support Ship, with Seaking 42B and Chetak helicopters, a Kalvari-class submarine and P8I Maritime Patrol Aircraft participated.
- The "Varuna" joint exercise is part of the Clemenceau 2021 deployment the French Navy is conducting from February to June 2021 in the eastern Mediterranean, the Gulf and the Indian Ocean (Arabian Sea).
    - Its goal is to contribute to the stabilization of strategic zones and strengthening cooperation with the navies of partner countries, in particular India for the Indian Ocean component.
    - As part of this deployment, the carrier strike group is also taking part in anti-ISIS operations.
- The bilateral naval exercise was initiated in 1983 and it was christened 'Varuna' in 2001.

DRDO develops crystal blades for aero engines

(Source: The Hindu)

Context: *In a major technological breakthrough, the Defence Research and Development Organisation (DRDO) said it has developed single crystal blade technology and supplied 60 of such blades to the Hindustan Aeronautics Limited (HAL) as part of their indigenous helicopter development programme for helicopter engine application.*

Details:

- "It is part of a programme taken up by the Defence Metallurgical Research Laboratory (DMRL), a laboratory of the DRDO, to develop five sets, 300 in number, of single crystal high pressure turbine (HPT) blades using a nickel-based super alloy," the DRDO said in a statement.
- The supply of the other four sets would be completed in due course, it said.
- **Very few countries such as the U.S., the U.K., France and Russia have the capability to design and manufacture such single crystal components**, it said. The DRDO has been working for a long time to develop this technology which is a critical component in aero engines.

- Helicopters need compact and powerful aero-engines for operating at extreme conditions and to achieve this, state-of-the-art single crystal blades having complex shape and geometry, manufactured out of nickel-based super alloys capable of withstanding high temperatures of operation are used.

Government of National Capital Territory of Delhi (Amendment) Act, 2021

(Source: The Hindu)

Context: *The Ministry of Home Affairs issued a gazette notification stating that the provisions of the* ***Government of National Capital Territory of Delhi (Amendment) Act, 2021****, would be deemed to have come into effect from April 27.*

Details:

- The Act, which gives the Lieutenant-Governor of Delhi more teeth and significantly waters down the powers of both the elected government and the Legislative Assembly, will clarify the expression "Government" and address "ambiguities" in the legislative provisions to promote "harmonious relations between the legislature and the executive".

- The move comes a day after the Delhi High Court cautioned the Delhi government to put its "house in order" over the issue of inadequate oxygen supply in the city, adding that the Centre would be asked to take over if it could not manage the situation.
- Coming as the development does in the middle of the COVID-19 pandemic, the Act is expected to trigger another round of confrontation between the L-G and the Delhi government under AAP.
- **The Act defines the responsibilities of the elected government and the L-G along with the "constitutional scheme of governance of the NCT" interpreted by the Supreme Court in recent judgments regarding the division of powers between the two entities**.
- It will also seek to ensure that the L-G is "necessarily granted an opportunity" to exercise powers entrusted to him **under proviso to clause (4) of Article 239AA of the Constitution**.
- This particular clause provides for a Council of Ministers headed by a Chief Minister for the NCT to "aid and advise the Lieutenant-Governor" in the exercise of his functions for matters in which the Legislative Assembly has the power to make laws.

'Covaxin shields from B.1.617'

(Source: The Hindu)

Context: *A study has found that people who have been vaccinated with Covaxin have protection against the double mutant (B.1.617) variant first found in India.*

Details:

- A preprint of the study carried out by the Indian Council of Medical Research (ICMR) and Bharat Biotech researchers has been posted in biorXiv. Preprints are yet to be peer-reviewed and published in medical journals.
- **An earlier study had found that Covaxin neutralises the B.1.1.7 variant first found in the U.K.**
- **The B.1.617 variant has two mutations — E484Q and L425R** — of concern.
- These mutations are found in the receptor-binding domain of the spike protein.

- Though how the two mutations behave individually is well-known, the combined effect of these mutations when present together is not known.

Oxygen Concentrators during COVID-19

(Source: PIB)

Context: *As India battles the 2nd wave of the COVID-19 pandemic, the surge of new infections has resulted in an alarming increase in the number of active cases. The resultant stress on our public health infrastructure has led to a big spike in demand for oxygen concentrators.*

Details:

- To survive, we need a steady supply of oxygen, flowing from our lungs to various cells in the body. COVID-19 is a respiratory disease which affects our lungs and can cause the oxygen level to drop to dangerous levels.

- In such a situation, we would need to undergo what is known as oxygen therapy – using oxygen for medical treatment, to enhance our oxygen levels to clinically acceptable levels.
- Oxygen level is measured by oxygen saturation, known briefly as SpO2. This is a measure of the amount of oxygen-carrying haemoglobin in the blood. A healthy individual with normal lungs, will have an arterial oxygen saturation of 95% – 100%.
- According to a WHO training manual on pulse oximetry, if the oxygen saturation is 94% or lower, the patient needs to be treated quickly. A saturation of less than 90% is a clinical emergency.
- Now, according to the latest clinical guidance for management of adult COVID-19 patients, issued by the Ministry of Health & Family Welfare, an oxygen concentration less than or equal to 93% on room air requires hospital admission, while that below 90% is classified as a severe disease, requiring admission in ICU.
- However, given the prevalent situation in the wake of the 2nd wave, we must do whatever we best can, in order to try and replenish our oxygen levels, in the event of delay or inability in getting hospital admission as per the clinical management protocol.

Oxygen Concentrator – how does it work ?

- We know that atmospheric air has roughly 78% nitrogen and 21% oxygen. Oxygen concentrators are simple devices which do precisely what its name promises – they take in ambient air and increase the oxygen concentration, by filtering out and throwing away nitrogen.
- These Oxygen concentrators work the same way in supplying oxygen needed by the body such as oxygen tanks or cylinders, with the use of a cannula, oxygen masks or nasal tubes.
- The difference is that, while the cylinders need to be refilled, the Oxygen Concentrators can work 24 x 7.

O2 Concentrators market in India

- India has seen a big spurt in manufacture and sale of Oxygen concentrators. Besides multi-national brands, several Indian start-ups, funded under the CAWACH (Centre for Augmenting War with Covid

19 Health Crisis) programme of Department of Science & Technology, have developed efficient and cost effective Oxygen Concentrators.

- Given their usefulness during the second wave of Covid Pandemic, 1 lakh Oxygen Concentrators are being procured through PM CARES fund.

INTERNATIONAL

The Lag B'Omer festival of Israel

(Source: Indian Express)

Context: *At least 44 people were crushed to death in a stampede as tens of thousands of ultra-Orthodox Jews gathered in northern Israel to celebrate the annual Lag B'Omer festival. Over 150 people have also been injured in the stampede, with several in critical condition. The incident is widely being described as one of the country's deadliest civilian disasters.*

What is the Lag B'Omer festival?

- Lag B'Omer is an annual Jewish festival observed during the Hebrew month of Iyar. It is celebrated on the 33rd day of the Omer, the 49-day period between Passover and Shavuot.
- Lag B'Omer is the only day during the 49-day period when celebration is permitted.
- Hence, it is common for Jews to schedule weddings on this day every year. Young boys, who have reached the age of three, are also traditionally brought here for their first hair cut.
- To mark the occasion, tens of thousands of ultra-Orthodox Jewish pilgrims make their way to the base of Mount Meron every year, to pay their respects to Rabbi Shimon Bar Yochai, a second century sage and mystic, who is believed to have died on this day. The Rabbi's tomb is a much revered holy site in Israel.

Who was Rabbi Shimon?

- Rabbi Shimon was said to have been a gifted Talmudic scholar and a disciple of Rabbi Akiva, one of the greatest Jewish sages of all time.
- According to some accounts, Rabbi Shimon authored the 'Zohar', which is the main work of Kabbalah, or Jewish mysticism.
- Jews believe that on the day of his death, Rabbi Shimon told his disciples the many secrets of the Kabbalah, which some believe is how Lag B'Omer became a day of celebration. Bonfires are often lit on the day to represent the knowledge and wisdom he shared with his followers.
- Others believe that a deadly plague that killed 244,000 of Rabbi Akiva's followers ended on this day. Rabbi Shimon was said to have been among the few people who survived.

Supply Chain Resilience

(Source: The Hindu)

Context: *The Supply Chain Resilience Initiative (SCRI) formally launched by the Trade Ministers of India, Japan and Australia brought a wary response from China, which has described the effort as 'unrealistic'.*

Details:

- The three sides agreed the pandemic "revealed supply chain vulnerabilities globally and in the region" and "noted the importance of risk management and continuity plans in order to avoid supply chain disruptions".
- Some of the joint measures they are considering include supporting the enhanced utilisation of digital technology and trade and investment diversification, which is seen as being aimed at reducing their reliance on China.

- "The SCRI aims to create a virtuous cycle of enhancing supply chain resilience with a view to eventually attaining strong, sustainable, balanced and inclusive growth in the region," a statement said.

The SIPRI report

(Source: Indian Express)

Context: *In its report on trends in global military expenditure in 2020, the Stockholm International Peace Research Institute (SIPRI) has found that the world's top military spenders — the US, China and India — saw their military spending go up compared to 2019, even during a pandemic year.*

Details:

- Last year, the US spent a total of $778 billion, China spent $252 billion and India's military expenditure was $72.9 billion.
- While India's spending since 2019 grew by 2.1 per cent, the increase for China was more moderate, at 1.9 per cent. The US saw a 4.4 per cent growth over its 2019 expenditure.
- In total, the global military expenditure rose to $1981 billion last year, an increase of 2.6 per cent in real terms from 2019, the report said.
- It mentioned that the "2.6 per cent increase in world military spending came in a year" when the global GDP shrank by 4.4 per cent (October 2020 projection by the International Monetary Fund), "largely due to the economic impacts of the Covid-19 pandemic".

What SIPRI does

- The Sweden-based SIPRI is an independent international institute dedicated to research into conflict, armaments, arms control and disarmament.
- It was established on the basis of a decision by the Swedish Parliament and receives a substantial part of its funding in the form of an annual grant from the Swedish Government.
- Established in 1966, SIPRI provides data, analysis and recommendations, based on open sources, to policymakers, researchers, media and the interested public.

