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1. SCIENCE & TECHNOLOGY

1.1 Falcon Heavy Rocket

Why in News?

Recently, SpaceX has launched the Falcon Heavy rocket into a geosynchronous Earth orbit.

More About the News?

1. It has been launched from Launch Complex 39A at the Kennedy Space Centre in Florida, US.
2. This is the 4th launch of the huge rocket system, and the first one in nearly 3 years since its last launch in 2019.

About the Current Mission:

1. The rocket is carrying satellites to space for the U.S. military in a mission named as US Space Force (USSF)-44.
2. The mission has organized 2 spacecraft payloads, one of which is the TETRA 1 microsatellite, for various prototype (sample) missions & the other is for national defence purposes.
3. It will place the satellites for the Space Systems Command's Innovation and Prototyping.

What is the Falcon Heavy Rocket?

1. SpaceX claims Falcon Heavy to be the most powerful rocket in the world.
2. The rocket has a height of 70 m, a width of 12.2 m and a mass of 1,420,788 kg.
3. Falcon Heavy has 27 Merlin engines which together generate more than 5 million pounds of thrust while going upward.
   [Merlin is a family of rocket engines developed by SpaceX for use on its Falcon 1, Falcon 9 and Falcon Heavy launch vehicles, merlin engines use RP-1 and liquid oxygen as rocket propellants in a gas-generator power cycle.]
4. These engines were designed for recovery and reuse.
5. The rocket has a lifting capacity of around 64 metric tonnes into orbit.
6. The Falcon Heavy also uses 3 boosters to add more thrust and lift capacity.
7. SpaceX last launched its Falcon Heavy rocket in June 2019 from NASA's Kennedy Space Centre.
8. It carried 24 satellites as part of the Department of Defence's Space Test Program-2.

SpaceX's Falcon Heavy
SpaceX will attempt to launch the Falcon Heavy today to deliver the Arabsat-6A telecommunications satellite.

Launch site: Cape Canaveral, Fla.
Payload: Arabsat-6A satellite that will deliver television, radio, Internet, and mobile communications to customers in the Middle East, Africa, and Europe.

Falcon Heavy facts
■ The liftoff thrust of the Falcon Heavy is equal to 18 Boeing 747 aircraft at full power.
■ The Falcon Heavy rocket consists of two side boosters and a center core.
■ The side boosters will attempt to land back at Cape Canaveral.
■ The Falcon Heavy's center core will attempt to land on the droneship "Of Course I Still Love You" in the Atlantic Ocean.
■ All three rockets use hypersonic grid fins which help guide them during reentry.
■ Each rocket contains a cluster of 9 engines giving the Falcon Heavy a total of 27 first-stage engines.

Source: SpaceX

1.2   RISAT-2

Why in News?

Recently, the Indian Space Research Organisation's (ISRO) RISAT (Radar Imaging Satellite)-2 satellite has made "uncontrolled'' re-entry into the Earth's atmosphere.

More about the news:

1. It happened at the predicted impact point in the Indian Ocean near Jakarta.
2. RISAT-2 was India's 1st "eye in the sky" which kept surveillance on the country's borders.
3. It worked to provide help in anti-infiltration and anti-terrorist operations.

What is RISAT-2?

1. The principal sensor of RISAT-2, considered a 'spy' satellite, was an X-band synthetic-aperture radar from Israel Aerospace Industries.
2. RISAT-2 was built more quickly, after 2008 Mumbai terror attacks due to operational delays with the indigenously developed C-band for Risat-1 satellite.
   [The satellite, which was India's 1st dedicated investigation satellite, controlled day-night as well as all-weather monitoring capability.]
3. It was also used to track aggressive ships at sea which can cause a military threat.
4. RISAT-2, weighing about 300 kg was launched on April 20, 2009, by the PSLV-C12 launch vehicle.
5. It provided beneficial payload data for over 13 years.
6. RISAT-2's services were provided for various space applications also.
7. RISAT-2 shows ISRO's capability to carry out spacecraft orbital operations in an efficient way.
8. It fulfilled all necessary international mitigation guidelines for space debris, showing the long-term sustainability of outer space.

What are the Upcoming Projects of ISRO?

1. Gaganyaan: Indian Human Spaceflight Programme.
2. Aditya-L1: To Study the Sun's atmosphere.
3. NASA-ISRO Synthetic Aperture Radar Mission: To study hazards and global environmental change.
4. Shukrayaan-1: Orbiter to Venus.

1.3   Projects to Track Small Fishing Vessels

Why in News?

Recently, it has been reported that projects launched to track small fishing vessels along India's coast are making progress.

- The 3rd edition of the 'pan-India' coastal defence Exercise Sea Vigil-22 is also scheduled to be held on 15th-16th November to test coastal security.

<u>What are Small Fishing Vessels?</u>

Small fishing vessel are *boats or ships used to catch fish in the sea*, or on a lake or river.

<u>What are Different Projects to Track Small Fishing Vessels?</u>

1. Automatic Identification System (AIS): It was made compulsory for all vessels above 20 metres to have AIS, after the 2008 terrorist attacks in Mumbai. However, for vessels under 20 metres, the process has been delayed for several reasons.
2. Vehicle Management System: It has advanced features and enables 2-way communication. The technology has been handed over to 4 companies for commercial production and trials were conducted in association with the Indian Space Research Organisation (ISRO).
3. ReALCraft: Verification and monitoring of a large number of fishing vessels in India has been greatly eased by the creation of the online ReALCraft (Registration and Licensing of Fishing Craft).
4. Biometric Identity Cards: Issuance of biometric identity cards to the majority of fishermen and composite card readers to the maritime security agencies has been done to enable biometric verification of the identity of fishing vessel crews at sea.
5. Indo-Pacific Maritime Domain Awareness (IPMDA): The Quad grouping, at the Tokyo summit 2022 announced it to track "dark shipping" and build a "faster and more accurate maritime picture of activities in partner waters". It will also integrate three critical regions in the Indo-Pacific, the Pacific Islands, Southeast Asia, and Indian Ocean Region (IOR).

<u>About the Exercise Sea Vigil:</u>

1. The initial edition of the exercise was conducted in January 2019.
2. It is termed as India's largest coastal defence drill.
3. The exercise is a build up towards the major Theatre Level Readiness Operational Exercise (TROPEX), which the Indian Navy conducts every 2 years.

4. Exercise Sea Vigil-22 provides realistic assessment of India's strengths and weaknesses and thus helps in further strengthening maritime and national security.
5. The exercise is being conducted by the Indian Navy in coordination with Coast Guard and other Ministries.
6. The exercise is undertaken along the entire 7,516 km coastline and Exclusive Economic Zone of India.
7. It involves all the Coastal States and Union territories along with other maritime stakeholders, including the fishing and coastal communities.

<u>Significance of E-Vigil Exercise:</u>

1. Sea Vigil and TROPEX together will cover the entire range of maritime security challenges, including transition from peace to conflict.
2. It provides opportunity, at the apex level, to assess the country's preparedness in the domain of maritime security and coastal defence.

1.4   Garuda Shakti

<u>Why in News?</u>

India and Indonesia are participating in the 8th edition of the bilateral military exercise 'Garuda Shakti' at Karawang (Indonesia) that started on 21 November 2022.

About Garuda Shakti:

1. It is a military exercise between India and Indonesia.
2. It aims at enhancing understanding, cooperation and interoperability between the Special Forces of both armies.

Significance of Exercise Garuda Shakti:

1. The joint exercise will enable both armies to know each other better, and share their wide experiences specially battle experience on countering terrorist operations, Regional Security Operations & Peace Keeping Operations in an international environment.
2. The exercise is yet another important landmark and will ensure the friendly relations between the 2 countries.

What are the Other Bilateral Military Exercises?

1. MAITREE (India and Thailand	2. Kurukshetra (India and Singapore)
3. Ekuverin (India and Maldives)	4. Nomadic Elephant (India and Mongolia)
5. Hand-in-Hand (India and China	6. Shakti (India and France)
7. Mitra Shakti (India and Sri Lanka)	8. Surya Kiran (India and Nepal)
9. Harimau Shakti (India and Malaysia)	10. Yudh Abhyas (India and US)

1.5 National Geoscience Awards 2022

Why in News?

Recently, the Ministry of Mines invited nominations for the 'National Geoscience Awards' (NGA)-2022 for contributions in the field of fundamental/applied geosciences, mining, and allied areas.

So, What is a Geoscience?

1. Geoscience is the term which is used to refer to the Earth Sciences. In other words, it can also be called as the study of Earth.
2. Geoscientists can come from different fields such as atmospheric sciences, geology, hydrology, mineralogy, petrology, pedology and oceanography.

Key Points about the National Geoscience Awards

1. It was started by the Ministry of Mines in 1966 and is given annually.
2. It's an initiative to encourage geoscientists to work towards excellence.
3. Any citizen of India with a significant contribution in any of the fields specified in Clause-2 of the NGA Regulation 2022 will be eligible for these awards.
4. Some Broad Disciplines in which the award is given are: -
a) Mineral Discovery & Exploration
b) Mining, Mineral Beneficiation & Sustainable Mineral Development
c) Basic Geosciences
d) Applied Geosciences

Categories of the Award are:

1. National Geoscience Award for Lifetime Achievement: This award is given to an individual with an exceptionally high lifetime achievement for sustained and significant contributions in any of the disciplines mentioned in Clause-2 of NGA Regulation 2022. The award carries a cash prize of Rs. 5,00,000/- and a certificate.

2. National Young Geoscientist Award: This award is given for outstanding research work in any field of geosciences to an individual below 35 years of age. The award carries a cash prize of Rs. 1,00,000 plus a research grant of Rs. 5,00,000/- spread over 5 years subject to satisfactory yearly progress and a certificate.

1.6 Global Partnership on Artificial Intelligence (GPAI)

Why in News?

Recently, India has been handed over the presidency of 'Global Partnership on Artificial Intelligence' (GPAI) for 2022-23 by the outgoing Council Chair (France) in its 3rd Annual Summit in Japan.

So, What is Artificial Intelligence (AI)?

1. It can be described as the action of machines doing tasks that have historically required human intelligence.
2. It includes technologies like machine learning, pattern recognition, big data, neural networks, self-algorithms etc.
3. Few Examples of AI are: Facebook's list of suggested friends for its users, self-driving cars, trains etc.
4. AI automates processes and reduces human error but the principal limitation of AI is that it learns from the data. This means any inaccuracy in the data will be reflected in the results.
5. AI is expected to add almost USD 967 Billion to the Indian economy by 2035 and USD 450–500 billion to India's GDP by 2025, accounting for 10% of the country's USD 5 trillion GDP target.

Highlights of the Annual GPAI summit are:

1. After this summit, Tokyo became the 1st Asian city to host this summit.
2. The meeting happened on 4 themes:
a) Responsible AI,

b) Data governance,

c) Future of work,

d) Innovation and commercialisation.

3. India highlighted its commitment to efficient use of AI and to build a innovative ecosystem around AI.

About the GPAI

1. It was launched in June, 2020 with 15 member countries.

2. It is a multi-stakeholder initiative on artificial intelligence (AI), which aims to fill what it describes as 'the gap between theory and practice on AI,' by supporting cutting-edge research, as well as applied activities on AI.

3. The initiative facilitates international cooperation on AI by bringing together on a single platform, experts from fields such as science, industry, civil society, governments, international bodies and academia.

4. At present, GPAI has a total of 25 member countries: Australia, Belgium, Brazil, Canada, Czech Republic, Denmark, France, Germany, India, Ireland, Israel, Italy, Japan, Mexico, the Netherlands, New Zealand, Poland, the Republic of Korea (South Korea), Singapore, Slovenia, Spain, Sweden, the United Kingdom, the United States, and the European Union (EU).

5. It's 15 founding members are: Australia, Canada, France, Germany, India, Italy, Japan, Mexico, New Zealand, the Republic of Korea, Singapore, Slovenia, the UK, the US, and the EU.

1.7　Total Lunar Eclipse

Why in News?

Recently, a Total Lunar Eclipse (TLE) occurred on 8th November, 2022.

- Earlier Indian witnessed a Partial Solar Eclipse in October 2022.

What is the Lunar Eclipse?

1. Lunar eclipse takes place when Earth's shadow falls on moon.
2. For this, The Earth has to be directly between the Sun and the Moon.
3. A lunar eclipse can only take place during a full Moon.
4. First, the Moon moves into the penumbra (the part of the Earth's shadow). Part of the Moon's disc will look dimmer than a regular full Moon.
5. And then the Moon moves into the Earth's umbra (where direct light from the Sun is totally blocked out by the Earth), means the only light reflecting off the Moon's disc has already been refracted, or bent, by the Earth's atmosphere.

Anatomy of a Lunar Eclipse
A total lunar eclipse can only occur at Full Moon, when Earth blocks the sunlight normally reflected by the Moon. Some sunlight is bent through Earth's atmosphere, typically allowing the Moon a coppery glow. This diagram, not to scale, looks down on the solar system from above.

LUNAR ECLIPSES
Penumbral　Partial　Total
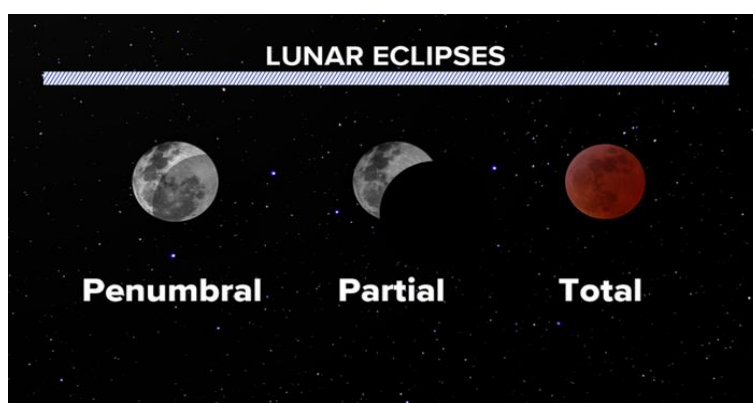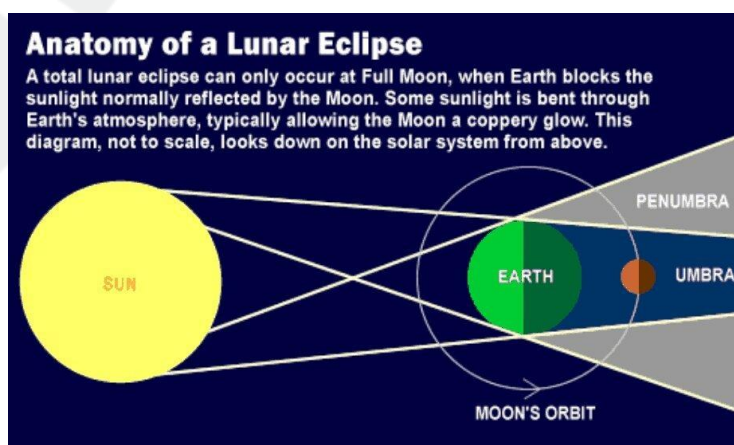
Types of Eclipses:

Penumbral	Partial	Total
1. The Moon travels through Earth's penumbra, or the faint outer part of its shadow. 2. The Moon dims so slightly that it can be difficult to notice.	1. An imperfect alignment of Sun, Earth and Moon results in the Moon passing through only part of Earth's umbra. 2. The shadow grows and then decrease without completely covering the Moon.	1. It happens when the earth comes in between the sun and the moon and earth's shadow falls on the moon. 2. During this, the whole of the lunar disc enters the Earth's umbra, so the Moon appears reddish (Blood Moon).

More About Total Lunar Eclipse:

1. During this the moon takes on a reddish colour due to Rayleigh scattering.
   [Rayleigh scattering is the scattering of light by particles in a medium without a change in its wavelength. This is also the reason why the sky appears blue.]
2. The moon turns red during the eclipse since the only sunlight reaching it is passing through the earth's atmosphere. The sunlight scatters due to the dust or clouds in the atmosphere producing the red colour.
3. Total lunar eclipses occur, on average, about once every year and a half, according to NASA (National Aeronautics and Space Administration).

1.8   PSLV C54

Why in News?

Indian Space Research Organisation (ISRO) has successfully launched the Polar Satellite Launch Vehicle (PSLV) C54 from the Satish Dhawan Space Centre in Srihari Kota, Andhra Pradesh.

- This was the 56th flight of PSLV, which marks the final mission for the year for PSLV-C54 rocket.

What are the Satellites Launched?

1. Nano Satellite-2 for Bhutan (INS-2B):
   - INS-2B satellite is a collaborative mission between India and Bhutan with two payloads.
   - NanoMx, a multispectral optical imaging payload developed by Space Applications Centre (SAC).
   - APRS-Digipeater which is jointly developed by DITT-Bhutan and URSC was successfully deployed.
2. Anand:
   - The Anand three axis stabilized Nano satellite is a technology demonstrator for miniaturized electro-optical payload.
   - All other sub-systems like TTC, power, onboard computer and ADCS from Pixxel, India was also placed in the orbit successfully.
3. Astrocast:
   - Astrocast, a 3U spacecraft, is a technology demonstrator satellite.
   - There are 4 nos. of Astrocast Satellites in this mission.
   - These spacecrafts are housed within an ISISpace QuadPack dispenser.
   - The dispenser protects the satellite from contamination.
4. Thymbolt Satellites:

- The Thybolt is a 0.5U spacecraft bus.
- It includes a communication payload to enable rapid technology demonstration and constellation development for multiple users from Dhruva Space with a minimum lifetime of 1 year.

5. EOS-6:
   - It is to observe ocean colour data, sea surface temperature and wind direction data to use in oceanography, climatic and meteorological applications.
   - The satellite also supports value added products such as potential fishing zones using chlorophyll, Sea Surface Temperature (SST) and land based geophysical parameters.

Significance of INS-2B:

1. It will provide high-resolution im
2. ages to Bhutan for the management of the country's natural resources.
3. The launch of the new satellite is part of India's efforts to back Bhutanese King Jigme Khesar Namgyel Wangchuck's plans to use advanced technology, including ICT and space technology, for the development of Bhutan.
4. The collaboration also fits in with India's "neighbourhood first" policy.

Additional Information:

1. Polar Satellite Launch Vehicle (PSLV):
   - It has been ISRO's main rocket ever since.
   - PSLV's of current day are is improved and way more powerful than the ones used in the 1990s.
   - It is the 1st Indian launch vehicle to be equipped with liquid stages.

   - PSLV is the most reliable rocket used by ISRO till date, with 52 out of 54 flights being successful.
   - It has successfully launched 2 spacecraft namely Chandrayaan-1 in 2008 and Mars Orbiter Spacecraft in 2013.
2. Geosynchronous Satellite Launch Vehicle (GSLV):
   - It is much more powerful rocket than any previous ones.
   - It was built to carry heavier satellites much deeper into space.
   - GSLV rockets have carried out 18 missions till date, out of which 4 ended in failure.
   - It can take 10,000 kg of satellites to lower the earth's orbits.
   - It has been developed many times resulting into GSLV Mk II, with indigenously developed Cryogenic engine.

1.9   Centre Restricts Use of Glyphosate

Why in News?

The Ministry of Agriculture and Farmers Welfare has restricted the use of Glyphosate (a widely used herbicide).

More About the News:

1. It has been restricted due its health impacts on humans and animals.
2. The new notification mandates that all certificates of registration already issued, now to be returned to the registration committee.
3. Failure to do so will result in appropriate action being taken under the Insecticides Act of 1968.

What is Glyphosate?

1. An Herbicide developed in 1970.
   [Herbicide is a chemical agent used for killing or preventing the growth of unwanted plants. (Residential or agricultural weeds and invasive species)
2. Its scientific name is N-(phosphonomethyl) glycine.
3. It is applied to the leaves of plants to kill weeds.
4. Glyphosate was highly accepted by the tea planters in the past two decades and has a very good market size in West Bengal and Assam.
5. Presently, its consumption is highest in Maharashtra as it is becoming a key herbicide in sugarcane, maize and many fruit crops.

What are the Concerns?

1. Health impacts of glyphosate range from cancer, reproductive and neurotoxicity and immunotoxicity.
2. Symptoms include irritation, swelling, burning of the skin, oral and nasal discomfort, unpleasant taste and blurred vision.
3. Majority of those using the weedicide were not trained for doing so and did not have the appropriate safety precautions.
4. The extensive use of glyphosate in sensitive areas has severe consequences.
5. Allowing continued use of glyphosate in India will contribute to widespread use of illegal herbicide tolerant crops.
6. It is a threat to agroecological (environment friendly) nature of Indian farms, apart from spreading the toxic effects to people, animals and the environment.

Illegality of Glyphosate use:

1. In whole world almost 35 countries have banned the use of glyphosate.
2. These include Sri Lanka, Netherlands, France, Colombia, Canada, Israel and Argentina.
3. In India, glyphosate has been approved for use only in tea plantations and non-plantation area close to tea crops.
4. Use of the substance anywhere else is illegal.

1.10   Coronal Holes

Why in News?

Recently, NASA's Solar Dynamics Observatory Captured dark spots on the sun's surface resembling eyes and a smile.

- NASA clarified that these spots are called coronal holes.

About Coronal Hole:

1. It is a patch of the Sun's atmosphere having much lower density than anywhere else in the sun's atmosphere.
2. The coronal holes appear as dark spots in ultraviolet views of the Sun.
3. These are regions where the Sun's magnetic field lines are connected directly to astronomical space.
4. These areas allow solar material to escape out in a high-speed stream of solar wind and leaves a dark "hole" near the surface of the Sun.
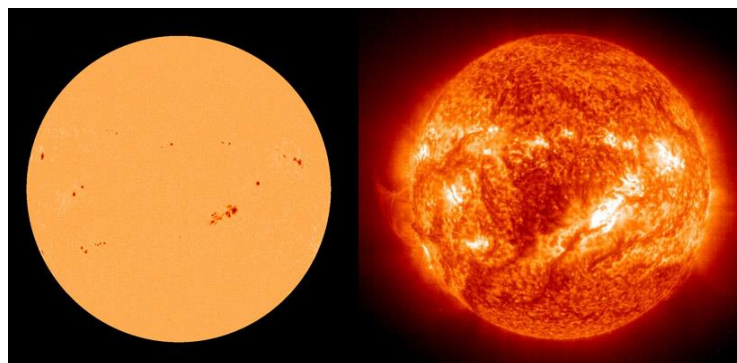
5. Coronal holes appear throughout the solar cycle, but last for much longer periods of time during solar minimums, when the Sun is less active.
6. These coronal holes are important to understand the space environment around the earth through which our technology and astronauts travel.
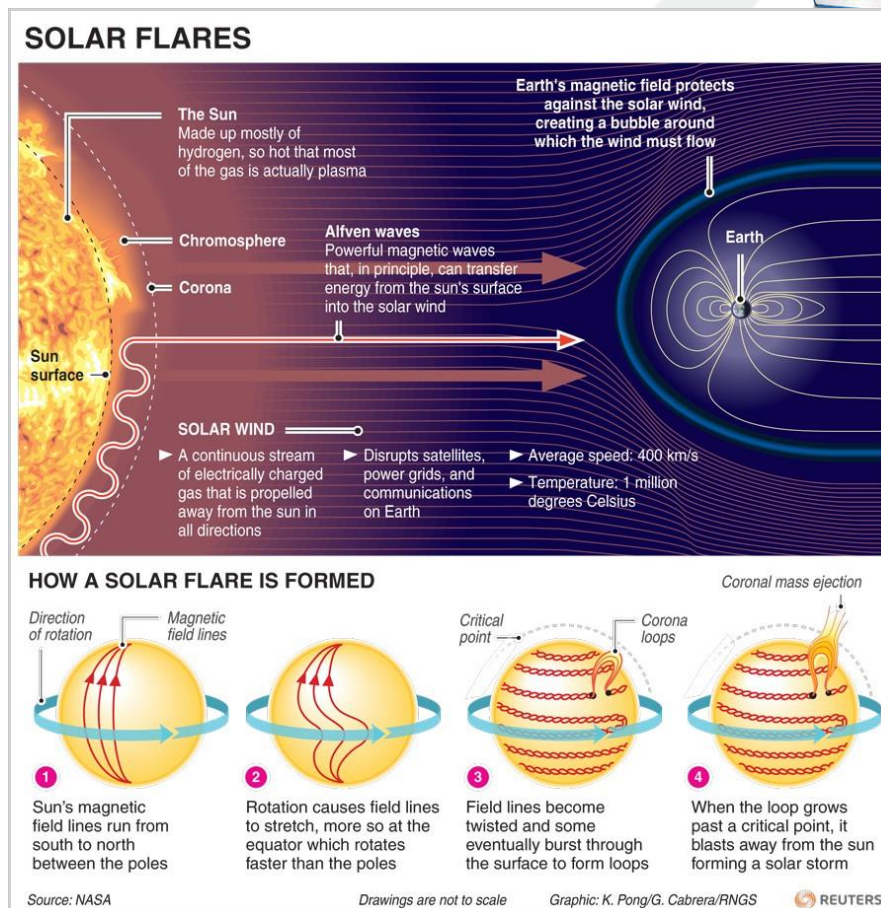
The image above shows the Visible light spectrum view (which can be distinguished by normal human eye) and ultraviolet view of sun's surface.

1.11   Cordy Gold Nanoparticles (Cor-AuNPs)

<u>Why in News?</u>

Recently, scientists from 4 Indian institutions, including Bodoland University, have developed Cordy Gold Nanoparticles.

<u>More about the News:</u>

1. These particles can make drug delivery in the human body faster and surer.
2. These nanoparticles have received an international patent from Germany.

<u>What are Cordy Gold Nanoparticles (Cor-AuNPs)?</u>

1. These are nanoparticles derived from the synthesis of the extracts of Cordyceps Mlitaris and Gold Salts.
2. Cordyceps militaris is a high value parasitic fungus. (Grown in lab at the Department of Biotechnology's Technology Incubation Centre (TIC) in Bodoland University)
3. Cordyceps mushroom are found in the eastern Himalayan belt and also known as super Mushrooms.
4. Gold salts are the chemical compounds of gold generally used in medicine.

Benefits of Cor-AuNPs:

1. When the drug particles are smaller, they penetrate better in the cells.
   [Cordyceps militaris adds bioactive components to the synthesis of gold nanoparticles for better penetration.]
2. Biosynthesized nanogold particles show a new application of nanoparticles i.e., development of therapeutic drugs which can be delivered as tablets, capsules, and in other forms.

1.12 Twin Engine Deck Based Fighter

In Context

According to the officials from the Aeronautical Development Agency (ADA), the Twin Engine Deck Based Fighter (TEDBF) could be initiated into the Navy by 2031-32.

About TEDBF:

1. In January 2020, DRDO demonstrated successful landing of Naval LCA on INS Vikramaditya and then, 18 take-offs and landings were conducted in 5 days.
2. The TEDBF is being taken up from the experience of the Naval LCA.
3. It is envisaged as a twin-engine medium weight fighter with an all-up weight of 26 tonnes and wing folding.
4. It is a replacement for the Mig-29K fighters in service and should be invested with the Navy by 20

2.   POLITY AND GOVERNANCE

2.1   Undertrials (Who are not found guilty yet but in police custody)

Why in News?

Recently, the Supreme Court has decided to examine a request challenging a provision in the election law that ban the voting rights of under trials.

- This ban restricts a persons confined in civil prisons and convicts serving their sentence in jails from casting their votes.

Who is Under trial?

A person who is arrested for some crime and is waiting to appear before the magistrate (a government official dealing with administration of laws).

Present Status of Undertrials:

1. According to National Crime Record Bureau (NCRB), 76% of prisoners in Indian jails are under-trials.
2. The basic rights of a person (undertrial) get harmed as there is possibility that he/she is innocent but due to delay in trials they have to spend time in police custody.

What are the Associated Allegations?

1. The latest National Crime Reports Bureau (NCRB) report of 2021 shows that a total of 5,54,034 prisoners were confined as on 31th December, 2021 in various jails across the country hence, this ban excludes a Large Segment of the Population.
2. Ban is more likely to send messages that undermine respect for the law and democracy rather than boosting those values.
3. Ban on right to vote is not essential to punish a person.
4. If an imprisoned person can vote if she/he is out on bail, why is the under trial who is not yet found guilty of a crime by a court of law can not use the same right.
5. Requirements for legitimate punishment is not denying the right to vote.
6. Even a judgment-debtor (a person who has not paid his debt despite a court verdict) who has been arrested and detained as a civil person is deprived of her right to vote.
7. The ban also lacks reasonable classification required based on the nature of the crime unlike in countries like South Africa, United Kingdom, France, Germany, Greece, Canada, etc. This lack of classification violates the fundamental right to equality under Article 14 (right to equality).

What are the Provisions related to Prisoners' right to cast their vote?

Article 326	Under it the right to vote is a constitutional right.
Section 62(5) of the Representation of the People Act, 1951	Individuals in the lawful custody of the police and those serving a sentence of imprisonment after conviction cannot vote. Undertrial prisoners are also excluded from participating in elections even if their names are on the electoral rolls.

Prisoners under Preventive Detention	Only those under preventive detention can cast their vote through postal ballots.

Reasons for a high number of undertrials:

1. Delay in the justice system.
2. Shortages of court staff and judges.
3. Bail system is not efficient and regular.
4. Poor legal representation (to get Government lawyer of legal help etc.)

Initiative for Undertrials in India:

1. setting up of several Fast-Track Courts so that cases can be solved speedily.
2. Modernization of Prison scheme.
3. IPC and CrPC laws have been revised and reviewed for less confusion.
4. Similar type of small offences is merged together so that they can be solved fast with better efficiency.

Way Forward:

In words of Former UN High Commissioner for Human Rights Zeid Ra'aed Al Hussein when the fundamental principles of human rights are not protected the centre of our institution no longer holds hence, considering large number of people under trials, India should look for better means of conduct with them to make them more responsible and ethical citizens.

2.2   UDISE Plus Report

Why in News?

Recently, the Union Education Minister released the 'Unified District Information System for Education (UDISE) Plus 2021-22' report on school education.

1. The Ministry of Education also released the Performance Grading Index (PGI) for 2020-21.

About the UDISE Plus Report

1. UDISE Plus is an updated and improved version of UDISE, which was initiated in 2012-13 by the Ministry of Education.
2. It was launched in 2018-2019 to speed up data entry, reduce errors, improve data quality and ease its verification.
3. It's a comprehensive study that provides information on enrolment and dropout rates of school students, number of teachers in schools, and information on other infrastructural facilities like toilets, buildings and electricity etc

So, What are the Findings of the UDISE Plus 2021-22 Report?

1. Decline in Enrolments:
a) At Pre-Primary Level: A total of 94.95 lakh students entered pre-primary classes in 2021-2022, registering a drop of 10% as compared to the previous year when 1.06 crore children enrolled in these classes.
b) Primary and Higher Secondary Level: Enrolment in primary classes (classes 1 to 5) also saw a drop for the first time—falling from 12.20 lakh in 2020-2021 to 12.18 lakh in 2021-2022.

c) However, the total number of students from primary to higher secondary increased by almost 19 lakhs and reached a total of 25.57 crore students.

2.Decline in Number of Schools:

a) Total number of schools in 2021-22 stood at 14.90 lakhs compared to 15.09 lakhs in 2020-21.

b) The decline was mainly due to closure of private and other management schools and grouping/clustering of schools by various states.

c) There were also 1.89 lakh fewer teachers as their number reduced from 96.96 lakh in 2020-2021 to 95.07 lakh in 2021-2022.

3.Computer Facilities and Internet Access:

a) Computer facilities were available in 44.75% of schools, while Internet access was available only in 33.9% of schools.

b) However, their availability has improved as compared to pre-covid when only 38.5% of schools had computers and 22.3% had Internet facilities.

4.Gross Enrolment Ratio (GER):

a)It compares the enrolment in a specific level of education to the population of the corresponding age group.

b) The GER for the primary section has improved from 101.3% in 2018-2019 to 104.8% in 2021-2022.

c) For secondary classes, it has risen to 79.6% in 2021-22, from 76.9% in 2018-19 and for higher secondary level, it has increased from 50.14% to 57.6%.

5. Category-wise Improvement:
a) Total number of Scheduled Caste enrolment increased to 4.82 Crore in 2021-22 as compared to 4.78 Crore in 2020-21.
b) Total Scheduled Tribe enrolment increased to 2.51 crore in 2021-22 from 2.49 crore in 2020-21.
c) Total other backward students also increased to 11.48 crore in 2021-22 from 11.35 crore in 2020-21.
d) Total enrolment of Children with Special Needs (CWSN) in 2021-22 reached at 22.67 lakh as compared to 21.91 lakh in 2020-21.

6.Gender Parity Index (GPI):

a) The Gender Parity Index (GPI) of GER indicates the representation of girls in school with respect to their population in the corresponding age group.

b) In 2021-22 over 12.29 crore girls are enrolled in primary to higher secondary showing an increase of 8.19 lakh compared to the enrolment of girls in 2020-21.

About the Performance Grading Index (PGI)

1. PGI is an evidence-based comprehensive analysis of the school education system across states and Union Territories.
2. The Index classifies States and Union Territories into 10 grades based on their score out of a total 1,000 points.
3. The highest achievable Grade is Level 1, which is for State/UT scoring more than 950 points out of a total of 1000 points.
4. The lowest grade is Level 10 which is for scores below 551.
5. Their performance is assessed on a total of 70 indicators in 5 domains.

6. The 5 domains are: learning outcome, access, infrastructure and facilities, equity and governance process.

7. PGI is based on data drawn from several data sources, including the Unified District Information System for Education Plus (UDISE +) 2020-21, National Achievement Survey NAS 2017, and Mid-Day Meal Portal.

Findings of the PGI are:

1. **Many States attained Level 2:** A total of 7 States and UTs, Viz., Kerala, Punjab, Chandigarh, Maharashtra, Gujarat, Rajasthan, and Andhra Pradesh have attained Level II (score 901-950) in 2020-21 as compared to none in 2017-18 and 4 in 2019-20. Gujarat, Rajasthan and Andhra Pradesh are the new entrants to the highest achieved level of any state so far.

2. **States attained Level 3:** A total of 12 States and UTs, including Delhi, Tamil Nadu, Karnataka and Odisha, attained Level 3 with a score between 851-900.

3. **Biggest Improvement:** Ladakh has seen the biggest improvement by climbing up from Level 10 in 2019-2020 to Level 4 in 2020-2021.

2.3   Supreme Court upheld the validity of EWS Quota

Why in News?

Recently, the Supreme Court has upheld the validity of the 103rd Constitutional Amendment Act which provides 10% reservation for the Economically Weaker Sections (EWS) among forward castes in government jobs and educational institutions across India.

About the Verdict

View of Majority Judges:

1. They said that 'the 103rd constitutional amendment act cannot be said to breach the basic structure of the constitution'.

2. The EWS quota does not violate equality and the basic structure of the constitution. Reservation in addition to the existing reservation does not violate the provisions of the constitution.

3. The reservation is an instrument of 'affirmative action' by the state for the inclusion of backward classes.

4. Basic structure can't be breached by enabling the state to make provisions for education.

5. Reservation is important not just for the inclusion of socially and economically backward classes into the society but also to class so disadvantaged.

6. They also said that '50% rule formed by the Supreme Court in the Indira Sawhney judgment of 1992 was "not flexible". Further, it had applied only to SC/ST/SEBC/OBC communities and not the general category.

7. The Scheduled Castes, Scheduled Tribes and the Backward Classes for whom the special provisions have already been provided in Article 15(4), 15(5) and 16(4) form a separate category as distinguished from the general or unreserved category.

View of Minority Judges:

1. They said that 'Reservations were designed as a powerful tool to enable equal access. Introduction of economic criteria and excluding SCs (Scheduled Castes), STs(Scheduled Tribes), OBCs (Other Backward Classes), saying that they had these pre-existing benefits is injustice.

2. Permitting the breach of 50% ceiling limit will become "a gateway for further infractions and result in compartmentalization (division into sections).

So, What is the Economically Weaker Section (EWS) Quota?

1. The 10% EWS quota was introduced under the 103rd Constitution (Amendment) Act, 2019 by amending Articles 15 and 16 of the constitution.

2. It inserted Article 15(6) and Article 16(6) in the Indian Constitution.

3. It provides reservation in jobs and admissions in educational institutes for Economically Weaker Sections (EWS).

4. It was enacted to promote the welfare of the poor who are not covered under the 50% reservation policy for Scheduled Castes (SCs), Scheduled Tribes (STs) and Socially and Educationally Backward Classes (SEBC).