What the 2020 report says

- In 2020, the United States' military spending was 3.7 per cent of its GDP while the corresponding numbers for China and India were 1.7 per cent and 2.9 per cent respectively.
- From 2011 to 2020, American military expenditure dropped by 10 per cent, but China saw a 76 per cent growth while India's military spending grew by 34 per cent.
- SIPRI said that military spending in Asia and Oceania "was 2.5 per cent higher in 2020 than in 2019 and 47 per cent higher than in 2011, continuing an uninterrupted upward trend since at least 1989" and attributed the rise "primarily to increases in spending by China and India, which together accounted for 62 per cent of total military expenditure in the region in 2020".
- The other top spenders included Russia with $61.7 billion, the UK at $59.2 billion, Saudi Arabia at $57.5 billion, followed by Germany and France at just under $53 billion each.
- Releasing the latest data, SIPRI said that the total "global military expenditure rose to $1981 billion last year, an increase of 2.6 per cent in real terms from 2019" and the "five biggest spenders in 2020, which together accounted for 62 per cent of global military expenditure".
- As a consequence of the reduction in global GDP last year, it said that "military spending as a share of GDP—the military burden—reached a global average of 2.4 per cent in 2020, up from 2.2 per cent in 2019," which, it said, "was the biggest year-on-year rise in the military burden since the global financial and economic crisis in 2009".

- While military spending did rise globally, some countries explicitly reallocated part of their planned military spending to pandemic response, such as Chile and South Korea, and many others, including Brazil and Russia, spent considerably less than their initial military budgets for 2020, the report said.

International Space Station

(Source: The Hindu)

Context: *The International Space Station (ISS) is a landmark of international cooperation. For over 20 years, it has seen intense collaboration between the U.S., Russia, the EU, Japan and Canada, and has played host to people from 19 countries since its launch in 1998. This scenario appears to be coming to an end, as Russian space agency Roscosmos's chief has declared that Russia is ready to build its own space station and launch it by 2030 if President Vladimir Putin would give the go ahead. Further, in an interview to Russian TV, Deputy Prime minister Yuri Borisov said Russia would give notice and leave the ISS by 2025.*

About ISS

- The idea of the ISS was born in 1984 when Ronald Reagan, then the US President, announced it in a State of the Union address.
- Since then, the ISS project saw a collaboration grow between several countries, mainly the following space agencies: NASA (U.S.), Roscosmos (Russia), ESA (Europe), JAXA (Japan) and CSA (Canada). Though the programme began in 1993, the construction of the station started only in 1998.
- The ISS has been assembled section by section over several years. The first segment was launched on November 20, 1998 in a Russian proton rocket named Zarya (which means 'sunrise').
- The first human expedition to the station was launched in a Soyuz TM 31 rocket from Baikonur Cosmodrome in Kazakhstan. This crew became the very first to inhabit the ISS — these were NASA astronaut Bill Shepard and Yuri Gidzenko and Sergei Krikalev from Roscosmos, who reached the station on November 2, 2000 and stayed for several months.
- The assembling of the ISS has been a complex undertaking in itself. It took over 10 years and over 30 missions to bring it to its present form.
- Though the basic unit was launched in 1998, a photograph of the station taken in September 2000 from spaceship Atlantis looked markedly different from a picture taken in October 2018 by Expedition 56 members after undocking in a Soyuz spacecraft. Installation of different parts took place on close to 40 different occasions from 1998 to 2020.

Physics experiments

- Some of the early physical sciences experiments related to crystal growth. The newer ones study the behaviour of free-flying soccer balls in microgravity.
- More exotic sounding subjects include Janus particles, or particles that have two 'faces' with distinct properties — one side is hydrophobic and avoids water, while the other is hydrophilic and loves water.
- Studying these in microgravity reveals the fundamental physics behind microparticle self- assembly and the kinds of colloidal structures that can be fabricated.
- Do these experiments justify the amount of money that is spent on the ISS? There is a debate. It costs NASA about $3 billion to $4 billion a year just to maintain the station, and the total spending had gone up to $100 billion in 2018 itself. Would it be more fruitful to invest in space-based telescopes or missions other than the ISS?
- Under the Donald Trump administration, the U.S. reached out to private firms to participate in the space expeditions. American space research had been a governmental activity until this development. This showed NASA the way to cut the huge payments it had been making to Russia to ferry astronauts back and forth. The commercial equation was disrupted once again.

- For over 20 years, the ISS has remained an ideal of global unity and peace, at least in the realms of space. Will there be another such expensive investment in the areas of science and technology? There is no answer now, but, so far, the ISS is unique in being one such ideal.

Oldest water on Earth

(Source: Indian Express)

Context: *While NASA's Perseverance rover has been making news since reaching Mars in February, a 2016 study by Canadian geologists is also eliciting significant interest, for the clues it offers in the search for alien life, especially on the Red Planet. The research, published in Nature Communications, is based on a discovery made by Dr Barbara Sherwood Lollar of the University of Toronto, who in 2009 extracted from a Canadian mine water that is 1.6 billion years old– the oldest to be found on our planet. The discovery of the water 2.4 km below the Earth's surface has since been heralded as one of great importance, given its ramifications on what we know about the origin and evolution of our planet, the nature of water and life, as well as the* ***possibility of finding life on Mars****.*

The 'world's oldest water'

- Since 1992, Sherwood Lollar had been carrying out research at the Kidd Creek mine, located on the 2.7 billion-year-old Canadian Shield, one of the world's largest continental shields – meaning the oldest and least tectonically active parts of the Earth's crust.
- It was on an expedition in 2009 that a musty smell led Sherwood Lollar to make the crucial discovery. "It literally is following your nose right up to the rock, to find the crack or the fractures where the water is discharging," she told the magazine Maclean's. The water was highly saline– ten times saltier than sea water.
- According to the report, the researcher, who at the time was unaware of how old the water exactly was, sent a sample to UK's Oxford University, who informed her that it caused their mass spectrometer to break. Researchers then conducted studies for four years on the sample, finally settling at the 1.6 billion years figure.

What scientists found in the water

- Investigations into the highly saline water led to a pathbreaking discovery: scientists found that chemolithotrophic microbes– bacteria that can thrive in the most extreme surroundings– had been able to survive in the subterranean liquid.
- Researchers found that the microbes had been feeding on nitrogen and sulphate, and that the chemistry that supported them bore resemblance to ocean beds that are known to support similar such extreme life forms.
- As it happens, the Canadian Shield, on which the Kidd mine is located, in the past used to form an ocean floor, as per the report. Over millions of years of flux, however, its horizontal seabed became vertical, now preserved in the mine's rock walls from which the water sample was extracted.

Why this matters in the search for life on Mars

- Being a continental shield, which suffers the least from plate tectonic activity, the Canadian Shield is the closest analogue on Earth to the subsurface of Mars, researchers believe.
- Scientists argue that if life-supporting water can be found 2.4 km below the Earth, it may be possible that the same could be true in the case of the Red Planet. This hypothesis provides an impetus for missions like Perseverance, which are looking for signs of present or past life on Mars.

MOXIE

Context: *NASA has extracted oxygen from the carbon dioxide in the thin Martian atmosphere.*

Details:

- The unprecedented extraction of oxygen on Mars was achieved by a device called MOXIE aboard Perseverance, a six-wheeled science rover .
- It produced about 5 grams of oxygen, equivalent to roughly 10 minutes' worth of breathing for an astronaut.
- This is the first extraction of a natural resource from the environment of another planet.

About MOXIE:

- A technology demonstrator, MOXIE is designed to generate up to 10 grams of oxygen per hour, and is placed inside the Perseverance rover.
- It is the size of a car battery, weighing 37.7 pounds (17.1 kg) on Earth, but just 14.14 pounds (6.41 kg) on Mars.
- Over the next two years, MOXIE is expected to extract oxygen nine more times.

Why is producing oxygen on the Red Planet so important?

- Oxygen supply on Mars is essential for crewed missions to Mars– not just for astronauts to breathe but for rockets to use as fuel while coming back to Earth.
    - As per NASA, for four astronauts to take off from Mars, a future mission would require around 7 metric tons of rocket fuel and 25 metric tons of oxygen– around the weight of an entire space shuttle.
    - In contrast, **astronauts living and working on Mars would require far less oxygen to breathe,** maybe around one metric ton.
    - Thus, it will be an enormous challenge to haul the 25 metric tons of oxygen from Earth to Mars for the return journey, and that their job would become significantly easier if the liquified oxygen can be produced on the Red Planet.

Mains

GS II

Temples are not fiefdoms of the state

(Source: The Hindu)

Context: *No doubt the problem of hierarchical division in Hindu society is prevalent. But the issue of government control of temples is distinct from the issue of throwing open Hindu religious institutions to all classes and sections of society. To confuse the two is constitutionally misleading. Separate pieces of legislation exist — the [Madras] Temple Entry Authorisation Act, 1947 — to address these issues.*

A myth

- A myth is trotted out to justify sovereign control of temples: that Hindu temples were supervised and managed by kings, who "habitually employed ministries to supervise temples and charitable bodies". Like many myths the colonials perpetuated, this too must be disabused: there is not a shred of historical source to support this claim.
- On the contrary there are inscriptions, cast in stone, that attest that temples were managed wholly and entirely by local communities.
- Before turning to the solution, it would seem sensible to ask the question.

State in religion

- Why is the community demanding that the government stay away from temples? Unbridled corruption; theft and destruction.
- If the gross mismanagement of financial resources and indisputable corruption by the state along with the loss and destruction of temple antiquities were not sufficient reasons for the government to relinquish its (mis)management, a mere glance at state legislations will reveal a deeper malady.
- The state has assumed the role of religious functionaries to determine who will be heads of Mutts and the authority to conduct poojas.
- For example, The Shri Jagannath Temple Act, 1954 entrusted the committee appointed by the state with the task of ensuring the performance of seva pooja. When the Act was questioned by the Raja of Puri before the Supreme Court, in Raja Birakishore vs The State Of Orissa, the Court made a revelation: the performance of a puja is in fact a secular act and, therefore, the state is justified in its regulation.
- The exercise of state regulation of secular aspects of religion was taken to extreme lengths when the Court ruled that the state, by appointing temple priests, was exercising a secular function (Seshammal & Ors, Etc. Etc vs State Of Tamil Nadu).
- Whatever style of secularism we subscribe to, surely the Indian state is not to tell the believer how he/she is to offer worship to the deity nor is it to tell the custodian of the deity how she will be appointed.

Distinct aspects

- The writer of the article rightly points out that the Constituent Assembly framed the religious liberty clauses keeping in mind the historical prohibition of entry to certain classes and sections of Hindu society.
- Article 25(2) grants power to the State to enact law on two distinct aspects. Article 25(2)(a) empowers the state to regulate "economic, financial, political or other secular activities which may be associated

with religious practice". Article 25(2)(b) enables the state to enact law to prohibit the exclusion of 'classes and sections' of Hindu society to enter into Hindu temples of a public character and also make law for social welfare and reform.

- Thus, the control of secular aspects associated with religion and the power to throw open Hindu temples to all classes and sections of society are distinct. The control of secular aspects is not a measure of any social reform.
- Viewed from this standpoint, the Hindu Religious and Charitable Endowments Department is not a "tribune for social justice" as argued in the article nor has it ever guaranteed equal access to worship.
- Nowhere does the text of the Constitution permit the state to assume ownership of properties belonging to religious institutions and treat them as state largesse to be siphoned off.
- The only vestige of authority under the Constitution empowering the state to take over property of religious institutions is under Article 31A(b). Even then it is doubtful that this article covers property belonging to religious sects.
- The history of legislative practice of endowment laws reveals the state prerogative in ensuring regulation of only secular activities. As a matter of fact, the Shirur Mutt case, while upholding certain provisions of the 1951 Act, struck down a major portion of the Act characterising the provisions as a "disastrous invasion" of religious liberty. In 1959, the Legislature 'cured' the defects pointed out by the Supreme Court, by inserting verbatim the very provisions that the Supreme Court had stuck down in 1954.

Applicable to charities

- The Waqf Act justification for the legitimacy of control of Hindu religious endowments is misleading. A reading of the Act reveals that it applies to charities and specifically excludes places of worship such as mosques. In fact the scheme of the Waqf Act supports the argument that the government should not regulate places of worship.
- The most fundamental criticism against the release of Hindu temples from government control to the society is two-fold.
    - First, it is asked to whom will the temples be handed over to?
    - Second, once restored to the community, will it not perpetuate class hierarchies?
- What is being asserted by the community is the right of representation in the affairs of the management of temples.
- This right of representation can be effectuated by the creation of boards representative of religious heads, priests and responsible members from the dharmik sampradaya. The logic is simple. Members who profess a particular dharmik sampradaya will have its due interest in mind.

British legacy

- When the British government realised that a secular government should take no part in the management of religious institutions, it enacted the Religious Endowments Act (Act XX of 1863) repealing the pre-existing Bengal and Madras Regulations.
- Interestingly, in handing over the religious institutions to the society, it created committees in every district to exercise control over temples.
- Section 8 of the Act provided that the members of the committee to be appointed from persons professing the religion, for purposes of which the religious establishment was founded or maintained and in accordance with the general wishes of those who are interested in the maintenance of the institution.
- For this purpose the local government caused an election. In the spirit of equality of all religions, this scheme should be applicable to all religious institutions which would guarantee adequate community representation in the management of their places of worship.

Reforms in the National Pension System

(Source: The Hindu)

Context: *Started as the New Pension Scheme for government employees in 2004 under a new regulator called the Pension Fund Regulatory and Development Authority (PFRDA), the National Pension System (NPS) has been open for individuals from all walks of life to participate and build a retirement nest-egg. Given the dominance of informal employment in India, the Employees' Provident Fund Organisation, which is contingent on a formal employer-employee relationship, only covers a fraction of the workforce. The NPS has been gradually growing in size and now manages ₹5.78 lakh crore of savings and 4.24 crore accounts in multiple savings schemes. Of these, over 3.02 crore accounts are part of the Atal Pension Yojana (APY), a government-backed scheme for workers in the unorganised sector that assures a fixed pension payout after retirement. The rest constitute voluntary savings from private sector employees and self-employed individuals, for whom some significant changes are on the anvil.*

What overhaul is the PFRDA planning?

- The law regulating the NPS allows members to withdraw just 60% of their accumulated savings at the time of retirement.
- With the remaining 40%, it is mandatory to buy an annuity product that provides a fixed monthly income to retirees till their demise. Members who accumulate up to ₹2 lakh in their NPS account at the time of retirement are exempted from the mandatory annuitisation, and can withdraw the full amount.
- Last week, PFRDA chairman Supratim Bandyopadhyay said this limit will soon be revised to ₹5 lakh. Separately, the regulator has decided that the annuity purchase stipulation for 40% of members' retirement corpus should be dropped altogether. Legislative amendments to this effect are being worked out for Parliament's approval.

What prompted this rethink?

- Falling interest rates and poor returns offered by annuity products had triggered complaints from some members and experts about the compulsory annuitisation clause.
- With retail inflation running at about 5%-6% over the past year, the returns on annuities are, in fact, negative, even if one does not factor in the tax.
- To avoid forcing people into such an unattractive investment, the regulator has now proposed to give members a choice to retain 40% of their corpus with the NPS fund managers even after retirement.
- This, the PFRDA chief believes, will allow them to get better returns, and these savings can be paid out to members over 15 years through something like the systematic withdrawal plan offered by mutual funds.
- While this change shall need Parliament's nod, the expansion of the annuity-free withdrawal limit from ₹2 lakh to ₹5 lakh is being done immediately.
- "Suppose somebody reached ₹2.1 lakh at retirement, he will get an annuity component of ₹84,000, which, today, will give an income of ₹400 or ₹450 a month — a pittance. So, now, we will allow those with savings up to ₹5 lakh to take the entire corpus out if they choose," the PFRDA chief said.

Are there any other tweaks in the works?

- While different schemes under the NPS have given reasonable returns at a low fund-management cost so far, there has been a clamour for a guaranteed return product for large sections of potential investors with a high aversion to risk. An actuary is being appointed to suggest the design for such a product and the PFRDA hopes to launch its first guaranteed product soon.
- At least three more fund managers are expected to be appointed soon, which will take the total managers to ten. Age restrictions to join the NPS are also being eased to allow people to join the scheme up to the age of 70 years, from 65 years earlier.

- The reason is that over 15,000 recent NPS members joined after the age of 60 since the age limit was raised to 65 years from 60 years in 2017. So, as Indians' overall longevity improves, the population of "retired, but not so tired" will also have access to the NPS.

India-Bangladesh

(Source: The Hindu)

Context: *Bangladesh and India both celebrated the golden jubilee of Bangladesh's Independence recently, alongside the birth centenary of 'Banghabandu' Sheikh Mujibur Rahman. There was a predictable outburst of warm sentiments witnessed in Bangladesh on this occasion, but celebrations in India were on an extremely low key. The creation of Bangladesh — from the ashes of East Pakistan — is presumably India's finest foreign policy triumph till date, and it defies imagination why India has been so reticent in acknowledging this fact.*

The architect, India's stand

- A plausible reason put forward in certain quarters is that it possibly meant acknowledging the role of former Prime Minister Indira Gandhi in this seminal event, as she is widely acknowledged to be the real architect of this triumph, notwithstanding claims put forward by many a swashbuckling General and others in uniform.
- Hopefully this canard is not true, though she is currently being demonised for her so-called sins of commission and omission. It would amount to ignoring historical facts, for without Prime Minister Indira Gandhi, it is difficult to conceive of India pulling off such a triumph.
- This may sound like exaggerated praise, but anyone who had an opportunity to witness Mrs. Indira Gandhi's steely resolve during that period — as for instance when it was communicated to her during a meeting of the War Cabinet, that the U.S. Seventh Fleet (which included the nuclear powered aircraft carrier, Enterprise) was steaming up the Bay of Bengal, will hardly dispute this fact. Displaying no signs of diffidence, she made it clear that it made little difference to the cause that they had embarked upon.
- Few nations across the world can possibly boast of an achievement of this nature. What is even more noteworthy is that while accomplishing this task, India did not claim any 'spoils of victory'. After Pakistan's defeat in East Pakistan, India voluntarily and unconditionally, handed over power to the elected representatives of the newly established nation. Such magnanimity is seldom seen in the annals of world politics.

A year of significance

- Not too many among the current generation would remember that 1971 was a signal year for India. It was in 1971 that India had extended all out support to the Government in Sri Lanka to defeat the group, the Janatha Vimukthi Peramuna in that country.
- And, 1971 was again the year in which India contributed to the establishment of a new nation, Bangladesh, which was carved out of East Pakistan following a pogrom launched by the military rulers in Islamabad, that was unmatched in modern times. Half-a-century later, India would have done well to highlight and remind the world of these two events, to further embellish its democratic credentials.
- While India was busy scripting a new destiny for the people of East Pakistan, millions of refugees from East Pakistan were streaming into India. What was especially striking was that despite such a calamitous situation, and the strain on its resources, the Government of the day acted with extreme circumspection and did not give in to the rising clamour for any kind of premature military intervention in East Pakistan. It was to adhere to this position till Pakistan declared war on India in December 1971.

- Meantime, Sheikh Mujibur Rahman had been arrested and flown to West Pakistan. Tajuddin Ahmad had been secretly sworn in as the Prime Minister of an independent Bangladesh and installed in Mujibnagar, from where the new government-in-exile operated till the liberation of East Pakistan.
- India well recognised that before India could legitimately intervene in East Pakistan, the new government-in-exile had to acquire legitimacy, both within East Pakistan and also internationally. All this demonstrated political finesse of the highest order. It was not easy with over five million refugees coming into the country, conveying gruesome tales of untold atrocities.