5. It enables both the Centre and the States to provide reservations to the EWS of society.

Significance of the EWS Quota:

1. Helps in Addressing Inequality: The 10% quota is progressive and can address the issues of educational and income inequality in India since the economically weaker sections of citizens have remained excluded from attending higher educational institutions and public employment due to their financial incapacity and lack of support.

2. Provides Recognition to the Economic Backwardness: There are many people or classes other than backward classes who are living under hunger and poverty. So, this EWS quota gave constitutional recognition to the poor from the upper castes too.

3. Reduction of Caste-Based Discrimination: Moreover, it will gradually remove the stigma associated with the reservation because reservation has historically been related to caste and most often the upper caste looks down upon those who come through the reservation.

Way Forward

1. It is high time now that the Indian political class should overcame its tendency of continually expanding the scope of reservation in pursuit of electoral gains, and realised that it is not the solution for problems.

2. Instead of giving reservation based on different criteria, the government should focus on quality of education and other effective social upliftment measures. It should create a spirit of entrepreneurship and make them job-givers instead of a job seeker.

2.4 Age of Consent for Adolescents

Why in News?

Recently, Karnataka High Court, while dismissing a case filed under the Protection of Children from Sexual Offences Act, 2012 (POCSO Act), said that the Law Commission of India should rethink the age criteria in law for having consensual sex to address the issue of instances of sexual intercourse as a result of mutual love affair amongst minor girls and boys, who are aged above 16 but are below 18.

So, What is the POCSO Act, 2012?

1. This act defines a child as any person who is below 18 years of age.

2. It defines different forms of sexual abuse, including penetrative and non-penetrative assault, as well as sexual harassment and pornography.

3. It categorise a sexual assault to be "aggravated" under certain circumstances, such as when the abused child is mentally ill or when the abuse is committed by a person who is in a position of trust or authority like a family member, police officer, teacher, or doctor.

4. The Act says that a case of child sexual abuse must be disposed of within 1 year from the date the offence is reported.

5. The POSCO Act, 2012 was amended in August 2019 to provide more stringent punishment, including the death penalty, for sexual crimes against children.

Related Concerns are:

1. There have been several instances in the past few years when the courts have quashed criminal proceedings of rape and kidnapping, after being convinced that the law was being misused to suit one or the other party.
2. In many cases, a couple fears opposition from parents and this results in a situation where families file a case with the police, who then book the boy for rape under the POCSO Act with the intent to marry under IPC or the Prohibition of Child Marriage Act, 2006.
3. A number of young couples who are in consensual and non-exploitative relationships have found themselves facing the criminal justice system.
4. It also impacts the delivery of justice as these cases constitute a large burden on courts and they divert attention from investigation and prosecution of actual cases of child sexual abuse and exploitation.

Conclusion and Way Forward

1. There is a need to reform the law to revise the age of consent and prevent the criminalisation of older adolescents engaging in factually consensual and non-exploitative acts.
2. Adolescents have to be made aware of the stringent provisions of the Act and also regarding the IPC.

2.5 Report on SWAMITVA Scheme

Why in News?

Recently, the report of the Expert Committee on 'SVAMITVA Scheme' was released during the National Conference on SVAMITVA Scheme and Rural Planning in Madhya Pradesh.

So, What is SVAMITVA Scheme?

1. SVAMITVA stands for 'Survey of Villages and Mapping with Improvised Technology in Village Areas'.
2. It's a center sector scheme which was launched nationally on the occasion of National Panchayati Raj Day on 24th April 2021.
3. 'Ministry of Panchayati Raj' (MoPR) is the nodal ministry of the scheme and 'Survey of India' is the technology implementation agency under the scheme.
4. Aim is to provide the 'record of property rights' to all village households and to issue them the property cards.
5. The demarcation in rural areas will be done using Drone Surveying Technology.
6. It will cover almost 6.62 Lakh villages in the entire country during the period 2021-2025.
7. Property Cards are known by different names in different states of India like 'Title deed' in Haryana, 'Rural Property Ownership Records (RPOR)' in Karnataka, 'Adhikar Abhilekh' in Madhya Pradesh, 'Sannad' in Maharashtra, 'Svamitva Abhilekh' in Uttarakhand, 'Gharauni' in Uttar Pradesh.

Some Key Highlights of the Report are:

1. About Expert Committee: The Expert Committee was formed in 2022 consisting of domain experts from Land Governance, Banking, Survey of India, National Informatics Centre (NIC), State Revenue and Panchayati Raj Departments, Industry and premier Planning and Architecture Institutes.
2. Recommendations of the Report are:
a) To create systems that promote transparency in the implementation of the scheme.

b) Promote the adoption of record of rights for availing bank loan.
c) Develop linkages between different departments for informed decision-making related to property tax assessment and collection.
d) Promote the wider adoption of SVAMITVA data by government and private agencies.
e) Adoption of RADPFI (Rural Area Development Plan Formulation and Implementation) guidelines and SVAMTIVA data for accurate village level-planning.

Benefits of SVAMITVA Scheme are:

1. The delivery of property rights through an official document will enable villagers to access bank finance using their property as collateral.

2. If the property records for a village is maintained at the Panchayat level, it will allow for collection of associated taxes from the owners. The money generated from these local taxes can be used to build rural infrastructure and facilities.

3. Freeing the residential properties including land from the title disputes and the creation of an official record is likely to result in appreciation in the market value of the properties.

4. The accurate property records can be used for facilitating tax collection, new building and structure plan, issuing of permits etc.

5. The scheme will enable creation of better-quality Gram Panchayat Development Plans (GPDPs), using the maps created under this programme. The Gram Panchayats are constitutionally mandated for preparation of Gram Panchayat Development Plans (GPDP) for economic development and social justice.

6. The GPDP is based on a participatory process in convergence with schemes of all related Central Ministries/Line Departments related to 29 subjects listed in the 11 Schedule of the Constitution.

2.6   Operation of Quasi-judicial Courts

Why in News?

Recently, the Supreme Court said that the biggest issue faced by Quasi-judicial Courts is the lack of adequate supervision and ownership by the administrative and political leadership.

So, What is a Quasi-judicial Body?

1. A quasi-judicial body is "an organ of Government other than a Court or Legislature, which affects the rights of private parties either through adjudication (judgement) or rulemaking".

2. In other words, a quasi-judicial body is an entity such as an arbitrator or tribunal which has powers and procedures almost similar to those of a court of law or judge.

3. It is not mandatory that a Quasi-Judicial Body has to necessarily be a organisation similar to a Court of Law. For example, the Election Commission of India is also a Quasi-Judicial Body but does not have its core functions as a Court of Law.

4. Some other examples of Quasi-Judicial Bodies in India are:

a) National Green Tribunal
b) Central Information Commission (CIC)
c) Lok Adalat
d) Finance Commission
e) National Consumer Disputes Redressal Commission

Advantages of Quasi-Judicial Bodies are:

1. In the conventional judicial process, a large section of population hesitates from approaching the courts due to high expenditures, thus defeating the purpose of justice.

2. Quasi-judicial bodies, on the other hand, have an overall low-cost which encourages people to seek redressal for their grievances.

3. Tribunals and other such bodies do not follow any lengthy or complex procedure like submitting application or evidence etc.

4. Quasi-judicial bodies, while taking up specific matters, majorly help in sharing the massive workload of the Judiciary. Like the National Green Tribunal adjudicating the matters related to environment and pollution.

Challenges are:

1.Data on the level of pendency of cases or the speed of disposal is not compiled in many states.

2. Many quasi-judicial bodies are so busy in their routine works and other administrative functions assigned to them that they remain with very less time for court work.

3. Their access to court clerks and record keepers is limited. Computers and video recorders are not available in many of these courts.

4. Several of the presiding officers lack proper knowledge of law and procedures, which has landed many civil servants in deep trouble in sensitive matters.

What Measures can be taken to Improve Quasi-judicial Courts?

1. The government should make the efficient functioning of these agencies a priority.
2. Detailed data on the functioning of these agencies must be collected and published from time to time, at least annually.
3. This data can be laid before the concerned legislatures.
4. An electronic platform can be established to handle all works related to the administration of justice, such as filing of complaints, issue of summons, movement of case records between courts, issuing copies of the judgments and so on. It can establish a sound basis for analysing the functioning of these bodies and facilitate the publication of statistics.
5. Annual inspections of these courts should be made mandatory.
6. Research on the functioning of these courts should be encouraged.
7. Regular training and orientation of the adjudicating authorities should be taken up from time to time.
8. The state index of performance of these quasi-judicial courts be made and published. It can draw the attention of the states to their performance in comparison to others and help them identify areas of weakness.

2.7 Supreme Court Commented Over Short Tenures of CEC

Why in News?

Recently, the Supreme Court said that the government does not give much importance to Election Commissioners' independence, as evidenced by the reduction in tenures of Chief Election Commissioners (CECs) from over 8 years (in the 1950s) to just a few 100 days (after 2004).

So, What has the SC said about the Election Commissioners?

1. SC said that the Constitution of India has vested vast powers on the shoulders of the CEC and the 2 Election Commissioners.
2. Apart from competence, the character is also crucial, so that those appointed as Election Commissioners will not allow themselves to be bulldozed under pressure of anyone.
3. SC also said that 'in the absence of a law to oversee such appointments, the silence of the Indian Constitution is being exploited by all'.
4. The government assures that the person nominated does not serve the full 6 years by picking someone close to the age of 65, thus undermining independence of ECI.

Government's Reply:

1. Government said that 'there is no vacuum in the Constitution on the issue'.
2. If the Constitution has taken a position despite multiple ideas put forward by the original Constituent Assembly, that position must be respected.
3. The separation of powers cannot be challenged, as it is the basic feature of the Constitution.
4. This matter comes under the area of Parliament to debate and not the court.

Suggestion given by the SC: An appointment committee can be made by including the Chief Justice of India to appoint the Election Commissioners to ensure neutrality.

About Election Commission of India (ECI)?

1. ECI is an independent constitutional body which is responsible for administering union and state election processes in India.
2. The body administers elections to the Lok Sabha, Rajya Sabha, State Legislative Assemblies and the office of the President and Vice President of India.

What are the constitutional provisions related to ECI?

1. Part XV of the Indian constitution deals with elections and establishes a commission for these matters.
2. The ECI was established in accordance with the constitution on 25th January 1950.
3. Article 324 to 329 of the constitution deals with the powers, function, tenure, eligibility etc of the commission and its members.

Articles related to Elections	
324	Superintendence, direction and control of elections to be vested in an Election Commission.
325	No person to be ineligible for inclusion in, or to claim to be included in a special, electoral roll on grounds of religion, race, caste or sex.
326	Elections to the House of the People (Lok Sabha) and to the Legislative Assemblies of States to be on the basis of adult suffrage.
327	Power of Parliament to make provision with respect to elections to Legislatures.

328	Power of Legislature of a State to make provision with respect to elections to such Legislature.
329	Bar to interference by courts in electoral matters.

What is the structure of ECI ?

1. Originally, the ECI had only 1 election commissioner but after the Election Commissioner Amendment Act 1989, it has been made a multi-member body.
2. Now, the ECI consists of 1 Chief Election Commissioner (CEC) and 2 Election Commissioners (ECs).
3. The secretariat of the ECI is located in New Delhi.
4. At the state level, ECI is helped by a Chief Electoral Officer (CEO) who is an IAS officer.
5. The President appoints Chief Election Commissioner and the Election Commissioners.
6. They have a fixed tenure of 6 years, or up to the age of 65 years, whichever is earlier.
7. They enjoy the same status and receive salary and perks as available to the judges of the Supreme Court of India.

What is the procedure for the removal of CEC and ECs ?

1. CEC can be removed from the office on same grounds and manner as it is in case of Supreme Court judges.
2. Judges of High Courts and Supreme Court, CEC, Comptroller and Auditor General (CAG) may be removed from office through a motion adopted by the parliament on the grounds of 'Proved misbehaviour or incapacity'.
3. Removal requires special majority of not less than 2/3rd of members present and voting in the house and it should be supported by more than 50% of the total strength of the house.
4. The Constitution does not use the word 'impeachment', for the removal of the judges, CAG, CEC.
5. The term 'Impeachment' is only used for removing the President of India. It requires the special majority of 2/3rd members of the total strength of both the houses.

What are the Key Functions of ECI?

1. Biggest function of ECI is to provide superintendence, direction and control to the entire process of elections to the parliament and legislatures of all the states and to the office of President and Vice-President of India.
2. It also decide the election schedules for the conduct of periodic and timely elections, whether general or bye-elections.
3. It prepares electoral roll (list of voters) and issues Voter ID card too.
4. It decides on the location of polling stations, location of counting centres, arrangements to be made in and around polling stations and counting votes and declaring results.
5. It grants recognition to political parties & allot election symbols to them.
6. The commission also provide advice in the matter of post election disqualifications of sitting members of parliament and state legislatures.
7. It issues the Model Code of Conduct (general guidelines for candidates and political parties) in elections for political parties and candidates, so that no one should indulge in unfair practices or there is no abuse of powers by those in power.
8. It set limits on campaign expenditure per candidate for all the political parties and also monitors the same.

Conclusion and Way Forward

A Chief Election Commissioner (CEC) of the calibre of TN Sheshan (former CEC) is required to ensure free and fair elections and to strengthen democracy in India. Though such personalities appear occasionally, appointments without any bias can provide close to him.

2.8 Registration of Birth and Death Act, 1969

Why in News?

Recently, the Union Home Ministry proposed amendments to the 'Registration of Birth and Death (RBD) Act, 1969'.

So, What is Registration of Birth and Death (RBD) Act, 1969?

1. Registration of Births and Deaths in India is mandatory under the RBD Act, 1969.
2. Under the RBD Act, it is the responsibility of the States to register births and deaths.
3. State governments have set up facilities for registering births and deaths and keeping records.
4. The Chief Registrar appointed in every State is the executive authority for the implementation of the Act in that state.
5. The Registrar General of India, appointed under this Act, is responsible for coordinating and unifying the implementation of the RBD Act.

About the Proposed Amendments

1. It has been proposed to make birth certificates a mandatory document for almost every sphere of life like for admissions in educational institutions, inclusion in the voter list, appointment in Central and State government jobs, issue of driving licence, passports etc.
2. It shall be mandatory for hospitals and medical institutions to provide a copy of all death certificates, stating the cause of death, to the local registrar apart from providing to the relative of the deceased.
3. As per the Civil Registration System (CRS) report, the registration level of births for the country increased to 92.7% in 2019 from 82.0% in 2010 and that of registered deaths increased from 67% in 2010 to 92.0 % in 2019. CRS is an online system for registration of births and deaths under the control of the RGI.

What is the Need for the Amendments?

1. The amendments will enable the Registrar General of India (RGI) under the Ministry of Home Affairs (MHA) to "compulsorily maintain a database of registered birth and deaths at the national level".
2. The birth and death database at the national level can be used to update the Population Register, the Electoral Register, Aadhar, ration card, passport and driving licence databases.
3. If the amendments are implemented, then the Centre can use the data to update the National Population Register (NPR) that was first prepared in 2010. The NPR already has a database of 119 crore residents and under the Citizenship Rules, 2003, it is the 1st step towards the creation of a National Register of Citizens (NRC).

2.9 New Norms for TV Channels

Why in News?

Recently, the Ministry of Information & Broadcasting has issued guidelines and specified new uplinking and downloading rules.

- Earlier, the Ministry of Information and Broadcasting (I&B) had issued an **advisory stating that any kind of broadcasting** be done only through Prasar Bharti.

What are the New Provisions?

1. Obligation to Telecast Content in National/Public Interest:
a) Television channels will have to telecast content in the national interest or public service every day for atleast 30 minutes.
b) These obligations will not be applicable for sports, wildlife, and foreign channels.
c) The themes of national importance include,

- Education and spread of literacy

- Agriculture and rural development,

- Health and family welfare,

- Science and technology,

- Welfare of women

- Welfare of the weaker sections of society

- Protection of the environment and of cultural heritage and national integration.

2. No prior Permission for Live Telecast of Events:
a) Requirement for seeking permission for live telecast of events has been done away with, only prior registration of events to be telecast live would be necessary.
b) No requirement of prior permission for change of language or conversion of mode of transmission from Standard Definition (SD) to High Definition (HD) or vice versa, only prior intimation would be required.

3. Simplification and Rationalization:
a) Structure of the Guidelines has been systematized to avoid duplication and common parameters.
b) The penalty clauses have been rationalized and separate nature of penalties have been proposed for different types of contraventions as against uniform penalty at present.

2.10 Electoral Bond Scheme Amendments

Why in News?

A weeks before elections in certain states, the Central Government has amended the Electoral Bond Scheme.

What are Electoral Bonds?

1. An electoral bond is promissory note on paper through which money can be donated to political parties.
2. Before 2018, anyone could give these donations through direct cash to political parties.
3. But later Electoral Bond Scheme (EBS) was introduced by government to bring some transparency accountability in the spendings of political parties and to curb the black money in country.
   - [Black money is the money which is not in the records of government through banking or any other medium]
4. EBS was introduced with the Finance Bill, 2017 and notified in 2018.
5. Through the EBS, banks came in between the donor and buyer of bonds, making it easier to track the donation money.

How does the Electoral Bond works?

1. Notified Banks are chosen.

2. These notified banks issues electoral bonds.

3. The Donor buys an electoral Bond using cheque/digital Payments.

4. The donor gives the bond to the party of his choice.

5. The party deposits in the bond in an account, whose details are with the election commission.

More About the Electoral Bond Scheme:

1. Nature of the Bond	1. Bond received is of the nature of a promissory note. (Unsecured promise on the paper) 2. It is the interest free banking instrument. 3. It can be used for making donation to only those parties who are registered under section 29 A of Representation of People Act (RoPA) 1951 and which secured not less than 1% of votes polled in the last general election to the house of the people or a legislative assembly.
2. Life of the Bond	1. These bonds have life of just 15 days, after which the buyer have to pay the money back. 2. Available for purchase for a period of 10 days, in month as specified by government. [This provision has been amended in Nov 2022 with providing additional validity of 15 days.]
3. Value of Bonds	1. Issued/ Purchased in the denominations of 1000, 10,000, 1,00000 and 1,0000000 Rs. With no maximum limits. 2. Available from specified branches of SBI banks.
4. Taxability	1. The donations would not be taxable.

What are the Amendments Made to the Scheme?

Additional Period of 15 Days:

Earlier	Now
1. In 2018, when the Electoral Bond Scheme was introduced, these bonds were made available for a period of 10 days each in January, April, July and October, as may be specified by the central government.	1. The amendment has introduced a new para, providing an additional period of 15 days shall be specified by the Central Government (in the year of general elections) to the Legislative Assembly of States/UTs with Legislature.

Benefits of Electoral Bonds:

1. More Transparency: It makes political parties to spend in a more transparent way, as the account details get shared with Election Commission.
2. Ensures Accountability: As the donations/spendings are done through banking channels, every political party have to explain in the end that where the entire sum of money has been expended.
3. Discouraging Cash: Bonds are given through a limited number of notified banks and that too through cheque and digital payments that discourages the usage of cash.
4. Maintain Privacy: The identity of the individuals, groups of individuals, NGOs, religious and other trusts who donates electoral bonds is not disclosed.

Issues with the Electoral Bonds:

1. No Disclosure of the amounts: Even major political parties have not disclosed the amount they received through electoral bonds.
2. Not good for Democracy: The introduction of electoral bonds is "distorting democracy" in India as only 23 political parties are eligible to get these bonds according to eligibility criteria.
3. Restricting Right to know: Before the introduction of electoral bonds, political parties had to disclose details of all its donors, who have donated more than Rs 20,000. The change violates the citizen's 'Right to Know' and makes the political class even more unaccountable.
4. Low Secrecy: Anonymity does not apply to the government of the day, which can always access the donor details by demanding the data from the State Bank of India (SBI). This means that only the common people are in the dark about the source of these donations.

Way Forward:

The government should reconsider and modify some provisions of the Electoral Bonds Scheme to ensure full disclosure and transparency. At the same time, the bonds should ensure that the funds being collected by the political parties are coming from clean money.

2.11   Aadhaar Rules Amended

Why in News?

Recently, the government has amended Aadhaar regulations.

▪ The Aadhaar (Enrolment and Update) Regulations have been updated to reflect the changes.

What is Aadhaar?

1. A 12-digit unique identity for every Indian individual, including children and infants
2. Enables identification for every resident Indian.

3. Establishes uniqueness of every individual on the basis of demographic and biometric information.
4. It is an unpaid service that every resident can get irrespective of present documentation.
5. Each individual will be given a single unique Aadhaar ID number.
6. Aadhaar will provide a universal identity infrastructure which can be used by any identity-based application (like ration card, passport, etc.)

Name XXXX
DOB: XX-XX-XXXX
Gender: MALE
9953995399

0000 1111 2222

About the new regulations:

Earlier	Now
As per the regulations earlier, residents, older than 15 years at the time of enrolment were recommended to update their biometric data every 10 years.	The process of updating documents is not mandatory.

1. This process will help in ensuring the accuracy of information in the Central Identities Data Repository (CIDR).
2. The amendment of the Aadhaar regulation is limited to updating demographic information and does not involve biometric data such as fingerprints.

Some Data/ Facts Related to Aadhaar:

1. 134 crore Aadhaar numbers have been issued till date.
2. Around 1000 government schemes – 650 from state governments and 315 from central government use Aadhaar authentication services to avoid duplication and removal of false beneficiaries.
3. Aadhaar enrolment of adult citizens is almost 100 %.
4. Aadhaar is same as Social Security Number (SSN) used in US.
5. But there are some differences too in Aadhaar and SSN, as follows:

Aadhaar- Unique Identification Authority for India	SSN- Social Security Number
1. Anyone who lives in India for 182 days can enrol. 2. It collects biometrics. 3. Biometrics in it include finger prints and iris of both eyes. 4. It is linked to Bank records, Ration card, Pan card and many more. 5. Indian government is making Aadhar compulsory to increase its usage.	1. Only citizens and those with work permit can get SSN number. 2. No biometrics. 3. Does not even carry a photograph. 4. It is mad available to several federal agencies that store it at organisational level. 5. US government has passed several laws to restrict its usage.

Issues/Significances of Aadhaar:

Issues with Aadhar	Significance of Aadhar
1. Aadhaar act allows cancellation of Aadhaar number for any reason by the government and citizens have no option in that case. 2. A Centralized database is a concern because once it is compromised everyone is at risk. 3. There is no ID or address verification and there is no means of identifying fakes. 4. There is no data protection law in place in India. 5. Enrolment software hacks allowed foreign nationals to create Aadhaar numbers thus creating a national security risk. 6. UIDAI does not have a monitoring mechanism but only an audit mechanism. 7. Data goes to third parties which increases its vulnerability.	1. Increasing the accuracy of Aadhaar information is likely to help the government to eliminate the leakage of benefit transfers from various schemes. 2. Aadhaar Card is used as the major document of proof when opening a bank account under the Pradhan Mantri Jhan Dhan Yojana in the nation. 3. Aadhar Card linked bank accounts will get their set of LPG Subsidy directly accredited in the bank account. 4. A person who wants to get the benefits of provident funds and pensions, needs to link his/her Aadhaar Card to respective pension account and provident fund. 5. Aadhaar Card will relieve you of the lengthy procedure while obtaining Passport.

Additional Information:

Unique Identification Authority of India (UIDAI) & Aadhar

1. The UIDAI is a statutory authority established under the provisions of the Aadhaar (Targeted Delivery of Financial and Other Subsidies, Benefits and Services) Act, 2016.
2. It was established by the Government of India, under the Ministry of Electronics and Information Technology (MeitY).
3. UIDAI was created to issue Unique Identification numbers (UID), named as "Aadhaar", to all residents of India.
4. The UID had to be robust enough to eliminate duplicate and fake identities.
5. Under the Aadhaar Act 2016, UIDAI is responsible for:
   - Aadhaar enrolment and authentication
   - Operation and management of all stages of Aadhaar life cycle,
   - Developing the policy
   - System for issuing Aadhaar numbers to individuals
   - Perform authentication and the security of identity information and authentication records of individuals.

Central Identities Data Repository (CIDR)

1. It is a central database that stores and manages identity information for individuals and organizations.
2. It is used to verify and authorize individuals and organizations before giving access to government services and information.
3. CIDR also supports the issuance of electronic identity cards and the management of identity information.

2.12   A Court of the Future (Reformed Judiciary)

Why in News?

Recently, some experts have highlighted the need of renovation of the judiciary system in India.

Introduction About Indian Judiciary:

1. The Indian judicial system follows the common law system.
2. It is based on recorded judicial examples as inherited from the British colonial legacy.
3. The court system of India contains the Supreme Court of India, the High Courts and subordinate courts at district, municipal and village levels.
4. The laws declared by SC are binding on all other courts and authorities in the country (Article 141).
5. The Supreme Court has the power to hold any authority in contempt if they disregard or disobey the order of the court (Article 129).
6. It is being said that there is no law in India to guide the judges; we only have guidelines.

Supreme Court of India
◈ Its decisions are binding on all courts.
◈ Can transfer Judges of High Courts.
◈ Can move cases from any court to itself.
◈ Can transfer cases from one High Court to another.

High Court
◈ Can hear appeals from lower courts.
◈ Can issue writs for restoring Fundamental Rights.
◈ Can deal with cases within the jurisdiction of the State.
◈ Exercises superintendence and control over courts below it.

District Court
◈ Deals with cases arising in the District.
◈ Considers appeals on decisions given by lower courts.
◈ Decides cases involving serious criminal offences.

Subordinate Courts
◈ Consider cases of civil and criminal nature

Important Data/ Facts About Indian Judiciary:

1. There are 25 high courts for 28 states and eight Union Territories.
2. The British introduced the common law system in India and established the Sadar Diwani Adalat.
3. They were later followed by the establishment of high courts.
4. The first high court was established at Calcutta in 1862.
5. The Supreme Court was established on 28th January 1950. The Supreme Court consists of 34 Judges including the Chief Justice.
6. A Judge of the Supreme Court cannot be removed from office except by an order of the President passed after an address in each House of Parliament supported by a majority of the total membership of that House and by a majority of not less than two-thirds of members present and voting, and presented to the President in the same Session for such removal on the ground of proved misbehaviour or incapacity. (Article 124)

Functions of the Indian Judiciary

1. The judiciary is responsible for protecting and upholding the Constitution and its ideals. The courts interpret the Constitution and can strike down any law, ordinance, rule, or regulation which violates or infringes the Constitutional provisions.
2. We have a federal structure of governance and hence, disputes between the states and the Union and the States are inevitable. It is the exclusive and original jurisdiction of Supreme Court to resolve such disputes.
3. Part III of the Constitution confers certain fundamental rights. The judiciary ensures that these fundamental rights are not violated.
4. If any act of the legislature or the executive bridges these rights, then the Constitutional courts have the power to issue writs (summonses).
5. In several cases, the courts lay down guidelines which are later incorporated in the statutes by the legislature.
6. The judiciary also provides an advisory opinion to the President and resolves any doubts relating to the Constitutional provisions.

Binding value of Judicial Models:

1. Decisions of the Supreme Court are binding on all courts in India. The Supreme Court is not bound by decisions of High Courts, lower courts or other judicial authorities.
2. Decisions of a High Court are binding on all inferior courts (as long as they don't conflict with Supreme Court decisions) within its jurisdiction.
3. Lower courts are bound by decisions of higher courts in their own states. Whereas, the decisions by High Courts of other states hold only influential value.

Problems in the judicial system:

1. Overburdened and delay in justice: The Supreme Court and the high courts are overburdened with the caseload. This results in huge delays in justice and sometimes, litigation continues for decades.
2. Costly affair: Litigation is a costly matter due to which in many cases, the common people are forced to sacrifice their rights and claims as they are unable to afford the legal proceedings.
3. Lack of infrastructure: The judiciary also lacks the infrastructure to properly deal with the huge caseload.

4. The British-era laws: Several laws have become outdated and there is need to amend and modify those laws.
5. Frequent adjournments: The caseload before the subordinate courts is also huge and the adjournments are granted by the courts which results in delays.
6. Under trials burden: The undertrial prisoners suffer in jails for years while their cases are pending.
7. Ratio of judges to people is very low: There are about 21 judges in India for 1 million people, which is very low and the need to improve this ratio was highlighted by the Law Commission in the 245th Report.

About the Judicial reforms in India:

1. E-Courts portal: It is a one-stop solution for all stakeholders like the litigants, advocates, government agencies, police, and common citizens.
2. E-filing of Cases: E-filing, also known as electronic filing, is a facility that provides filing of cases through the internet, sitting back at home.
3. Virtual court system: The regular court proceedings in our Indian courts in Covid times either adjourned or have been carried out virtually via videoconferencing.
4. National Judicial Data Grid (NJDG): The statistics of cases pending at the national, state, district and individual court level are now made accessible to the general public, researchers, academicians and the society at large.
5. e-Sewa Kendra: The e-Sewa Kendra is set up as a one-stop centre for accessing all the facilities provided under the e-Courts Project.
6. Interoperable Criminal Justice System (ICJS): It works to transfer data and information between the different pillars of the criminal justice system, like courts, police, jails, juvenile homes and forensic science laboratories etc.

Way Forward:

A vibrant and independent judiciary is essential for any democracy to thrive and to keeps a check on the other two organs of the government, i.e., the legislature and the executive hence, there is an urgent need to address the shortage of judges and to ensure that the cases are disposed of in a timely manner to establish the rule of law in the country.

2.13   Social Media & Elections

Why in News?

In October 2022, the Chief Election Commissioner has addressed an international conference for Election Management Bodies (EMBs).

More about News:

1. The conference was hosted by the Election Commission of India (ECI) under the guidance of the 'Summit for Democracy' platform of United States.

2. While addressing the conference, the commissioner advised social media sites to use technology properly to control fake news proactively.

What are the Concerns Regarding the Spread of False Information?

1. Red-Herring: [A clue or piece of information which is misleading or distracting.]
   - It is a content moderation-driven approach.
   - It works to modify or hide the content to distract public from the larger problem.
2. Opaqueness of Social Media Platforms:
   - One of the biggest hurdles to control misinformation is the lack of transparency by social media platforms.
   - Social media platforms are increasingly becoming the primary ground for public discourse but a few of individuals have excessive control over it.
3. Inadequate Measures:
   - Various social media platforms have been unable to develop a clear framework to stop misinformation.
   - The absence of a uniform approach, enforcement, and accountability has weakened the information ecosystem.
4. Digital Media Illiteracy among Children:
   - Social media is the primary source of student's literacy but, there is lack of digital literacy among them.
   - The National Education Policy 2020 has also missed to add the media literacy in the curriculum.
   - Although 'digital literacy' is mentioned once in the document, social media literacy is entirely neglected.
5. Threats due to Anonymity (privacy of user's Identity):
   - Anonymity is helpful for someone in sharing their views without any insecurity but, it does more harm by enabling user to spread false information without being held accountable.

How is Media regulated during Elections?
The Election Commission does not regulate media but responsible to enforce the laws or Court directions, which might have linkages with media. These laws are mentioned below:

1. Section 126 of the Representation of the People Act, 1951:	It prohibits displaying any election matter through videography, television or other similar device, during 48 hours before the conclusion of poll.
2. Section 126A of the Representation of the People Act, 1951:	It prohibits behaviour of exit poll and broadcasting of their results during the period mentioned in all the States and Union Territories.
3. Section 127A of the Representation of the People Act, 1951:	It governs the printing and publication of election pamphlets, posters, etc., and makes it mandatory to mention the names

	and addresses of the printer and the publisher.
4. Section 171H of the Indian Penal Code:	It prohibits expenditure on advertisement etc., without the authority of the contesting candidate.

What are the Pros and Cons of social media in Elections?

Pros:	Cons:
1. Digital plannings have become increasingly important to organize political rallies and party manifestos (agenda) in recent years. 2. Social media helps the middle-class people to frame their opinion about which political part to vote by reading about them on social media. 3. Social media encourages people to use their right to vote and influencing others to vote too. 4. Social media makes it easy for people to stay up to date on upcoming events, party schedules, and election agendas. 5. It also works as an intermediary between political parties and common people and reach out to people to hear & solve their concerns.	1. Social media has become a tool for politicians to create more noise and excessive advertisement of themselves, which promote polarization. 2. During elections, the spread of fake news on Social Media Platforms influences the people's preferences. 3. Social media is used to blame and criticize the opposition parties by spreading misleading and incorrect facts. 4. The number of political minorities are growing, and they are using social media to create a political deadlock. 5. Social media presence and advertising requires a lot of spending hence, the wealthy parties spend way more to influence the majority of the voter base.

Way Forward:

There is need to take some measures for the effective use of social media in elections without any violation of individual rights also, it is high time to ensure that the voting is not influenced to ensure Free and Fair Election in the country.

Additional Information:

What is ECI?

1. The Election Commission of India is an autonomous constitutional body.
2. It is responsible for managing Union and State election processes in India.
3. The body administers elections to:
    - Lok Sabha
    - Rajya Sabha
    - State Legislative Assemblies
    - Offices of the President
    - Vice President

Articles related to Elections	
324	Superintendence, direction and control of elections to be vested in an Election Commission.
325	No person to be ineligible for inclusion in, or to claim to be included in a special, electoral roll-on grounds of religion, race, caste or sex.
326	Elections to the House of the People and to the Legislative Assemblies of States to be on the basis of adult suffrage.
327	Power of Parliament to make provision with respect to elections to Legislatures.
328	Power of Legislature of a State to make provision with respect to elections to such Legislature.
329	Bar to interference by courts in electoral matters.

2.14   1st Amendment of Indian Constitution

Why in News?

The Supreme Court has accepted a PIL, challenging the changes made to the right to freedom of speech and expression by the 1st amendment to the Constitution in 1951.

- The petitioner says that the amendment damages the basic structure of doctrine.
- PIL is the power given to the public through judicial activism, under which they can ask courts their opinions on any issue related to larger public interest.

About 1st Constitutional Amendment:

1. It was approved under India's first Prime Minister Jawaharlal Nehru in 1951.
2. It altered articles 15, 15 (3), 46, 341, 342, 372 and 376 and empowered States to 'make any special provision for the advancement of any socially and educationally backward classes or for the Scheduled Castes and the Scheduled Tribes'.
3. After this Amendment, the state is prohibited from enacting laws curbing citizens' rights to freedom of expression and to practise any trade, occupation or business.

Features of the 1st Amendment:

4. The amendment also added a 9ᵗʰ schedule to the Constitution, which contains a list of number of State laws which cannot be challenged in courts.
5. It prohibits States from making laws permitting them to acquire any citizen's land.
6. The amendment also introduced 3 new exceptions to the right to free speech.
7. Now, citizens did not have the right to speak freely if their words:
   - Cause a threat to "public order"
   - Encourage an offence
   - Affects "friendly relations with foreign States"

Way Forward:

To protect and strengthen the institutional safeguards for freedom of speech, revisiting the First Amendment debates, 74 years after independence, could be one step in this direction.

Additional Information:

Other changes brought in by this amendment are:

1. Empowering the President/Governor to summon or prorogue each House for a session in an interval of less than six months,
2. Disallowing judges who are not Indian citizens from being appointed as Chief Justices of any High Court or judges of any other court.
3. Disallowing the President from modifying any law within 3 years from the commencement of the Constitution.

2.15   Decentralisation of MGNREGA Scheme

Why in News?

Ministry of Rural Development has suggested decentralisation of the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), allowing for more "flexibility" at the ground level.

About MGNREGA:

1. It is a poverty alleviation (lessening) programme of the Government of India.
2. It provides the legal Right to Work in exchange for money to the citizens of the country.
3. Approx. 1.5 crore people work under MGNREGA daily.
4. It aims to enhance livelihood security in rural areas by providing at least 100 days of guaranteed wage employment in a financial year to every household whose adult members volunteer to do unskilled work.
5. The funds under the scheme are shared between the Centre and the states. The Central Government bears:
   - 100% of the cost of unskilled labour
   - 75 % of the cost of semi-skilled and skilled labour
   - 75% of the cost of materials
   - 6% of the administrative costs

Features of MGNREGA:

1. The Act provides a legal right to employment for adult members of rural households.
2. The scheme ensures that, at least 1/3ʳᵈ of beneficiaries have to be women.
3. It also considers the welfare of labourers as the wages must be paid according to the Minimum Wages Act, 1948.
4. Employment must be provided within 15 days, and if the state fails to do so an 'unemployment allowance' must be given.

- ▪ [Unemployment allowance is the financial aid given by government in case of non-availability of work.]

5. Panchayats are responsible for planning, implementation and monitoring of the works that are undertaken.
6. Gram Sabhas must recommend the work to be done and at least 50% of the work must be executed through MGNREGA.
7. There is proactive opening of the job/work through wall writings, Citizen Information Boards, Management Information Systems etc. (conducted by Gram Sabhas).

What are the Issues/Suggestions related to decentralisation of MGNREGA?

Issues:	Suggestions:
1. If the fund management remains centralized instead of paying directly to Gram Sabhas, the gram sabhas become unable to decide the work they want to undertake. 2. There is a continuing problem of delay in fund spending, where beneficiaries end up buying the construction material themselves to complete the projects. 3. MGNREGA wages were far below the market rate in many States, defeating the purpose of acting as a safety net. For example, at present, the minimum wage of a farm labourer in Gujarat is RS 324.20, but the MGNREGS wage is Rs 229.	1. There should be a greater variations & broad category of works to be listed out and flexibility should be given at ground level to select the type of works. 2. For making disbursal on time there should be revolving funds (an extra internal monetary pool) that can be utilised whenever there is a delay in the Central funds. 3. The wages should be revised time to time so that people feel financial security.

Other Recent Issues related to MGNREGA:

1. More than 1.59 lakh workers are registered under the scheme but almost 75% of them does not get work.
2. Increasing mechanisation (work by machines) is one such big issue which is reducing the availability of the jobs.
3. According to an audit report there has been a misappropriation of almost Rs 935 crore in NREGA schemes in the last 4 years.

Significance OF MGNREGA:

1. It is a social security scheme to generate employment for the rural poor and ensure livelihood for people in rural areas.
2. The scheme works for welfare of people by ensuring participation of women, Scheduled Castes (SCs) and Scheduled Tribes (STs) and other marginalised sections of society.
3. It increases the wage rate in rural areas and strengthens the rural economy through the creation of infrastructure assets.

4. It enables sustainable development by its contribution in the direction of water conservation.
   - For example, Over the last 15 years, 3 crore assets related to water conservation have been created through the rural jobs scheme.

MGNREGs CONTRBUTION TO SUSTAINABLE DEVELOPMENT GOALS (SDGs)

Challenges to MGNREGA:

1. Low Wage Rates under MGNREGA have resulted in a lack of interest among workers.
2. The funds allocated to MGNREGA are not sufficient in many States which affects the work in peak season.
3. There are very little funds available as compared to the actual funds allocated for the schemes due to high corruption.
4. There are several cases of discrimination against women and people from the backwards groups are reported from several regions of the country and a vast number goes unreported.
5. There is a huge pendency in the number of unemployment allowances.
6. There is lack of awareness among people, especially women about this scheme and its provisions, which leads to uninformed choices or inability to get the benefits of the scheme.
7. Improper scrutiny (investigation) and lack of timely resources result in poor quality assets.

Suggestions for effective functioning of MGNREGA:

1. The participation of women and backwards classes must be increased by raising awareness, which will make it more inclusive.
2. There is a need to carry out regular social audits as per rules.
3. People should be sensitised to stand up for the discrimination against them.
4. actions should be initiated against officers who are found guilty of stealing funds.
5. The poor utilisation of funds should be analysed and steps must be taken to improve them.

Way Forward:

The welfare schemes like MGNREGA are very important for the holistic development of India. Government should increase the funds towards welfare schemes and should positively look forward to empower the gram sabhas with regular audits so that efficiency of these types of schemes can be maintained and their real purpose to uplift people can be fulfilled.

2.16 Old Pension System Vs New Pension System

Why In News?

Recently, some of the political parties are promising to switch to the Old Pension Scheme (OPS).

- New pension system came into effect for those joining government services from January 1, 2004.

Comparison between the Old and New system:

Criteria	New Pension Scheme (NPS)	Old Pension Scheme (OPS)
Public Coverage	Anyone from age 18 till 55	Only central government employees
Contribution	All the contributions are included along with dearness allowance	10% of (special pay + basic pay + other allowances)
Fund Management	6 Fund managers	Managed by Provident fund Trust
Regulations	PFRDA (Pension Fund Regulatory Development Authority)	No such body
Charges	Fixed as well extra Charges applicable	No extra charges applicable
Bank Account	Same account can be used	Separate account needed

Major Changes:

Old System	New System
1. Pension to government employees at the Centre as well as states was fixed at 50% of the last drawn basic pay.	1. It gives 'defined' benefit to the retiree hence, described as a 'Defined Benefit Scheme'. Example - if a government employee's basic monthly salary at the time of retirement was Rs 10,000, she would be assured of a pension of Rs 5,000. 2. The monthly payouts of pensioners also increased with hikes in dearness allowance (DA) announced by the government for serving employees

What is DA?

1. It is calculated as a percentage of the basic salary.
2. DA is a kind of adjustment the government offers its employees and pensioners to make up for the steady increase in the cost of living.
3. DA hikes are announced twice a year, generally in January and July

Major issues associated with the OPS:

1. No Corpus for Pension: The main problem was that the pension liability remained unfunded, that is, there was no corpus specifically for pension.
2. Unstable Pensions: Pension liabilities would keep climbing since pensioners' benefits increased every year; like salaries of existing employees, pensioners gained from indexation, or what is called 'dearness relief'.
3. Burden on centre and states: Over the last 3 decades, pension liabilities for the Centre/states have jumped manifold.
   [By 2020-21, the Centre's bill had jumped 58 times to Rs 1, 90,886 crores; for states, it had shot up 125 times to Rs 3, 86,001 crores.]

4. Bad economics: Overall, pension payments by states eat away a quarter of their own tax revenues. If wages and salaries of state government employees are added to this bill, states are left with hardly anything from their own tax receipts.
5. Inter-generational equity: There is also the larger issue of inter-generational equity. Today's taxpayers are paying for the ever-increasing pensions of retirees.

More about the New Pension Scheme (NPS):

1. It was the NDA government under A B Vajpayee that brought the pension reforms.
2. The New Pension System proposed by the Project OASIS report became the basis for pension reforms.
3. NPS was originally considered for unorganised sector workers, was adopted by the government for its own employees.
4. The NPS was for prospective employees; it was made mandatory for all new recruits joining government service from January 1, 2004.

Contributions according to NPS:

1. The defined contribution comprised 10 % basic salary and DA by the employee and a matching contribution by the government.
2. In 2019, the government increased its contribution to 14 % of the basic salary and DA.
3. Schemes under the NPS are offered by 9 pension fund managers:
   ▪ SBI, LIC, UTI, HDFC, ICICI, Kotak Mahindra, Adita Birla, Tata, and Max.

Way forward:

This does bring state governments some short-term gains as they will not have to put the 10 % matching contribution towards employee pension funds. For employees it will result in higher salaries in hands as, they will not have to set aside 10 % of their basic pay and DA towards pension funds.

Additional Information:

Old Age Social and Income Security (OASIS) project

1. In 1998, the Union Ministry of Social Justice and Empowerment commissioned a report for an Old Age Social and Income Security (OASIS) project.
2. It was formed under the S A Dave committee.

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<tr><td>**3.**</td><td># INTERNATIONAL RELATIONS</td></tr>
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3.1   Black Sea Grain Initiative

<u>Why in News?</u>

Recently, Russia re-joined the Black Sea Grain Initiative.

<u>What is the Black Sea Grain Initiative?</u>

1. The Black Sea Grain initiative works to control the rising food prices coming from supply chain disturbances because of Russian actions.
2. The deal between United Nations (UN) and Turkey, was signed in Istanbul in July, 2022.
3. It was agreed initially for a period of 120 days.
4. The deal works to provide safe maritime corridor for Ukrainian exports (particularly for food grains).
5. The central idea of the initiative was to manage markets by ensuring a proper supply of grains and also limiting food price inflation.

<u>Role of Joint Coordination Centre (JCC):</u>

1. The deal also comes with a Joint Coordination Centre (JCC).
2. JCC consists the senior representatives from Russia, Turkey, Ukraine and the UN for oversight and coordination.
3. All commercial ships are required to register directly with the JCC to ensure appropriate monitoring, inspection and safe passage.
4. Ships (to the designated corridor) transport as per the schedule fixed by the JCC after inspection.
5. JCC works to ensure that there is no unauthorised cargo or personnel onboard.
6. Following this, they are allowed to go towards Ukrainian ports for loading through the designated corridor.

<u>Why is the Black Sea Grain Initiative Important?</u>

1. Ukraine is among the largest exporters of wheat, maize, rapeseed, sunflower seeds and sunflower oil, globally.
2. It directly approaches Russia and Europe, due to its access to deep-sea ports of Black Sea.
3. The initiative has also brought a difference to the global cost of living crisis.
4. From approximately 9.8 million tonnes of grains have been shipped since the initiative commenced.
5. People storing the grain in the hope of selling it with high prices were now obligated to sell.

<u>Way Forward:</u>

Although the initiative alone cannot address global hunger, it can stop the chances of the global food crisis increasing further especially when the region is already trying to achieve the pre-war levels.

3.2   2nd BIMSTEC Agriculture Ministers Meeting

Why in News?

Recently, India hosted the 2nd Agriculture Ministerial-level meeting of the 'Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation' (BIMSTEC).

Highlights of the Meeting are:

1. India urged the member countries to cooperate in developing a comprehensive regional strategy to strengthen cooperation for the transformation of agriculture.
2. India also urged the member countries to focus on a connected agricultural food system and a healthy diet for all by referring to the importance of millet as a nutritious food and the efforts made by India to promote millet and its products during the International Year of Millets - 2023.
3. All members agreed that natural and ecological farming should be promoted to conserve agricultural biodiversity and reduce the use of chemicals.
4. Members highlighted and appreciated India's statement which was made at the 5th BIMSTEC Summit held in Colombo in March, 2022 on enhancing regional cooperation between BIMSTEC nations for food security, peace and prosperity in the region.
5. Members adopted the 'Action Plan for Strengthening BIMSTEC Agricultural Cooperation' (2023-2027).
6. An MoU (Memorandum of Understanding) between the BIMSTEC Secretariat and the International Food Policy Research Institute (IFPRI) has been signed and approval has been given to bring fisheries and livestock sub-sectors under the Agricultural Working Group.

So, What is BIMSTEC?

1. It's a regional organisation comprising 7 Member States in which 5 are from South Asia, including Bangladesh, Bhutan, India, Nepal, Sri Lanka and 2 from Southeast Asia, including Myanmar and Thailand.
2. This sub-regional organisation came into being on 6th June 1997 through the 'Bangkok Declaration'.
3. The BIMSTEC region is home to almost 1.5 billion people which constitute around 22% of the global population with a combined Gross Domestic Product (GDP) of 2.7 trillion economy.
4. The BIMSTEC Secretariat is in Dhaka.

Significance of BIMSTEC

1. The BIMSTEC has huge potential as a natural platform for development and cooperation as all the countries are neighbours and connected.
2. The growing value of BIMSTEC can be attributed to its geographical factor, abundant natural and human resources, and rich historical and cultural heritage for promoting deeper cooperation in the region.
3. The Bay of Bengal region has the potential to become the epicentre of the Indo-Pacific area, a place where the strategic interests of the major powers of East and South Asia intersect.
4. It serves as a bridge between the 2 major high-growth centres of Asia — South and Southeast Asia.

Challenges with the BIMSTEC are:

1. **Huge Inconsistency in Meetings:** BIMSTEC planned to hold summits every 2 years, ministerial meetings every year, but only 5 summits have taken place in 20 years.

2. **Highly Neglected by member states:** It seems that India has used BIMSTEC only when it fails to work through SAARC in the regional setting and other major members like Thailand and Myanmar are focused more towards ASEAN than BIMSTEC.

3. **Has Broad Focus Areas:** The focus of BIMSTEC is very wide, including 14 areas of cooperation like connectivity, public health, agriculture etc. It is suggested that BIMSTEC should remain committed to small focus areas and cooperate in them efficiently.

4. **Bilateral Issues between Member Nations:** Bangladesh is facing one of the worst refugee crises of Rohingyas from Myanmar who are fleeing prosecution in the state of Rakhine in Myanmar. There is a border conflict between the Myanmar and Thailand too.

5. **Shadowed by BCIM:** The formation of another sub-regional initiative, the Bangladesh-China-India-Myanmar (BCIM) Forum, with the proactive membership of China, has created more doubts about the potential of BIMSTEC.

Conclusion and Way Forward

1. Today, there is a need for finalisation of the BIMSTEC Free Trade Agreement among the member countries.

2. As the region is facing challenges of health and economic security, the FTA will make the Bay of Bengal a bridge of connectivity, a bridge of prosperity and a bridge of security.

3. India needs to counter the impression that BIMSTEC is an India-dominated bloc.

4. BIMSTEC should focus more on new areas such as the blue economy, the digital economy, and promotion of exchanges and links among start-ups and Micro, Small and Medium Enterprises (MSMEs).

3.3   India-Belarus Relation

Why in News?

Recently, the 11th Session of the India-Belarus Inter-Governmental Commission on Trade, Economic, Scientific, Technological and Cultural Cooperation was held.

Highlights of the Session

1. The Inter-governmental Commission reviewed the results of bilateral cooperation that took place after the 10th session of the Commission in 2020.

2. While expressing satisfaction at the progress made in regard to some projects, the Commission also directed concerned Ministries and Departments to focus on key sectors in the trade & investment spheres to finalise some concrete outcomes.

3. Both countries have shared their strong desire to further broaden their cooperation with emphasis on key sectors such as pharmaceuticals,

financial services, science and technology, heavy industries, culture, tourism, and education.

4. Both countries have directed their respective business communities to engage with each other in these sectors.

5. The 2 sides agreed to promote cooperation among various states in India and regions in Belarus.

About India-Belarus Relations

1. India's relations with Belarus have been traditionally warm and cordial.

2. India was one of the 1st country to recognize Belarus as an independent country in 1991 after the disintegration of the Soviet Union.

3. The cooperation between the 2 countries is visible at many multilateral forums such as the UN Security Council (UNSC) and Nuclear Suppliers Group (NSG).

4. Belarus was one of the countries whose support helped in consolidating India's candidature for the non-permanent seat at the UNSC in July 2020.

5. India has also supported Belarus at various international forums, such as Belarus's membership in the Non-Aligned Movement (NAM) and other international and multilateral groups like IPU (Inter-Parliamentary Union).

6. The 2 countries enjoy a comprehensive partnership and have established mechanisms for exchanging views on bilateral, regional and multilateral issues through Foreign Office Consultations (FOC), Intergovernmental Commission (IGC), and Joint Commission on Military Technical Cooperation.

7. The two countries have signed a number of Agreements/MoUs on various subjects, including trade and economic cooperation, culture, education, media, sports, tourism, science & technology, agriculture, textiles, Promotion and Protection of Investments, defence and technical cooperation etc.

8. In the economic sector, the annual bilateral trade turnover in 2019 stands at USD 569.6 million.

9. The Indian Community in Belarus consists of around 112 Indian nationals and 906 Indian students pursuing studies in medicine in state medical universities of Belarus.

10. Indian art and culture, dance, yoga, ayurveda, Indian films, etc. remain popular among Belarusian nationals.

11. Many young Belarusians also take keen interest in learning Hindi and dance forms of India.

Way Forward

1. Belarus can become an "entry point" for Indian pharmaceutical companies to the Eurasian market.

2. There is a huge potential in military and technical cooperation between the 2 countries.

3. Some recreational centres can be established in Belarus based on Indian traditional medicine systems (Ayurveda + Yoga).

3.4　G-20 Summit 2022

Why in News?

Recently, the 17th annual summit of G-20 was hosted by the Indonesian G20 presidency in Bali under the theme 'Recover Together, Recover Stronger'.

- Now, India has assumed the charge of the G20 presidency and the 18th summit will be held in India in 2023.

What is the G20?

1. The G20 was formed in 1999 (after the financial crisis of the late 1990s that hit East Asia and Southeast Asia in particular)
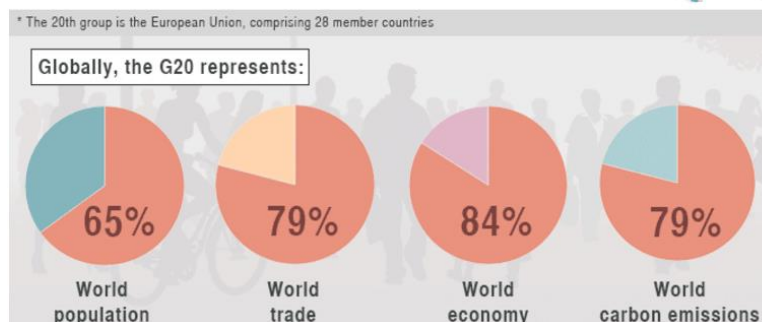
2. It aims to secure global financial stability by involving middle-income countries.
3. Together, the G20 countries include 60% of the world's population, 80% of global GDP, and 75% of global trade.
4. Its member countries are:
5. Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Republic of Korea, Mexico, Russia, Saudi Arabia, South Africa, Turkey, the United Kingdom, the United States and the EU.

<u>What are the Outcomes of the Summit?</u>

1. All member countries have adopted a declaration criticizing Russia's aggression in Ukraine "in the strongest terms" and demanding its withdrawal.
2. They also recognised that while most members condemned the war in Ukraine, "there were other views of the situation and sanction
3. The G20 economies agreed in their declaration to increase the interest rates carefully to avoid spillovers and warned for "increased volatility" in currency moves, a sea change from last year's focus on mending the scars of the Covid-19 pandemic.
4. The leaders promised to take coordinated action to address food security challenges and commended the Black Sea grains initiative.
5. G20 leaders agreed to pursue efforts to limit the global temperature increase to 1.5 degrees Celsius - confirming they stand by the temperature goal from the 2015 Paris Agreement on climate change.
6. Leaders have recognized the importance of digital transformation in reaching sustainable development goals.
7. They encouraged international collaboration to further develop digital skills and digital literacy to harness the positive impacts of digital transformation, especially for women, girls, and people in vulnerable situations.
8. Leaders have also expressed their continuous commitment to promoting a healthy and sustainable recovery.
9. Members have appreciated the establishment of a new financial intermediary fund for pandemic prevention, preparedness, and response (the 'Pandemic Fund') hosted by the World Bank.
10. Leaders reaffirmed their commitment to strengthen global health governance, with the leading and coordination role of the World Health Organisation (WHO) and support from other international organizations.

<u>What are the Challenges before the G-20 Member Countries?</u>

1. Russia's invasion of Ukraine has not only created massive geopolitical uncertainty but also spiked global inflation.
2. Continuous high inflation in several countries has eroded purchasing power across these countries, thus bringing down the economic growth.
3. In response to high inflation, central banks across countries have raised interest rates, which, in turn, have dampened economic activity further.

* The 20th group is the European Union, comprising 28 member countries

Globally, the G20 represents:

65%	79%	84%	79%
World population	World trade	World economy	World carbon emissions

4. Some of the biggest major economies such as the US and the UK are set to face a recession; others, such as those in the euro area, are likely to slow down to almost a halt.
5. China, one of the major engines of global growth, is witnessing a sharp slowdown due to its real estate crisis.
6. The world economy is struggling with geopolitical rifts such as the tensions between the US and China, the two biggest economies in the world, or the decline in trade between the UK and the euro area in the wake of the Brexit decision.

Way Forward:

A strong, sustainable, balanced, and inclusive recovery requires joint action by the G-20 and this kind of joint action, in turn, requires not just securing peace in Ukraine but also "help prevent further fragmentation". On trade, the G20 leaders need to push for a "more open, stable, and transparent rules-based trade" that would help address global shortages of goods. Strengthening the resilience of global value chains would help protect against future shocks.

3.5   Friendshoring

Why in News?

Recently, the US secretary of treasury has pushed for "friendshoring" to diversify trade away from countries that are present at geopolitical risk.

So, What is Friendshoring?

1. Friendshoring is a strategy where a country sources the raw materials, components and even manufactured goods from countries that share its values.
2. Aim is to reduce dependence on the countries which are considered a "threat" to the stability of the supply chains.
3. It is also called "allyshoring".
4. For the Europe, Russia was a reliable energy partner, but in the Ukraine war, it has weaponized the gas against the people of Europe.

5. It's an example of how malicious actors can use their market positions to gain geopolitical leverage or disrupt trade for their own gain.
6. Friend-shoring or ally-shoring has become a means for the US to influence firms to move their sourcing and manufacturing sites to friendly nations.
7. The purpose of Friendshoring is to move supply chains from less like-minded nations, such as China in case of the US.

What can be the Implications of Friendshoring?

1. Friendshoring may push the world towards a more isolated place for trade and can reverse the gains of globalization. It is a part of "deglobalisation" process.
2. After the global economy has been influenced by the year-long lockdown of Covid-19, any form of protectionism will further disrupt the already unstable global supply chain.
3. This new form of protectionism will not be good for globalization, while affecting the global supply chain and economy.
4. Also, as this becomes a trend, the world will gradually become separated, and it will be hard for countries to work together for the well-being of humanity.

Conclusion and Way Forward

1. If each country use its best advantage to contribute to the world's economy, everyone's disadvantage can get compensated.

2. Although we are still way far from complete globalization, and there are many differences and even controversies between countries too but friend-shoring does not seem like a good solution for a better future for entire humanity.

3.6   India- Israel Defence Cooperation

Why in News?

These days, Israel has been closely working with the Indian defence forces to find solutions for their defence needs.

About the India-Israel Defence Cooperation

1. Evolution of Relation: The defence cooperation & relation between India & Israel has evolved over time – from being an importer of Israeli tech and equipment, Indian companies are now collaborating with Israeli Aerospace Industries (IAI) on a variety of projects.
2. Cooperation in Unmanned Aerial Vehicles (UAVs):
a) Heron MK II:

i)It's the state-of-art UAV that can fly at a height of 35,000 feet, covering a radius of 1000 km and can see through dense clouds, can work in bad weather and can fly for 45 hours.

ii) MK IIs can be deployed in Leh.

iii) MK II can also be used for search and rescue operations too.

b) Medium Altitude Long Endurance (MALE) Heron TPs:
i) Last year, the Indian Army has taken them on lease. They are Medium Altitude Long Endurance (MALE) Unmanned Aerial System (UAS) for all-weather missions.
ii) Heron TP drones are 1 of the 2 drones made in Israel that can be armed if needed.

c) Manufacturing of UAVs in India:
i) After PM Modi's visit to Israel in 2017, India signed an agreement with Elcom Systems and Dynamatic Technologies for the manufacture of UAVs in India.
3. Missiles & ammunition:
a) Both countries government organisations and private industries are committed to co-developing defence systems.
b) India is also sourcing Firefly loitering ammunition, Spike anti-tank guided missiles, and Spice guidance kits from Israel.
c) BARAK 8: Israel Aerospace Industries and India's Defence Research and Development Organisation (DRDO) have codeveloped a medium-range surface-to-air-missile (MRSAM), named as BARAK 8 Air defence system.

About India-Israel relations

1. India recognised Israel as far back as in 1950s but normalisation in relations took another 4 decades.
2. In 1992, started defence deals, and cooperation in science, technology and agriculture.

3. The first high-level visits:
a) In 2000, L K Advani became the 1st Indian minister to visit Israel.
b) The 2 countries set up a joint anti-terror commission in 2000.

c) And in 2003, Ariel Sharon became the 1st Israeli Prime Minister to visit India.

4. The bilateral merchandise trade grew from USD 200 million in 1992 to USD 6.35 billion (excluding defence) during the period 2021-2022, with the balance of trade being in India's favour.

5. India is Israel's third-largest trade partner in Asia and 7th largest globally.

6. In recent years, bilateral trade has diversified into several sectors such as pharmaceuticals, agriculture, IT and telecom, homeland security etc.

7. Israeli companies have been instrumental in transferring technology to India in areas like renewable energy, telecom, water technologies. Many of them have also set up research &development centres in India.

8. The Free Trade Agreement (FTA) between the 2 countries is also on talks.

3.7   India-Australia Economic Cooperation and Trade Agreement

Why in News?

Recently, the Australian Parliament approved the India-Australia Economic Cooperation and Trade Agreement (Ind-Aus ECTA).

What is a Free Trade Agreement (FTA) ?

1. It's an agreement between 2 or more countries to reduce the barriers on import and export between them.

2. Under an FTA, goods and services can be purchased and sold across international borders with little or no government tariffs, quotas, subsidies etc.

3. The concept of free trade is exactly opposite to trade protectionism (restrictions on open and free trade).

So, What is Ind-Aus ECTA?

1. It is the 1st Free Trade Agreement (FTA) that India has signed with a major developed country in last almost a decade.

2. The agreement covers almost all areas of bilateral economic and commercial relations between the 2 countries, and covers areas like:

a) Trade in Goods,
b) Trade in Services,
c) Technical Barriers to Trade (TBT),
d) Sanitary and Phytosanitary (SPS) measures,
e) Dispute Settlement,
f) Telecom, Customs Procedures,
g) Pharmaceutical products and many other areas

3. ECTA provides for an institutional mechanism to encourage and improve trade between the 2 countries.

4. The ECTA between India and Australia covers almost all the tariffs levied by India and Australia on import and export between them.

5. India will get benefits of preferential market access provided by Australia. This includes all the labour-intensive sectors of export interest to India such as Gems and Jewellery, Textiles, leather, footwear, furniture etc.

6. On the other hand, India will be offering preferential access to Australia on almost 70% of products it exports to India.

7. Under the agreement, Indian graduates from STEM (Science, Technology, Engineering and Mathematics) will be granted extended post-study work visas.

8. Australia will also set up a programme to grant visas to young Indians looking to work in Australia.

9. Annual Visa quota of 1800 will be be reserved for India's Yoga teachers and Chefs.

10. It is also estimated that almost 10 lakh jobs will be created as a result of ECTA in both the countries.

About the India- Australia Relations

1. India and Australia enjoy excellent bilateral relations and in the recent years it has gone to a new level.

2. Both countries share common values in many areas like parliamentary democracies, Commonwealth traditions, expanding economic engagement, long standing people-to-people ties and increasing high level interaction.

3. The India-Australia Comprehensive Strategic Partnership initiated during the India-Australia Leaders' Virtual Summit held in June 2020 has become the cornerstone of India-Australia bilateral relations.

4. Growing India-Australia economic and commercial relations is contributing to the stability and strength of a rapidly diversifying and deepening bilateral relationship between the 2 countries.

5. Australia is the 17th largest trading partner of India and India is Australia's 9th largest trading partner.

6. India-Australia bilateral trade for both merchandise and services is valued at USD 27.5 billion in 2021.

7. India's merchandise exports to Australia grew by almost 135% between 2019 and 2021.

8. India's exports consist primarily of finished products and were of USD 6.9 billion in 2021.

9. India's merchandise imports from Australia were USD 15.1 billion in 2021, consisting largely of raw materials, minerals and intermediate goods.

10. India and Australia are partners in the trilateral Supply Chain Resilience Initiative (SCRI) arrangement along with Japan which aims to reduce the dependence on china and to enhance the smooth flow of supply chains in the Indo-Pacific Region.

11. Further, India and Australia are also the members of the QUAD grouping which also comprise the US and Japan, to further enhance cooperation and develop partnership across several issues of common concern.

Conclusion and Way Forward

1. The India-Australia ECTA will further add to the deep, close and strategic relations between the 2 countries and will significantly enhance bilateral trade in goods and services, create new employment opportunities, raise living standards, and improve the general welfare of the peoples of the 2   countries.

2. Both India and Australia share a vision of a free, open, inclusive and rule-based Indo-Pacific region and cooperative use of the seas by following international laws including the United Nations Convention on the Law of the Sea (UNCLOS) and peaceful resolution of disputes.

3.8   Issue of Kuki-Chin People

Why in News?

Recently, more than 270 members of the Kuki-Chin community from Bangladesh who have entered Mizoram are being referred to as "officially displaced persons" in state government records, as India does not have a law on refugees.

So, What is the Stand of Government on this Issue?

1. As per the Ministry of Home Affairs (MHA), foreign nationals who enter the country without valid travel documents are treated as illegal immigrants.
2. The MHA has clarified that state governments have no powers to grant 'refugee' status to any foreigner and added that India is not a signatory to the United Nations Refugee Convention of 1951 and its 1967 Protocol.

About the Kuki-Chin People

1. The Kuki people are an ethnic group native to the Mizo Hills (formerly Lushai) in India.
2. They constitute 1 of several hill tribes residing within India, Bangladesh and Myanmar.
3. The Chin people of Myanmar and the Mizo people of Mizoram are related tribes of the Kukis. The Kuki-Chin is a Christian community from Bangladesh's Chittagong Hill Tracts, which shares close ethnic ties with people in Mizoram.
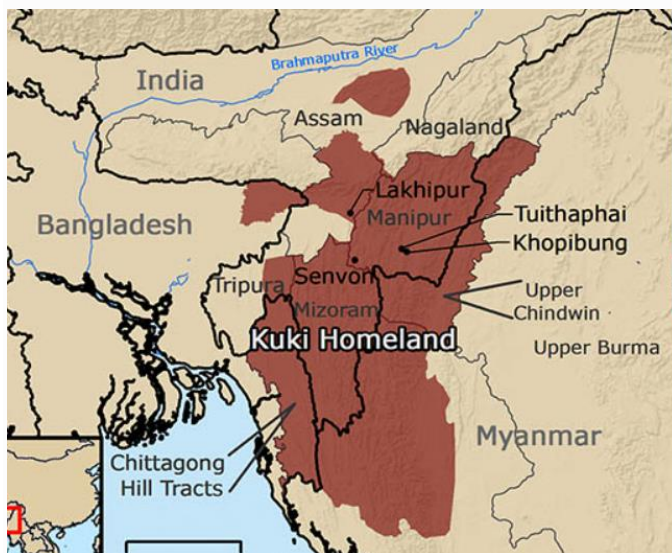
The Mizoram Cabinet has approved the setting up of temporary shelters and other amenities for Bangladeshi Kuki-Chin refugees, who have sought refuge in the northeastern state amid an alleged military operation against an ethnic insurgent group in Bangladesh's Chittagong Hills Tracts .

About India's Refugee Policy

1. India lacks specific legislation to address the problem of refugees, in spite of their increasing inflow.
2. The Foreigners Act, 1946, fails to address the problems faced by refugees as a class. It also gives huge power to the central government to deport any foreign citizen.
3. Further, the Citizenship Amendment Act, 2019 (CAA) strikingly excludes Muslims from its purview and seeks to provide citizenship only to Hindu, Christian, Jain, Parsi, Sikh, and Buddhist immigrants persecuted in Bangladesh, Pakistan, and Afghanistan.
4. Moreover, India is not a party to the 1951 Refugee Convention and its 1967 Protocol, the key legal documents related to refugee protection.
5. In spite of not being a party to the 1951 Refugee Convention and its 1967 Protocol, India has had a fair record on the issue of refugee protection. India has a moral tradition for assimilating foreign people and culture.
6. Further, the constitution of India also respects the life, liberty, and dignity of human beings. The Supreme Court in the National Human Rights Commission vs. State of Arunachal Pradesh (1996) held that "while all rights are available to citizens, persons including foreign citizens are entitled to the right to equality and the right to life, among others."

India's Argument for Not Signing the 1951 Refugee Convention

1. The definition of refugees in the 1951 convention only includes the violation of civil and political rights, but not economic rights, of individuals.

2. For instance, 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.

3. If the violation of economic rights were to be included in the definition of a refugee, it will clearly pose a major burden on the developed world.

4. On the other hand, this argument, if used in the South Asian context, could be a problematic proposition for India too.

3.9   South China Sea (SCS) Code of Conduct (CoC) Should Align With International Law

Why in News?

Recently, while addressing ASEAN Defence Ministers Plus meeting, Indian Defence Minister stated that negotiations on Code of Conduct (CoC) for South China Sea (SCS) should be as per the international laws.

About South China Sea
1. South China Sea is an arm of western Pacific Ocean in Southeast Asia. It is located in the south of China, east & south of Vietnam, west of the Philippines and north of the island of Borneo.

2. It is connected by Taiwan Strait with the East China Sea and by Luzon Strait with the Philippine Sea.

3. Bordering states & territories (clockwise from north): the People's Republic of China, the Republic of China (Taiwan), the Philippines, Malaysia, Brunei, Indonesia, Singapore and Vietnam.

4. Strategic Importance: This sea holds tremendous strategic importance for its location as it is the connecting link between the Indian Ocean and the Pacific Ocean (Strait of Malacca).

5. As per the United Nations Conference on Trade And Development (UNCTAD) 1/3 of the global shipping passes through it.

China's Claim:
1. China lays claim on nearly all of the South China Sea, including the Paracel Islands.

2. However, Taiwan, Philippines, Brunei, Malaysia and Vietnam also claim parts of the region, believed to hold valuable oil and gas deposits.

India's Stand:

1. India has maintained that it is not a party to the SCS dispute and its presence in the SCS is not to contain China but to secure its own economic interests, especially that of its energy security needs.

2. However, China's increasing ability to decide and expand its role in the South China Sea has compelled India to re-evaluate its approach on the issue.

3. As a key element of the Act East Policy, India has started internationalizing disputes in the Indo-Pacific region to oppose China's threatening tactics in SCS.

4. Further, India is using its Buddhist legacy to make a strong bond with the Southeast Asian Nations.

5. India has also deployed its navy with Vietnam in the South China Sea for protection of sea lanes of communication (SLOC).

6. Also, India is the part of Quad initiative (India, US, Japan, Australia) and of Indo-Pacific narrative. These initiatives are viewed as a containment strategy by China also the focus

Reasons For Dispute in the South China Sea:

1. Overlapping Claims Over the Islands:

a) The Paracel Islands are claimed by China, Taiwan and Vietnam.
b) The Spratly Islands are claimed by China, Taiwan, Vietnam, Brunei and Philippines.
c) The Scarborough Shoal is claimed by Philippines, China and Taiwan.

2.China's Aggression:
a) Since 2010, China has been converting uninhabited islands into artificial islands.

b) China has been changing the size and structure of the reefs by modifying their physical land features. It has also established airstrips on Parcel and Spratly.

c) Chinese fishing fleets are engaged in paramilitary work on behalf of the state rather than the working as a commercial enterprise of fishing.

d) The US is very critical of building these artificial islands and terms these actions of China as building a 'great wall of sand'.

So, What is Code of Conduct (COC) on South China Sea (SCS)?

1. COC refers to the mutually agreed rules and regulations between the China and the ASEAN.
2. CoC, between ASEAN and China, is intended to reduce conflict in SCS where China's expansive maritime and territorial claims clash with other ASEAN member states .
3. Evolution of CoC dates back to 1992, when ASEAN issued its 1st statement on territorial disputes in SCS.
4. Later, they signed Declaration on Conduct of Parties in SCS in 2002, with draft guidelines adopted in 2011.

3.10   Indo Pacific Regional Dialogue (IPRD), 2022

Why in News?

Recently, the 4th edition of Indo Pacific Regional Dialogue (IPRD) concluded in Delhi.

About the Indo-Pacific Region:

1. Indo-Pacific is a recent concept.
2. Just a decade ago the world has started talking about the Indo-Pacific; its rise has been important.
3. The term is on the basis of understanding that the Indian Ocean and the Pacific are a strategically linked.
4. Also, the centre of gravity has shifted to Asia. The reason being maritime routes, the Indian Ocean and the Pacific provide the sea lanes. The majority of the world's trade passes through these oceans.

About IPRD:

1. IPRD is a top level international annual conference of the Indian Navy and its initial concept was made in 2018.
2. The event has been hosted annually since 2018, except in 2020, when it had to be postponed due to the Covid-19.
3. The National Maritime Foundation (NMF) is the Navy's knowledge partner and chief organizer.
4. Theme for 2022 is "Operationalising the Indo-Pacific Oceans".

What is the Indo-Pacific Oceans Initiative (IPOI)?

1. It was announced by the Indian Prime Minister at the 14th East Asia Summit (EAS) in 2019.
2. It is a comprehensive and inclusive construct for regional cooperation that is focused on seven pillars:
    ▪ Maritime Security
    ▪ Maritime Ecology
    ▪ Maritime Resources
    ▪ Disaster Risk-reduction and Management
    ▪ Trade-Connectivity and Maritime Transport
    ▪ Capacity-building and Resource sharing
    ▪ Science, Technology and Academic Cooperation

Objectives of the Initiative:

1. It reviews the current geopolitics in the Indo-Pacific region and identifies opportunities, dangers, and problems of the region.
2. IPRD is important because one of the main goals of the NMF is to conduct analyses of international relations and geopolitical factors that are important to India strategically.