Coordination and the goal

- At the diplomatic level, India did not act entirely alone. Prime Minister Indira Gandhi's carefully crafted diplomatic dispatches to world leaders had helped create a groundswell of support for the persecuted Bengalis of East Pakistan.
- The signing of the Indo-Soviet Treaty in August 1971 came as a shot-in-the-arm for India, encouraging it to stay the course. Russia's action was in marked contrast to the stand of western nations such as the United States which displayed hostility to India's efforts, viewing it as an encouragement to the forces seeking to dismember the state of Pakistan.
- Within the country, regular meetings and the constant dialogue with Opposition leaders ensured that India acted in a united manner, notwithstanding the public clamour for immediate action.
- India sought to intervene in East Pakistan, only after Pakistan attacked India on December 3, 1971.
- Three days later on December 6, India made the formal announcement of recognising the new state of Bangladesh, almost nine months after the Peoples' Republic of Bangladesh had been proclaimed by Sheik Mujibur Rahman. Still later in March 1972, India and Bangladesh signed a Treaty of Peace and Friendship.
- The events spread over several months that culminated in the emergence of a new nation, became possible only because of close coordination among the various limbs of the Government, which acted in concert to achieve the cardinal objective, viz., that the struggle of the people of East Pakistan should not go in vain.
- The West, however, erroneously believed the humanitarian disaster notwithstanding, that it could not let down its ally Pakistan, which was a member of several western-led military alliances. Quite a few other nations, while sympathetic to the plight of the beleaguered population of East Pakistan, were unwilling to extend support fearing the wrath of the U.S.

Operating from the shadows

- A great deal has been written about the military exploits in connection with the formation of Bangladesh — of the IndianArmy, the Indian Navy and the Indian Air Force. Very little has, however, been mentioned about the role of the intelligence agencies.
- Understandably so, since the intelligence agencies do not publicise their exploits and operate behind an iron curtain.
- Fifty years after Bangladesh gained Independence, it may, however, be time to give a pat on the back of the two principal intelligence agencies at the time — the Intelligence Bureau (IB) and the Research & Analysis Wing (R&AW/RAW).
- A vast network of agents had been created by the IB well before the organisation was bifurcated in 1968 into the IB and the R&AW, and the latter built on these assets. These agents played a critical role behind the scenes, preparing the ground for the eventual collapse of Pakistani Army resistance in East Bengal.
- At the risk of violating a cardinal rule of intelligence, it might also be the opportune moment to pay a silent tribute to one of the most outstanding secret agents of recent times, whose name and pseudonym will, however, have to remain a secret, but whose exploits were no less than that of the most celebrated spy of World War II, Richard Sorge.
- The time has also come to acknowledge the role of the Mukti Bahini — the Army of Bangladeshi irregulars — fashioned by the intelligence agencies which played a key role during the conflict. This seldom happens, but is worth a mention, at least in a newspaper article.

- The ultimate accolade for India's role in creating a new nation is that Bangladesh is today a relatively prosperous country, having made steady progress from the category of a Least Developed Country to a Developing country.
- Bangladesh "will get time up to 2026 to prepare for the transition to the status of a developing country". Few countries across the world expected the new nation to survive, let alone thrive, given that the nascent Bangladesh Government was functioning under an untested leader, Sheikh Mujibur Rahman; the country had been born amidst widespread and unprecedented violence and upheaval, possessed scarce resources, and was riven with internecine differences.

Bangladesh today

- Today, Bangladesh is a shining example of what is possible through human endeavour and a wise leadership. It has not allowed itself to be drawn into the vortex of foreign influences, and maintains an independent foreign policy.
- Relations with India are excellent today, though there have been periods when relations were not all that cordial. Currently, Bangladesh's annual GDP growth exceeds that of its erstwhile parent, Pakistan. Women empowerment has been a major catalyst in Bangladesh's progress, and this is largely responsible for transforming the country.
- India's achievement in enabling the people of East Pakistan to carve out a separate destiny for themselves and achieve full freedom from Islamabad, well mirrors what can be achieved when the political, diplomatic, military, intelligence and civil segments act in a coordinated manner under a firm and far-sighted political leadership. This is the acid test for any future eventuality of this nature.

A case for judicial federalism

(Source: The Hindu)

Context: *In the face of a de facto COVID-19 health emergency, the High Courts of Delhi, Gujarat, Madras and Bombay, among others, have done exactly that. They considered the pleas of various hospitals for oxygen supply. The Gujarat High Court issued a series of directions, including for laboratory testing and procurement of oxygen. The Nagpur Bench of the Bombay High Court was constrained to hold night sittings to consider the issue of oxygen supply. It directed immediate restoration of oxygen supply that had been reduced from the Bhilai steel plant in Chhattisgarh. The Delhi High Court directed the Central government to ensure adequate measures for the supply of oxygen. It cautioned that we might lose thousands of lives due to lack of oxygen.*

Transfer of cases

- On April 22, the Supreme Court took suo motu cognisance of the issue in 'Re: Distribution of Essential Supplies and Services During Pandemic'.
    - It said, "Prima facie, we are inclined to take the view that the distribution of these essential services and supplies must be done in an even-handed manner according to the advice of the health authorities" and asked the Central government to present a national plan. In addition, it issued an order asking the State governments and the Union Territories to "show cause why uniform orders" should not be passed by the Supreme Court. The court thus indicated the possibility of transfer of cases to the Supreme Court, which it has done on various occasions before.
- Under Article 139A of the Constitution, the Supreme Court does have the power to transfer cases from the High Courts to itself if cases involve the same questions of law.

- However, what make the court's usurpation disturbing are two well-founded observations regarding its contemporary conduct.
    - One, the court has been indifferent to the actions and inactions of the executive even in cases where interference was warranted, such as the Internet ban in Kashmir.
    - Two, where effective remedies were sought, when activists and journalists were arrested and detained, the court categorically stayed aloof. It acted as if its hands were tied. Lawyers will find it difficult to recall a significant recent case of civil liberty from the court where tangible relief was granted against the executive, except for rhetorical statements on personal liberty.
- These features, coupled with the unhealthy characteristics of an executive judiciary, makes the court's indication for a takeover disturbing. On April 23, presumably due to widespread criticism of the court's move, especially from a section of the legal fraternity, the court backtracked and simply adjourned the case.\
- The matter might be heard by the Supreme Court in the coming days. Significantly, the developments so far offer some crucial lessons for judicial federalism in India.
- The very fact that many from different High Court Bar Associations spoke up against the move to transfer the cases from the High Courts to the Supreme Court is a positive signal that underlines re-emergence of internal democracy within the Bar.
- In the Supreme Court, the judges sit in Benches of two or more. The purpose of this practice is to encourage deliberation on the Bench to have a higher level of deliberative justice. This necessarily presupposes dissent. A characteristic feature of the apex court in the recent years is general lack of dissent in issues that have serious political ramifications. This deficit occurs not only in the formally pronounced judgments and orders; dissenting judges on the Bench are rare, and the hearing on the COVID-19 case was no exception.
- According to the Seventh Schedule of the Constitution, public health and hospitals come under the State List as Item No. 6. There could be related subjects coming under the Union List or Concurrent List.
- Also, there may be areas of inter-State conflicts. But as of now, the respective High Courts have been dealing with specific challenges at the regional level, the resolution of which does not warrant the top court's interference.
- In addition to the geographical reasons, the constitutional scheme of the Indian judiciary is pertinent. In L. Chandra Kumar v. Union of India (1997), the Supreme Court itself said that the High Courts are "institutions endowed with glorious judicial traditions" since they "had been in existence since the 19th century and were possessed of a hoary past enabling them to win the confidence of the people".
- Even otherwise, in a way, the power of the High Court under Article 226 is wider than the Supreme Court's under Article 32, for in the former, a writ can be issued not only in cases of violation of fundamental rights but also "for any other purpose". This position was reiterated by the court soon after its inception in State of Orissa v. Madan Gopal Rungta (1951).

Autonomy is the rule

- Judicial federalism has intrinsic and instrumental benefits which are essentially political. The United States is an illustrative case. Scholar G. Alan Tarr of Rutgers University hinted, "Despite the existence of some endemic and periodical problems, the American system of judicial federalism has largely succeeded in promoting national uniformity and subnational diversity in the administration of justice".
- Justice Sandra Day O'Connor rightly said in a 1984 paper that the U.S. Supreme Court reviews "only a relative handful of cases from state courts" which ensures "a large measure of autonomy in the application of federal law" for the State courts.
- This basic tenet of judicial democracy is well accepted across the courts in the modern federal systems. The need for a uniform judicial order across India is warranted only when it is unavoidable — for example, in cases of an apparent conflict of laws or judgments on legal interpretation.
- Otherwise, autonomy, not uniformity, is the rule. Decentralisation, not centrism, is the principle. In the COVID-19-related cases, High Courts across the country have acted with an immense sense of judicial

responsibility. This is a legal landscape that deserves to be encouraged. To do this, the Supreme Court must simply stay away.

Undermining 'vaccination for all'

(Source: The Hindu)

Context: *Just when the spread of COVID-19 has reached catastrophic proportions, with the daily case-load rising faster than that seen anywhere in the world since the beginning of the novel coronavirus pandemic, the Government of India has acted by unveiling a completely revamped vaccine strategy.*

Details:

- Two key elements are the hallmark of this new strategy, which will be implemented from May 1.
    - First, the phased roll-out of the vaccination drive initiated on January 16 under which the vaccine-eligible sections of the population were gradually increased, has now been extended to the entire adult population, namely, to those above 18 years.
    - Second, and more importantly, a significant deregulation of the vaccine market has been effected and vaccine manufacturers have the freedom to sell 50% of their vaccine production to State governments and private hospitals, and at prices that can be substantially higher than that hitherto fixed by the government.
    - A third element of the vaccine strategy, which was not announced formally, is a grant of ₹45 billion to the two vaccine manufacturers, the Serum Institute of India (SII) and Bharat Biotech, to boost their capacities.

Handing over the reins

- The new vaccine strategy raises a number of questions, not the least from the manner in which the central government has given up its control over the market for vaccines, a key feature of the vaccine roll-out plans thus far.
- This issue assumes further significance since the Government of India is well aware, as all public authorities around the world are, about the significance of vaccinating every citizen in the country; "none of us will be safe until everyone is safe".
- It is, therefore, vitally important that public health authorities in the country take an objective view of the realities of the country before adopting strategies for vaccine availability, for this is absolutely critical for resetting lives and livelihoods disrupted by the pandemic. Several facts suggest that this has not done while rejigging the extant vaccine strategy.