Significance of Indo- Pacific Region for India:

1. It is one of the most populous and economically active regions of the world.
2. Almost 60% of the world's population and 2/3rd of the global economic output makes it global economic centre.
3. The region is also a great source and destination for Foreign Direct Investment.
4. The region is also important for world's critical and large supply chains.

5. There are vast reserves of marine resources in the Indian and Pacific Oceans, including offshore hydrocarbons, methane hydrates, seabed minerals and rare earth metals.
6. Also, the world's largest economies are located in the Indo-Pacific region, including India, U.S.A, China, Japan, Australia.

3.11   Meeting of China-Indian Ocean Region Forum

Why in News?

Recently, the China International Development Cooperation Agency (CIDCA), held a meeting of the China-Indian Ocean Region Forum in which 19 countries took part but not the India.

Key Highlights of the Meet are:

1. Theme: Shared Development: Theory and Practice from the Perspective of the Blue Economy.
2. Participating Countries are: Indonesia, Pakistan, Myanmar, Sri Lanka, Bangladesh, Maldives, Nepal, Afghanistan, Iran, Oman, South Africa, Kenya, Mozambique, Tanzania, Seychelles, Madagascar, Mauritius, Djibouti, Australia and representatives of 3 international organisations were present. India was not invited for the meeting.
3. In this meeting, China proposed to establish a marine disaster prevention and mitigation cooperation mechanism between China and the countries in the Indian Ocean region.
4. China expressed its willingness to provide necessary financial, material, and technical support to the countries in need.

So, What China Seek from the Meet?

1. China is trying to increase its influence in the strategic Indian Ocean region with huge investments in ports and infrastructure in several countries.
2. Already, China has made investments in ports and infrastructure in several countries, including Pakistan and Sri Lanka.
3. China has acquired Sri Lanka's Hambantota port on a 99-year lease besides building the port at Pakistan's Gwadar in the Arabian Sea opposite to India's western coast and infrastructure investments in the Maldives.

What are the Concerns?

1. China has often been accused of engaging in "debt diplomacy" in many countries under its Belt and Road Initiative allegedly in the name of infrastructure development.
2. Since 2008, China has regularly deployed a contingent of naval warships in the Gulf of Aden and established its 1st foreign military base in Djibouti in 2017.
3. At the same time, India's absence is seen as an attempt to challenge India's traditional presence in the region. Moreover, the Chinese Foreign Ministry refused to disclose who the participants were from other countries.

About the Indian Ocean Rim Association (IORA)

1. It was established in 1997 and is a regional forum that seeks to build and expand understanding and mutually beneficial cooperation through a consensus-based evolutionary approach.
2. IORA has 23 member states and 9 Dialogue Partners.
3. It's members are: Australia, Bangladesh, the Comoros, France, India, Indonesia, Iran, Kenya, Madagascar, Malaysia, Maldives, Mauritius, Mozambique, Oman, Seychelles, Singapore, Somalia, South Africa, Sri Lanka, Tanzania, Thailand, the United Arab Emirates and Yemen.
4. China is a dialogue partner in the IORA.
5. The IORA Secretariat is based in Mauritius.

3.12   SCO's Council of Heads of Government (CHG) Meeting

Why In News

In October 2022, the 21st Meeting of SCO's Council of Heads of Government (CHG) held in Nur-Sultan (Kazakhstan).

More about the news:

1. The meeting was held in virtual format under the chairmanship of Kazakhstan.
2. This meet is held annually to focus on the trade and economic agenda of the organisation and approves the SCO's annual budget.

Shanghai Cooperation Organization (SCO):

1. It is a permanent intergovernmental international organisation of Eurasian Nations.
2. It has emerged as one of the largest trans-regional international organisations.
3. Its secretariat is in Beijing.
4. SCO is a political, economic and military organisation that aims at maintaining peace, security and stability in the region.

 Journey from Shanghai 5 to SCO:

1. Shanghai Five emerged in 1996 from a series of talks between 4 former USSR republics and China.
2. Kazakhstan, China, Kyrgyzstan, Russia and Tajikistan were members of the Shanghai Five.
3. It was renamed as SCO as with the accession of Uzbekistan to the group in 2001.
4. Both India and Pakistan were observer states, initially and were given full membership in 2017.
5. In 2021 SCO agreed for Iran to join in SCO.
6. Belarus has also begun the membership process for SCO.

About the Members in meeting:

The SCO-CHG meeting was attended by SCO Member States, Observer States, the Secretary General of the SCO, the Executive Director of the SCO Regional Anti-Terrorist Structure, Turkmenistan and other invited guests

Member states	Observer States	Dialogue Partners
Kazakhstan	Afghanistan	Azerbaijan
China	Belarus	Armenia
Kyrgyzstan	Iran	Cambodia
Russia	Mongolia	Nepal
Tajikistan		Turkey
Uzbekistan		Sri Lanka
India		
Pakistan		
Iran		

India's stand on Various Issues in the Meeting:

1. India's External Affairs Minister represented India and highlighted India's strong cultural and historical connect with the SCO region.
2. He repeated India's strong commitment towards developing multilateral cooperation in the areas of

    ▪ Food and energy security
    ▪ Climate change
    ▪ Trade and culture

3. He spoke about the launch of the global Mission 'LIFE' (Lifestyle for Environment) and its importance in ensuring food and energy security.
4. The Indian minister said that the Connectivity projects should respect the sovereignty and territorial integrity of Member States and respect international law.
    [It was said in a reference to China's Belt and Road Initiative (BRI).]
5. As stated by the Indian Minister, India's total trade with SCO Members is only $141 billion, which has the potential to increase manifold.

Significance of SCO for India:

1. India has taken over as Chairperson of the SCO for 2023, and will host leaders of all SCO countries at a summit in Delhi expected in mid-2023.

2. It will help India in counterterrorism abilities by working toward intelligence sharing, law enforcement and developing best practices and technologies.
3. SCO can help in achieving regional integration and promote connectivity and stability across borders.
4. Through the SCO, India can also work on anti-drug trafficking and small arms proliferation.
5. Further, it also helps India to have a multilateral talk with friends like Russia and adversaries like China and Pakistan.
6. SCO provides India with an opportunity to pursue the "Connect Central Asian Policy" as central Asia is a part of India's Extended Neighbourhood.
7. It will also help India to control the ever-growing influence of China in Eurasia.

Additional Information:

China's Belt and Road initiative:

1. China began the Belt and Road Initiative in 2013.
2. It aims to recover the ancient trade routes crossing to and from China–from Rome in Europe to East Asia.
3. China was criticised in the West for providing unsustainable debts to countries that will be unable to repay them.
4. India opposed the BRI as it included the China-Pakistan Economic Corridor, which connected Kashgar in China with the Gwadar port in Pakistan via Pakistan-occupied Kashmir.

China's BRI roadmap

3.13   UN Human Right Council's Universal Periodic Review

Why in News?

Recently, the UN Human Rights Council's (HRCs) Universal Periodic Review (UPR) session was held in Geneva, where India's human rights record was examined by the Universal Periodic Review (UPR) Working Group.

So, What is Universal Periodic Review?

1. It's a unique process which involves a periodic review of the human rights records of all 193 UN Member States.
2. The ultimate aim of this mechanism is to improve the human rights situation in all countries and address human rights violations wherever they occur. Currently, no other universal mechanism of this kind exists.
3. UPR for the 1st time was done in 2008 and from then all 193 UN member states have been reviewed thrice within the 1st, 2nd and 3rd UPR cycles.
4. During the review process, states present specific steps that they have taken to implement recommendations made during their previous reviews and highlight their recent human rights developments.
5. UPR for India:
a) The representatives of 3 countries are serving as rapporteurs ("troika") for the review of India and these are: Sudan, Nepal and the Netherlands.
b) This review marks the beginning of the UPR 4th cycle. India's 1st, 2nd and 3rd UPR reviews took place in April 2008, May 2012 and May 2017, respectively.
6. These Reviews are Based on:
a) National report and the information provided by the state who is under review,
b) Information contained in the reports of independent human rights experts and groups,
c) Information provided by other stakeholders including national human rights institutions, regional organizations and civil society groups.

Highlights of the Recent UPR Report are:

1. Countries like Greece, the Netherlands and Vatican City called upon the Government of India to ensure freedom of religion and to end discrimination against human rights defenders and religious minorities.
2. Germany expressed concern about the rights situation in India especially of religious minorities as well as women and girls.
3. Germany also said that the Foreign Contribution Regulation Act should not "unduly restrict" the "freedom of association" in India.
4. The German representative called upon India to strengthen the National Human Rights Commission and said that the discrimination against Dalits should end.
5. Russia asked India to continue to take policies that will eradicate poverty and called for "responsible corporate behaviour".
6. Nepal called for India to strengthen measures to end violence against women and end child marriage.
7. While, India said that it appreciates the role of human rights defenders, journalists and activists in the democratic system but the activities of these groups and individuals should be in conformity with the law of the land.

About the UNHRC?

1. The UN Human Rights Council is an inter-governmental body within the UN system which is responsible for strengthening the promotion and protection of human rights around the world.

2. It was created by the United Nations General Assembly in 2006. It replaced the former United Nations Commission on Human Rights.

3. The Office of the High Commissioner for Human Rights (OHCHR) serves as the Secretariat of the Human Rights Council.

4. OHCHR is headquartered in Geneva, Switzerland.

5. UNHRC is made up of 47 UN member states which are elected by the UN General Assembly (UNGA).

6. UNHRC membership is based on equitable geographical distribution. Seats are distributed as follows:

a) African States: 13 seats

b) Asia-Pacific States: 13 seats

c) Latin American and Caribbean States: 8 seats

d) Western European and other States: 7 seats

e) Eastern European States: 6 seats

7. Members of the council serve for a period of 3 years and are not eligible for immediate re-election after serving 2 consecutive terms.

4.   SOCIAL ISSUES

4.1   Anti-Superstition Laws in India

Why in News?

Human sacrifice of 2 women in Indian state of Kerala has raised the concerns about the present scenario of law-and-order situations which are not able to curb the centuries old bad practices such as superstition which are derogatory to humanity.

What is Superstition?

1.   A belief that does not have any logic and cannot be explained by any reason or scientific method.
2.   'Superstition' is a Latin word which means "extreme fear of the god''.
3.   Superstitions are widespread and found in every corner of the world.
4.   Presently in India, there is no exclusive legislation to deal with superstitious practices, black magic, or human sacrifice in particular.
5.   In last few years around 800 women in Bihar, Jharkhand, Chhattisgarh and Odisha have been killed due to black magic practices.

Arguments in favour of the Need of the law	Counter arguments/ we do not need a separate law
1. The IPC is lacking to deal with crimes such as magic and other superstitious practices. 2. Violent practices like throwing children on thorns, parading women naked should not be allowed in the name of religion.	1. Having special law for every crime provides no solution and makes the problem worse. 2. It can take away almost everything associated with the religion for the reason that there is no scientific logic behind that. 3. The practical legal framework of our country is sufficiently enough to address such crimes. For example, throwing a child on thorns is an offence under Sections 307 and 323 of the IPC. 4. These superstitions can be addressed by amendments in the Criminal Procedure Code.

Evolution of Superstition Related Laws in India:

1.   8 states in India have black magic legislations so far.
       [These include Bihar, Chhattisgarh, Jharkhand, Odisha, Rajasthan, Assam, Maharashtra and Karnataka.]
2.   The Prevention of Witch Practices Act was amongst the 1st in India to address witchcraft that came in Indian state of Bihar in 1999.
3.   In 2013 the Maharashtra followed Bihar and enacted the Prevention and Eradication of Human Sacrifice and Other Inhuman, Evil and Aghori Practices and Black Magic Act, which banned the practice of human sacrifice in the state.

4. Assam Witch Hunting (Prohibition, Prevention and Protection) Bill, 2015 was turned into Act almost after 3 years of Assembly had passed it.
5. The state of Karnataka too affected a controversial anti-superstition law in 2017 known as the Karnataka Prevention and Eradication of Inhuman Evil Practices and Black Magic Act.
   [It prohibits the "inhumane" practices linked to religious rituals including performing any inhumane acts.]

Way Forward/ Suggestions

In overall sense mental sensitisation is extremely crucial along with the laws to reduce the superstitions related crimes in India also, the law enforcement agencies need a major reformation to make criminal justice more accessible.

4.2   Pahari Tribe in the ST list of J&K

Why in News?

Recently, the National Commission for Scheduled Tribes (NCST) has cleared the way for the inclusion of the 'Pahari ethnic group' in the Scheduled Tribes (ST) list of the Union Territory of Jammu and Kashmir.

1. Presently, Jammu and Kashmir has 12 communities that have been notified as STs.

So, What is the Process of Inclusion in the STs List?

1. Overall, the process to include tribes in the ST list begins with the recommendation from the respective State governments, which are then sent to the Tribal Affairs Ministry, which reviews and sends them to the Registrar General of India for approval.
2. This is followed by the NCST approval before the list is sent to the Cabinet for the final decision.
3. The final decision rests with the President's office issuing a notification specifying the changes under powers vested in it under Articles 342.
4. The inclusion of any community in the Scheduled Tribes come into effect only after the President assents to a Bill that amends the Constitution (Scheduled Tribes) Order, 1950, after it is passed by both the Lok Sabha and Rajya Sabha.

About the Benefits any Community get after Inclusion in the ST List are:

1. It enables members of the communities newly listed in the revised list of Scheduled Tribes to get benefits meant for STs under the existing schemes of the government.
2. Some of the major benefits include post-matric scholarship, overseas scholarship and the national fellowship, besides education, concessional loans from the National Scheduled Tribes Finance and Development Corporation, hostel for students etc.
3. In addition, the tribe will also be entitled to get benefits of reservation in services and admission to educational institutions as per the government policy.

Some Constitutional and Legal Provisions related to Tribes in India are:

1. Constitutional Provisions:
a) As per Census of 1931, Schedule tribes were termed as "backward tribes" living in the "Excluded" and "Partially Excluded" areas.
b) The Government of India Act of 1935 called for the 1st time for representatives of "backward tribes" in provincial assemblies.
c) The Constitution does not define the criteria for recognition of Scheduled Tribes and hence the definition contained in 1931 Census was used in the initial years after independence.

d) However, Article 366 of the Constitution only provides process to define Scheduled Tribes: "Scheduled Tribes means such tribes or tribal communities or parts of or groups within such tribes or tribal communities as are deemed under Article 342 to be Scheduled Tribes for the purpose of this Constitution."

e) 342(1): The President may with respect to any State or Union Territory, and where it is a State, after consultation with the Governor, by a public notification, specify the tribes or tribal communities or part of or groups within tribes or tribal communities as Scheduled Tribe in relation to that State or Union Territory.

f) The 5th schedule of the Constitution lays out the provisions for Administration and Control of Scheduled Areas and Scheduled Tribes in states other than Assam, Meghalaya, Tripura and Mizoram.

g) The 6th schedule deals with the administration of the tribal areas in Assam, Meghalaya, Tripura and Mizoram.

2. Legal Provisions:

a) Protection of Civil Rights Act, 1955 against Untouchability.

b) Scheduled Castes and the Scheduled Tribes (Prevention of Atrocities) Act, 1989.

c) Provisions of the Panchayats (Extension to the Scheduled Areas) Act, 1996.

d) Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006.

4.3   All Employees can opt for PF Pensions Scheme

Why in News?

Recently, the Supreme Court has upheld the validity of Employees' Pension (Amendment) Scheme, 2014 but removed the threshold limit of Rs 15,000 monthly salary for joining the pension fund.

So, What is the Employees' Pension Scheme?

1. Employees' Pension Fund Scheme, which is also known as Employees' Pension Scheme (EPS), is a social security scheme provided by the Employees' Provident Fund Organisation (EPFO).

2. The scheme was first launched in 1995.

3. The scheme, provided by EPFO, makes provisions for pensions for the employees in the organized sector after the retirement at the age of 58 years.

4. Employees who are members of Employees Provident Fund (EPF)   automatically become members of EPS.

5. Both employer and employee contribute 12% of employee's monthly salary (basic wages plus dearness allowance) to the Employees' Provident Fund (EPF) scheme.

6. EPF scheme is mandatory for employees who draw a basic wage of Rs. 15,000 per month.

7. Of the employer's share of 12 %, 8.33 % is diverted towards the EPS.

8. Central Govt. also contributes 1.16% of employees' monthly salary in it

EPS (Amendment) Scheme, 2014:

1. The EPS amendment of 2014, had raised the pensionable salary cap to Rs 15,000 a month from Rs 6,500 a month, and allowed only existing members (as on September 1, 2014) along with their employers exercise the option to contribute 8.33% on their actual salaries (if it exceeded the cap) towards the pension fund.

2. This was extendable by another 6 months at the discretion of the Regional Provident Fund Commissioner.

3. It, however, excluded new members who earned above 15,000 and joined after September 2014 from the scheme completely.

4. The amendment, however, required such members to contribute an additional 1.16% of their salary exceeding ₹ 15,000 a month towards the pension fund.

About the SC's Recent Judgement

1. By using Article 142, the Supreme Court ruling gives EPFO members, who have availed the EPS, another opportunity over the next 4 months to opt and contribute up to 8.33% of their actual salaries as against 8.33% of the pensionable salary capped at Rs 15,000 a month towards pension.
2. Under the pre-amendment scheme, the pensionable salary was computed as the average of the salary drawn during the 12 months prior to exit from membership of the Pension Fund. The amendments raised this to an average of 60 months prior to exit from the membership of the Pension Fund.
3. The court held the amendment requiring members to contribute an additional 1.16 % of their salary exceeding Rs 15,000 a month as ultra vires the provisions of the Employees' Provident Funds and Miscellaneous Provisions Act, 1952.

What will be the Implications of this judgement?

1. People who have subscribed to EPF will be able to get pension on their full salary instead of Rs. 15000 cap.
2. Employees and Employers, who have contributed to the EPF without any approval from Assistant Provident Commissioner, may not get the benefit of judgment.

4.4   Mother Tongue Survey of India

Why in News?

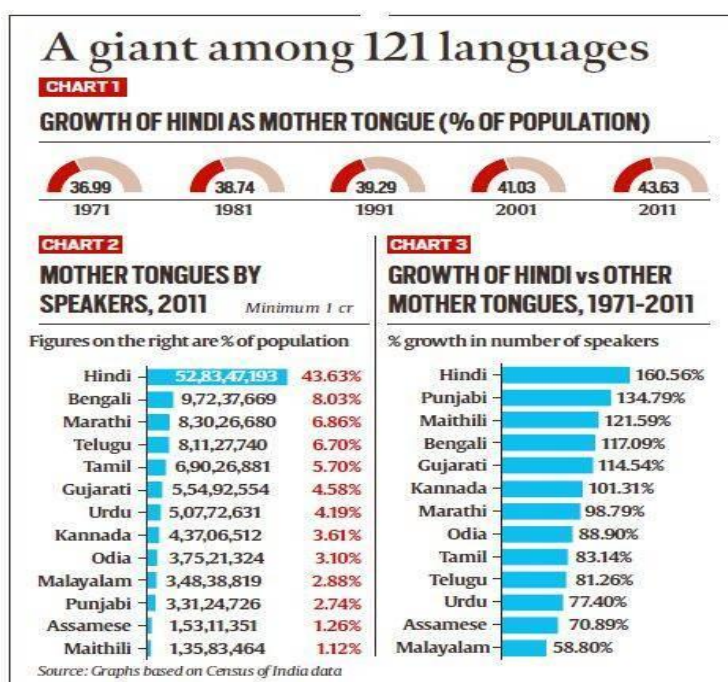The Ministry of Home Affairs recently completed the Mother Tongue Survey of India (MTSI).

 More about the News:

1. The survey was done with the help of field video of the country's 576 languages.
2. National Film Development Corporation (NFDC) will arrange the linguistic data of the surveyed mother tongues in audio-video files.

What is the MTSI?

1. The Mother Tongue Survey of India is a project that surveys the mother tongues in India.
2. It also documents the features of the selected languages.
3. The category "mother tongue" is a title provided by the respondent of the survey. (But it need not be matching with the actual linguistic medium.)

Status About the mother tongues in India?

A giant among 121 languages

CHART 1

GROWTH OF HINDI AS MOTHER TONGUE (% OF POPULATION)

36.99	38.74	39.29	41.03	43.63
1971	1981	1991	2001	2011

CHART 2

MOTHER TONGUES BY SPEAKERS, 2011   *Minimum 1 cr*

Figures on the right are % of population

Hindi	52,83,47,193	43.63%
Bengali	9,72,37,669	8.03%
Marathi	8,30,26,680	6.86%
Telugu	8,11,27,740	6.70%
Tamil	6,90,26,881	5.70%
Gujarati	5,54,92,554	4.58%
Urdu	5,07,72,631	4.19%
Kannada	4,37,06,512	3.61%
Odia	3,75,21,324	3.10%
Malayalam	3,48,38,819	2.88%
Punjabi	3,31,24,726	2.74%
Assamese	1,53,11,351	1.26%
Maithili	1,35,83,464	1.12%

CHART 3

GROWTH OF HINDI vs OTHER MOTHER TONGUES, 1971-2011

% growth in number of speakers

Hindi	160.56%
Punjabi	134.79%
Maithili	121.59%
Bengali	117.09%
Gujarati	114.54%
Kannada	101.31%
Marathi	98.79%
Odia	88.90%
Tamil	83.14%
Telugu	81.26%
Urdu	77.40%
Assamese	70.89%
Malayalam	58.80%

Source: Graphs based on Census of India data

1. According to the 2011 linguistic census data released in 2018, there are more than 19,500 languages and dialects spoken as mother tongues in India.
2. These languages further grouped into 121 categories of mother tongue after their inspection and study.
3. According to the 2011 linguistic census, Hindi is the most widely spoken mother tongue.
   [52.8 crore people or 43.6 % of the population declared Hindi as the mother tongue]
4. After Hindi, almost 8% of the population spoke Bengali, making it the country's second most popular mother tongue.

What is the Linguistic Survey of India?

1. The Linguistic Survey of India (LSI) is a regular research activity in the country since the 6th Five Year Plan.
2. The objective of the Linguistic Survey of India is to present an updated linguistic scenario in the country.
3. It further aims to provide necessary inputs to the social/educational planners in respective States for their planning to achieve their respective goals.

Where does the mother tongue feature in the education of children?

1. Under the National Education Policy (NEP) 2020 the focus is on promoting mother tongue and regional languages.
2. The new National Curriculum Framework (NCF) for the foundational stages of education has recommended that mother tongue should be the primary medium of instruction in schools for children up to 8 years of age.
3. Since children learn the concepts fast and deeply in their home language, the primary medium of instruction should be the child's mother tongue.

Additional Information:

About the Population Census:

1. The coming population census will be the 16th.
2. The first exercise was conducted in 1872.
3. It will be the 8th census since independence.
4. The census was supposed to take place in 2021, but was postponed due to the outbreak of the Covid-19 pandemic.
5. The Home Ministry has adopted some new technologies including digital data processing and the use of geospatial technology.
6. Pre-census mapping activities like preparation and updating of maps that show administrative units will be carried out.
7. Census results will be distributed through web-based interactive maps.
8. Jurisdictional changes that occurred in the country after Census 2011 till 2019 have been updated in the geo-referenced database and more than 6 lakh maps have been prepared and uploaded for census functionaries.

4.5   Gaslighting

Why in News?

The act of gaslighting isolates people from society and changes their reality.

Gaslighting and it's Working:

1. Gaslighting is a type of psychological abuse. One person or a group manipulates another, making them doubt their own mental health.
2. Gaslighting is a technique of manipulation used to control people in politics and interpersonal relationships.
3. Stern explained that in order for such abuse to exist the "mutual participation" between the "gaslighter" (perpetrator) and the "gaslightee" (victim) is important.
4. When a person is gaslighted they experience confusion, anxiety and loss of trust in themselves.
5. If successful in the act of gaslighting, the committer can isolate the victim from society and even from their closest social circles to the extent that the gaslightee starts believing that the gaslighter is the only person they can trust.

Historical Background of Gaslighting:

1. In 1938, playwright Patrick Hamilton wrote a thriller play called the Gas Light, which tells the story of a man who attempts to drive his wife insane (mad) to steal from her.
2. He convinces her that she was going insane, to the point where she was made to believe that the noises from the attic and the flickering gas light were imagined by her, while in reality, he was responsible for it.
3. Psychologists R. Barton and J. A. Whitehead coined the term "gaslighting" in 1969 as they analysed involuntary hospitalisation as a form of abuse.
4. Rarely used after this, the term was popularised by psychotherapist Robin Stern in 2007 and has now become a universal term.

Methods of Gaslighting:

1. There are various methods used by gaslighters to manipulate their victims into questioning their realities.
2. The committer acts like he/she don't understand the conversation or refuses to listen, convincing the victim that they must have misunderstood.
3. By trivialising the victim's experiences or feelings, the committer makes sure that the victim starts questioning their own character.
4. The committer refuses to take responsibility for their actions of hurting the victim by blaming the victim for causing the situation that resulted in abuse by the gaslighter.
5. Moreover, they divert the focus of a discussion, when the gaslightee starts questioning the gaslighter's credibility.
6. Perpetrators can also use negative stereotypes, based on the victim's gender, class, caste, race or ethnicity to lower their self-esteem.

Impact of the Gaslighting:

1. It highlights the importance of intimate relationships in the phenomenon, ignoring the gender-based inequalities that make it a common feature of domestic violence.
2. Committers of such abuse, use the already present structural inequalities and stereotypes, and institutional vulnerabilities to control their victims.
3. Persistent gaslighting can be terrible for the mental health of the person on the receiving end causing him/her to believe they deserve the abuse.
4. The impact can last long after the gaslighter is out of the victim's life and very often leads to a lifetime of self-doubt and difficulty making decisions.

How to protect self from Gaslighting?

1. Pay attention to what the person does, not what they say. Gaslighters say one thing, but their actions say another.

2. Don't listen to someone who constantly tells you "You're crazy" or makes similar comments that make you routinely question yourself.
3. Don't believe anyone who tells you that others, especially your family and/or friends, agree with them and not you.
4. Remember that it's not you; the gaslighter is 100% responsible for their behavior.

Conclusion:

Gaslighting is a serious issue which can be difficult to recognise especially when one is involved in an intimate relationship. Moreover, it is possible for a person to get used to such behaviour from their partners, mistaking it for love. The 1st step in abusive relationships is to become aware of one's own role in gaslighting, the ways in which one's behaviour, desires, and fantasies may lead to idealising the gaslighter and seeking their approval.

4.6   Sugamya Bharat Abhiyan

Why in News?

The Sugamya Bharat Abhiyan (Accessible India Campaign) is going to complete 7 years in December 2022.

So, What is the Accessible India Campaign (AIC)?

1. It was launched by the PM of India on International Day of Persons with Disabilities on 3rd December 2015.
2. AIC is the nationwide flagship campaign of the Department of Empowerment of Persons with Disabilities (DEPwD), Ministry of Social Justice and Empowerment.
3. The aim of the campaign is to make a barrier-free and a comfortable   environment for 'Divyangjans' (Persons with Disabilities - PwDs) all over the country.
4. Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995 categorically provided for non-discrimination in transport and in the built environment.
5. But, the Rights of Persons with Disabilities Act, 2016 replaced the PwD Act, 1995 to comply with United Nations Convention on the Rights of Persons with Disabilities (UNCRPD).
6. UNCRPD, to which India is a signatory puts under Article 9 some obligations on the Governments for ensuring to PwDs accessibility to:
a) Information
b) Transportation
c) Physical Environment
d) Communication Technology
e) Accessibility to Services as well as emergency services.

About the Performance of Accessible India Campaign

1. Under the campaign, Access Audit of 1671 buildings completed in which 1,630 Government buildings, including 1030 Central Government buildings have been provided with features of accessibility.
2. 35 International Airports and 55 Domestic Airports have been provided with features of accessibility.
3. All 709 A1, A & B category railway stations have been provided with features of accessibility.
4. 1,45,747 (29.05%) buses have been made partially accessible for PwDs and 8,695 (5.73%) buses have been made fully accessible.
5. Nearly 627 Central and State/UT government websites have been made accessible.
6. Almost 19 private news channels are telecasting partially accessible news bulletins.
7. 9 general entertainment channels have telecasted 3686 scheduled programs/movies using subtitling.
8. Out of 11,68,292 government and government aided schools, a total of 8,33,703 schools (71%) have been made barrier free with the provision of ramps, handrails and accessible toilets.
9. Activities under the Accessible India Campaign are being monitored through a Management Information System (MIS) portal.
10. The central government has launched 'Sugamya Bharat App' too that provides information regarding the various initiatives taken by the government.

Additional Information:

Some Recent Initiatives related to Empowerment of Disables are:

1. In India:
a) Unique Disability Identification Portal
b) DeenDayal Disabled Rehabilitation Scheme
c) Assistance to Disabled Persons for Purchase/fitting of Aids and Appliances
d) National Fellowship for Students with Disabilities

2. At Global level:

a) International Day of Persons with Disabilities
b) UN Principles for People with Disabilities

4.7   Demography Trends of India

Why in News?

According to the projection by the United Nations, in 2022, China will for the 1st time hit the absolute decline in its population and in 2023, India's population will reach 1,428.63 million.

What is Demography?

1. Demography is the scientific study of human populations mainly with respect to their size, their structure and their development.
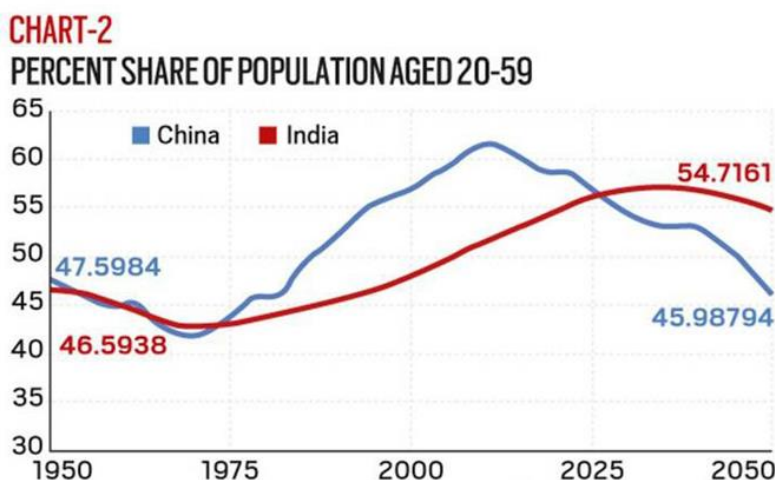2. It considers the quantitative aspects of the general characteristics of Population and changes in them.

What is Demographic Dividend?

Demographic dividend is a country's working-age population's share of the overall population.

Evolution of Population planning in India:

1. 1950 --- India became one of the first developing countries to come up with a state-sponsored family planning programme in the 1950s.
2. 1952 --- A population policy committee was established.
3. 1956 --- A Central Family Planning Board was set up and its focus was on sterilisation.
4. 1976 --- GOI announced the 1st National Population Policy.
5. 1980 --- Realising the potential of education to tackle the problems related to education sector the Ministry of Education launched a Population Education Programme.
6. In 2000 --- National Population Policy came, with an aim of achieving a stable population for India.

CHART-2
PERCENT SHARE OF POPULATION AGED 20-59

China   India

47.5984
46.5938
54.7161
45.98794

1950 1975 2000 2025 2050

What were the major objectives of National Population Policy of 2000?

1. The Policy aims to achieve stable population by 2045.
2. One of its immediate objectives is to address the unmet needs for contraception, health care infrastructure, and personnel and provide integrated service delivery for basic reproductive and child health care.

What are the factors which Drive Changes in Population Characteristics?

Total Fertility Rate (TFR):	1. The TFR is the average number of births by women aged 15-49 for a particular period/year. 2. TFR has fallen for India in the last 3 decades. 3. It came down from 3.4 to 2, between 1992 to 2021 4. The fall in TFR is very significant in the rural areas, especially due to family planning policies. 5. A TFR of 2.1 is considered as "replacement-level fertility" (RLF). [RLF is *the level of fertility at which a population exactly replaces itself from one generation to the next*.]
Fall in Mortality:	1. CDR is the number of persons dying per year per 1,000 population. 2. It fell to single digits in 2020, for both the countries. 3. Mortality falls with increased education levels, public health and vaccination programmes, access to food and medical

	care, and provision of safe drinking water and sanitation facilities.
	<table><tr><td>Country/CDR Rates</td><td>1950</td><td>2020</td></tr><tr><td>India</td><td>22.2</td><td>7.4</td></tr><tr><td>China</td><td>23.2</td><td>7.4</td></tr></table>
Life Expectancy at Birth:	1. It is defined *as how long, on average, a new born can expect to live after birth.* 2. It went up from 41.7 to 70.1 years for India, between 1950 and 2020. [It went up from 43.7 to 78.1 years for China in the same period.]

CHART-1
TOTAL FERTILITY RATE

Legend: All-India, Rural, Urban

	1992-93	1998-99	2005-06	2015-16	2019-21
Urban	2.7	2.3	2.1	1.8	1.6
Rural	3.7	3.1	3	2.4	2.1
All-India	3.4	2.9	2.7	2.2	2
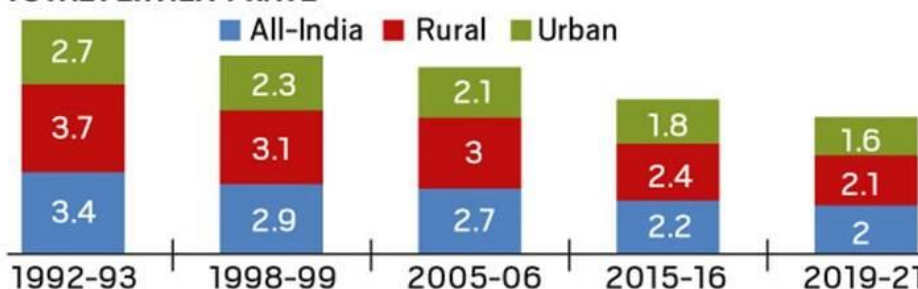
What can be done?

1. New skills and opportunities for women and girls & their participation in a 3 trillion-dollar economy is urgently needed.
2. There is a need of suitable infrastructure, helpful social welfare schemes and massive investment in quality education and health.
3. For those already in the 25-64 age bracket, there is a need for skilling, which is the only way to ensure they are more productive and have better incomes.

Way Forward:

There is an opportunity for India to reap a demographic dividend as its working-age population's share of the overall population reached 50% only in 2007 and will peak at 57% by the mid-2030s but, it is depending upon the creation of meaningful employment opportunities for a young population.

Additional Information:

National Family Health Survey (NFHS) is a large-scale, multi-round survey & it includes all the households throughout India.

NFHS has 2 specific goals:

- To provide essential data on health and family welfare needed for policy and programme purposes.
- To provide information on important emerging health and family welfare issues.

4.8   Censored Poverty

What is Poverty?

Poverty is about not having enough money to meet basic needs including food, clothing and shelter. However, poverty is more, much more than just not having enough money.

The World Bank Organization describes poverty in this way:

"Poverty is hunger. Poverty is lack of shelter. Poverty is being sick and not being able to see a doctor. Poverty is not having access to school and not knowing how to read. Poverty is not having a job, is fear for the future, living one day at a time.

Poverty has many faces, changing from place to place and across time, and has been described in many ways. Most often, poverty is a situation people want to escape. So, poverty is a call to action -- for the poor and the wealthy alike -- a call to change the world so that many more may have enough to eat, adequate shelter, access to education and health, protection from violence, and a voice in what happens in their communities."

Methods used for poverty determination:

1. Deprivation-specific "headcount ratios" (HCRs): The percentage of deprived persons in the population.
2. The Head Count Ratio (HCR) is the percentage of a population that falls below the Poverty Line.
3. The deprivations of interest used in MPI calculations: The interests included in MPI Calculations are health, education and household amenities
4. 2011-12 estimates were based on the 2nd India Human Development Survey (IHDS-2).
5. Compare the annual rate of decline of deprivation-specific HCRs before and after 2011-12.

About the Multidimensional Poverty Index (MPI):

1. Multidimensional poverty measures various dimensions of poverty like health, education, and living standards etc., rather than only the monetary poverty.
2. The MPI is based on per capita consumption expenditure.
3. It has 3 equally weighted dimensions:

   - o   Health
   - o   Education
   - o   Standard of living

4. These 3 dimensions are represented by 12 indicators such as: nutrition, school attendance, years of schooling, drinking water, sanitation, housing, bank accounts among others.
5. Global MPI is released by the United Nations Development Programme (UNDP) and the Oxford Poverty & Human Development Initiative (OPHI).


Ten Indicators

Three Dimensions of Poverty

- Health — Nutrition, Child Mortality
- Education — Years of Schooling, School Attendance
- Living Standard — Cooking Fuel, Sanitation, Water, Electricity, Floor, Assets
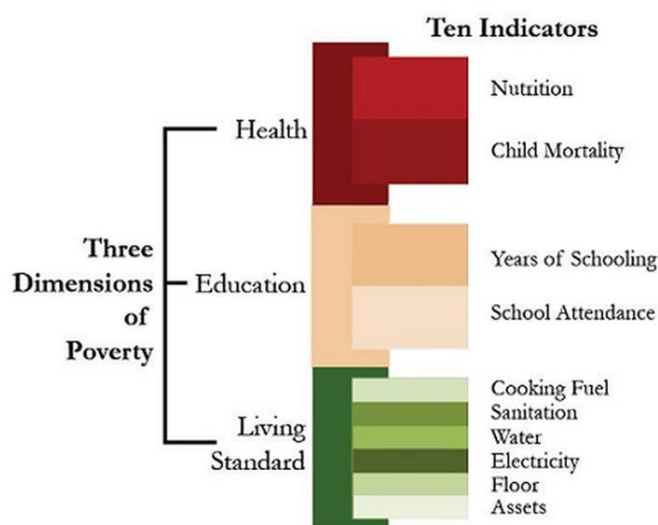
What was the result?

The rate of decline of HCRs after 2011-12 was "8 times higher" on average.

What were the findings of MPI 2022?

1. India has the largest number of poor people in the world i.e., 22.8 crore, followed by Nigeria at 9.6 crore.
2. Approx. 41.5 crore people have managed to exit poverty in India in last 15-years (2005-21).
3. Index has reported a fall in the Incidences of poverty from 55.1% in 2005-06 to 16.4% in 2019-21.
4. Deprivations in all 10 MPI indicators saw significant reductions, which have led to reduction in MPI value and poverty by 50%.
5. Bihar has seen the fastest reduction in MPI value, which was recorded the poorest State in 2015-2016.
   - [The Poverty in Bihar fell from 77.4% in 2005-06 to 34.7% in 2019-21.]
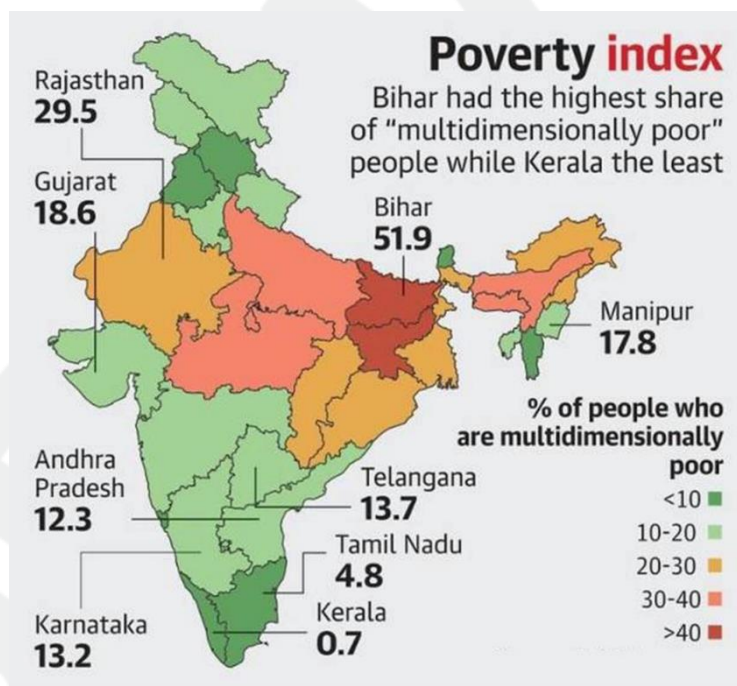
What are the issues associated with the claim?

1. The Comparison between 2005-06 and "2011-12" is actually a comparison between 2 different sets of estimates for 2005-06 (indeed, the respective figures are very close to each other).
2. The findings are not headcount ratios rather "censored headcount ratios.
3. India Human Development Survey (IHDS) data is not comparable with NFHS in any case.
4. Even if there is no improvement in nutrition, the censored HCR for nutrition deprivation would decline over time simply because multidimensional poverty is declining.

Actual HCR data:

	2005-06 (NFHS-3)	2015-16 (NFHS-4)	2019-21 (NFHS-5)
Health			
Nutrition	57.3%	37.6%	31.6%
Child Mortality	4.8%	2.7%	2.1%
Education			
Years of Schooling	25%	13.9%	11.4%
School attendance	21.3%	6.4%	5.3%

1. The rate of HCR decline was not uniform in the second period: It was faster for most household amenities, but slower for most other indicators.

2. In MPI: The convention is to give equal weight (one third each) to health, education and amenities, and then equal weight to individual indicators within each domain.
3. Based on the conventional MP weights: overall rate of decline of deprivation was the same in both periods.
4. Multidimensional poverty" HCR: It declined faster in the second period.

Indian Efforts to reduce Multidimensional Poverty Index:

1. India releases the National level Multidimensional Poverty Index (MPI).
   ▪ NITI Aayog is the nodal agency for the MPI.
2. Global MPI is part of Government of India's decision to monitor the performance of the country in 29 select Global Indices.
3. India is a part of the "Global Indices to Drive Reforms and Growth (GIRG)" exercise:
   ▪ ["Global Indices to Drive Reforms and Growth (GIRG)" works to monitor India's performance on various important social and economic parameters.]
4. India runs a parameter dashboard and a State Reform Action Plan (SRAP) to track the performance on leading indicators like health and education etc.
5. Niti Aayog influences the monitoring mechanism of the Global Multidimensional Poverty Index.

Government initiatives:

1. Garib Kalyan Rojgar Abhiyan
2. The Mahatma Gandhi National Rural Employment Guarantee Act 2005 (MNREGA)
3. Pradhan Mantri Awaas Yojana (PMAY)
4. Pradhan Mantri Ujjwala Yojana (PMUY)
5. Public Distribution System (PDS)
6. National Rural Livelihood Mission (NRLM)

What more can be done?

1. In order to reduce the Intensity of Poverty we need to address deprivations across the entire population.
2. Programmatic interventions should be there with ground-level realities as the survey data gives us only broad policy pointers.

Way Forward:

This year's Multidimensional Poverty Index (MPI) reminds us of the need for a complete picture of how people are being affected by poverty, who they are and where they live. There is a need to design effective responses that leave no one behind.

4.9 Nai Chetna- Pahal Badlav Ki

Why in News?

Recently, the Ministry of Urban Development launches the "Nai Chetna-Pahal Badlav Ki"- A Community-led National Campaign Against Gender-Based Discrimination.

So, What is the "Nai Chetna-Pahal Badlav Ki" Campaign?

1. It's a 4-week campaign, aimed at equipping women to recognise and prevent violence and making them aware of their rights.
2. Under this campaign, activities will be centred on the theme of 'Gender equality and gender-based violence.'
3. This will be an annual campaign focussing on specific gender issues each year. The focus area of the campaign this year is 'gender-based violence'.

4. This campaign will be implemented by all states in collaboration with Civil Society Organisations (CSO).
5. The campaign will bring together all line departments and stakeholders to create a dedicated effort in acknowledging, identifying and addressing the issues of violence.

What are the Major Causes of Gender Based Violence?

1. Social/Political/Cultural factors: Still there are a lot of discriminatory social, cultural and religious laws, norms and practices that marginalises women and girls and fail to respect their rights.
2. Judicial Barriers: Lack of access to justice institutions because of lot of reasons like lack of adequate and affordable legal advice, lack of family support, financial instability etc.
3. Individual Barriers: Threat or fear of isolation and social exclusion and exposure to further violence at the hands of the culprit, the community or the authorities, including arrest, detention, ill-treatment etc.

What are the Impacts of Violence Against Women?

1. It seriously affects all aspects of women's health- physical, sexual and reproductive, mental and behavioural health, thus preventing them from realizing their full potential.
2. Violence and threat of violence affects women's ability to participate actively, and as equals, in many forms of social and political areas.
3. Workplace harassment and domestic violence has an impact on women's participation in the workforce and their economic empowerment.
4. Sexual harassment limits the educational opportunities and achievements of girls.

So, What can be done to Eliminate Gender Based Violence?

1. Gender Based Violence (GBV) can be eliminated through collective efforts of society, government and individuals.
2. Training healthcare providers to recognize and respond to gender-based violence is 1 of the most important ways of identifying and assisting victims.
3. Media can play a very big role in making gender-based violence visible, advertising solutions, informing policy-makers and educating the public about legal rights and how to recognize and address this issue.
4. School systems are instrumental in stopping gender-based violence before it starts. Messages from Regular curricula, sex education, school counselling programs and school health services can all convey the message that violence is wrong and can be prevented.
5. A number of studies have shown that involving entire community in recognizing, addressing and working to prevent gender-based violence is one of the surest way of eliminating it.

4.10   Unemployment in India

Why in News?

Recently, the National Statistical Office (NSO) has released the Periodic Labour Force Survey (PLFS).

- The unemployment rate in urban areas for persons aged above 15 has decreased to 7.2% in July-September 2022 from 9.8% in July-September 2021.

About Unemployment:

1. Unemployment occurs when a person who is actively searching for employment is unable to find work.
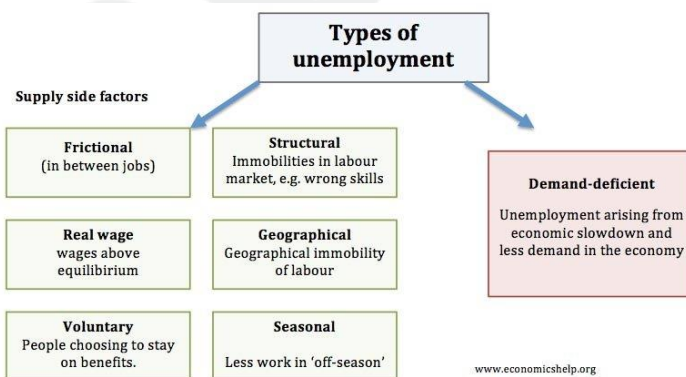2. Unemployment can be used to analyse the health of the economy.

3. Employment and Unemployment are defined by NSO, on the basis of the following activities of an individual:
    a. Working (engaged in an economic activity) i.e., 'Employed'.
    b. Seeking or available for work i.e., 'Unemployed'.
    c. Neither seeking nor available for work.
4. The labour force= a + c
5. Unemployment rate is the percent of the labour force that is without work.
6. Unemployment rate = (Unemployed Workers / Total labour force) × 100.

Types of Unemployment:

1. Disguised Unemployment: It is a situation where more people are employed than actually needed to do a particular work. It is mostly found in agriculture.
2. Seasonal Unemployment: It occurs during certain seasons of the year, like agricultural labourers in India rarely get work throughout the year.
3. Structural Unemployment: It occur because of mismatch between the jobs available in the market and the skills of the available workers in the market.
4. Cyclical Unemployment: It is a result of the business cycle, where unemployment rises during recession (it is a period of weak or negative growth in GDP) and declines with the increase of economic growth.
5. Technological Unemployment: It's a kind of unemployment which occurs because of change in technology.
   [In 2016, World Bank data has estimated that 70% jobs in India are in danger because of automation.]
6. Frictional Unemployment: It's also known as search unemployment.
   It is the time gap between the 2 Jobs of an Individual i.e., when he left his last job and the day on which he is starting the new job.
   [It is often considered voluntary unemployment because it is not caused due to the shortage of jobs but in fact, the worker himself quit his job in search of better opportunities.]
7. Vulnerable Employment: This is the job without proper job contracts and thus don't have any legal protection. These persons are considered 'unemployed' because records of their work are not maintained.

Types of unemployment

Supply side factors

Frictional (in between jobs)

Structural Immobilities in labour market, e.g. wrong skills

Demand-deficient Unemployment arising from economic slowdown and less demand in the economy

Real wage wages above equilibirium

Geographical Geographical immobility of labour

Voluntary People choosing to stay on benefits.

Seasonal Less work in 'off-season'

www.economicshelp.org

What is the Periodic Labour Force Survey?

1. It is a periodic survey to collect the data on the labour force data.
2. It was launched by National Statistical Office (NSO), Ministry of Statistics & Programme Implementation in April 2017.
3. The PLFS has 2 objectives:
   ▪ To estimate the key employment and unemployment indicators in the short time interval of 3 months.
   ▪ To estimate employment and unemployment indicators in both rural and urban areas annually.

What are the Key Findings of the PLFS (July-September 2022)?

Parameters	Definition	July-Sept (2021)	July-Sept (2022)
Unemployment Ratio	The unemployment ratio is defined as the percentage of persons	9.3% for men and 11.6% for women	6.6% for men & 9.4% for women

	unemployed among the persons in the labour force.		
Worker-Population Ratio (WPR)	The WPR is defined as the percentage of employed persons in the population.	66.6% for men and 17.6% for women.	Among men was 68.6% and 19.7% among women.
Labour Force Participation Rate (LFPR):	It is the percentage of persons in the labour force who are working or seeking or available for work in urban areas and of age15 and above.	46.9% 73.5% for men and 19.9% for women.	Increased to 47.9% For men it was 73.4% and 21.7% for women

What are the Major Causes of Unemployment in India?

1. In India the caste stereotyping is one major issue in India as work is prohibited for specific castes in some areas.
2. Also, in big joint families having big business, many persons of the family depend on the joint income of the family.
3. Rapid Growth in population is also a big problem in India and has become one of the main causes of unemployment.
4. Still in India nearly half of the workforce is dependent on Agriculture and don't like to do job (Also, it provides seasonal employment)
5. The industrial development had adverse effects on cottage and small industries.
6. The production of cottage industries began to fall due to Industrial development which have resulted into many artisans becoming unemployed.
7. Mobility of labour in India is low. Due to attachment to the family, people do not go too far off areas for jobs.
8. Factors like language, religion, and climate are also responsible for low mobility.
9. Jobs in the todays capitalist world have become highly specialised but India's education system does not provide the right training and specialisation needed for these jobs.
10. Lack of education is also an issue, there are many illiterate people who are willing to work but can't due to lack of skills.

What are Government's Initiatives to Curb Unemployment?

▪ Support for Marginalized Individuals for Livelihood and Enterprise (SMILE)
▪ PM-DAKSH (Pradhan Mantri Dakshta Aur Kushalta Sampann Hitgrahi)
▪ Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA)
▪ Pradhan Mantri Kaushal Vikas Yojana (PMKVY)
▪ Start Up India Scheme
▪ Rozgar Mela

5.　ECONOMY

5.1　Formalizing the Informal Sector

Background

1. Predominance of Informal Sector has become one of the central features of Indian labour market.
2. While the informal sector contributes almost half to the GDP of the country but its dominance in the employment front is such that more than 90% of the total workforce has been engaged in the informal economy.
3. Government has made several efforts to formalize the economy through various initiatives like introduction of the Goods and Services Tax (GST), Digital Payment Systems, enrolment of informal sector workers on numerous government portals like e-Shram etc.
4. Biggest reason for pushing towards formalisation is that formal sector is more productive than the informal sector, and formal workers have access to social security benefits too.

So, What is the Difference Between Formal and Informal Sector?

Formal Sector	Informal Sector
Any public or private sector organisation which employs 10 or more workers comes under Formal Sector.	Any organisation which employs less than 10 workers comes under Informal Sector.
Government exercise control over this sector by passing necessary acts and making rules and regulations	Government has very limited control over this sector.
Workers are entitled to social security benefits here.	Not entitled to social security benefits.
Workers have the right to form trade unions	No such right here.
Better pay scale	Less pay scale
Job security is there to some extent	No job security here

Scenario of Informal Workers as per the E-Shram Portal:

1. Social and Economic Analysis: Over 94% of 27.6 crore informal sector workers registered on the e-Shram portal have a monthly income of Rs 10,000 or below and over 74% of the enrolled workforce belongs to Scheduled Castes (SCs), Scheduled Tribes (STs) and Other Backward Classes (OBCs).
2. Age-wise Analysis: Almost 61% of the registered workers on the portal are in the age group of 18 years to 40 years, while 22% are of the age group 40 years to 50 years.
3. Gender Wise Analysis: Almost 53% of registered workers are female and 47 % are male.
4. Occupation Wise: Agriculture is at the top with 52% of enrolments done by those engaged in the farm sector followed by domestic and household workers at 10% and construction workers at 9%.

What are the Challenges Related to Informal Sector in India?

1. **Issue of Gender Disparity:** Women constitute the majority of informal participants, but they receive the least benefits and are characterized by lower paying, bad working conditions etc.

2. **Huge Exploitation:** The informal employment by definition has no written contract, paid leave and hence pay no minimum wages, nor pay attention to conditions of work.

3. **Lack of Taxation:** As the businesses of the informal economy are not directly regulated, they usually avoid one or more taxes by hiding incomes and expenses from the agencies. This poses a challenge for the government as the major sector of the economy remains out of the tax net.

4. **No Separate Statistics:** There are no official statistics available representing the true state of the economy, which makes it difficult for the government to make policies regarding the informal sector in particular and the whole economy in general.

5. **No Fixed Working Hours:** Long working hours beyond labour standards are common in India in the unorganized sector. In Particular, there is no fixed working time in the agriculture sector because there are no laws which can act as a guideline for farm workers' working conditions.

Way Forward and Way Forward

1. **Simplifying Registration Processes:** There is a need to ease rules for informal business conduct that will bring informal enterprises and their workers into the domain of formality.

2. **Comprehensive Data of Informal Sector:** It is necessary to build a comprehensive statistical database on various dimensions of the informal economy as an integral part of the National Statistical System.

3. **Grievance Redressal Mechanism:** Grievances from informal workers should be heard and solved periodically through an officially monitored mechanism.

4. **Gender Pay Parity:** Directive Principles of State Policy of the constitution direct towards equal pay for equal work (Article 39(d)); women agricultural laborers usually receive lower wages than their male counterparts. The Government should strengthen and enforce this DPSP through relevant legislative acts.

5.2   India Chem 2022

Why in News?

Recently, 12th International Exhibition and Conference, India Chem 2022 was inaugurated at Pragati Maidan, New Delhi.

More about the News:

1. The conference is organised once in every two years.
2. The theme for India Chem 2022 is "Vision 2030: Chemicals and Petrochemicals Build India".

What is the Status of Chemical Industry in India?

1. India's chemical industry is extremely diversified and can be broadly classified into:
   - Bulk chemicals
   - Specialty chemicals (6th largest producer of chemicals in the world)

- Agrochemicals (4TH largest producer)
- Petrochemicals
- Polymers
- Fertilisers

2. India holds a strong position in exports and imports of chemicals and ranks 14th in exports and 8th in imports at global level (excluding pharmaceuticals)

3. India contributes to 16% of the world's production of dyes, as we are 2nd largest manufacturer and exporter of the dyes.

4. The country's chemicals industry is de-licensed, except for few hazardous chemicals.

Issues of Chemical Industry:	Suggestions for the issues of Chemical Industries:
1. India does not have enough technology, plants and infrastructure to manufacture key chemicals in a cost-effective and less polluting manner. 2. India has nearly stopped manufacturing several key Active Pharmaceutical Ingredients (API) due to lack of technology and availability of raw material required. [These are significant ingredients in the manufacturing of drugs and are also called bulk drugs.] 3. India heavily depends on China for 67% of chemical intermediates and API that is needed to manufacture drugs and export. 4. Manufacturers are unable to meet the price at which chemicals are produced by China and chemicals manufacturing costs in India is 15% more than in China.	1. There is a need for mission mode chemical engineering with fixed targets for sufficient production of chemicals. 2. The drug manufacturing clusters should be increased along with development of common infrastructure in India. 3. The technology platforms for biocatalysts should be developed to control the higher cost of manufacturing. [Biocatalysts refers to the use of natural substances from biological sources (such as enzymes) to speed up the chemical reactions.] 4. Government should encourage the private players to work for chemical industries.

What are the Related Government Initiatives?

1. Under the Union Budget 2022-23, the government allocated Rs. 209 crores to the Department of Chemicals and Petrochemicals.

2. Government has introduced Production linked incentive (PLI) Schemes to promote Bulk Drug Parks (BDP).
[BDP is a space with common infrastructure facilities for the exclusive manufacture drugs only]

3. A 2034 vision for the chemicals and petrochemicals sector has been set up by the government to improve domestic production, reduce imports and attract investments in the sector.

Way Forward

India should adopt the modern technology from the world and invest more in research and development of chemical engineering also, schemes like the Promotion of Bulk Drug Parks and Production Linked Incentives are needed to reduce the manufacturing cost of bulk drugs and promote domestic manufacturing.

5.3   New Products in Make-II Project

Why in News?

Recently, the Indian Army has approved five Project Sanction Orders (PSOs) for the development of niche (unique) technology.

- These will be built under Make-II route of defence procurement.

What is the Make-II Project?

1. Make II projects are industry funded projects.
2. These projects involve design, development and innovative solutions by Indian vendors for development of samples.

New Additions under the Project:

1. High Frequency Man Packed Software Defined Radios (HFSDR):
   - These are the radio sets that will replace the existing High Frequency radio sets in the inventory, which have limited data handling capability and old technology.
   - It will provide long distance radio communication through improved data capability and band width coupled with enhanced security.
2. Drone Kill Systems:
   - Drone kill system is an anti-drone system against low Radio drones.
   - It is being developed to function in all types of landscapes, both during day and night.
3. Infantry Training Weapon Simulator (IWTS):
   - It is the 1st tri service Make-II project with the Army as the lead service.
4. Medium Range Precision Kill Systems (MRPKS):
   - The MRPKS, once launched can roam in the air for up to 2 hours and can acquire real time high value targets up to 40 km.

What is the 'Make' Category of Capital Acquisition?

1. The 'Make' category of capital acquisition is the basis of the Make in India.
2. It is an initiative that will work to build indigenous capabilities through the involvement of both public and private sector.
3. 'Make-I' refers to government-funded projects while 'Make-II' covers industry-funded programmes.
4. Make-I is involved in development of platforms such as light tank and communication equipment with Indian security protocols.
5. Make-II category involves sample development of military hardware and their upgradation for import substitution for which no government funding is provided.
6. Another sub-category under 'Make' is 'Make-III' which covers military hardware that may not be designed and developed indigenously, but can be manufactured in the country for import substitution, and Indian firms may manufacture these in collaboration with foreign partners.

What are the other Initiatives to Boost Domestic Production of Defence Equipment?

1. Defence Industrial Corridors
2. Corporatization of the Ordnance Factory Boards
3. Defence India Startup Challenge
4. Draft Defence Production and Export Promotion Policy 2020

5.4   Newly Discovered Species of Honeybee

Why in News?

Recently, a new endemic species of honeybee has been discovered from western ghats named Apis karinjodian.

- [Endemic species is a species which is *restricted to a geographical area and do not occur naturally in any other part of the world*.]

About the honeybee Species:

1. Common Name given to honeybee found in India is ''Indian black honeybee''.
2. The last honeybee described from India was Apis indica in 1798.
3. The new species has increased the number of species of honeybees in the world to 11.
4. Apis karinjodian has evolved from Apis cerana that is adapted to the hot and humid environment of the Western Ghats.
5. Indian black honeybees are able to produce a thicker honey which allows for increased honey production.
6. Till date, Apis cerana was the only honeybee species found across the plains of central and southern India and Sri Lanka with a uniform population.
7. Bur now, research has given a new direction to apiculture (beekeeping) in the country by showing the presence of 3 species honey bees, namely:
   - Apis indica
   - Apis cerana
   - Apis karinjodian.
8. The distribution of Apis karinjodian ranges from the central Western Ghats and Nilgiris to the southern Western Ghats.
9. It covers the States of Goa, Karnataka, Kerala and parts of Tamil Nadu.
10. They are listed as Near Threatened (NT) under the IUCN's Red List.

What is the Status of the Apiculture in India?

1. The Indian apiculture market size is supposed to reach a value of Rs 33,128 million by 2024.
2. India is the 6th major natural honey exporting country.
3. More than 1.25 lakh metric tonnes of honey are being produced in the country & more than 60 thousand metric tonnes is exported.
4. The export of natural honey was of worth Rs 633.82 crore (during FY 2019-20).
5. The major export countries were the USA, Saudi Arab, Canada, and Qatar.

What are Related Initiatives?

1. 'Sweet Revolution': It is an initiative of the Government of India to promote apiculture, popularly known as 'beekeeping'.

2. National Beekeeping and Honey Mission in 2020: It was launched to boost the Sweet Revolution. (Under the Ministry of Agriculture and Farmers Welfare) &
   ▪ It aims to establish 5 big regional and 100 small honey and other Bee Products testing laboratories.
   ▪ Till now, 3 world class laboratories have already been setup & 25 small laboratories are in the process of being set up.
3. Assistance for Setting up of Processing Units: India is also providing assistance to the beekeepers for setting up of Processing Units.
4. Adopting Scientific Techniques: Central/State Governments are making efforts for capacity building of beekeepers to increase the production of honey by adopting scientific techniques.

5.5 Orphan Crops

Why in News?

Recently, experts have highlighted the importance of ''Indigenous Crops'' in Surviving the Climate Change.

What are Orphan Crops?

1. Orphan crops are those that are not traded internationally and hence, get less attention in terms of research of agricultural training and extension.
2. They get less attention in terms of research of agricultural training and extension.
3. Because of less research attention, the breeding technology for orphan crops is way behind in getting help of modern technology.
4. This means that the seeds and plants are less more vulnerable to drought, flooding, or extreme temperatures.
5. Also, due to lesser attention, these crops lower in productivity due to pest's attacks etc.
6. They're grown in Africa, Asia, and South America and eaten as part of local diets.

Some Examples of the Orphan Crops:

1. Millet:
   ▪ Millet is a small-seeded grass produced heavily in India, Nigeria, Niger, and Mali.
   ▪ There are a number of millet varieties, and they tend to be high in magnesium (which helps maintain muscle and nerve function) and are a good source of antioxidants.
2. Cowpea:
   ▪ It is known as "black-eyed peas".
   ▪ It is produced mostly in Nigeria and Niger and is rich in amino acids compared to other grains.
3. Pigeonpea:
   ▪ Pigeonpea is a legume with top production in India, Myanmar (Burma), Malawi, and Uganda.
   ▪ It's high in protein and fibre, and it's great for intercropping, or growing alongside other plants.
   ▪ It has a deep root system, so it doesn't compete for resources with other plants, and it actually improves its soil by adding more nitrogen.

Significance of Orphan Crops

1. Orphan crops are important for the countries where they're grown.
2. They provide income for the poorest farmers and used as staples (main food) in the local diet.
3. Though lagging breeding technology has hurt their resilience, especially to pests and disease, they are uniquely adapted to the environment in which they are grown.
4. Higher Nutrition Values like they contain zinc, iron etc.
5. Good for people with Diabetes, Heart Diseases etc.
6. They are drought resistant and require less water to grow.
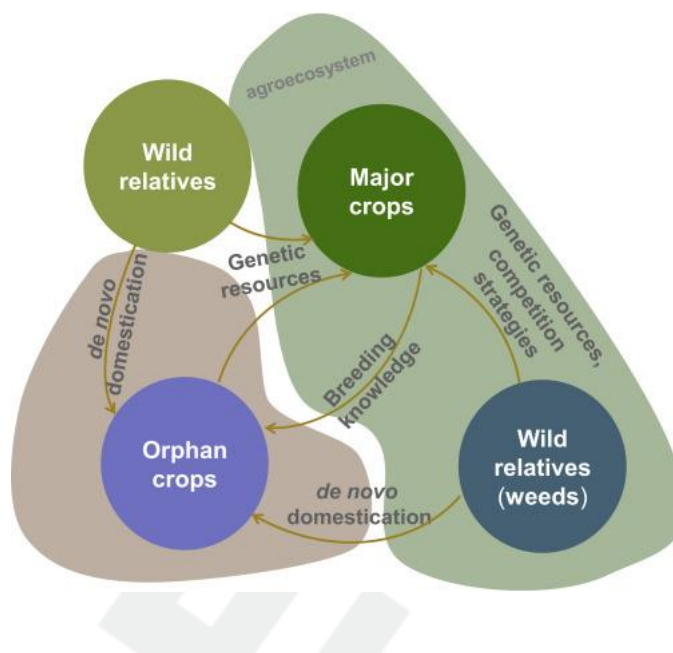
Additional Information:

A. 2023 will be celebrated as international year of Millets (UN)
B. 2018 was celebrated as National Year of Millets.

5.6   Six Years of Demonetisation

Why in News?

According to a recent survey, even 6 years after demonetisation, people prefer cash transactions.

About Demonetisation:

1. It is the process of removal of a coin, note from the economy by the prohibiting its use as a legal tender.
   [Coins or banknotes that are recognized by government and must be accepted if offered as a payment are legal tender]
2. On 8th November 2016, the Government of India has announced the demonetisation of all 500 and 1,000 banknotes of the Mahatma Gandhi Series.
3. Along with this, the government has also announced the issuance of new 500 and 2,000 banknotes in exchange for the demonetised banknotes.

What were the government's objectives behind Demonetisation?

There were 3 main economic objectives behind demonetisation:

▪ Fighting black money
▪ Fake notes
▪ Creating a cashless economy by pushing digital transactions.

About Findings of the Survey:

1. The process of demonetisation was conducted 6 years ago to control the circulation of black money but has failed in the long run, as currency in people's hands have only increased in the past 6 years.

2. Digital transactions continue to rise in the economy and yet there is a 44% rise in cash transactions, especially in real estate deals.
3. The survey has further revealed that 76% people use cash to buy groceries, eat out and get food delivery.

Who Participated in the Survey?

The survey has received more than 32,000 responses from citizens located in 342 districts of India.

- 68% respondents were men
- 32% respondents were women
- 44% respondents were from tier 1 cities
- 34% from tier 2 cities
- 22% from tier 3, 4 and rural districts

What has been the outcomes of the exercise?

1. About Black Money:
   - Among targets, the biggest one was tackling black money.
     [Black money is the money which is not in the records of government through banking or any other medium]
   - According to RBI data, almost the entire money (99%) that was invalidated came back into the banking system hence, the demonetisation was a failure in unearthing black money in the system.
   - Also, instances of black money captures still continue.
2. About Fake Notes:
   - RBI's annual report, submitted that Rs.15.44 lakh crore worth of currency was demonetised.
   - The withdrawn money amounted to 86.4% of the currency in circulation at the time. Only Rs.16,000 crore out of the Rs.15.44 lakh crore was not returned.
   - Also, only .0027% fake currency was "captured" following demonetisation.
3. Digitisation of economy:
   - As per RBI report, demonetisation has made India a lesser cash-based economy, though not completely.
4. Support during Pandemic:
   - The creation of digital infrastructure post-demonetisation helped India in coping with the pandemic.
   - As we already had tools for faceless transactions (cash) at that time, it became easier to move towards contactless transactions (digital).

Conclusion:

Though there has been a visible increase in digital payments, it is doubtful that whether the stated and primary goal of demonetisation to control black money was worth it.

5.7   India's "First" Sovereign Green Bonds Framework

Why in News?

Recently, the Union Minister for Finance & Corporate Affairs has approved the final Sovereign Green Bonds Framework of India.

- Sovereign Green Bonds will be issued for collecting resources for green projects.

What are Sovereign Green Bonds?

1. Green bonds are the bonds issued by companies & countries etc., to fund projects that have positive environmental or climate benefits.
2. The projects can include renewable energy, clean transportation and green buildings related projects.
3. Profits from green bonds are reserved only for green projects.
4. Green bonds are not like standard bonds (which can be utilized for various purposes)
5. By the end of 2020, 24 national governments had issued Sovereign Green, Social and Sustainability bonds.

How does these bonds Work?

STEP 1--An investor lends money to the bond issuer.

STEP 2--The issuer uses this money to fund his/her project.

STEP 3--The investor earns interest through coupons.

STEP 4--The issuer repays the investor's principal at the end.

What is Sovereign Green Bonds Framework?

1. A Green Finance Working Committee (GFWC) was created to make decisions on the issuance of Sovereign Green Bonds.
2. The framework has been rated 'Medium Green' & with a "Good" governance score by a Norway-based company.
3. The 'Medium Green' rating is assigned 'to projects and solutions that represent significant steps towards the long-term vision, but are not quite there yet.
4. All fossil fuel-related projects have been kept out of the framework, along with biomass-based renewable energy projects that depends on feedstock from 'protected areas.
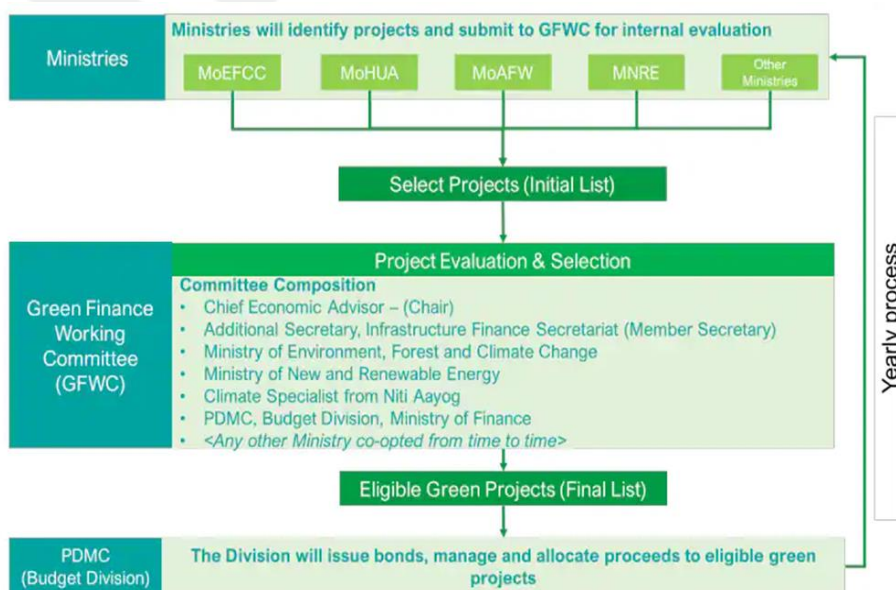
Status of Green Bonds:

Global Status:	National Status:
1. The Environmental, Social and Governance (ESG) funds are estimated at USD 40 trillion. 2. Europe accounts for about half of all the bonds issued.	1. According to the Climate Bonds Initiative, an international organization working to mobilize global capital for climate action, Indian entities have issued

3. The ESG debt funds pie (distribution) is around USD 2 trillion, from which more than 80% is "environmental" or green bonds, and the rest social and sustainability bonds.	green bonds for over USD 18 billion.

Way Forward:

Green Bonds have emerged as an important tool to mobilize financial resources for clean and green projects also, governments should have clear cut frameworks for their respective countries to facilitate the green bonds, so that climate targets can be achieved.

5.8   Report on Municipal Finances by RBI

Why in News?

Recently, the Reserve Bank of India (RBI) has released the Report on Municipal Finances.

- The report has compiled and analysed the budgetary data for 201 Municipal Corporations (MCs) across all States.
- The RBI Report explores 'Alternative Sources of Financing for Municipal Corporations' as its theme.

What is a Municipal Corporation?

1. In India, the Municipal Corporation is the urban local government.
2. It is responsible for the development of any Metropolitan City having a population of more than 1 million people.
3. It is also known by names like, Mahanagar Palika, Nagar Palika, Nagar Nigam, City Corporation, and so on.
4. The Municipal Corporations are established in the states by the acts of the state legislatures, whereas in the Union Territories through the acts of the Parliament.
5. Municipal governments depend heavily on property tax revenue to fund their activities.
6. The 1st municipal corporation in India was created in Madras in 1688, followed by municipal corporations in Bombay and Calcutta in 1726.