Vaccine exports

- The phased roll-out of the government's ambitious vaccination drive, beginning with health-care and frontline workers in January, followed by the gradual inclusion of senior citizens and people above 45 years in March and April, respectively, was in sync with the availability of vaccines in the country.
- Although SII, the largest vaccine producer, had initially promised to supply 100 million doses of vaccines a month, in reality it could provide between 50 million to 60 million doses. But, given that India too saw a degree of "vaccine-scepticism", the Government of India found itself in a situation where it could promise exports of vaccines to 95 countries, mostly in Africa and Asia.
- Until now, nearly 142 million vaccine doses have been administered in the country, the third highest in the world. However, in terms of population share, less than 2% has received both vaccine doses, while less than 9% has received one dose.

- But there is one worrying facet, which is that a demand-supply mismatch has begun to appear as the coverage of the vaccine-eligible population expanded.
- The largest supplier, SII, gave two explanations for its inability to meet its commitments.
    - The first was that the United States Government had used a Cold War piece of legislation, the Defense Production Act, to restrict exports of vaccine culture and other essential materials.
    - Second, the company complained that it lacked the financial capacity to expand its production, requesting a grant of ₹30 billion from the government (https://bit.ly/2S8z3iB).

Onus on States

- It is the face of this vaccine supply-crunch that the government has announced the new vaccine strategy, by opening vaccination to all adults in the country, and allowing vaccine producers to sell 50% of their production directly to State governments and private hospitals.
- The new strategy shifts the onus onto the State governments, which have to take decisions regarding free vaccination for people above 18 years, while the central government would continue to support vaccination for people above 45 years, and health-care workers and frontline workers.
- The government has not fixed the vaccine prices and has allowed the producers to pre-declare the prices they would charge from the State governments and private hospitals, a sharp departure from the extant strategy.
- Thus far, government facilities have provided vaccines free of cost, while private facilities are allowed to charge no more than ₹250 per dose. The central government played the role of a sole procurement agency that helped in driving down prices, thus addressing the issue of affordable access to vaccines.
- However, the new strategy abandons this mechanism and fragments the market into three layers namely, central government procurement, State government procurement and the private hospitals. This layering of the market would allow the producers to charge high prices from the State governments and private hospitals.
- In fact, both SII and Bharat Biotech have immediately announced their intentions to raise vaccine prices. SII will sell Covishield to State governments and private hospitals would have at ₹400 and ₹600 per dose, respectively, while the corresponding figures for Bharat Biotech's Covaxin are ₹600 and ₹1,200 per dose.
- The new strategy would shift the burden of vaccination of the young population, namely, those between 18-44 years, entirely on the State governments. This implies that the vaccination of a significant section of the population depends on the financial health of each State government, resulting in inequitable access to vaccines across States.
- Moreover, given their poor state of finances, most State governments may not be able to procure the required number of vaccine doses to meet the demands of the targeted population. In such a situation, a large share of the vaccine quota (50% of domestic production) earmarked for the State governments and the private hospitals could end up with the latter.

In the U.S.

- The decision to substantially deregulate the vaccine market raises serious questions in view of the reported advance of ₹45 billion made by the Government of India to the two vaccine producers in India for expanding their production capacities.
- The Federal government in the United States has done similarly, providing financial support to vaccine producers, who are now set to rake in their billions by charging high prices.
- Several public interest groups in the U.S. have asked questions as to why the tax-paying public should bear the high prices of vaccines when Federal taxes have been used to beef up the vaccine producers.
- This question is more pertinent in India, where access to affordable vaccines is critical for ensuring "vaccination for all".

More open licensing needed

- It is somewhat ironic that the new vaccine strategy, which could undermine "vaccination for all", comes from a country that has long championed the cause of access to affordable medicines in international forums.
- Rather than hand over the reins of price determination to the duopoly in the vaccine market, the government should have urgently addressed the serious doubts over affordability of vaccines by ensuring a competitive market for vaccines.
- According to recent estimates, existing producers in India will be unable to meet the country's vaccine requirements by some distance, and therefore, India needs more vaccine manufacturers to ensure uninterrupted supply.
- One positive step that the government has taken in this direction is to increase production of Bharat Biotech's vaccine through the involvement of three public sector undertakings, including Haffkine Institute.
- We would argue that there is a need for more open licensing of this vaccine to scale up production. This would enhance competition in the market, enabling the vaccines to reach every citizen in the country.

Antimicrobial resistance: the silent threat

(Source: The Hindu)

Context: *Antimicrobial resistance (AMR), the phenomenon by which bacteria and fungi evolve and become resistant to presently available medical treatment, is one of the greatest challenges of the 21st century. World Health Organization Director-General Tedros Adhanom Ghebreyesus said in July 2020, "AMR is a slow tsunami that threatens to undo a century of medical progress". AMR is already responsible for up to 7,00,000 deaths a year. Unless urgent measures are taken to address this threat, we could soon face an unprecedented health and economic crisis of 10 million annual deaths and costs of up to $100 trillion by 2050.*

Diverse challenges

- AMR represents an existential threat to modern medicine. Without functional antimicrobials to treat bacterial and fungal infections, even the most common surgical procedures, as well as cancer chemotherapy, will become fraught with risk from untreatable infections.
- Neonatal and maternal mortality will increase. All these effects will be felt globally, but the scenario in the low- and middle-income countries (LMICs) of Asia and Africa is even more serious. LMICs have significantly driven down mortality using cheap and easily available antimicrobials.
- In the absence of new therapies, health systems in these countries are at severe risk of being overrun by untreatable infectious diseases.
- The challenges are complex. Drug resistance in microbes emerges for several reasons. These include the misuse of antimicrobials in medicine, inappropriate use in agriculture, and contamination around pharmaceutical manufacturing sites where untreated waste releases large amounts of active antimicrobials into the environment.
- All of these drive the evolution of resistance in microbes. This is compounded by the serious challenge that no new classes of antibiotics have made it to the market in the last three decades, largely on account of inadequate incentives for their development and production.
- A recent report from the non-profit PEW Trusts found that over 95% of antibiotics in development today are from small companies, 75% of which have no products currently in the market. Major pharmaceutical companies have largely abandoned innovation in this space.

- Tackling these diverse challenges requires action in a range of areas – in addition to developing new antimicrobials, infection-control measures can reduce antibiotic use. A mix of incentives and sanctions would encourage appropriate clinical use.
- At the same time, it is critical to ensure that all those who need an antimicrobial have access to it; 5.7 million people worldwide die annually because they cannot access drugs for infections that are treatable.
- Further, to track the spread of resistance in microbes, surveillance measures to identify these organisms need to expand beyond hospitals and encompass livestock, wastewater and farm run-offs. Finally, since microbes will inevitably continue to evolve and become resistant even to new antimicrobials, we need sustained investments and global coordination to detect and combat new resistant strains on an ongoing basis.

The way forward

- There is room, however, for cautious optimism. A multi-sectoral $1 billion AMR Action Fund was launched in 2020 to support the development of new antibiotics, and the U.K. is trialling a subscription-based model for paying for new antimicrobials towards ensuring their commercial viability.
- This means that the government will pay upfront for these new antimicrobials, thereby delinking the life-saving value of the drugs from the volume of sales and providing an incentive for their production in market conditions that do not do so.
- Other initiatives focused on the appropriate use of antibiotics include Peru's efforts on patient education to reduce unnecessary antibiotic prescriptions, Australian regulatory reforms to influence prescriber behaviour, and initiatives to increase the use of point-of-care diagnostics, such as the EU-supported VALUE-Dx programme.
- Beyond human use, Denmark's reforms to prevent the use of antibiotics in livestock have not only led to a significant reduction in the prevalence of resistant microbes in animals, but also improved the efficiency of farming.
- Finally, given the critical role of manufacturing and environmental contamination in spreading AMR through pharmaceutical waste, there is a need to look into laws such as those recently proposed by India, one of the largest manufacturers of pharmaceuticals, to curb the amount of active antibiotics released in pharmaceutical waste.
- While the range of initiatives that seek to control the emergence and spread of AMR is welcome, there is a need to recognise the limitations of a siloed approach.
- Current initiatives largely target individual issues related to AMR (such as the absence of new antibiotics, inappropriate prescription and environmental contamination) and consequently, narrowly defined groups of stakeholders (providers, patients and pharmaceutical companies).
- Regulating clinician prescription of antimicrobials alone would do little in settings where patient demand is high and antimicrobials are freely available over-the-counter in practice, as is the case in many LMICs.
- Efforts to control prescription through provider incentives should be accompanied by efforts to educate consumers to reduce inappropriate demand, issue standard treatment guidelines that would empower providers to stand up to such demands, as well as provide point-of-care diagnostics to aid clinical decision-making. \
- Policy alignment is also needed much beyond the health system. Solutions in clinical medicine must be integrated with improved surveillance of AMR in agriculture, animal health and the environment. This means that AMR must no longer be the remit solely of the health sector, but needs engagement from a wide range of stakeholders, representing agriculture, trade and the environment with solutions that balance their often-competing interests.
- Finally, successful policies in individual countries are no guarantee of global success. International alignment and coordination are paramount in both policymaking and its implementation. Indeed, recent papers have proposed using the Paris Agreement as a blueprint for developing a similar global approach to tackling AMR.

- With viral diseases such as COVID-19, outbreaks and pandemics may be harder to predict; however, given what we know about the "silent pandemic" that is AMR, there is no excuse for delaying action.

Making social welfare universal

(Source: The Hindu)

Context: *India is one of the largest welfare states in the world and yet, with COVID-19 striking in 2020, the state failed to provide for its most vulnerable citizens. The country witnessed multiple crises: mass inter- and intra-migration, food insecurity, and a crumbling health infrastructure. The extenuating circumstances of the pandemic has pushed an estimated 75 million people into poverty. The second wave has brought even the middle and upper-class citizens to their knees. Economic capital, in the absence of social capital, has proven to be insufficient in accessing healthcare facilities. Illness is universal, but healthcare is not.*

Absorbing shocks

- The country has over 500 direct benefit transfer schemes for which various Central, State, and Line departments are responsible.
- However, these schemes have not reached those in need. The pandemic has revealed that leveraging our existing schemes and providing universal social security is of utmost importance. This will help absorb the impact of external shocks on our vulnerable populations.
- An example of such a social protection scheme is the Poor Law System in Ireland. In the 19th century, Ireland, a country that was staggering under the weight of poverty and famine, introduced the Poor Law System to provide relief that was financed by local property taxes.
- These laws were notable for not only providing timely assistance but maintaining the dignity and respectability of the poor while doing so. They were not designed as hand-outs but as necessary responses to a time of economic crisis.
- Today, the social welfare system in Ireland has evolved into a four-fold apparatus that promises social insurance, social assistance, universal schemes, and extra benefits/supplements.
- A similar kind of social security system is not unimaginable in India. We have seen an example of a universal healthcare programme that India ran successfully — the Pulse Polio Universal Immunisation Programme.
- In 2014, India was declared polio-free. It took a dedicated effort over a number of years. However, it shows us what is possible. With the advancements in knowledge and technology, a universal coverage of social welfare is possible in a shorter time frame.