Constitutional Provisions Related to Municipal Corporations:

1. In the Constitution of India, no provision was made for the establishment of local self-government, except the Article 40 in the Directive Principles of State Policy.
2. The 74th Amendment Act, 1992 has inserted a new Part IX-A in Constitution which deals with the administration of Municipalities and Nagar Palikas.
3. It consists of Article 243P to 243ZG and also added a new 12th schedule to the Constitution.
4. The 12th schedule consists of 18 items.

How do Municipal Corporations get their Finances?

What are the Findings of the Report by RBI?

1. Poor working of MCs:

There have been several gaps in the working of MCs and there has been very less improvement in their functioning despite several attempts to reform local governance in India also, the availability and quality of essential services for urban populations in India has remained poor.

2. Lack of Financial Autonomy:

While the size of the municipal budgets in India are much smaller than in other countries and revenues are dominated by property tax collections and devolution of taxes and grants from upper tiers of governments it results in lack of financial autonomy.

3. Minimal Capital Expenditure:

MCs' expenditure in the form of administrative costs, interest and finance charges is rising, but capital expenditure is minimal.

Stagnant Revenues/Expenditure:

Municipal revenues/expenditures in India have stagnated at around 1 % of GDP (Gross Domestic Product) from more than 10 years. Whereas, municipal revenues/ expenditures are 7.4 % of GDP in Brazil and 6 % of GDP in South Africa.

4. Ineffective State Financial Commissions:

Governments have not set up State Financial Commissions (SFCs) in a regular and timely manner, also, in most of the States, SFCs have not been effective in ensuring proper transfer of funds to Local governments.

What were the Suggestions in the Report?

1. MCs need to adopt transparent practices with proper monitoring of various receipt and expenditure items.
2. MCs should explore different innovative bond and land-based financing mechanisms to increase their resources.
3. There is need for better urban infrastructure due to rapid rise in urban population density and also requires greater flow of financial resources to Local governments.
4. With the revenue generation capacity of municipal corporations declining over time, dependence on the devolution of taxes and grants from the upper tiers has risen. This calls for innovative financing mechanisms.

Way Forward:
Municipalities in India need to balance their budgets by law, and any municipal borrowing needs to be approved by the State government.
In order to improve the buoyancy of municipal revenue, the Centre and the States may share one-sixth of their GST (Goods and Services Tax).
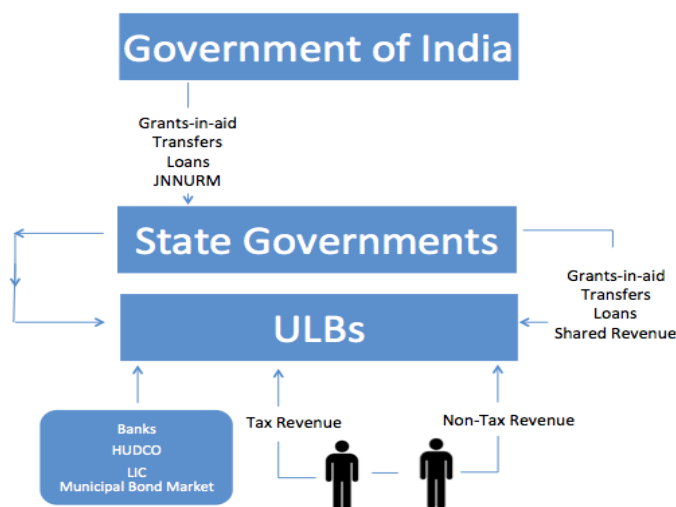
5.9 Rising Illegal, Unreported and Unregulated (IUU) Fishing

<u>Why in News?</u>

Indian Navy has monitored, more than 200 Chinese fishing vessels in the Indian Ocean, despite growing Illegal, Unreported and Unregulated (IUU) fishing beyond the Exclusive Economic Zone (EEZ).

- Most of the illegal activity is found in the Northern Indian Ocean Region (IOR).
- International Day for the Fight against Illegal, Unreported and Unregulated Fishing is organized every year on 5th June.

<u>What is Illegal, Unreported and Unregulated Fishing (IUU)?</u>

1. IUU fishing is a broad term that captures a wide variety of fishing activity.
2. IUU fishing is found in all types and dimensions of fisheries.
3. It occurs both on the high seas and in areas within national jurisdiction.
4. It concerns all aspect of the capture and utilisation of fish, and it may sometimes be associated with organized crime.
5. IUU fishing weakens the national and regional efforts to conserve the fish stocks and to progress towards achieving the goals of long-term sustainability and responsibility.

<u>What is the State of India's Fisheries Sector?</u>

1. India is the 2nd largest fish producing country in the world.
2. India accounts for 7.56% of global production.
3. Fishery sector of India contributes almost 1.24% to the country's Gross Value Added (GVA) and over 7.28% to the agricultural GVA.
4. India aims to achieve a target of producing 22 million metric tonnes of fish by 2024-25.
5. It is a powerful engine for providing employment to 14.5 million people and supporting livelihood for the 28 million fishermen.
6. The fisheries sector has witnessed 3 major transformations in the last few years:
   - The growth of inland aquaculture, specifically f+reshwater aquaculture.
   - The mechanization of capture fisheries.
   - The successful start of brackish water prawn aquaculture.

<u>What are the Related Initiatives to Fisheries?</u>

1. Fishing Harbours: The development of 5 major Fishing Harbours (Kochi, Chennai, Visakhapatnam, Paradip, Petuaghat) as hubs of economic activity.
2. Seaweed Park: It is in Tamil Nadu & it would be the centre of production for quality seaweed-based products.
3. Pradhan Mantri Matsya Sampada Yojana: It strives to create direct employment to 15 lakh fishers, fish farmers, etc. and about thrice this number as indirect employment opportunities. It also aims to double the incomes of fishers, fish farmers and fish workers by 2024.
4. Palk Bay Scheme: The Scheme, "Diversification of Trawl Fishing Boats from Palk Straits into Deep Sea Fishing Boats" was launched in 2017 as a Centrally Sponsored Scheme. It was launched as part of the umbrella Blue Revolution Scheme.

Transforming Fisheries Sector - Supporting Livelihoods

5. Marine Fisheries Bill, 2021: The Bill proposes to only grant licenses to vessels registered under the Merchant Shipping Act, 1958, to fish in the Exclusive Economic Zone (EEZ).

What are the Initiatives taken to tackle the Issue of Illegal Mining?

1. Indo-Pacific Maritime Domain Awareness (IPMDA): This was announced by Quad members to provide a more accurate maritime picture of "near-real-time" activities in the region and to catalyse joint efforts of India and other Quad partners towards IUU.
2. IFC-IOR: IFC-IOR has been collaborating with other regional monitoring centres across the globe to enhance maritime safety and security, including efforts to monitor IUU.
3. UNCLOS: As per United Nations Convention on the Law of the Sea, the coastal nations are responsible for addressing IUU fishing issues within their respective EEZ.
4. The Cape Town Agreement: It is an internationally binding instrument that sets minimum requirements on the design, construction, equipment, and inspection of fishing vessels of 24 meters in length and over or equivalent in gross tons. India is not a signatory of the agreement.
5. Agreement on Ports State Measures: It aims to prevent and eliminate IUU fishing through the implementation of effective port State measures, and thereby to ensure the long-term conservation and sustainable use of living marine resources. India is not a signatory of the agreement.
6. International Day for the Fight against IUU Fishing: The General Assembly of the United Nations (UNGA) declared 5th June the International Day for the Fight against IUU Fishing.

5.10   5th Meeting of Governing Council of NIIF

Why in News?

Recently, the Union Minister for Finance & Corporate Affairs chaired the 5th meeting of the Governing Council (GC) of National Investment and Infrastructure Fund (NIIF).

What is the National Investment and Infrastructure Fund (NIIF)?

1. NIIF is a government-backed entity established to provide long-term capital to the country's infrastructure sector.
2. It was set up in December 2015 as a Category-II Alternate Investment Fund.
3. The Indian government has a 49% stake in NIIF with the rest held by foreign and domestic investors.
4. NIIF is considered India's quasi-sovereign wealth fund, due to significant stake of government in it.
5. Across its 3 funds, it manages over USD 4.3 billion of capital.
6. Its office is in New Delhi.

What are the Highlights of the Meeting?

1. India Japan Fund:
   ▪ In a Memorandum of Understanding (MoU), NIIF and Japan Bank for International Development (JBIC) have proposed to establish NIIF's 1st bilateral fund - the "India Japan Fund" - with contributions coming from the Government of India (GoI).
   ▪ The MoU was signed recently on 9th November, 2022.
2. NBFCs:
   ▪ The governing Council (GC) has noted that the 2 Non-Banking Financial Companies (NBFCs), where NIIF has majority stakes, have increased their combined loan book from Rs. 4,200 crores to Rs. 26,000 crores in 3 years.
   ▪ The GC has also guided NIIF to undertake advisory activities proactively to support central/state governments to create a pipeline of investible Public-Private Partnership (PPP) projects.
3. Exploring Opportunities under Different Schemes:

- The finance minister pushed the NIIFL team to explore opportunities under the National Infrastructure Pipeline, PM Gati Shakti and National Infrastructure Corridor.
- These schemes include a big pool of investible greenfield and brownfield investment projects, and try to attract commercial capital into those opportunities.
4. Status of Three Funds:
   - The GC was explained of the current status of the 3 funds that are currently managed by NIIFL:

Master Fund	Fund of Funds (FoF):	Strategic Opportunities Fund (SoF):
Invests primarily in operating assets in core infrastructure sectors such as roads, ports, airports, power, etc.	Managed by fund managers with experience in infrastructure and related sectors in India. Green Infrastructure, Mid-Income & Affordable Housing, Infrastructure Services, and allied sectors are some of the areas of focus.	SOF has been established with the objective to provide long-term capital to high-growth future-ready businesses in India. The fund's strategy is to build a portfolio of large entrepreneur-led or professionally managed domestic champions and unicorns.

Additional Information:

Greenfield vs Brownfield Investment:

Greenfield Project:	Brownfield investment:
It refers to investment in a manufacturing, office, or other physical company-related structure or group of structures in an area where no previous facilities exist.	The projects which are modified or upgraded are called brownfield projects. The term is used for purchasing or leasing existing production facilities to launch a new production activity.

5.11 Collapse of FTX Cryptocurrency Exchange

Why in News?

A sharp decline in the prices of Bitcoin, Terra Luna network and new crypto-tax regulations in India have increased problems for investors and the overall industry.

- However, the sudden market breakdowns turned more intense after the shocking FTX crash.

What is cryptocurrency?

1. It is a digital currency that does not depend on any central authority to support or maintain it.
2. Digital currency also commonly known as private currency.
3. Transaction and ownership data is stored in a digital ledger and for this Distributed Ledger Technology (DLT) is used.
   For example: Blockchain, etc.
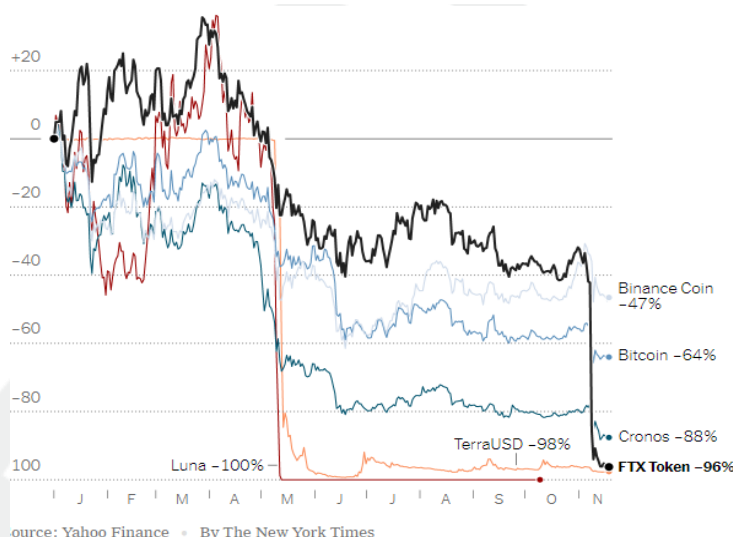4. Under DLT, data is stored in multiple places at the same time.

What is the FTX?

1. FTX was one of the largest and fastest-growing crypto exchanges in the world.
2. It basically has coverage over the crypto by-products market.
3. Before the collapse, it was the 2nd largest cryptocurrency exchange globally.
4. FTX along with Binance, accounted for a majority of global cryptocurrency trades.
5. This event pulled Bitcoin's price to a two-year low.

Change in the Crypto Prices this Year:

Impact of the Crypto Crash:

1. The latest crypto crash affected not just FTX users, but also traders investing in top cryptocurrencies like Bitcoin and Ether.
2. Investors holding large reserves of exchanges in cryptocurrency, took a hard hit as it lost most of its value in just hours.
3. About 130 affiliated firms are now part of the bankruptcy proceedings.

Source: Yahoo Finance • By The New York Times

How does FTX is different from Celsius, and Voyager collapses?

FTX	Celsius, Voyager
1. It is a crypto exchange (not a lending platform). 2. Cryptocurrencies in these have their own values. 3. Formerly, in May this year one of the top cryptocurrencies like Luna and Terra USD [UST] lost over 90% of their value.	1. These are lending platforms. 2. These doesn't have their own value rather impacted by the values of cryptocurrencies. 3. The lost values of cryptocurrencies like Luna, has caused liquidity shortages that pushed these lending platforms to suspend withdrawals, which resulted into their own collapse.

What's the platform used for?

1. FTX is set up as two verticals: One can be accessed by global users, and the other is specifically built-in compliance with U.S. law.
2. FTX.US is for residents of US as they could not legally trade on the FTX International platform.
3. FTX claimed to have more than 1 million customers in 2021.
4. FTX International offered investors an option to trade in tokenized stocks, which are digital coin-based products of shares of actual companies.
5. It also allowed users to bet on expected valuations of companies. Such features attracted users to the platforms.

Benefits of Cryptocurrency:

1. Integral security: If you use false name to steal, the ledger systems hide the identities.
2. Low transaction cost: Very low fees and charges for transactions as compared to traditional currencies.
3. Lack of interference from the banking system: As these currencies are not regulated by government hence, they fall out of the coverage of banking system guidlines, resulting into low interference from government policies.
4. Universal recognition: Lots of cryptocurrencies are recognised and acceptable in many nations.

Challenges associated with cryptocurrencies:

1. Despite of high security there are risks in form of Cyberattacks on wallets, exchange mechanism fraud (Crypto jacking).
2. As the cryptocurrencies are not regulated by central government, hence these can't be traced by governments which makes them easier to use for Illicit Trading, Criminal Activities, & organised crimes.
3. If large numbers of investors invest in digital currencies rather than rupee the demand of the latter (rupee) will automatically fall and can cause loss rupee value.
4. There is a problem with digital currencies, that is lack of Liquidity which results into lower acceptability.
5. Digital currencies are Vulnerable to the price fluctuations, making them unstable currencies.
6. There is no proper dispute settlement mechanisms and control, which makes it less consumer friendly.

Way Forward:According to some experts, the volatile crypto market from here could face more regulations also, these fallouts make a strong case for why we need decentralised systems which can ensure increase in transparency and widespread adoption of a decentralised system.

5.12   RBI's Concerns on Slow Deposit Growth

Why in News?

Recently, the RBI has raised concerns over the slow growth in deposits and advised banks to be attentive and adopt new-age technology solutions.

More About the News:

1. Deposits of banks rose by Rs 15.17 lakh crore since April 2022, with current deposits at Rs 172.72 lakh crore, according to the latest RBI data.
2. The deposit growth in the same period of last year was Rs 14.53 lakh crore.

About Deposit and Credit Growth:

1. Bank's credit strength is measured by its in-house (present in bank) reserves.
2. The demand for credit increases with greater economic activity.
   [The aggregate credit demand domestically bears an "uneven profile" at present, RBI says.]
3. Urban demand seems healthy and rural demand which was muted has also started getting some strength recently.
4. Commercial bank credit growth too has been surging, led by services, personal loans, agriculture and industry, in that order.
5. This reflects the growing preference for bank credit for meeting working capital requirements.
6. As per CRISIL, deposit growth fall is not due to actual fall in the deposit growth rather it is due to the rise in the credit growth.
7. Credit growth was on a lower trajectory during pandemic, and it was due to the lower economic activities.

8. Now with economic activity returning to normalcy, the credit growth has picked up, especially in the previous 3 quarters.

Understanding the current scenario:

1. RBI said, that the domestic macroeconomic outlook can be best understood as sensitive to tough global headwinds (scenarios).
2. The present Global scenarios are originating from 3 sources:
   - Russian actions in Ukraine impacting energy supplies and prices (especially in Europe)
   - Economic slowdown in China because of frequent lockdowns due to its zero-Covid policy
   - Increased cost-of-living because of resulting inflationary pressures.
3. Thus, monetary policies across the globe, especially of advanced economies, are being tightened, encouraging concerns about financial stability risk in emerging and developing economies.

How has been the Bank's Asset Quality?

1. The Gross Non-Performing assets (GNPAs) have consistently declined, with net NPAs sliding down to 1% of total assets.
2. Liquidity cover is healthy and profitability has been increased.
3. Market participants have raised concerns with respect to corporates in light of the macroeconomic situation.
   [LCR is the proportion of highly liquid assets held by financial institutions, to ensure their ability to meet short-term obligations.]
4. The reason for the improving asset quality is the de-leveraging (reduction of debt) that has happened in corporate India over the years.
   [Most corporates have been able to cut down on their debt level and improve their credit profiles, recently.]
5. Corporate NPAs are expected to come down in coming Financial Year due to setting up of the National Asset Reconstruction Company Ltd.

5.13 World Energy Outlook 2022 Report, an Analysis

Why in the News?

The International Energy Agency (IEA) has recently released its World Energy Outlook 2022 report.

More about the News:

1. The report stated that global emissions will peak in 2025.
2. This report explores key questions about the crisis, including setbacks for clean energy transitions, government responses on energy markets and possible risks ahead on the path to net zero emissions.

Russia's invasion of Ukraine has sparked a global energy crisis:

1. The world is in the middle of its 1st global energy crisis.
2. Pressures in markets preceded Russia's invasion of Ukraine, but Russia's actions have turned a rapid economic recovery from the pandemic – which strained all manner of global supply chains, including energy – into complete energy disorder.
3. Prices for spot purchases of natural gas have reached levels never seen before, regularly exceeding the equivalent of USD 250 for a barrel of oil.
4. The crisis has fuelled inflationary pressures and created a forthcoming risk of recession.
5. Faced with energy shortfalls and high prices, governments have so far committed well over USD 500 billion, mainly in advanced economies, to shield consumers from the immediate impacts.

Policy responses are fast-tracking:

1. New policies are helping in encouraging annual clean energy investment to more than USD 2 trillion by 2030.
2. Clean energy becomes a huge opportunity for growth and jobs, and a major arena for international economic competition.
3. As markets rebalance, renewables, supported by nuclear power, see sustained gains the upside for coal from today's crisis is temporary.
4. International energy trade undergoes a profound redirection in the 2020s as countries adjust to the rupture of Russia-Europe flows, which is assumed to be permanent.

Clean electricity is controlled for a faster transformation:

1. The world is in a critical decade for carrying a more secure, sustainable and affordable energy system the potential for faster progress is huge if strong action is taken immediately.
2. Supply chains for some key technologies like batteries, solar PV and electrolysers are expanding at rates that support higher global ambition.
3. Today's high energy prices highlight the benefits of greater energy efficiency and are encouraging the behavioural and technology changes in some countries to reduce energy use.
4. Concerns about fuel prices, energy security and emissions are boosted by stronger policy support.
5. A huge increase in energy investment is essential to reduce the risks of future price spikes and volatility, and to get on track for net zero emissions by 2050.

Challenges:

1. Higher investment in oil and gas would be needed to avoid further fuel price volatility, but this would also mean putting the 1.5 °C goal in danger.
2. Immediate shortfalls in fossil fuel production from Russia will need to be replaced by producing it anywhere else to fulfil the energy needs.
3. Russia's invasion of Ukraine is motivating a whole new direction of global energy trade which is resulting into a bad position of Russia.
4. Russia's turn towards Asian markets is particularly challenging in the case of natural gas, as the market opportunity is limited.

Way Forward:

A new energy security model is needed to maintain consistency and affordability while reducing emissions. As the world moves on from today's energy crisis, it needs to avoid new vulnerabilities arising from high and volatile critical mineral prices or highly concentrated clean energy supply chains.

5.14   Moving Focus towards Natural Farming

The rapid increase in food demand is encouraging farmers worldwide, to increase crop production, which further put pressure on the environment leading to its serious degradation.

▪ [To feed the growing population, it is estimated that food production will need to increase by 60% by 2050.]

What is Natural Farming?

1. 'Natural Farming' is suggested as a neoteric (modern) approach to improve both traditional and modern agricultural practices.
2. It aims to safeguard the environment, public health, and communities.
3. Natural Farming aims to significantly cut down production costs by encouraging farmers to prepare essential biological inputs using on-farm, natural and home-grown resources.
4. It has the potential to enable food production without compromising the needs of future generations.

What is the Significance of Natural Farming?

1. Natural Farming helps in increasing net incomes of farmers by reducing the input cost while maintaining the adequate production.
2. The food produced from Natural Farming has higher nutrition value and therefore offers better health benefits.
3. As Natural Farming does not use any synthetic chemicals it helps in reducing health risks.
4. The Natural Farming has a very healthy impact on the biology of soil or on microbes. It improves soil health and in turn increase productivity.

What is Zero Budget Natural Farming?

1. It is a unique model of farming that depends on Agroecology.
   [*Agroecology* is sustainable farming that works with nature.]
2. It uses chemical-free farming based on sustainable agricultural practices.
3. In the mid-1990s, Subhash Palekar has developed it as an alternative to the chemical fertilisers, pesticides and intensive irrigation methods, which have helped during Green Revolution.
4. It aims to reduce the production costs and return to pre-green revolution farming practices which do not require expensive inputs such as fertilisers, pesticides, and irrigation.

What is the difference between Zero Budget Natural Farming and Conventional Farming?

Zero Budget Natural Farming	Conventional Farming
Almost Zero cost	High Input and Operational Cost
Jeevamrutha and other methods are applied	Fertilizers are used
No ploughing and tilting needed	Ploughing and tilting needed
Less irrigation requirement	It is Irrigation intensive
Based on ecology	Based on economics

What are the Major Challenges Related to Farming in India?

1. Even after taking significant steps, many farms still depend on the monsoon as only 52 % of India's Gross Cropped Area (GCA) is irrigated at the national level.
2. Despite of the rapid commercialization of agriculture in India, most farmers stick to cereals as the main crop and ignore crop diversification.
3. Farmers often talk about the lack of readily available natural inputs as a barrier to converting to chemical-free agriculture as not every farmer has the time, patience, or labour to develop their own natural inputs.
4. Many farmers have switched back to conventional farming after seeing the reduced yield out of ZBNF.

[Sikkim, the 1st organic state in India has seen some declines in production after they shifted to organic farming.]

<u>What are the Recent Government Initiatives Related to Sustainable Agriculture?</u>

- National Mission on Sustainable Agriculture
- Paramparagat Krishi Vikas Yojana (PKVY)
- Sub-mission on AgroForestry (SMAF)
- Rashtriya Krishi Vikas Yojana
- Mission Organic Value Chain Development for North Eastern Region (MOVCDNER)

<u>What can be Done?</u>

1. Government should work to increase the women's Participation in Natural Farming, as their involvement in decision-making would also positively impact the health and nutritional status of the family.
2. Traditional technologies can be used to complement frontier technologies like tissue culture, genetic engineering, to achieve higher productivity.

   [Rainwater harvesting and recycling of organic waste for plant nutrient, pest management, etc., are examples of traditional technologies.]
3. Government should support the microenterprises that produce inputs for chemical-free agriculture to address the challenge of unavailability of natural inputs.
4. The promotion of natural farming needs to be combined with the setting up of village-level input preparation and sales shops.

<u>Way Forward:</u>

Developing mutual relationships between agricultural productivity and conservation of nature is necessary. There can be modifications made to farming systems in order to make it a natural ecosystem also, the ecologically and economically useful trees, shrubs and perennial grasses can be integrated into farms in ways that is helpful for natural vegetative structure.
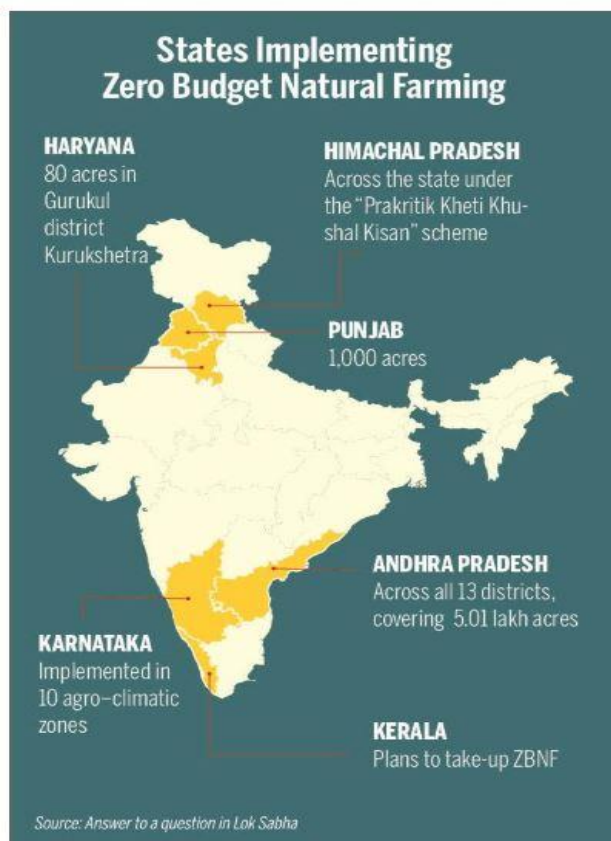
5.15   Pradhan Mantri Fasal Bima Yojana (PMFBY)

<u>Why in News?</u>

Recently, Union Ministry of Agriculture and Farmers Welfare stated that it is open to take farmer friendly changes in Pradhan Mantri Fasal Bima Yojana (PMFBY).

<u>About PMFBY:</u>

1. PMFBY was Launched in 2016.
2. It is being administered by the Ministry of Agriculture and Farmers Welfare.
3. It replaced the National Agricultural Insurance Scheme (NAIS) and Modified National Agricultural Insurance Scheme (MNAIS).
4. Farmers including sharecroppers and tenant farmers growing notified crops in the notified areas are eligible for coverage.
5. It provides insurance coverage and financial support to farmers at the failure of any of the notified crops as a result of natural calamities, pests & diseases.
6. To stabilize the income of farmers to ensure their extension in farming.
7. To encourage farmers to adopt innovative and modern agricultural practices.
8. To ensure the flow of credit to the agriculture sector.

<u>About the Premium under PMFBY:</u>

1. A uniform premium to be paid by farmers, and that is 2% for all Kharif crops and 1.5% for all Rabi crops.
2. Also, for annual commercial and horticultural crops, the premium to be paid by farmers will be only 5%.
3. Premium above these limits is shared by the Central and State Governments on 50:50 basis, except in North Eastern Region where it is 90: 10.
4. There is no upper limit on Government subsidies.
5. Even if the balance premium is 90%, it will be borne by the Government.
6. Earlier, there was a provision of capping the premium rate which resulted in low claims being paid to farmers.
7. This capping has now been removed and farmers will get a claim against the full sum insured without any reduction.

<u>What are the Recent Changes?</u>

Earlier	Now
The scheme was once mandatory for loanee farmers.	After 2020, the centre changed it to make it optional for all farmers.
The Premium was unlimited (central subsidy had no upper limit)	The Centre decided in February 2020 to limit its premium subsidy to 30% for unirrigated areas and 25% for irrigated ones.

In 2020, new technology was also adopted like, Weather Information and Network Data Systems (WINDS), Yield Estimation System based on Technology (YES-Tech), Collection of Real Time Observations and Photographs of Crops (CROPIC) are some of the key steps taken under the scheme to bring in more efficiency and transparency.

<u>What is the Scope of the Yojana:</u>

1. PMFBY is currently the largest crop insurance scheme in the world.

2. in terms of farmer enrolments, averaging 5.5 crore applications every year and third largest in terms of premium received.
3. During the arduous seasons of 2017, 2018 and 2019 marred by weather extremities, the scheme proved to be a decisive factor in securing livelihoods of farmers wherein claims paid ratio in several states averaged more than 100 % against the gross premium collected.

<u>What were the Issues Related to the Scheme?</u>

1. Financial Constraints of States: The financial constraints of the state governments and low claim ratio during normal seasons are the major reasons for non-implementation of the Scheme by these States.
2. States are unable to deal with a situation where insurance companies compensate farmers less than the premium, they have collected from them and the Centre.
3. The State governments failed to release funds on time leading to delays in releasing insurance compensation.
4. This defeats the very purpose of the scheme which is to provide timely financial assistance to the farming community.
5. Many farmers are dissatisfied with both the level of compensation and delays in settlement.
6. The role and power of Insurance companies is significant. In many cases, it didn't investigate losses due to a localized calamity and, therefore, did not pay the claims.
7. Insurance companies have shown no interest in bidding for groups that are prone to crop loss.
8. The insurance business makes money at times when farmers are more vulnerable i.e., at times of crop failures.

<u>Way Forward:</u>

There is a need for comprehensive rethinking among states and the central governments to further resolve all the pending issues around the scheme so that the farmers could get benefit from this scheme. Further, rather than paying subsidies under this scheme, the state government should invest that money in a new insurance model.

5.16 Direct Benefit Transfer

<u>Why in News?</u>

Most economists support the conversion of all agricultural subsidies into direct income support i.e., Direct Benefit Transfer to farmers.

<u>What is Direct Benefit Transfer Scheme?</u>

1. It is an aid for simpler/faster flow of information and funds beneficiaries.
2. It helps to reduce the fraud in the delivery system.
3. It is a mission by the government of India started on 1st January 2013.
4. It would be helpful to reform the government delivery system.
5. Aadhaar is not mandatory in DBT schemes but is preferred and beneficiaries are encouraged to have Aadhaar.
6. The common platform for routing of the Direct Benefit Transfer is:
   ▪ Central Plan Scheme Monitoring System (CPSMS)
   ▪ The earlier version of the Public Financial Management System (PFMS)
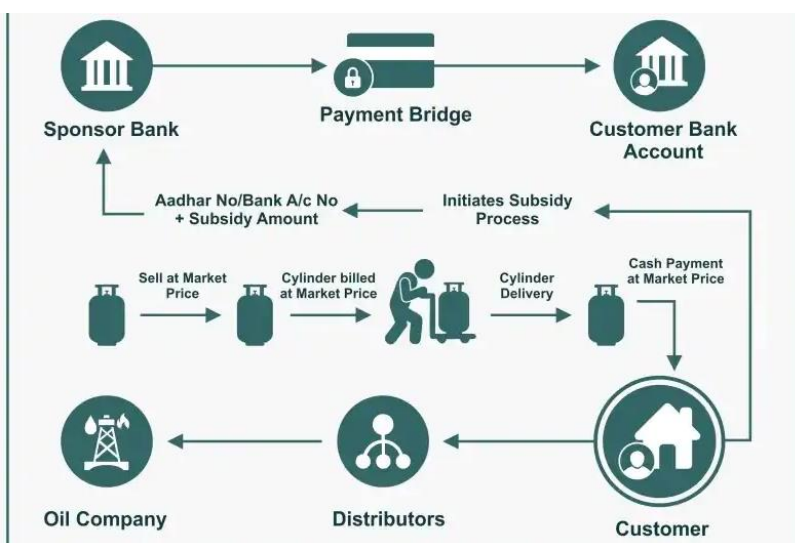
- The Office of Controller General of Accounts, was chosen to act as
7. Implementation of DBT schemes include
    - Beneficiary Account Validation System
    - A healthy payment platform integrated with Reserve Bank of India (RBI)
    - National Payments Corporation of India (NPCI)
    - Public & Private Sector Banks
    - Regional Rural Banks and Cooperative Banks
8. There are 310 Schemes from 53 Ministries under DBT. Some important schemes are:
    - Pradhan Mantri Fasal Bima Yojana
    - National Food Security Mission
    - Pradhan Mantri Krishi Sinchai Yojana
    - PM KISAN
    - Swachh Bharat Mission Gramin
    - Atal Pension Yojana
    - National AYUSH Mission

What are the Benefits of DBT?

1. In a mission-mode approach, it has worked to open bank accounts for all household and increase the coverage of banking and telecom services.
2. It created the Aadhaar Payment Bridge to enable instant money transfers from the government to people's bank accounts.
3. DBT has enabled easy transfer of credit and subsidies to all rural and urban households that are linked under varied government schemes.
4. DBT has allowed the government to provide financial assistance effectively and transparently to farmers with lower transaction costs.
5. The PM Awas Yojana and LPG Pahal scheme successfully use DBT to transfer funds to eligible beneficiaries.
6. Various scholarship schemes and the National Social Assistance Programme use the DBT architecture to provide social security.
7. With the help of programmes such as the Self Employment Scheme for Rehabilitation of Manual Scavengers (SRMS) DBT opens new frontiers that enable social mobility of all sections of society.

What are the Issues Regarding DBT?

1. Most prominent issues faced by citizens is the lack of accessibility to enrolment points, unavailability of stock, lack of operators responsible for enrolment, etc.
2. Still there are many rural & tribal areas, which don't have banking facility and road connectivity. There is also a need for financial literacy which would enhance awareness among people.
3. Delays in accepting and pushing the applications forward. There is difficulty in obtaining the required documentation and errors/issues found in them.
4. One of the most prominent issues is disruptions to payment schedule in receiving money in their bank accounts through DBT.
    [Reasons for disruptions could be bringing errors in Aadhaar details, pending KYC, frozen or inactive bank accounts, mismatch in Aadhaar and bank account details, etc.]

What can be done?

1. Empowering technology and innovation are important to boost the DBT scheme.
2. There is need to increase awareness about the government subsidies and aids.
3. There is an urgent need to increase the accessibility of registration centre for citizens across schemes, specifically in rural and peri-urban areas.
4. A common grievance redress cell for all DBT schemes across tiers, State, district, and block to help the beneficiary to resolve their issues.

6. ENVIRONMENT

6.1   Waste To Energy Programme

<u>Why in News?</u>

Recently, the Central Government has issued guidelines for continuing its waste-to-energy programme.

<u>More about the News:</u>

1. These guidelines will help companies to produce biogas and bioCNG, and electricity.
2. For production, these companies will use urban, industrial and agricultural waste and residues.

<u>What is the Waste-to-Energy Program?</u>

1. The program is part of an umbrella scheme, the National Bioenergy Programme.
2. The government will offer financial assistance to project developers, while implementing agencies, including inspection firms, will be paid service charges for commissioning the waste-to-energy plants.
3. Indian Renewable Energy Development Agency (IREDA) will be the implementing agency for the program.
4. IREDA will be paid a service charge of 1% of Central Financial Assistance (CFA) to process applications, besides 1% for the CFA (minimum ₹50,000) for implementing, and monitoring the performance once the plants are commissioned.
5. The Centre will provide financial assistance of Rs 75 lakh per MW for new biogas plants and Rs 50 lakh per MW for existing units.
6. If the waste-to-energy plants are set up in special category states, such as the North East, Himachal Pradesh, Sikkim, Jammu and Kashmir, Ladakh, Lakshadweep, Uttarakhand, and Andaman & Nicobar Islands, the eligible CFA will be 20% higher than the standard CFA pattern.

<u>What is National Bioenergy Programme?</u>

1. It is introduced by Ministry of New and Renewable Energy (MNRE).
2. Sub-Schemes of National Bioenergy Programme are:
   - Waste to Energy Programme.
   - Biomass Programme
   - Biogas Programme

<u>What is Biogas?</u>

1. Biogas is a renewable fuel produced using the anaerobic (Oxygen less) digestion of organic materials (animal waste, leaves, agricultural waste, crop residue etc.)
2. It contributes to all 17 of the United Nation's Sustainable Development Goals.
3. It can also be converted to produce numerous sustainable transportation fuels.
4. It is primarily consisting of:
   - Methane (50-65%)
   - Carbon dioxide (30-40%)
   - Hydrogen sulphide (1-2.5%) and a little moisture.
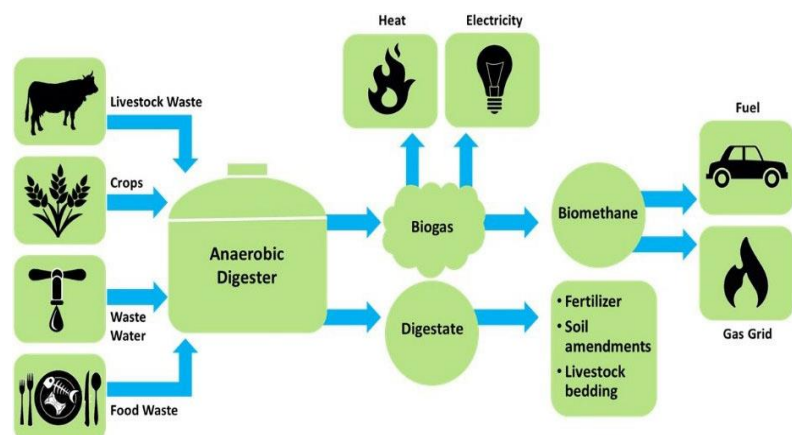
What is Bio CNG?