Ease of application

- Existing schemes cover a wide variety of social protections. However, they are fractionalised across various departments and sub-schemes. This causes problems beginning with data collection to last-mile delivery.
- Having a universal system would improve the ease of application by consolidating the data of all eligible beneficiaries under one database. It can also reduce exclusion errors. The Pradhan Mantri Garib Kalyan Yojana (PMGKY) is one scheme that can be strengthened into universal social security.
- It already consolidates the public distribution system (PDS), the provision of gas cylinders, and wages for the MGNREGS.
- Generally, social assistance schemes are provided on the basis of an assessment of needs. Having a universal scheme would take away this access/exclusion barrier. For example, PDS can be linked to a universal identification card such as the Aadhaar or voter card, in the absence of a ration card.

- This would allow anyone who is in need of foodgrains to access these schemes. It would be especially useful for migrant populations. Making other schemes/welfare provisions like education, maternity benefits, disability benefits etc. also universal would ensure a better standard of living for the people.
- To ensure some of these issues are addressed, we need to map the State and Central schemes in a consolidated manner. This is to avoid duplication, inclusion and exclusion errors in welfare delivery.
- Alongside, a study to understand costs of welfare access for vulnerable groups can be conducted. This will help give a targeted way forward. The implementation of any of these ideas is only possible through a focus on data digitisation, data-driven decision-making and collaboration across government departments.

The rising sun in India-Japan relations

(Source: The Hindu)

Context: *Contrary to the expectations of many, Japanese Prime Minister Yoshihide Suga has turned out to be a true successor of his predecessor, Shinzo Abe, on the foreign policy front. His visit to the United States last month has set the agenda for the wider Indo-Pacific engagement of Tokyo and its evolving priorities.*

Focus on China

- Right at the outset, it was clear that the crux of the discussions during this first in-person meeting between the newly anointed President of the United States, Joe Biden, and Mr. Suga would revolve around China.
- To begin with, Tokyo and Washington drilled down to brass tacks on their joint security partnership given the need to address China's recent belligerence in territorial disputes in the South and East China Seas as well as in the Taiwan Strait. Both sides affirmed the centrality of their treaty alliance, for long a source of stability in East Asia, and pledged to stand up to China in key regional flashpoints such as the disputed Senkaku Islands and Taiwan.
- Reflecting the changed nature of conflict, both sides acknowledged the importance of extended deterrence vis-à-vis China through cooperation on cybersecurity and space technology.
- Discussions also touched upon Chinese ambitions to dominate the development of new age technologies such as 5G and quantum computing.
- Given China's recent pledge to invest a mammoth $1.4 trillion in emerging technologies, Washington and Tokyo scrambled to close the gap by announcing a Competitiveness and Resilience Partnership, or CoRe.
- The two allies earmarked billions in funding for the deployment of secure 5G networks, committed to building digital infrastructure in developing countries and promised to collaborate on setting global digital standards.
- Both sides have also signalled their intent to continue the Trump-era policy of pressure on China to reform economic practices such as "violations of intellectual property rights, forced technology transfer, excess capacity issues, and the use of trade distorting industrial subsidies".
- Tokyo and Washington also rallied around the standard of shared values. Both powers repeatedly emphasised their vision of a Free and Open Indo-Pacific that respects the rule of law, freedom of navigation, democratic norms and the use of peaceful means to settle disputes.
- In the aftermath of the successful Quad Summit, both parties expressed their continued support for the four-nation grouping of the United States, India, Australia and Japan. China's human rights violations in Xinjiang, its heavy-handed suppression of protests in Hong Kong and military aggression towards Taiwan came in for heavy criticism.
- Given that the Japanese premier plans to visit India as soon as the situation permits following the COVID-19 pandemic, his dealings with the U.S. are a preview of what New Delhi can expect from Tokyo.

A preview

- First, one can expect a continuation of the balancing security policy against China that began with Prime Minister Narendra Modi and Shinzo Abe in 2014. During a phone call with the Indian Prime Minister, Mr. Suga expressed concern over China's "unilateral" actions in the East and South China Seas, Xinjiang and Hong Kong. Crucially, India's clashes with China in Galwan have turned public opinion in favour of a more confrontational China policy.
- In just a decade, New Delhi and Tokyo have expanded high-level ministerial and bureaucratic contacts, conducted joint military exercises and concluded military pacts such as the Acquisition and Cross-Servicing Agreement (ACSA) logistics agreement.
- Further, no meeting would be complete without an affirmation of New Delhi and Tokyo's support for a Free and Open Indo-Pacific and continued willingness to work with the Quad, which is fast emerging as a central pillar of the security strategies of both nations.
- A Modi-Suga meeting, accompanied by the planned 2+2 Ministerial meetings, will likely aim to take stock of the state of play in the security relationship while also pushing the envelope on the still nascent cooperation on defence technology and exports.

Technology partnership

- Second, the two powers will look to expand cooperation in sectors such as cybersecurity and emerging technologies. During the Shinzo Abe years, New Delhi and Tokyo put together a digital research and innovation partnership that ran the gamut of technologies from AI and 5G to the Internet of Things and space research.
    - As with the U.S.-Japan summit, Mr. Suga and Mr. Modi may look to deepen cooperation between research institutes and expand funding in light of China's aforementioned technology investment programme.
    - It is yet unclear whether Mr. Suga will attempt to stir the pot and bring up the disagreements over India's insistence on data localisation and continued reluctance to accede to global cybersecurity agreements such as the Budapest Convention.
- Third, economic ties and infrastructure development are likely to be top drawer items on the agendas of New Delhi and Tokyo. While Japan has poured in around $34 billion in investments into the Indian economy over the course of the last two decades, Japan is only India's 12th largest trading partner, and trade volumes between the two stand at just a fifth of the value of India-China bilateral trade.
- A Modi-Suga summit will likely reaffirm Japan's support for key manufacturing initiatives such as 'Make in India' and the Japan Industrial Townships.
- Further, India will be keen to secure continued infrastructure investments in the strategically vital connectivity projects currently under way in the Northeast and the Andaman and Nicobar Islands.

Third country outlook

- Finally, a Suga-Modi Summit would undoubtedly devote much attention to evolving a joint strategy towards key third countries and multilateral bodies.
- In years past, New Delhi and Tokyo have collaborated to build infrastructure in Iran and Africa, provide vital aid to Myanmar and Sri Lanka and hammer out a common Association of Southeast Asian Nations outreach policy in an attempt to counter China's growing influence in these corners of the globe.
- However, unlike previous summits, the time has come for India and Japan to take a hard look at reports suggesting that joint infrastructure projects in Africa and Iran have stalled with substantial cost overruns. Tokyo will also likely continue its charm offensive on the Regional Comprehensive Economic Partnership in an attempt to get New Delhi to reverse its decision not to join the massive trade compact.
- Writing in 2006, Shinzo Abe, in his book, Utsukushii Kuni E (Toward a Beautiful Country), expressed his hope that "it would not be a surprise if in another 10 years, Japan-India relations overtake Japan-U.S. and Japan-China relations".

- Thus far, New Delhi has every reason to believe that Japan's Yoshihide Suga is willing to make that dream a reality.

GS III

Nutrition loss and Food security concerns amid COVID-19

(Source: The Hindu)

Context: *The political and social handling of the COVID-19 pandemic have added to the persisting issues of food insecurity faced by millions in India even prior to the novel coronavirus pandemic India consistently has ranked poorly in all international rankings on hunger (ranking 102 among 117 countries in the Global Hunger Index 2019). With the second, more vigorous wave of COVID-19, the inability of those already on the brink of subsistence to absorb a second economic shock cannot be overlooked even as the current health crisis is creating havoc. Rural distress specifically needs closer examination and urgent policy attention.*

Data collection, findings

- The Rapid Rural Community Response, or RCRC to COVID-19, a collective of over 60 non-governmental organisations has collected three rounds of data since the lockdown.
- The data provide crucial evidence of the nature and persistence of food and financial insecurity among the poor residing in rural areas.
- The third round conducted between December 2020-January 2021 has collected data from 11,766 households across 64 districts, in Assam, Bihar, Chhattisgarh, Gujarat, Jharkhand, Madhya Pradesh, Maharashtra, Odisha, Rajasthan, Telangana and Uttar Pradesh.

Cutting down on food

- The most recent data suggest a persistence of cutting down on food even nine months after the first lockdown, during the seeming "revival" period.
- While 40% of the sample cut down on food during the first lockdown, an alarming 25% reportedly continued to cut down on food during the most recent survey conducted between December and January 2021.
- Households reported cutting down on nutritious food — 80% cut down on milk, vegetables, pulses and oil (around 50% reported cutting down on pulses alone).
- Disaggregating the figure, we find that the poorer, socially marginalised Dalits, and those with lesser access to food security schemes (such as migrants) faced more severe food insecurity.
- Comparing similar households, we find households in Uttar Pradesh and Jharkhand were faring among the worst performing States.
- These reductions will undoubtedly further accelerate the impending effects on children's nutrition, as highlighted in the National Family Health Survey or NFHS-V (2019-20) and the Global Food Policy Report, 2021.
- The loss in nutrition may have come as a consequence of people losing their jobs and/or being pushed into lower income brackets over time due to the nature and handling of the pandemic.

Reduction in incomes

- Pew Research Center has indicated that the middle class in India has shrunk by over 32 million households in the past year.
- We find an indication of a downward shift in incomes even among a much poorer sample of households. Our survey suggests an over 70% reported reduction in incomes post the pandemic, with many falling into significant precarity.
- While 55% of households recalled earning less than ₹5,000 per month prior to the pandemic, around 74% reported doing so in December 2020-January 2021.
- It is thus unsurprising that around 30% households were also seeking loans, and among them, at least half of them reported needing loans for food, all indicative of the debilitating food and financial insecurities that poor households continue to face.