1. Bio-CNG is a renewable fuel obtained by purifying biogas.
2. Biogas is produced when microbes break down organic matter like food, crop residue, waste water, etc.
3. It is similar to natural gas in terms of its composition and properties, and is a cleaner alternative to fuels such as petrol and diesel.

What is the Indian Scenario regarding Biogas and Methanol?

1. CBG is the only transportation fuel from biogas, which is used for commercialisation.
2. Currently, LBG, hydrogen and methanol are not produced from biogas in India & the main reasons are:
   - Unavailability of biogas in bulk to produce these by-products.
   - Absence of infrastructure to generate and market these fuels.
   - Deficiency of modified automobile engines as well as the lack of effective research and development.

What are the Benefits of Bio Energy?

Pollution Free Cities:

- The biogas solution can help make our cities clean and pollution-free.
- Leaching of toxic substances from landfills contaminates the groundwater.
- Decomposing organic matter releases huge amounts of methane into the environment, causing air pollution and global warming as methane is a very potent GHG.

Handling Organic Waste:

- Installing large-scale municipal biogas systems can help cities handle organic waste efficiently to overcome the environmental and socio-economic challenges posed by overburdened landfills.
- Municipal waste can be fed into these plants to create clean and green fuel, along with biofertilizers, while keeping the cities clean and hygienic.

Helpful for Women:

- Switching to biogas could be good for women as they would not have to face the harmful smoke and pollution.
- The female members of a household are affected by indoor pollution as they spend more time inside the house.

Will decrease the Energy Dependence:

- Biogas can play a critical role in transforming the energy dependence of rural and agricultural communities, which majorly depends on burning wood, dung, charcoal, coal and other fossil fuels for their energy needs.
- The high dependence on non-renewable sources is the leading cause of the long-standing energy problems in the country.

What are Government's Initiatives for Promoting Biogas & Waste Management?

1. Biogas: SATAT Scheme
   The Indian government and Niti Aayog have outlined roadmaps to rush our transition towards green fuels and promote LNG, hydrogen and methanol.
2. Waste Management:
   National Dashboard on Elimination of Single Use Plastic and Plastic Waste Management
3. Solid Waste Management Rules, 2016

Additional Information:

<u>What is IREDA?</u>

1. Indian Renewable Energy Development Agency (IREDA) is a mini ratna company under the Ministry of New and Renewable Energy (MNRE).
2. It was set up in 1987 as a specialized non-banking finance agency for the renewable energy sector.
3. IREDA plays a key role in the renewable energy project financing which gives confidence to the financial institutions/banks to lend in the sector.

6.2   World Heritage Glaciers under Threat: UNESCO

Why in News?

Recently, a study conducted by the UNESCO (United Nations Educational, Scientific and Cultural Organization) has found that 1/3 of the glaciers on the UNESCO World Heritage list is under threat, regardless of the efforts to limit temperature increases.

So, What is a Glacier?

1. A glacier is a large accumulation of crystalline ice, snow, rock, sediment, and water that originates on land and moves down slope under the influence of its own weight and gravity.
2. They are the sensitive indicators of changing climate.

What are UNESCO's World Heritage Sites?

1. A World Heritage Site is a place that is listed by UNESCO for its special cultural or physical significance.
2. List of World Heritage Sites are maintained by the international 'World Heritage Programme', administered by the UNESCO World Heritage Committee.
3. Presently, there are almost 1,100 UNESCO listed sites across its 167 member countries.
4. In 2021, 'Liverpool — Maritime Mercantile City' in the UK was deleted from the World Heritage List due to "the irreversible loss in the site".

UNESCO Sites in India:

1. India is home to a total of 3691 monuments and sites. Of these 40 are designated as UNESCO World Heritage Sites including places like the Taj Mahal, Ajanta Caves and Ellora Caves.
2. World Heritage Sites also include natural sites like the Kaziranga National Park in Assam.
3. Recently, Harappan city of Dholavira in Gujarat was designated as India's 40th world heritage site.
4. Ramappa Temple (Telangana) was India's 39th World Heritage Site.
5. Khangchendzonga National Park, Sikkim has been inscribed as India's 1st and the only "Mixed World Heritage Site".
6. In 2022, the Union Ministry of Culture nominated 'Sacred Ensembles of the Hoysalas temples' for consideration as a World Heritage site for the year 2022-2023.

Findings of the UNESCO are:

1. Almost 50 UNESCO World Heritage sites include glaciers, representing almost 10% of the Earth's total glacierized area and they include the highest (near Mt Everest), the longest (in Alaska), and the last remaining glaciers in Africa.

2. These glaciers have been retreating at an accelerated rate since 2000 due to CO_2 emissions, which are warming temperatures.

3. They are currently losing almost 58 billion tons of ice every year which is equivalent to the combined annual water use of France and Spain and are responsible for nearly 5% of observed global sea-level rise.

4. The glaciers under threat are in Africa, Asia, Europe, Latin America, North America and Oceania.

a) Africa: The study predicts that all world heritage sites in Africa will very likely be gone by 2050, including Kilimanjaro National Park and Mount Kenya.

b) Asia: Glaciers in 3 parallel rivers of Yunnan Protected Areas (China) have witnessed highest mass loss as compare to 2000 (57.2%) and becomes the fastest melting glacier on the List.

c) Europe: Glaciers in Pyrenees Mont Perdu (France, Spain) will very likely to disappear by 2050.

What is the Significance of Glaciers?

1. Almost half of the humanity depends directly or indirectly on glaciers as their water source for domestic use, agriculture etc

2. They are also the pillars of biodiversity as they are home to many ecosystems.

3. When glaciers melt rapidly, millions of people face water scarcity and the increased risk of natural disasters such as flooding and millions more may be displaced by the resulting rise in sea levels.

Suggestions given by UNESCO are:

1. It is still possible to save the other 2/3, if the rise in global temperature did not exceed 1.5 degrees Celsius as compared to the pre-industrial levels.

2. In addition to drastically reducing carbon emissions there is a need for the creation of a new international fund for glacier monitoring and preservation.

3. Such a fund will support comprehensive research and implement early warning and disaster risk reduction measures.

4. There is an urgent need to cut greenhouse gas emissions and invest in nature-based solutions, which can help mitigate climate change and allow people to better adapt to its impacts.

6.3   State of Food and Agriculture Report, 2022

Why in News?

Recently, the 'State of Food and Agriculture Report (SFAR) 2022' was released by the Food and Agriculture Organization (FAO).

1. SFAR is released each year by Food and Agriculture Organization (FAO).

2. The report looked at how automation in our agrifood systems can contribute in achieving Sustainable Development Goals (SDGs) and offers recommendations to policy makers on how to maximize the benefits and minimize the risks.

So, What is Agricultural Automation?

1. It includes the use of anything from tractors to artificial intelligence which plays an important role in making food production more efficient and environment friendly.
2. But it can also deepen inequalities if it remains inaccessible to small-scale farmers and other marginalised groups.

Highlights of the SFAR 2022

1. The report looked at 27 case studies from all over the world, representing different technologies but only 10 of the 27 service providers technologies are profitable and financially sustainable.
2. There is an unequal progress towards mechanization among regions, according to available statistics on the number of tractors per 1,000 hectares of arable land.
3. High-income countries in North America, Europe and Oceania were highly mechanised by the 1960s but regions dominated by low-and middle-income countries were less mechanised.
4. Crucially, there are wide disparities in the spread of automation between and within countries, with adoption being particularly limited in Sub-Saharan Africa.
5. For Example, Japan had more than 400 tractors per 1,000 hectares of arable land as compared with just 0.4 in Ghana in 2005.

Recommendations of the Report are:

1. An agricultural automation policy in every country should ensure that agrifood systems are sustainable and resilient.
2. Policymakers should avoid doing over automation in labour- intensive works because agricultural automation can lead to unemployment in places where rural labour is abundant.
3. Policymakers should focus on creating an enabling environment for adopting automation.
4. Social protection should be provided to the least skilled workers, who are more likely to lose their jobs during the transition.

About the Food and Agriculture Organization (FAO)

1. It's a specialised agency of the United Nations that leads international efforts to defeat hunger.
2. World Food Day is celebrated every year around the world on 16th October.
3. The day is celebrated to mark the anniversary of the founding of the FAO in 1945.
4. It is one of the UN food aid organisations which is based in Rome (Italy). It's sister bodies are the World Food Programme and the International Fund for Agricultural Development (IFAD).

5.Some Big Initiatives of FAO are:

1. Globally Important Agricultural Heritage Systems (GIAHS).
2. Monitors the Desert Locust situation throughout the world.
3. Established Codex Alimentarius Commission or CAC which is responsible for all matters regarding the implementation of the Joint FAO/WHO Food Standards Programme.
4. The 'International Treaty on Plant Genetic Resources for Food and Agriculture' was adopted by the 35th Session of the Conference of the FAO in 2001.

5.Some Important Publications of FAO are:

a) The State of World Fisheries and Aquaculture (SOFIA).
b) The State of the World's Forests (SOFO).
c) The State of Food Security and Nutrition in the World (SOFI).
d) The State of Agricultural Commodity Markets (SOCO).

6.4   Provisional (temporary) State of Global Climate Report 2022

Why in News?

Recently, the World Meteorological Organization (WMO) has released provisional State of the Global Climate report, 2022.

▪   The ''final'' report is expected to be published in April, 2023.

What is the WMO State of the Global Climate report?

1. This report is produced annually.
2. It is in line with the most recent long assessment cycle provided by the 6th IPCC Assessment Report.
3. The report tries to show the current state of the climate using key climate indicators.
4. The report also mentions the extreme events and their impacts.

What are the Highlights of the Report?

1. Increase in Concentration of Greenhouse Gases:
    ▪   The concentrations of 3 main greenhouse gases, carbon dioxide (CO_2), methane (CH_4) and Nitrous oxide (NO_2), all were at record high in 2021.
    ▪   The emissions of methane have increased at the fastest pace ever. [At the climate change conference in Glasgow, countries had pledged to cut global methane emissions by at least 30% by the year 2030.]
2. Temperature:
    ▪   The global average temperature in 2022 is estimated to be about 1.15 °C above the 1850-1900 average.
    ▪   2015 to 2022 are likely to be 8 warmest years on record.
    ▪   La Niña (a cooling of sea-surface waters in the equatorial Pacific Ocean) conditions have dominated 2020 and are expected to continue until the end of 2022.
3. Glaciers and Ice:
    ▪   In the European Alps, glacier melt records were broken in 2022 as average thickness losses of between 3 to 4 metres throughout the Alps which is more than in the previous record year 2003.
    ▪   For the 1st time in history, no snow cover has remained till the summer season.
4. Sea Level Rise:
    ▪   Global mean sea level has ''risen'' by 3.4 ± 0.3 mm per year over the last 30 years (1993-2022).
5. Ocean Heat:
    ▪   The ocean stores 90% of the heat from human emissions of greenhouse gases.
    ▪   Overall, 55% of the ocean surface experienced at least one marine heatwave in 2022 whereas, only 22% of the ocean surface experienced a marine cold spell.
6. Extreme Weather:
    ▪   In East Africa, rainfall has been below average in 4 consecutive wet seasons & that is longest dry season in 40 years.
    ▪   There was record breaking rain during July & August month of last few years also, the year 2022 have seen even extensive flooding in Pakistan.
    ▪   Large parts of the northern hemisphere were very hot and dry.

Steps taken to tackle the Climate Change:

What are the National Steps taken to tackle Climate change?	What are the Global Steps taken to tackle Climate change?
1. NAPCCC: To control the climate change, India has released its National Action Plan to Combat Climate Change (NAPCC). It has 8 sub missions including National Solar Mission, National Water Mission etc. 2. India Cooling Action Plan: It provides an integrated approach towards cooling including reduction in the cooling demand. This would help reduce emissions and hence reducing global warming.	1. Paris Agreement: It aims to keep the rise in global temperatures below 2°C from pre-industrial times along with efforts to limit it to 1.5°C. 2. UN SDGs: These are 17 broad goals for achieving sustainable development in the society & goal 13 exclusively focuses on tackling climate change. 3. Glasgow Pact: It has highlighted that actions in the current decade are the most important for achieving the 1.5-degree target.

Way Forward

Government needs to focus on bold policies and solutions, that can transform the way, the resources are produced and consumed, to create new jobs, provide more access and affordability for everyone and to build a cleaner and greener living environment.

Additional Information:

What is the World Meteorological Organization (WMO)?

1. The WMO is an intergovernmental organization.
2. It has 192 Member States/Territories.
3. India is a member of WMO.
4. It originated from the International Meteorological Organization (IMO), which was established after the 1873 Vienna International Meteorological Congress.
5. Established by the approval of the WMO Convention on 23rd March 1950, WMO became the specialized agency of the United Nations.
6. It works for meteorology (weather and climate), operational hydrology and related geophysical sciences.
7. WMO is headquartered in Geneva, Switzerland.

6.5 Mathura-Vrindavan Carbon Neutral Target

Why in News?

Recently, the Government of Uttar Pradesh has announced that Mathura-Vrindavan will become a "net zero carbon emission" tourist destination by 2041.

1. This will be the 1st such carbon neutral master plan for a tourist destination in India.

What is Net Zero Carbon Emission?

1. It is also referred to as 'carbon neutrality' and it does not mean that a country/state would bring down its emissions to zero.

2. Rather, it is a state in which a country's emissions are compensated by the absorption and removal of greenhouse gases from the atmosphere.

PM MAKES FIVE PLEDGES
1. India will increase its non-fossil energy capacity to 500GW by 2030
2. India will meet 50% of its energy requirements from renewable energy by 2030
3. India will reduce the total projected carbon emissions by one billion tonnes from now to 2030
4. By 2030, India will reduce the carbon intensity of its economy by 45% (from a previous target of 35%)
5. By 2070, India will achieve the target of net zero

WHAT IS NET ZERO?
Net zero refers to a balance where emissions of greenhouse gases are offset by the absorption of an equivalent amount from the atmosphere. Experts see net zero targets as a critical measure to successfully tackle climate change and its devastating consequences

PLEDGES BY TOP THREE EMITTERS
- CHINA: Beijing announced no new pledges on Monday. It previously pledged net zero by 2060.
- UNITED STATES: The US touted domestic legislation to spend $555bn to boost renewable power and electric vehicles. It has pledged net zero by 2050.
- INDIA: The country's economy will become carbon neutral by the year 2070

3. Further, absorption of the emissions can be increased by creating more carbon sinks such as planting more trees.

4. More than 70 countries have promised to become Net Zero by the middle of the century i.e., by 2050.

5. India has also promised to cut its emissions to net zero by 2070 at the UNFCCC COP-26 meeting.

Major Announcements made to achieve the Target are:

1. Tourist vehicles will be banned from the entire Braj region, which includes famous pilgrim centres such as Vrindavan and Krishna Janmabhoomi.

2. Only electric vehicles used for public transport will be allowed into the area.

3. All 252 water bodies and 24 forests in the area will also be revived.

4. The plan divides the entire region into 4 clusters, each containing 2 of the 8 key cities.

5. The idea is to form small circuits called 'Parikrama Paths' which the pilgrims can undertake either on foot or using electric vehicles.

6. In case they want to travel from 1 destination to another they can avail electric mini-buses.

So, What is the Cultural Significance of Mathura-Vrindavan Region?

1. Mathura, which is situated on the bank of river Yamuna, is the abode of Lord Krishna and it has a great religious sanctity among the Hindus.

2. It is mentioned in the epic Ramayana too. It is on record that Mathura was one of the capitals of Kushan King Kanishka (130AD).

3. Some of the famous temples are Bankey Bihari Temple, Govind Dev Temple, Rangaji Temple, Dwarikadhish Temple and the ISKCON Temple.

6.6   New Species of Estuaries Crabs

Why in News?

Recently, researchers have discovered a new species of Estuarine Crab at the Mangroves of Parangipettai near the Vellar River estuary in Cuddalore district, Tamil Nadu.

[Estuary is an area where river meets the ocean.]

More About the News:

1. The species has been named 'Pseudohelice Annamalai'.
2. The name is given in recognition of 100th Anniversary of Annamalai University.

About Pseudohelice Annamalai?

1. This is the 1st ever record of this genus, Pseudohelice, collected from high intertidal areas.
2. Within this genus, only 2 species have been confirmed till date, namely
    ▪ "Pseudohelice Subquadrata"
    ▪ "Pseudohelice Latreilli"
3. The species discovered is distributed around the Indian subcontinent and the eastern Indian Ocean.
4. Pseudohelice annamalai is distinguished by dark purple to dark grey colouring, with irregular light brown, yellowish brown, or white patches.
5. The new species is small and has a maximum width of up to 20 mm.
6. This species is not aggressive and can move fast like other crabs.
7. The species lives at muddy banks of mangroves, hence their burrows (tunnel like houses) found near the pneumatophores of Avicennia mangroves.
   [Pneumatophores are specialized aerial roots stemming from original root system]
   [Burrows have a depth of 25-30 cm and are branched, with larger pellets around the entrance.]

Significance of these new discoveries:

1. The presence of Pseudohelice in India fills the distribution gap between the western Indian Ocean and the western Pacific Ocean.
2. The new species gives evidence of the geographic isolation of the eastern Indian Ocean from some marine organisms.
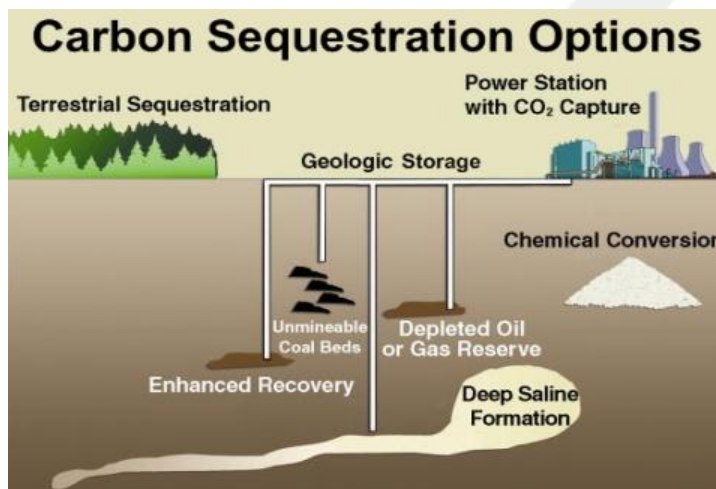
6.7   Carbon Sequestration

Why in News?

According to a recent study conducted in Maharashtra and Odisha, soil carbon sequestration may help fight climate change.

   ▪ Study is in line with the Sustainable Development Goal 13 on taking urgent action to combat climate change and its impacts.

What is Carbon Sequestration?

1. It is a long-term storage of carbon in plants, soils, geologic formations, and the ocean.
2. Carbon Sequestration occurs both naturally and as a result of anthropogenic activities and typically refers to the storage of carbon.

Types of Carbon Sequestration:

Terrestrial Carbon Sequestration:	Geologic Carbon Sequestration:	Ocean Carbon Sequestration:
It is the process by which CO_2 from the atmosphere is absorbed by trees and plants through photosynthesis and stored as carbon in soils and biomass (tree trunks, branches, foliage, and roots)	Through this CO_2 can be stored in including oil reservoirs, gas reservoirs and unmineable coal seams etc., with high organic content.	Oceans absorb, release and store large amounts of CO_2 from the atmosphere. This can be done in 2 ways- enhancing productivity of ocean biological systems through Iron fertilization, and injecting CO_2 into the deep ocean.

What are the Different Methods of Carbon Sequestration?

Natural Carbon Sequestration:	Artificial Carbon Sequestration:
1. It is the process by which nature has achieved a balance of carbon dioxide in our atmosphere suitable for sustaining life. 2. Animals leaves carbon dioxide, as plants do during the night. 3. Nature provided trees, the oceans, earth and the animals themselves as carbon sinks, or sponges. 4. All organic life on this planet is carbon based and when plants and animals die, much of the carbon goes back into the ground where it has little impact on contributing to global warming.	1. The number of processes in which the carbon emissions are captured at the point of production (e.g., Factory Chimneys) and then buried. 2. One proposed method is ocean sequestration, as in it the carbon dioxide is injected deep into the ocean, forming lakes of CO_2. 3. In theory, the CO_2 will stay deep down due to the pressure and temperature of the surrounding water, gradually dissolving into that water over time. 4. Another example is geological sequestration where the carbon dioxide is pumped into underground chambers such as old oil reservoirs, aquifers and coal seams that are unable to be mined.

Why is Carbon Sequestration a viable Option for Agriculture?

1. Carbon Farming (Carbon Sequestration) involves practices that are known to improve the rate at which CO2 is removed from the atmosphere and converted to plant material and soil organic matter. This would help in optimising carbon capture on working landscapes.
2. It can incentivise our farmers to introduce reformative practices in their agricultural processes, helping them shift their focus from improving yields to functioning ecosystems and sequestering carbon that can be sold or traded in carbon markets.

    Way Forward:
    Carbon sequestration not only improves the health of soil but can also result in improved quality, organic and chemical-free food (farm-to-fork models) along with improved income from carbon credits for the marginalised farmers hence, government should positively look forward to have the measures in place to balance the carbon capture.

6.8   E-waste Management Rules 2022

Why in News?

The government has recently notified E-waste (management) rules 2022.

   ▪ These rules will come into force from 1 April 2023.

What is E-waste?

1. E-Waste is short form of Electronic-Waste.
2. It includes the old and discarded electronic devices along with their components, parts and spares.

3. E-waste is categorised into 21 types under two broad categories:

        ▪ Information technology and communication equipment i.e., mobile phones etc.
        ▪ Consumer electronics i.e., scanners, camera and copiers etc.

4. Electronic waste (E-waste) is the fastest-growing stream of waste.
5. The Global E-Waste Monitor says that nearly 3 million tons of electronic waste was generated in India.

Reasons behind High E-Waste Generation:

1. India is one of the largest consumers of electronic gadgets in the world which causes high generation of E-waste.
2. The products have shorter life cycle, as the previous electronic gadgets becomes outdated as soon as the new models get launched in the market.
3. There are also limited repair options in the market as many manufacturers don't allow repair and reuse facilities.
4. Most consumers are still unaware of how to dispose (arrange) of their e-waste.

How can we manage the E-waste?

Major Highlights of E-waste (management) rules 2022:

1. It will apply to every manufacturer, producer, dismantler and recycler involved in manufacturing, sale, transfer, purchase, refurbishing, dismantling, recycling and processing of e-waste or electrical and electronic equipment.
2. The rule is applicable to all electrical devices and radiotherapy equipment, nuclear medicine equipment, Magnetic Resonance Imaging (MRI), electric toys, air conditioners, microwaves, tablets, washing machine, refrigerator and iPad among others.
3. The government has restricted the use of hazardous substances in manufacturing electrical and electronic equipment (EEE) following deaths due to exposure to radioactive material.
    It mandates the reduction of the use of lead, mercury, cadmium among others in the manufacturing of electronic equipment.
4. Manufacturers shall use the technology or methods so as to make the end product recyclable and ensure reduction in the quantity of e-waste.

5. The Central Pollution Control Board CPCB shall conduct random sampling of electronic equipment to monitor and verify the compliance of reduction of hazardous substances provisions.
6. If a product does not comply with the e-waste management rules, the manufacturer will have to withdraw all samples from the market.
7. Rules aim to incentivise registered electronic waste recyclers by introducing EPR or Extended Producer Responsibility certificates (which was not part of 2016 Rules).
8. Rules require producers to set up e-waste exchange facilities to facilitate collection and recycling, and assign specific responsibility to bulk consumers of electronic products for safe disposal.
9. Imports in the market for new electronic equipment shall be allowed only for those which are compliant with provisions laid down by the government.
10. It is the responsibility of the manufacturer to collect e-waste generated during manufacture and to ensure its recycling or disposal.
    However, the rule does not apply to waste batteries, packaging plastics, micro enterprises and radio-active waste, as covered under the provisions of the law.
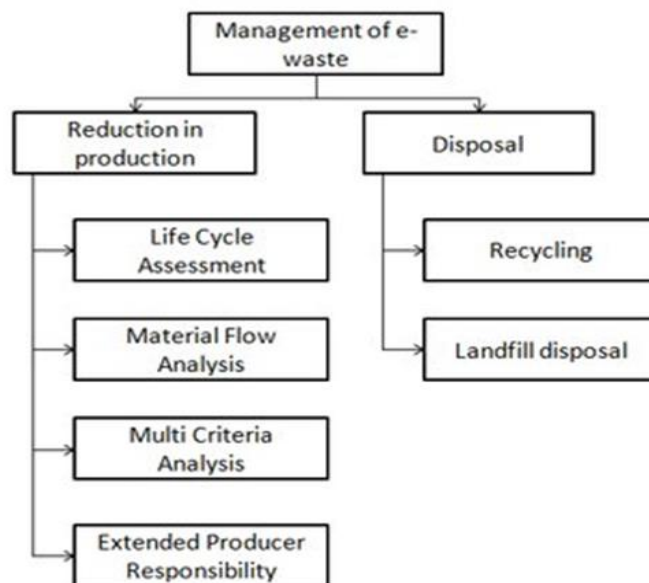
Impacts of E-waste on Environment and health:

1. There are various toxins and heavy metals present in the E-waste which get leached into environment and degrade the environmental and human health.

2. Some major effects of E-waste on the environment include:
    - Groundwater pollution.
    - Acidification of soil.
    - Air pollution due to the burning of plastic and other leftovers.
3. It also impacts health and cause serious illnesses such as:
    - Lung cancer
    - Respiratory problems
    - Brain damages, etc.
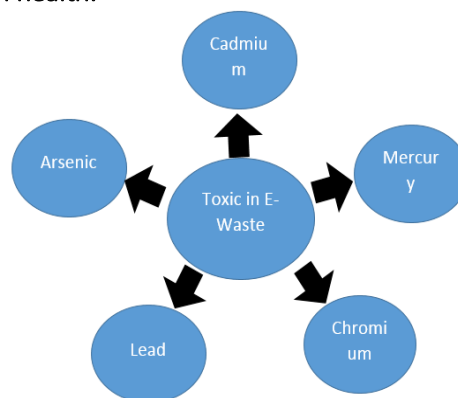
Challenges in E-waste Management and Recycling:

The recycling potential of our country is poor mainly due to:
1. There is lack of data available on consumption and generation of e waste.
2. The lower collection of E-waste is also one of the major issues of E-waste management as approx. 90 % of our E-waste is handled by the informal and unorganised sector.
3. We still use non-scientific and dangerous methods for the extraction of the resource from E-waste.
4. The financial health of municipalities is also not good to invest in the collection and treatment of E-waste.
5. There are lack of safety measures and health awareness for personals working on E-waste management sites.

Way Ahead:

Effective awareness along with Strict implementation of the rule, training for required skill sets and providing affordable technology to the informal sector could be a game-changer.

6.9   Carbon Border Tax

Why in News?

Recently, a group of countries included India has jointly opposed the Carbon Border Taxes proposed by the European Union (EU), at 27th edition of the Conference of Parties (COP) in Sharm El Sheikh, Egypt.

What is a Carbon Border Tax?

1. A carbon border adjustment tax is a duty on imports.
2. The duty is based on the amount of carbon emissions resulting from the production of the product in question.
3. We can say that it is a price on carbon emissions, hence helps in discouraging emissions.
4. As a trade-related measure, it also affects production and exports.
5. The proposal is part of the European Commission's European Green Deal that commits to make Europe the 1st climate-neutral continent by 2050.
6. A carbon border tax is possibly an improvement from a national carbon tax.
7. A national carbon tax is a fee that a government imposes on any company within the country that burns fossil fuels.

EU CARBON BORDER TAX IMPLICATIONS BY INDUSTRIES

What are the Causes Behind Imposing Carbon Tax?

1. The EU has declared to cut its carbon emissions by at least 55% by 2030 compared to 1990 levels. Till date, these levels have fallen by 24%. However, emissions from imports contributing to 20% of the EU's CO2 emissions are increasing.
2. Carbon tax would incentivise other countries to reduce GHG emissions and further shrink the EU's carbon footprint.
   [A *carbon footprint* is the total amount of greenhouse gases, that are generated by our actions.]

3. The Emissions Trading System of the EU makes operating within the region expensive for certain businesses hence, EU authorities fear that these businesses might prefer to relocate to countries that have more relaxed or no emission limits.
[This is known as 'carbon leakage' and it increases the total emissions in the world.]

What are the Issues with Carbon Border Tax?

1. The BASIC (Brazil, South Africa, India and China) countries' grouping had opposed the EU's proposal in a joint-statement.
2. BASIC countries called it "discriminatory" and against the principles of equity and 'Common but Differentiated Responsibilities and Respective Capabilities' (CBDR-RC).
[CBDR-RC principles acknowledge that richer countries have a responsibility of providing financial and technological assistance to developing and vulnerable countries to fight climate change.]
3. The EU is India's 3rd largest trading partner hence, by increasing the prices of Indian-made goods in the EU, this tax would make Indian goods less attractive for buyers and could lessen the demand.
4. The tax would create serious near-term challenges for companies with larger greenhouse gas footprint.
5. The EU's notion of having a uniform standard all over the world for the environment is not in line with the Article 12 of the Rio Declaration which says that the standards applicable to developed countries cannot be applied to developing countries.
6. The greenhouse content of these imports would also have to be adjusted in the greenhouse gas inventories of the importing countries which essentially implies that GHG inventories would have to be calculated not on the production basis but at the point of consumption basis.

[This would reverse the entire climate change regime.]

7. The policy often misunderstood as a form of protectionism.

[Protectionism refers to government policies that restrict international trade to help domestic industries.]

8. There is the risk that it becomes a protective device, excessively shielding local industries from foreign competition in so-called 'green protectionism'.

Way Forward:

India is not the target of this policy of the EU, the target is Russia, China and Turkey which are large emitters of carbon and major exporters of steel and aluminium to the EU. As far as India is concerned, it must assess the advantages and disadvantages that it is likely to face with the imposition of this tax and talk to the EU with a bilateral approach.

6.10   CSE's India 2022: An Assessment of Extreme Weather Events report

Why In News?

Recently, the Centre for Science and Environment (CSE) have released an Assessment of Extreme Weather Events report.

In 2022, India recorded its 7th wettest January since 1901.

What are Extreme weather events?

1. The UN Intergovernmental Panel on Climate Change (IPCC) defines extreme weather events as those that are "rare at a particular place and time of year".

2. India does not have any official definition but, India Meteorological Department (IMD) classifies lightning and thunderstorm, heavy to very and extremely heavy rainfall, landslide and floods, cold wave, heat wave, cyclones, snowfall, dust and sandstorms and hail storms as extreme weather events.

About the assessment:

1. The assessment provides a comprehensive overview of the state of extreme weather in India across a major part of the year.
2. The report provides season-wise, month-wise, and region-wise analysis of extreme weather events and their associated loss and damage.
3. CSE has obtained its data from 2 key Indian government sources:
   ▪ The IMD
   ▪ Disaster Management Division (DMD) of the Union Ministry of Home Affairs

SIXTH ASSESSMENT REPORT
Working Group I – The Physical Science Basis

ipcc
INTERGOVERNMENTAL PANEL ON climate change

CO₂ concentration	Sea level rise	Arctic sea ice area	Glaciers retreat
Highest in at least 2 million years	**Fastest rates** in at least 3000 years	**Lowest level** in at least 1000 years	**Unprecedented** in at least 2000 years

Major Highlights of the report:

1. The report has found that in just 9 months of 2022, India has witnessed some form of natural disaster almost every day.
2. India has recorded extreme weather events on 241 of the 273 days between January 1 and September 30, 2022, means India have seen close to a disaster every day in the nine months of this year.
3. This estimation of loss and damage is probably an underestimate. These disasters have claimed 2,755 lives, affected 1.8 million hectares of crop area, destroyed over 416,667 houses, and killed close to 70,000 livestock.
4. The report has also highlighted the nature of the events, as all types of extreme weather have been seen in the past nine months, i.e., lightning and storms were spread over 30 states and claimed 773 lives.
5. The report also gave a region wise and state wise assessment of extreme events:

Major gaps in the report:

1. Loss and damage assessment is not done properly: While a realistic estimate can be made about the number of days the country recorded extreme weather events from the IMD releases, major gaps remain when it comes to loss and damage assessment.
2. Data itself is not comprehensive: For instance, media reports suggest widespread crop loss in Haryana, Madhya Pradesh, Rajasthan, and Gujarat during the monsoon season (June-September), but the Centre's cumulative loss and damage report for the season claims that there have been no losses in these states.

Way forward:

Need of the hour is to move beyond the management of the disaster to reducing risks and improving resilience. We need to improve the systems for flood management, deliberately building drainage and

water recharge systems on the one hand and investing in green spaces and forests so that these sponges of water can be revitalized for the coming storms.

Additional Information:

Centre for Science and Environment (CSE)

1. It is a public-interest research and advocacy organisation based in New Delhi.
2. CSE researches into, lobbies for and communicates the urgency of development that is both sustainable and equitable.
3. CSE's efforts are specifically designed to create awareness about problems and propose sustainable solutions.
4. CSE's Pollution Monitoring Laboratory is an independent, analytical laboratory that monitors toxic contamination of the environment.
5. It uses the results of this monitoring for the regulation of the use of toxins in the country.

6.11 National Centre of Excellence for Green Port & Shipping

Why in News?

Recently, India's 1st National Centre of Excellence for Green Port & Shipping (NCoEGPS) was launched at "INMARCO 2022" held in Mumbai.

About INMARCO (International Maritime Conference and Exhibition):

1. The INMARCO is a quadrennial (4 times in a year) International Maritime Conference and Exhibition.
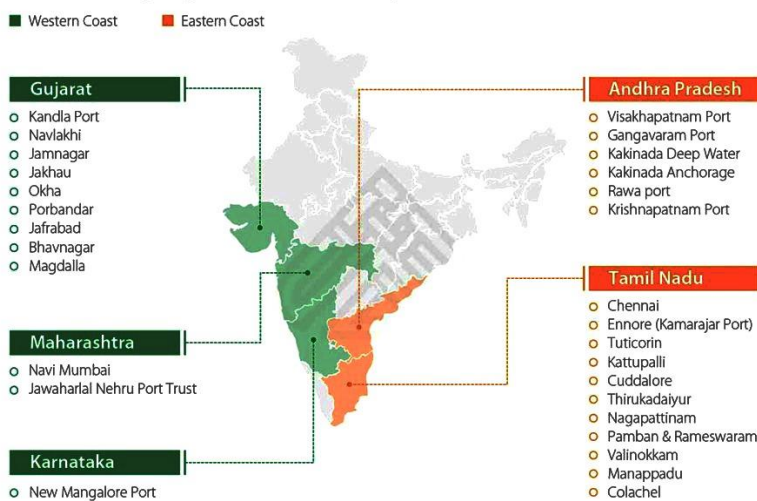2. It is hosted by the Institute of Marine Engineers (India).

What is Green Shipping?

1. Green Shipping is the use of clean resources and energy to transport people and goods by ships.
2. It is specifically concern about the reduction in use of non-renewable resources and to protect the environment from Green House Gases (GHGs) and environmental pollutants generated by ships.

What is NCoEGPS?

1. It is a major initiative by the Ministry of Ports, Shipping and Waterways (MOPSW) towards providing greener solutions.
2. The NCoEGPS will be working under the framework of the Sagarmala programme of the MoPSW.
3. The Energy and Resources Institute (TERI) is the knowledge and application partner for this project.
4. The centre aims to develop a regulatory framework and alternate technology adoption road map for Green Shipping.