Migrants on the margins

- The second wave of the pandemic comes on the back of an uneven recovery and persistence of crippling food and financial insecurity among the poorest households, especially migrants. Migrants who have travelled to cities only months ago are again travelling back to their villages.
- It was the relatively disadvantaged who had not been able to find their way back to the cities. There was limited support for migrants even in existing social protection schemes such as the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA). For example, among the poorest, households with migrants were more likely to seek work than those without (43% versus 32%), but less likely to get work (49% versus 59%) under the scheme.
- It is clear that households have not had a chance to rebuild, and with many completely exhausting their savings and facing massive debt, they are bound to be more severely hit than last year. In the face of such a threat, including high unemployment that is steadily rising again, the state must ensure immediate, sustained action.

Food security is a must

- The Government has promised to restart the Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY) with 5 kg of rice/wheat per person per month for the next two months.
- The government needs to provide similar support for stabler longer periods; expand the current offering to include nutritious foods like pulses; address issues faced in existing schemes such as MGNREGA (like delays in wages and rationing); and new schemes such as a potential urban employment scheme should be explored.
- Food security schemes such as ration provided to children through anganwadis, Public Distribution System and mid-day meal scheme in primary schools need to be ramped up systematically and urgently.
- For migrants stuck in cities without work, community kitchens (such as Amma canteens) are required.
- The most vulnerable will need more predictable and stable support than ever before.

Marking the beginning of a green era

(Source: The Hindu)

Context: *One of the lessons learned from the ongoing COVID-19 pandemic is the need for collective action among members of the international community to effectively address global challenges such as pandemics and climate change. The pandemic has created an unprecedented crisis that demands an exceptional global response. Even as countries rightly continue to focus on tackling the immediate health emergency, the need is to have a long-term vision to build a climate-resilient global economy for the future.*

Progress towards goals

- Ambition alone cannot attain goals. Good results depend on our ability to act. That is precisely what defines the two recent initiatives launched by Crown Prince Mohammed bin Salman bin Abdulaziz, Deputy Prime Minister of the Kingdom of Saudi Arabia, to combat the threat of climate change — the 'Saudi Green Initiative' and the 'Middle East Green Initiative'.
- In fact, one of the main pillars of the Saudi G20 presidency was to "safeguard the planet". The Saudi leadership of the summit highlighted how climate change had negatively impacted the planet, people's lives and their well-being.
- The G20 introduced initiatives like establishing a Global Coral Reef Research and Development Accelerator Platform to accelerate scientific knowledge and technology development in support of coral reef survival, conservation, resilience, adaptation and restoration.
- G20 leaders also acknowledged the Circular Carbon Economy (CCE) Platform as a tool towards affordable, reliable, and secure energy and economic growth. \
- Saudi Arabia is committed to lead regional efforts to address climate change and has been making steady progress in this direction.
- The Saudi Green Initiative aims to raise the vegetation cover, reduce carbon emissions, combat pollution and land degradation, and preserve marine life. As part of the initiative, 10 billion trees will be planted in the Kingdom.
- It aims to reduce carbon emissions by more than 4% of global contributions, through a renewable energy programme that will generate 50% of Saudi's energy from renewables by 2030.
- With the understanding that the need of the hour is to do more than enough, Saudi Arabia is working towards raising the percentage of its protected areas to more than 30% of its total land area, representing roughly 6,00,000 sq km, exceeding the global target of 17%.
- As part of the Middle East Green initiative, Saudi Arabia will work with the Gulf Cooperation Council countries and regional partners to plant an additional 40 billion trees in the West Asian region. It represents 5% of the global target of planting one trillion trees and reducing 2.5% of global carbon levels.
- Saudi Arabia has been sharing its expertise and know-how with its neighbouring countries to reduce carbon emissions resulting from hydrocarbon production in the region by 60% and globally by 10%.
- Saudi Arabia currently operates the largest carbon capture and utilisation plant in the world, turning half a million tonnes of CO2 annually into products such as fertilizers and methanol.
- It also operates one of the region's most advanced CO2-enhanced oil recovery plants that captures and stores 8,00,000 tonnes of CO2 annually. Plans are afoot to deploy additional carbon capture, utilisation and storage infrastructure. Saudia Arabia believes that nature-based solutions will play an important role in removing carbon as part of the CCE.
- We have already joined hands in February 2019 with India when Saudi Arabia joined the International Solar Alliance during the Crown Prince's state visit to the country, hence promoting cooperation in the renewable energy sector.
- Later that year, when the Indian Prime Minister visited Saudi Arabia, several MoUs and agreements in key sectors including renewable energy were signed.
- To ensure momentum and continuity, Saudi Arabia will convene an annual summit called the Middle East Green Initiative which will host leaders from the government, scientists and environmentalists to discuss the details of implementation.
- The aim is start implementing the plan in the fourth quarter of this year and continue for the next two decades. Saudi Arabia also recognises the scarcity of financial resources to irrigate the terrain. Therefore, in partnership with participating countries, innovative methods will be researched to irrigate from treated water, cloud seeding and other purpose-driven solutions such as planting native trees which requires support for three years to grow and will then be able to survive on their own with natural irrigation.

Working towards Vision 2030

- In 2016, the Crown Prince unveiled Vision 2030, a comprehensive road map to improve the quality of life of the citizens of the country. As part of this, Saudi Arabia carried out a comprehensive restructuring of the environmental sector and established the Environmental Special Forces in 2019.
- With NEOM and The Line, Saudi Arabia has already redefined the idea of sustainable habitats. NEOM's location also gives Saudi Arabia many advantages in the field of hydrogen production. According to the World Bank, for every dollar invested in resilient infrastructure, $4 in benefits are generated.
- With the Public Investment Fund recently pumping in $15 billion in the NEOM project and another $10 billion in renewable and solar energy projects, it is clear that the pandemic has only strengthened Saudi Arabia's resolve to realise the goals of Vision 2030 and become one of the major producers of renewable energy with a capacity to generate 9.5 GW by 2023.
- Our close friend and strategic partner India has also made remarkable commitments to tackle climate change and is on track to achieve its Paris Agreement targets. India's renewable energy capacity is the fourth largest in the world.
- India has an ambitious target of achieving 450 gigawatts of renewable energy capacity by 2030. We admire India's endeavour to build a safe and clean environment for future generations.
- Saudi Arabia hopes that the launch of the Saudi Green Initiative and the Middle East Green Initiative marks the beginning of a green era and that these initiatives provide momentum to other countries to unify their efforts to save our planet.

A patently wrong regime

(Source: The Hindu)

Context: *Even an unprecedented pandemic can do little, it appears, to upset the existing global regime governing monopoly rights over the production and distribution of life-saving drugs. If anything, since the onset of COVID-19, we've only seen a reaffirmation of intellectual property rules that have served as a lethal barrier to the right to access healthcare over the last few decades. The neo-liberal order, under which these laws exist, is so intractable today that a matter as seemingly simple as a request for a waiver on patent protections is seen as a claim unworthy of exception.*

Request for waiver

- On October 2 last year, India and South Africa submitted a joint petition to the World Trade Organization (WTO), requesting a temporary suspension of rules under the 1995 Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS).
- A waiver was sought to the extent that the protections offered by TRIPS impinged on the containment and treatment of COVID-19.
- As we now know, quick and efficient vaccination is the surest route to achieving global herd immunity against the virus. Should the appeal for waiver be allowed, countries will be in a position, among other things, to facilitate a free exchange of know-how and technology surrounding the production of vaccines.
- The request for waiver has, since, found support from more than 100 nations. But a small group of states — the U.S., the European Union, the U.K. and Canada among them — continues to block the move.
- Their reluctance comes despite these countries having already secured the majority of available vaccines, with the stocks that they hold far exceeding the amounts necessary to inoculate the whole of their populations.

- Their decision is all the more galling when one considers the fact that for the rest of the world mass immunisation is a distant dream. Reports suggest that for most poor countries it would take until at least 2024 before widespread vaccination is achieved.
- A patent is a conferral by the state of an exclusive right to make, use and sell an inventive product or process.
- Patent laws are usually justified on three distinct grounds: on the idea that people have something of a natural and moral right to claim control over their inventions; on the utilitarian premise that exclusive licenses promote invention and therefore benefit society as a whole; and on the belief that individuals must be allowed to benefit from the fruits of their labour and merit, that when a person toils to produce an object, the toil and the object become inseparable. Each of these justifications has long been a matter of contest, especially in the application of claims of monopoly over pharmaceutical drugs and technologies.

A new world order

- In India, the question of marrying the idea of promoting invention and offering exclusive rights over medicines on the one hand with the state's obligation of ensuring that every person has equal access to basic healthcare on the other has been a source of constant tension.
- The colonial-era laws that the country inherited expressly allowed for pharmaceutical patents. But in 1959, a committee chaired by Justice N. Rajagopala Ayyangar objected to this on ethical grounds.
- It noted that access to drugs at affordable prices suffered severely on account of the existing regime. The committee found that foreign corporations used patents, and injunctions secured from courts, to suppress competition from Indian entities, and thus, medicines were priced at exorbitant rates.
- To counter this trend, the committee suggested, and Parliament put this into law through the Patents Act, 1970, that monopolies over pharmaceutical drugs be altogether removed, with protections offered only over claims to processes.
- This change in rule allowed generic manufacturers in India to grow. As a result, life-saving drugs were made available to people at more affordable prices. The ink had barely dried on the new law, though, when negotiations had begun to create a WTO that would write into its constitution a binding set of rules governing intellectual property.
- In the proposal's vision, countries which fail to subscribe to the common laws prescribed by the WTO would be barred from entry into the global trading circuit. It was believed that a threat of sanctions, to be enforced through a dispute resolution mechanism, would dissuade states from reneging on their promises. With the advent in 1995 of the TRIPS agreement this belief proved true.
- As the Yale Law School professor Amy Kapczynski has written, compelling signatories to introduce intellectual property laws like those in the global north was nothing short of a scandal. The follies in this new world order became quickly apparent when drugs that reduced AIDS deaths in developed nations were placed out of reach for the rest of the world.
- It was only when Indian companies began to manufacture generic versions of these medicines, which was made possible because obligations under TRIPS hadn't yet kicked in against India, that the prices came down. But lessons from that debacle remain unlearned.

Refuting objections

- Instead, two common arguments are made in response to objections against the prevailing patent regime.
    - One, that unless corporations are rewarded for their inventions, they would be unable to recoup amounts invested by them in research and development.
    - Two, that without the right to monopolise production there will be no incentive to innovate. Both of these claims have been refuted time and again.
- Most recently, it has been reported that the technology involved in producing the Moderna vaccine in the U.S. emanated out of basic research conducted by the National Institutes of Health, a federal government agency, and other publicly funded universities and organisations.

- Similarly, public money accounted for more than 97% of the funding towards the development of the Oxford/AstraZeneca vaccine. Big pharma has never been forthright about the quantum of monies funnelled by it into research and development. It's also been clear for some time now that its research is usually driven towards diseases that afflict people in the developed world.
- Therefore, the claim that a removal of patents would somehow invade on a company's ability to recoup costs is simply untrue.
- The second objection — the idea that patents are the only means available to promote innovation — has become something of a dogma. But other appealing alternatives have been mooted. The economist Joseph Stiglitz is one of many who has proposed a prize fund for medical research in place of patents. Under the current system, "those unfortunate enough to have the disease are forced to pay the price… and that means the very poor in the developing world are condemned to death," he wrote.
- A system that replaces patents with prizes will be "more efficient and more equitable", in that incentives for research will flow from public funds while ensuring that the biases associated with monopolies are removed.
- The unequal vaccine policy put in place by the Indian state is indefensible. But at the same time, we cannot overlook the need for global collective action. If nation states are to act as a force of good, they must each attend to the demands of global justice.
- The pandemic has demonstrated to us just how iniquitous the existing world order is. We cannot continue to persist with rules granting monopolies which place the right to access basic healthcare in a position of constant peril. In its present form, the TRIPS regime, to borrow the law professor Katharina Pistor's words, represents nothing but a new form of "feudal calculus".

Current Affairs Quiz

1. Which of the following statements is/are correct regarding the Ecotype?
   1. Ecotype of a species are always inter-fertile.
   2. Ecotypes arise due to mutations, hybridization and isolation.
   3. Ecotype is genetically distinct and adapted to specific environmental conditions.

Select the correct answer code:
   a. 1 and 2 only
   b. 1 and 3 only
   c. 2 and 3 only
   d. 1, 2 and 3

Answer : d
All statements are correct

2. Which of the following is considered as legislative powers of the President?
   a. The Power of the President to consult Supreme Court on matters of public importance
   b. The Power of the President to promulgate Ordinances during recess of Parliament
   c. The Power of the President to appoint the Chief Election Commissioner
   d. The Power of the President to appoint the chiefs of the Indian Armed Forces

Answer : b

3. Padmaja Naidu Himalayan Zoological Park is located-
   a. Jammu and Kashmir
   b. Uttarakhand
   c. Sikkim
   d. West Bengal

Answer : d

4. Global Energy Transition Index is released by -
   a. International Solar Alliance (ISA)
   b. International Energy Agency (IEA)
   c. World Economic Forum (WEF)
   d. International Renewable Energy Agency (IRENA)

Answer : c

5. Which of the following statements is/are correct with respect to Varuna – 2021?
   1. It is a bilateral maritime exercise between Indian and French Navy.
   2. The 19th edition of Varuna 2021 will be conducted in the Arabian Sea.

Select the correct answer code:
   a. 1 only
   b. 2 only
   c. Both 1 and 2
   d. Neither 1 nor 2

Answer : c
Both statements are correct

6. Which of the following is associated with Project DANTAK?
   a. Border Roads Organisation
   b. Indian Space Research Organization
   c. Defence Research and Development Organization
   d. Council for Scientific and Industrial Research

Answer : a

Border Roads Organization's Project DANTAK is commemorating its Diamond Jubilee in Bhutan.
It was established on April 24, 1961 as a result of the visionary leadership of his Majesty the Third King and then Prime Minister Jawahar Lal Nehru.
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7. Which of the statements given below is/are correct?
   1. India is the second-largest producer of wheat in the world.
   2. Some of the important winter crops are wheat, barley, mustard and peas.

Select the correct answer code:
   a. 1 only
   b. 2 only
   c. Both 1 and 2
   d. Neither 1 nor 2

Answer : c

Both statements are correct

8. Mission Oxygen Express is a mission to render oxygen support to-
   a. Maharashtra
   b. Uttar Pradesh
   c. Lakshadweep
   d. None of the above

Answer : c

As part of the nation's fight against COVID 19, Indian Navy ships under Headquarters, Southern Naval Command at Kochi are progressing with the mission of OXYGEN EXPRESS in order to render support to the local administration of the Union Territory of Lakshadweep (UTL).

9. Which of the following statements is/are incorrect with respect to investments instruments InvITs and REITs?
   1. In REITs investor own a share of property, and he receives an appropriate share of the income from it, after deducting an appropriate share of expenses.
   2. InvITs are similar to REIT but invest in infrastructure projects such as roads or highways which take some time to generate steady cash flows.

Select the correct answer code:
   a. 1 only
   b. 2 only
   c. Both 1 and 2
   d. Neither 1 nor 2

Answer : d

Both statements are correct

10. NASA's Ingenuity mission is related to
   a) Study Neptune and Uranus during planetary flybys
   b) Deep space exploration systems

c) Flying Helicopter on Mars
d) Nuclear-powered drone to search for life on Mars

Ans: c)
NASA's Ingenuity Mars Helicopter became the first aircraft in history to make a powered, controlled flight on another planet.

11. Which of the following countries share border with Indian Ocean?
1. Tanzania
2. Zimbabwe
3. Botswana
4. Mozambique

Select the correct answer code:
a) 1 and 3 only
b) 1, 2 and 3 only
c) 1 and 4 only
d) 1, 2, 3 and 4

Ans. c)

12. Which of the following countries jointly launched Supply Chain Resilience Initiative (SCRI)?
1. India
2. China
3. Australia
4. Sri Lanka
5. New Zealand

Select the correct answer using the codes given below:
a. 1 and 3 only
b. 1, 2 and 4 only
c. 1, 2 and 4 only
d. All of the above

Answer : a
It aims to create a virtuous cycle of enhancing supply chain resilience with a view to eventually attaining strong, sustainable, balanced and inclusive growth in the Indo-pacific region

13. Consider the following statements with respect to organic production in India:
1. Organic products are currently exported from India only if they are produced, processed, packed and labelled as per the requirements of Paramparagat Krishi Vikas Yojana.
2. The National Programme for Organic Production (NPOP) has been implemented by APEDA since its inception in 2001 as notified under the Foreign Trade (Development and Regulations) Act, 199

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

Answer : b
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14. Which of the following statements is/are correct with respect to Oldest Water on Earth?
    1. It has been discovered from Kidd Creek mine, located on the Canadian Shield.
    2. The water is highly saline, ten times saltier than sea water and Chemolithotrophic microbes can survive in this water.

Select the correct answer code:
    a. 1 only
    b. 2 only
    c. Both 1 and 2
    d. Neither 1 nor 2

Answer : c
Both statements are correct

15. Which of the following statements is/are correct with respect to Agriculture Infrastructure Fund ?
    1. It is a pan India central sector scheme to inject formal credit into farm and farm-processing based activities.
    2. It is a medium-long term debt financing facility for investment in post-harvest management infrastructure through interest subvention and credit guarantee.

Select the correct answer codes:
    a. 1 only
    b. 2 only
    c. Both 1 and 2
    d. Neither 1 nor 2

Answer : c
Both statements are correct

16. Consider the following statements with respect to Report on Military Expenditure and Arms Trade:
    1. It is prepared and released annually by Amnesty International.
    2. The civil defence and current expenditure on previous military activities, and military involvement in non-military activities are excluded in the report.

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

Answer : b
Stockholm International Peace Research Institute (SIPRI) has released the report on military expenditure and arms trade globally.

17. Which of the following statements is/are correct with respect to 'Large Area Certification' (LAC) Scheme?
    1. It is launched by department of Agriculture and Farmers Welfare under its flagship scheme of Paramparagat Krishi Vikas Yojna.
    2. Areas in Arunachal Pradesh is first to get certified as organic under this scheme.

Select the correct answer code:
    a. 1 only
    b. 2 only
    c. Both 1 and 2
    d. Neither 1 nor 2

Answer : a

Area in Andaman and Nicobar has been certified as organic, the first large contiguous territory to be done under LAC Scheme

18. Which of the following statements is/are correct with respect to investments instruments Ct value in a Covid-19 Test?

1. It refers to the number of cycles after which the virus can be detected.
2. It tells about the viral load in the throat and not in the lungs.

Select the correct answer code:

a. 1 only
b. 2 only
c. Both 1 and 2
d. Neither 1 nor 2

Answer : c
Both statements are correct

19. Which of the following statements is/are correct with respect to GNCT of Delhi (Amendment) Act 2021?

1. It states that the "government" in the National Capital Territory of Delhi meant the elected government in the city.
2. It empowers Lieutenant Governor (L-G) of Delhi, he/she is not obliged to give his opinion to the State government within a time frame.

Select the correct answer code:

a. 1 only
b. 2 only
c. Both 1 and 2
d. Neither 1 nor 2

Answer : b
It states that the "government" in the National Capital Territory of Delhi meant the Lieutenant-Governor of Delhi.

20. Which of the following statements is/are correct with respect to investments instruments Himalayan Front Thrust (HFT)?

1. It is also known as Main Boundary Thrust (MBT), which is found along the boundary of Indian and Australian tectonic plates.
2. It demarcates a sharp physiographic and tectonic boundary between the Himalayan foothills and the Indo-Gangetic Alluvial Plains.

Select the correct answer code:

a. 1 only
b. 2 only
c. Both 1 and 2
d. Neither 1 nor 2

Answer : b
It is also known as the Main Frontal Thrust (MFT), a geological fault along the boundary of the Indian and Eurasian tectonic plates.
The Main Boundary Thrust (MBT) is another major thrust fault in the Himalaya orogenic wedge that was active in the Cenozoic.

- It runs parallel to the MFT with a spacing distance of about 20 km.