Port Connectivity: Major and Intermediate Seaports

■ Western Coast ■ Eastern Coast

Gujarat
o Kandla Port
o Navlakhi
o Jamnagar
o Jakhau
o Okha
o Porbandar
o Jafrabad
o Bhavnagar
o Magdalla

Maharashtra
o Navi Mumbai
o Jawaharlal Nehru Port Trust

Karnataka
o New Mangalore Port

Andhra Pradesh
o Visakhapatnam Port
o Gangavaram Port
o Kakinada Deep Water
o Kakinada Anchorage
o Rawa port
o Krishnapatnam Port

Tamil Nadu
o Chennai
o Ennore (Kamarajar Port)
o Tuticorin
o Kattupalli
o Cuddalore
o Thirukadaiyur
o Nagapattinam
o Pamban & Rameswaram
o Valinokkam
o Manappadu
o Colachel

Graphic © Asia Briefing Ltd.

5. It works to achieve carbon neutrality and circular economy (CE) in shipping sector in India.
6. India aims to increase the share of renewable energy to 60% of the total power demand of its major ports from a present share of less than 10%.
7. This will be done through solar and wind-generated power.

Objectives of NCoEGPS:

1. To boost 'Make in India' in Port, Coastal and Inland water transport sector.
2. To provide most appropriate solutions to various challenges in these sectors through fast-track innovation.
3. To create a pool of talented manpower to prepare the industry with improved theoretical and practical knowledge.
4. Self-sufficiency in providing short term solutions through scientific studies technology.

Significance of NCoEGPS:

1. It is a major attempt towards realising Mission Lifestyle for the Environment (LiFE) movement. [LiFE mission is a mission working on promoting an environmentally friendly environment.]
2. It aims to transform ports and shipping and turn it to more environment friendly.
3. The center will interact with all the ports, shipping, maritime states in understanding their problems and offering solutions.
4. NCoEGPS would also help in better policy framing.

7. SECURITY

7.1 Naseem-Al-Bahr 2022

Why in News?

Recently, the Indian Naval Ship (INS) Trikand, INS Sumitra, and Maritime Patrol Aircraft (MPA) Dornier, participated in the 13th Edition of 'Naseem Al Bahr' (Sea Breeze).

1. INS Trikand is a frontline frigate which is equipped with a range of weapons and sensors. It is a part of the Indian Navy's Western Fleet, based at Mumbai.
2. INS Sumitra, a multirole offshore patrol vessel is part of the Eastern Fleet of the Indian Navy, based at Visakhapatnam.

So, What is Naseem-Al-Bahr?

1. It's a bilateral maritime exercise between the Indian Navy (IN) and Royal Navy of Oman (RNO).
2. The exercise was conducted from 19th to 24th November 2022 off the coast of Oman and had 3 phases: Harbour phase, Sea phase and De-brief.
3. The 1st Naseem- Al- Bahr exercise was conducted in 1993.
4. Year 2022 marks 30 years of IN-RNO bilateral exercises.
5. India and Oman have traditionally enjoyed warm and friendly relations, sharing common cultural values. Naval exercises have added strength to the bilateral ties between the 2.

Some other Bilateral Maritime Exercises of India are:

1. Thailand: India-Thailand Coordinated Patrol (Indo-Thai CORPAT)
2. Indonesia: Samudra Shakti
3. Singapore: Singapore-India Maritime Bilateral Exercise (SIMBEX)
4. Qatar: Zair-Al-Bahr
5. Bangladesh: Bongosagar Exercise
6. Sri Lanka: Sri Lanka-India Naval Exercise (SLINEX)
7. Japan: Japan Maritime bilateral exercise (JIMEX), Maritime Partnership Exercise (MPX)
8. France: VARUNA

7.2 States to have NIA office by 2024

Why in News?

Recently, the Union Home Minister announced that all states in the country will have National Investigation Agency (NIA) offices by 2024 as a strategy to counter terrorism.

About the National Investigation Agency (NIA)

1. NIA is the Central Counter-Terrorism Law Enforcement Agency of India which is mandated to investigate all the offences affecting the sovereignty, security and integrity of India. It includes:
a) Friendly relations with foreign states,
b) Against atomic and nuclear facilities,
c) Smuggling of arms, drugs and fake Indian currency and infiltration from across the borders,
d) The offences under the statutory laws enacted to implement international treaties, agreements, conventions etc.
2. It was formed under the National Investigation Agency (NIA) Act, 2008.
3. The agency is empowered to deal with the investigation of terror related crimes across states without special permission from the states.
4. It's Headquarter is located in New Delhi.

Highlights of the Home Minister Speech are:

1. NATGRID: States have been suggested to utilise the National Intelligence Grid (NATGRID) that is operational now. NATGRID brings datasets of 11 agencies on a common platform.
2. Rationalising Criminal Justice System: Parliament will soon be presented with amendments to the Indian Penal Code (IPC) and Code of Criminal Procedure (CrPC).
3. Increase Coordination:
a) To ensure border and coastal security, border states should coordinate with the central agencies and security forces.
b) There is a need for optimal and rational utilisation of internal security resources to fight challenges before the nation.
c) One Data One Entry: Following the principle of "one data, one entry", the NIA has been entrusted to maintain a national terror database and the Enforcement Directorate (ED) to maintain a dataset on financial crimes and the Narcotics Control Bureau (NCB) on narco crimes.

4.Amendments to FCRA: The amendments to the Foreign Contribution Regulation Act (FCRA) in 2020 successfully prevented the misuse of foreign funding and effective monitoring became possible.

So, What are the Issues with the Law-and-Order Situation in India?

1. Poor General Administration:
a) Various government agencies lack coordination.
b) Poor enforcement of laws and general failure of administration.
2. Problems Related to Police:
a) Unscientific organisational structure and bad infrastructure are the biggest problems.
b) High political interference
c) Lack of modern technology and methods of investigation
d) High corruption at every level

e) Insensitive to human rights

f) Absence of transparent recruitment and personnel policies

3. Problems Related to the Judicial Process:

a) A large number of cases are pending

b) Low conviction rates

Related Constitutional and Legal Provisions are:

1. As the Law and Order is a State subject under the '7th Schedule' of the constitution, the constitution provided that the Ministry of Home Affairs (MHA) can intervene in matters concerning national security.

2. So, it is the primary duty of the state governments to prevent, detect, register and investigate crime and prosecute the criminals.

3. Central Government, however, supplement the efforts of the state governments by providing them with financial assistance for modernization of their Police Forces.

4. Further, intelligence inputs are regularly shared by the Central Security and Intelligence Agencies with the State Law Enforcement Agencies to prevent crime and law and order related incidents.

5. The National Crime Records Bureau (NCRB), a nodal agency under the MHA, is engaged in the process of collecting, compiling and analysing the crime statistics with a view to help the states to form appropriate strategies for better prevention and control of crime.

Way Forward/Conclusion:

Today, the nature of crimes has changed and they are becoming borderless, that is why the coordination of all States and the agencies is the need of the hour.

8. CULTURE

8.1 Patan Patola

Why in News?

Recently, Prime Minister of India gifted a 'Patan Patola' scarf to the Prime Minister of Italy at the G20 summit.

What is Patan Patola?

1. Patola is a double ikat woven fabric, usually made from silk in Patan (North Gujarat).

    [Ikat is a method of tie-dyeing the warp or filling before the cloth is woven.]

2. It received a Geographical Indication (GI) tag in 2013.
3. The ancient art of double ikat or Patola woven in pure silk dates back to the 11th century.
4. This strange quality has its origins in an intricate and difficult technique of dyeing or knot dyeing, known as 'bandhani', before weaving.
5. The Patola fabrics bear an equal intensity of colours and design on both sides.
6. Patola is woven on primitive hand-operated harness looms made out of rosewood and bamboo strips. The loom lies on a slant.
7. The process is labour-intensive, time-consuming, and requires a high order of skill and expertise.
8. It takes 3-4 months to prepare a tie-died design on warp and weft threads for one saree of six yards.
9. While possessing and wearing a Patola is considered a matter of pride, the fabric has largely remained inaccessible to common people because of its high price.
10. One of the major practitioners of this art form is the Salvi family from Patan.
11. The other commonly worn Patola is the Rajkot Patola, woven on a flat loom.
12. Before World War II, Indonesia was the major buyer of Patolas.

8.2 Wangala Dance

Why in News?

Recently, the opening ceremony of the 'Rising Sun Water Fest-2022' was conducted near the Umiam Lake (man-made reservoir) at Meghalaya.

1. Members of the Garo tribal community perform Wangala dance on the occasion of 'The Rising Sun Water Fest-2022'.

About the Wangala Dance

1. Wangala is also known as the 'Festival of Hundred Drums' and is celebrated with different forms of dance on the tunes of folk songs played on drums and primitive flute made of buffalo horns.
2. The festival is celebrated in honour of the Sun God and marks the end of the long harvest season.
3. The celebration also signifies the end of a long toil period in the field for the Garo tribe before the start of the winters.
4. For the Garo Tribe in Meghalaya, the festival is a way to preserve and promote their cultural identity and they exhibit their tradition in their celebrations.

About the Garo Community

1. The Garos, who call themselves A'chiks, are the 2nd largest tribe in Meghalaya.
2. The other 2 major tribes of Meghalaya are the Khasi tribe and the Jaintia tribe.
3. The Garos have a strong tradition that they have come from Tibet. They have a number of dialects and cultural groups. Each of them originally settled at a particular area of the Garo Hills and outlying plain lands.
4. However, the culture of the modern Garo community has been greatly influenced by Christianity.
5. In Garo, Marriages are not allowed within the same clan.
6. The Garos are 1 of the few remaining matrilineal societies in the world.
7. The individuals take their clan titles from their mothers. Traditionally, the youngest daughter inherits the property from her mother.
8. Sons leave the parents' house at puberty.
9. After getting married, the man lives in his wife's house.

8.3   Tokhu Emong Festival

Why in News?

From 7th November 2022, Nagaland is starting 4 day 'Tokhu Emong Bird Count' (TEBC).

1. It is the 1st bird count exercise in the state which is going beyond Amur Falcons. Till now, only Amur Falcon count exercise has been conducted in the state.
2. This bird count exercise is coinciding with the post-harvest Tokhu Emong festival of the 'Lothas', the Naga community that dominates the Wokha district of Nagaland.

About the Tokhu Emong Festival

1. This festival is a perfect mixture of religion, culture and entertainment.
2. 'Tokhu Emong' is widely celebrated in Wokha district of Nagaland.
3. The celebrations for the festival started on 7th November every year and this color-filled festival stretches over to 9 days.
4. 'Tokhu' means moving from house to house, collecting tokens and gifts in form of naturals resources and food. However, the meaning of 'Emong' is to put a halt on the appointed time.
5. Biggest attractions of this festival include community songs, dances, feast and fun.
6. Through the starting of this festival, people narrate the stories of their ancestors which were composed generations ago.

7. During the festival, gracious offerings are made to the 'Sky God' and 'Earth God' seeking for their blessings.

About Amur Falcons

1. Amur falcons are the world's longest travelling raptors that starts travelling with the onset of winters.
2. They breed in South-Eastern Siberia and Northern China, and migrate in millions across India and then over the Indian Ocean to southern Africa before returning to Mongolia and Siberia.
3. Their 22,000-kilometre migratory route is one of the longest amongst all avian species.
4. They get their name from the Amur River that forms the border between Russia and China.
5. Doyang Lake in Wokha district of Nagaland is better known as a 'stopover for the Amur falcons' during their annual migration from their breeding grounds to warmer South Africa.
6. Thus, Nagaland (Pangti Village) is also known as the "Falcon Capital of the World".
7. Amur Falcon comes under the least concern list of the International Union for Conservation of Nature (IUCN) Red List, but the species is protected under the Indian Wildlife Protection Act, 1972, and also under the Convention on Migratory Species, to which India is a signatory.

8.4 Afzal Khan Tomb

Why in News?

Recently, the **Supreme Court (SC)** has asked for reports from the Maharashtra government on the demolition drive conducted around the tomb of Afzal Khan.

1. The court said that these reports should indicate the nature of the structures and whether due process was followed in removing the alleged unauthorized structures.
2. The Maharashtra government stated that the demolition drive was over and illegal structures built on government and forest land were removed.

So, What is the Controversy over the Tomb of Afzal Khan?

1. Many Hindu groups have alleged that Hazarat Mohammad Afzal Khan Memorial Society has expanded the tomb by carrying out unauthorised constructions.
2. In 2004, a **Public Interest Litigation (PIL)** application was filed by a person demanding the demolition.
3. The Hindu groups also claimed the Society was glorifying an "enemy of Swaraj" in "Shivaji's own land" by hosting various activities in his honour.

About Afzal Khan

1. He was a 17th century commander of the **Adil Shahi dynasty of Bijapur.**
2. With **Chhatrapati Shivaji's** rise and increasing control on the region, Afzal Khan was seen as the man to control him in the Deccan.
3. Khan put together a force of 10,000 cavalry and marched from Bijapur to Wai, plundering Shivaji's territory along the way.

4. However, Shivaji called a council of war at the fort of Pratapgarh, where most of his advisers urged him to make peace. However, Shivaji was not eager to back down and he set up a meeting with Khan.

5. During the meeting, an argument between the 2 turned into an attack in which Shivaji emerged victorious. This was followed by a defeat of the Adilshahi army at the hands of the Marathas.

6. As per Maratha sources, Khan's remains were buried at the fort.

7. In an act of grace Shivaji erected a tomb over the remains of Afzal Khan and built a tower in his honour, which is still known by the name 'Afzul Buruj' at Pratapgarh.

8.5   Baliyatra

Why in News?

Recently, the PM in his address to the Indian diaspora in Bali on the sidelines of the G20 summit mentioned the annual Baliyatra on the banks of the Mahanadi in Cuttack that commemorates age-old links between ancient Kalina and Southeast Asia.

So, What is Baliyatra?

1. Baliyatra, literally means 'voyage to Bali'.

2. It's a week-long event which begins on Kartik Purnima (full moon night in the month of Kartik).

3. It is organised every year to commemorate the 2,000-year-old maritime and cultural links between ancient Kalinga (today's Odisha) and Bali and other South and Southeast Asian regions like Java, Sumatra, Borneo, Burma (Myanmar) and Ceylon (Sri Lanka).

4. As per the historians, popular items of trade between Kalinga and Southeast Asia included pepper, cinnamon, cardamom, silk, camphor, gold, and jewellery.

5. The Bali Yatra celebrates the greatness and skill of those expert sailors who made Kalinga one of the most prosperous empires of its time.

6. Baliyatra has a significant commercial dimension in addition to its cultural and historical elements.

How is Kalinga linked with Southeast Asia?

1. Growth of Ports: The Kalinga Empire (present-day Odisha) is known for its glorious maritime history. Due to the geographical location of Kalinga, this area saw the growth of ports as early as in 4th and the 5th century BC.

2. Famous ports: Some of the famous ports were Tamralipti, Manikpatna, Chelitalo, Palur and Pithunda allowed India to connect with other countries via the sea. Soon, the Kalingas had trade links with Srilanka, Java, Borneo, Sumatra, Bali and Burma. Bali was a part of the 4 islands that were collectively called the 'Suvarnadvipa', today known as Indonesia.

3. Kalinga's Ships: The people of kalinga used to construct large boats called the 'Boitas' and with the help of these, they traded with the Indonesian islands.

4. Dominance of Kalinga over Bay of Bengal: The Bay of Bengal was once known as the 'Kalinga Sea'. The dominance of the Kalingas over the sea routes can be understood from the fact that Kalidasa in his 'Raghuvamsa' referred to the King of Kalinga as 'The Lord of the Sea'.

5. Cultural Exchange with Indonesia: The Kalingas frequently traded with the island of Bali. The trade-in commodities also led to the exchange of ideas and beliefs.

6. Odia merchants made settlements in Bali and influenced its culture and ethics which led to the growth of Hinduism in the region.

7. Hinduism mixed well with the Balinese concepts and even today, 'Balinese Hinduism' is practised by a majority of their population.

8. They worship various Hindu Gods such as Shiva, Vishnu, Ganesha, Brahma etc

9. Shiva was considered to be the presiding deity and believed to be the elder brother of Buddha.

10. The Balinese also celebrate Hindu Festivals such as Shivaratri, Durga Pooja and Saraswati Pooja.

11. The 'Masakapan ke Tukad' festival celebrated in Bali is similar to the Bali Yatra festival in Odisha. Both are celebrated in the memory of their maritime ancestors.

8.6   Saras Food Festival-2022

Why in News?

Recently, 'Saras Food Festival, 2022' has been organized in New Delhi to promote ethnic and home-made handicrafts, paintings, toys, etc., prepared by women's of Self-Help Groups (SHGs).

About the Saras Food Festival

1. It's an initiative of the Union Ministry of Rural Development as an effort to empower women on a larger scale.

2. Women from various self-help groups have participated in this festival.

3. This event gives women SHGs an opportunity to showcase their skills in the field of food making and introduce people to the food culture of every corner of India.

4. These SHG womens are proficient in making rural products and preparing traditional dishes of their states.

5. The Ministry also launched the e-commerce portal for better and more effective marketing of Saras products prepared by women of self-help groups.

6. There are about 8 crore 62 lakh women who are members of SHGs and they have presence in almost 97% of Blocks, while 85 % of them are directly connected with the network of the Ministry.

7. Efforts are on to have at least 25% of all sales by women self-help groups through e-commerce portals annually.

8. The ministry will take steps to establish 'Saras stalls by women SHGs' in all state capitals, major cities, metros, airports and railway stations for widening the reach of marketing.

So, What are Self-Help Groups (SHGs)?

1. Basically, SHGs are informal associations of people who choose to come together to find ways to improve their living conditions.

2. In other words, it's a self-governed, peer-controlled information group of people with similar socio-economic backgrounds and having a desire to collectively perform a common purpose.

3. SHG relies on the notion of "Self Help" to encourage self-employment and poverty alleviation.

Objectives of the SHGs are:

1. To build the capacity of the poor and the marginalized in the field of employment and income generating activities.
2. To resolve conflicts through collective leadership and mutual discussion.
3. To provide **collateral free loan** with terms decided by the group at the market driven rates.
4. To work as a collective guarantee system for members who propose to borrow from organised sources like Banks and other financial institutions.

What is the Need for SHGs?

1. One of the biggest reasons for rural **poverty** in our country is low access to credit and financial services.
2. A Committee constituted under the chairmanship of Dr. C. Rangarajan to prepare a comprehensive report on 'Financial Inclusion in the Country' identified 3 major reasons for lack of financial inclusion:
a) Inability to provide collateral security,
b) Inadequate reach of the institutions, and
c) Weak community network.
3. The existence of sound community networks in villages is increasingly being recognised as one of the most important elements of credit linkage in the rural areas.
4. They help in accessing credit to the poor and thus, play a critical role in poverty reduction.
5. They also help to build social capital among the poor, especially women. This empowers women and gives them greater voice in the society.
6. Financial independence through self-employment has many benefits such as improved literacy levels, better health care and even better family planning.

Conclusion and Way Forward

1. In this era of liberalization, privatization and globalization, women are more conscious for their liberty, rights, freedom, security, social status etc, but till date they are deprived from same; hence, they should be provided with their deserving rights and liberties with dignity.
2. SHGs play a very important role in the economic and social advancement of women from rural areas.
3. Further, government programmes can be implemented through various SHGs. This will not only improve the transparency and efficiency but also bring our society closer to 'self-governance' as envisioned by Mahatma Gandhi.

8.7   UNESCO Asia- Pacific Awards

Why in News?

Recently, the United Nations Educational, Scientific and Cultural Organization (UNESCO) 'Asia-Pacific Awards for Cultural Heritage Conservation 2022' has been announced which includes 3 winners from India.

Award Winners are:

1. 13 projects from 6 countries have been acknowledged for awards and these 6 countries are: Afghanistan, China, India, Iran, Nepal and Thailand.
2. India's Performance:
a) Award of Excellence: Chhatrapati Shivaji Maharaj Vastu Sangrahalaya, Mumbai
b) Award of Merit: Domakonda Fort (Telangana) and Byculla Station (Mumbai)

About the UNESCO Asia-Pacific Awards for Cultural Heritage Conservation

1. It was started in 2000.
2. UNESCO Asia-Pacific Awards for Cultural Heritage Conservation programme recognises the efforts of private individuals and organisations in restoring, conserving and transforming structures and buildings of heritage value in the region.
3. It encourages property owners to undertake conservation projects within their communities, either independently or by public-private partnerships.
4. The awards give people a sense of pride and sense of ownership of their own heritage.

About Chhatrapati Shivaji Maharaj Vastu Sangrahalaya, Mumbai

1. The museum is a part of the Victorian Gothic and Art Deco Ensembles of Mumbai's world heritage property.
2. It was established as the 'Prince of Wales Museum of Western India' in 1922.

About Byculla Station, Mumbai

1.The station was built in 1853.

2. The first train of the country passed through Byculla station almost one-and-a-half centuries ago.

3. It has been restored to its original Gothic architectural glory.

About Domakonda Fort, Telangana

1. The Domakonda Fort is private property and was built in the 18th century.
2. It was built with mixed styles including stucco work, arched pillars, flat ceiling, and a courtyard with a water garden pond.

About UNESCO

1. United Nations Educational, Scientific and Cultural Organization (UNESCO) is a specialized agency of the United Nations (UN).
2. It aims to build peace through international cooperation in Education, the Sciences and the Culture.
3. It is also a member of the United Nations Sustainable Development Group (UNSDG), a coalition of UN agencies and organizations aimed at fulfilling the Sustainable Development Goals (SDGs).
4. UNESCO's Headquarter is located in Paris and the Organization has more than 50 field offices around the world.
5. It has a total of 193 Members and 11 Associate Members and is governed by the General Conference and the Executive Board.
6. 3 UNESCO member states are not UN members: Cook Islands, Niue, and Palestine.
7. While 3 UN member states (Israel, Liechtenstein and the United States) are not the members of UNESCO.

What are UNESCO's World Heritage Sites?

1. A World Heritage Site is a place that is listed by UNESCO for its special cultural or physical significance.
2. List of World Heritage Sites are maintained by the international 'World Heritage Programme', administered by the UNESCO World Heritage Committee.
3. Presently, there are almost 1,100 UNESCO listed sites across its 167 member countries.
4. In 2021, 'Liverpool — Maritime Mercantile City' in the UK was deleted from the World Heritage List due to "the irreversible loss in the site".

UNESCO Sites in India:

1. India is home to a total of 3691 monuments and sites. Of these 40 are designated as UNESCO World Heritage Sites including places like the Taj Mahal, Ajanta Caves and Ellora Caves.
2. World Heritage Sites also include natural sites like the Kaziranga National Park in Assam.
3. Recently, Harappan city of Dholavira in Gujarat was designated as India's 40th world heritage site.
4. Ramappa Temple (Telangana) was India's 39th World Heritage Site.
5. Khangchendzonga National Park, Sikkim has been inscribed as India's 1st and the only "Mixed World Heritage Site".
6. In 2022, the Union Ministry of Culture nominated 'Sacred Ensembles of the Hoysalas temples' for consideration as a World Heritage site for the year 2022-2023.

9.   MISCELLANEOUS

9.1   Early Warning System in Himalayan Region

Why in News?

Recently, the National Geophysical Research Institute (NGRI) of the Council of Scientific and Industrial Research (CSIR) has begun field studies to put in place 'Early-Warning Systems' in the Himalayan states against major and sudden floods, rockslides, landslips, glcier lake bursts and avalanches.

So, What are the Early Warning Systems?

1. Early Warning System is an integrated system of hazard monitoring, predicting and forecasting that enables individuals, communities, governments, businesses and others to take timely action to reduce disaster risks in advance of hazardous events.
2. It helps in reducing the harm to man and material.
3. Multi-hazard early warning systems address several hazards that may occur alone or simultaneously.
4. Increasing the availability of multi-hazard early warning systems and disaster risk information is 1 of the 7 global targets set by the Sendai Framework for Disaster Risk Reduction 2015-2030.

Some of India's Effort in Managing Disaster are:

1. Establishment of NDRF: India has responded well to all types of disasters by establishing National Disaster Reaction Force (NDRF), the world's largest rapid reaction force dedicated to disaster response.
2. Establishment of NDMA: The National Disaster Management Authority (NDMA), which is headed by the Prime Minister of India, is the apex body for Disaster Management in India. Setting up of NDMA and the creation of an enabling environment for institutional mechanisms at the State and District levels is mandated under the Disaster Management Act, 2005.

3. Provided Disaster Relief to many countries: India's foreign humanitarian assistance has increasingly included its military assets, primarily deploying naval ships or aircraft to deliver relief. In line with its policy of "Neighbourhood First," many of the recipient countries have been in the region of South and Southeast Asia.

4. Managing Climate Change Related Disaster: India has adopted the Sendai Framework for Disaster Risk Reduction, the Sustainable Development Goals (2015-2030), and the Paris Agreement on Climate Change, all of which make clear the connections among Disaster Risk Reduction (DRR), Climate Change Adaptation (CCA), and Sustainable Development (SD).

9.2   General Lachit Borphukan of Ahom Kingdom

Why in News?

The 400th birth anniversary of Assam's legendary war hero Lachit Borphukan will be

celebrated in the New Delhi from 23rd to 25th November, 2022

So, Who was Lachit Borphukan?

1. He was born on 24th November, 1622.
2. He was known for his leadership in the 'Battle of Saraighat' (1671) in which an attempt by Mughal forces to capture Assam was failed.
3. The battle of Saraighat was fought on the banks of the Brahmaputra in Guwahati.
4. It is considered as one of the greatest naval battles on a river

5. which resulted in the victory of Ahoms over the Mughals.
6. He was the inspiration behind strengthening India's naval force, inland water transport and creating infrastructure associated with it due to his great naval strategies.
7. The 'Lachit Borphukan Gold Medal' is awarded to the best cadet in the National Defence Academy (NDA).
8. The medal was instituted in 1999 to inspire defence personnel to cherish Borphukan's heroism and sacrifices.
9. He died on 25th April, 1672.

About the Ahom Kingdom

1. It was established in 1228 in the Brahmaputra valley of Assam, the Ahom kingdom ruled for almost 600 years.
2. The kingdom was founded by Chaolung Sukapha, a 13th century ruler.
3. The Ahoms ruled the Assam region till the province was annexed by Britishers in 1826 with the signing of the 'Treaty of Yandaboo'.
4. Renowned for their bravery, the Ahoms didn't even surrendered in front of the powerful Mughal Empire.
5. The Ahoms created a new state by suppressing the older political system of the bhuiyans (landlords).
6. The Ahom state depended upon forced labour. Those forced to work for the state were called paiks.
7. The Ahom society was divided into clans or khels. A khel often controlled several villages.
8. Ahoms worshipped their own tribal gods, yet they accepted the Hindu religion and the Assamese language. However, the Ahom kings did not completely give up their traditional beliefs after adopting Hinduism.
9. Poets and scholars were given land grants and theatre was encouraged by Ahom kings.
10. Important works of Sanskrit were translated into the local language during their rule.

Military Strategy of the Ahoms

1. The Ahom king was the supreme commander of the state as well as the Military.
2. The Ahom king himself led the state forces in the time of wars. The Paiks were the main army of the state.
3. There were two types of Paiks i.e., serving and nonserving. The non-serving Paiks constituted a standing militia which could be mobilized at a short notice by the kheldar (an expert military organizer).
4. The full contingent of the Ahom Army consisted of infantry, navy, artillery, elephantry, cavalry and spies. The main war weapons consisted of bows and arrows, swords, Javelins discus, guns, match-locks and cannons.
5. The Ahoms used to sent spies to the enemy's camp to study the strength and the war strategies of the enemies before leading an expedition.
6. The Ahom soldiers were experts in gureilla fighting. Sometimes they allowed the enemies to enter their state, then cut off their communications and attack them from the front and rear.
7. Few important forts of Ahom are: Chamdhara, Saraighat, Simlagarh, Kaliabar, Kajali and Pandu.

8. They also know the technique of constructing boat bridges in the Brahmaputra.
9. Above all, the mutual understanding among the civil and military wings, and unity among the nobles always worked as strong weapons for the Ahoms.

9.3 I2U2

Why in News?

India and UAE are going ahead with food security cooperation under I2U2.

About I2U2 Group

1) It was 1st mentioned in October 2021, after the Abraham Accords between Israel and UAE.
2) Abraham Accords are the series of peace agreements between Israel and several Arab countries. In 2020, it was signed with the help of USA between the UAE, Bahrain and Israel.
3) The name "Abraham" refers to the common prophet (messenger of god) of the 3 Abrahamic religions named Judaism, Christianity and Islam.
4) I2U2 was established as an international group to discuss common areas of mutual interest and to strengthen economic partnerships in trade and investment.
5) I2U2 is also referred to as the 'West Asian QUAD'.
6) I2U2 lacks a military angle and focuses on the economy.
7) It has identified 6 areas of cooperation and these are: 1) Water 2) Energy 3) Transportation 4) Space 5) Health 6) Food security.

9.4 Maiden India-ASEAN Defence Ministers' Meeting

Why in News?

Recently, 1st India-ASEAN Defence Ministers' Meeting was held.

During the meeting Indian Defence Minister proposed 2 major initiatives for further expanding scope of India-ASEAN defence relations:

1. India-ASEAN Initiative for Women in UN Peace Keeping Operations.
2. India-ASEAN Initiative on Marine Plastic Pollution.

9.5 Champions of the Earth Award

Why in News?

Recently, Indian wildlife biologist Dr Purnima Devi Barman honoured with UN Environment Programme's (UNEP) 2022 'Champions of the Earth award in Entrepreneurial Vision category'.

About Champions of the Earth award

1. It was started in 2005 and is awarded annually.
2. It is UN's highest environmental honour, it recognizes outstanding leaders from government, civil society, and private sector.
3. It honours individuals and organisations whose actions have a transformative impact on environment.

9.6 Shadani Darbar

1. Pakistan issued visa to Indian pilgrims to allow them to participate in 314th birth anniversary celebrations of Sant Shadaram Sahib.
2. Under Pakistan-India Protocol on Visits to Religious Shrines of 1974, pilgrims from both countries are allowed to travel to some shrines across the borders every year.
3. Shadani Darbar temple is located in Pakistan's Sindh province and is a sacred place for Hindu devotees from across the globe.
4. It was founded in 1786 by Sant Shadaram Sahib who is believed to be descendent of Lord Ram's son, Lav and also an avatar of Lord Shiva.

9.7 Rozgar Mela and Karamyogi Prarambh Module

Why in News?

As part of the government's 'Rozgar Mela' (employment fair), the PM has distributed over 71,000 appointment letters to new recruits via video conferencing.

The Prime Minister has also launched 'Karamyogi Prarambh', a special online orientation course designed for new appointees in government departments.

Some Key Points of Rozgar Mela are:

1. Rozgar Mela is an initiative of the central government to provide employment opportunities to the youth of the country.
2. Under the Rozgar Mela Scheme, 10 lakh jobs will be available for candidates to apply in Group A and B Gazetted Posts, Group B Non-Gazetted and Group C Non-Gazetted posts.
3. The Union Ministry of Home Affairs (MHA) will also fill a significant number of posts in various Central Armed Police Forces.
4. These recruitments are being done in mission mode by ministries and departments either by themselves or through various recruiting agencies such as UPSC, SSC, Railway Recruitment Board etc.

About the Karamyogi Prarambh Module

1. The Karamyogi Prarambh module is an initiative under Mission Karmayogi - a National Programme for Civil Services Capacity Building (NPCSCB).
2. The module is an online orientation course for all new appointees in various government departments.
3. It will include a code of conduct for government servants, workplace ethics, integrity, human resource policies etc.
4. The motive of the program is to make the government employees dedicated towards the people of the country.

9.8 Draft Aircraft Security Rules, 2022

Why in News?

Recently, the Ministry of Civil Aviation has released the Draft Aircraft Security Rules, 2022.

Background

1. The Draft Aircraft Security Rules, 2022 will replace the Aircraft Security Rules, 2011 which were necessary after Parliament passed Aircraft (Amendment) Act, 2020 in September 2020, giving statutory powers (powers derived directly from the provisions of the act) to the Bureau of Civil Aviation Security (BCAS) along with the Director General of Civil Aviation (DGCA) and Aircraft Accident Investigation Bureau (AAIB).

2. These rules allow these 3 bodies to impose penalties which can only be imposed by the courts till now. The Act also raised the maximum penalty from Rs 10 lakh to Rs 1 crore

3. Aircraft (Amendment) Act, 2020 was passed by the Parliament after the United Nation's aviation watchdog, International Civil Aviation Organisation (ICAO), raised questions about the 3 regulators of India functioning without statutory powers.

So, What are the Rules?

1. These rules will enable the Bureau of Civil Aviation Security (BCAS) to impose a fine of Rs 50 lakh to Rs 1 crore (depending on the size of the company) on airports and airlines if they fail to prepare and implement a security programme, or if they start operations without seeking a security clearance.

2. Basically, the BCAS is an attached office of the Ministry of Civil Aviation (India). It is the regulatory authority for civil aviation security in India.

3. Individuals will also face penalties ranging from Rs 1 lakh to Rs 25 lakh depending on the nature of offence.

4. Under the new rules, the BCAS will also be able to suspend or cancel an entity's airport security clearance and security programme.

5. To deal with the cyber security threats, the rules also require each entity to protect its information and communication technology systems against unauthorized use and prohibit disclosure of sensitive aviation security information.

6. The draft rules now authorize the airports to deploy private security agents instead of CISF (Central Industrial Security Force) personnel at "non-core areas" and assign security duties as per the recommendations of the National Civil Aviation Policy, 2016.

About the International Civil Aviation Organisation (ICAO)

1. It's a United Nations (UN) specialized agency which was established in 1944. It laid the foundation for the standards and procedures for peaceful global air navigation.

2. The 'Convention on International Civil Aviation' was signed on 7th December 1944 in Chicago.

3. This convention established the core principles permitting international transport by air, and also led to the creation of the ICAO.

4. One of the objective of ICAO is to promote the planning and development of international air transport so as to ensure the safe and orderly growth of international civil aviation throughout the world.

5. India is among its 193 members.

6. It is headquartered in Montreal, Canada.

9.9   Issue of Bluebugging

Why in News?

Several smartphones have their Bluetooth settings on discovery mode as it is a default setting, making it vulnerable to Bluebugging.

So, What is Bluebugging?

1. It's a form of hacking that let attackers access a device through its discoverable Bluetooth connection.

2. A hacker can gain unauthorized access to the apps and the device and can control them as per their wish through bluebugging.

3. Any Bluetooth-enabled device including True Wireless Stereo (TWS) devices or earbuds can become the victims of bluebugging.

4. Once a device or phone is bluebugged, a hacker can listen to the calls, read and send messages, steal and modify contacts etc.
5. Even the most secure smartphones like iPhones are vulnerable to such attacks.

Preventive Measures are:

1. Turning off Bluetooth and disconnecting paired Bluetooth devices when not in use.
2. Making Bluetooth devices undiscoverable from Bluetooth settings.
3. Updating the system software of the device to the latest version.
4. Limited use of public Wi-Fi.
5. Watch out the suspicious activities on your device.
6. Monitoring the sudden spikes in data usage.
7. Usage of latest anti-virus software.

9.10   19th Health Summit 2022

Why in News?

Recently, 15th Finance Commission_chairperson N.K. Singh addressed the Confederation of Indian Industry (CII)'s '19th Health Summit 2022' and highlighted various issues in the health sector.

So, What are the Recommendations/Issues Highlighted?

1. Inclusion of Health in the Concurrent List:
a) He recommended that the 'health sector' should be included in the 'Concurrent List'. Presently, it is there in the 'State List'.
b) He focused on universalising the health insurance to include 'the missing middle'.
c) The Missing Middle: People who are not rich enough to buy private health cover nor poor enough to qualify for government schemes.
2. Increasing Public Expenditure: There is a need to enhance public expenditure [on health] to 2.5% of the GDP by 2025.

3.Inter-State Variations on Health Spending:

a) The need is to recognise the large Inter-State variations on health spending and outcomes.
b) For instance, except Meghalaya, states are spending less than 8% of their Budget on the health sector, with the average being at 5.18% in 2018–19.
c) The per capita health spending of Bihar, Uttar Pradesh and Jharkhand is about half that of Kerala and Tamil Nadu.

4.Development Financial Institution:

a) The Finance Commission chief also suggested for setting up a development financial institution for the health sector.
b) Development Financial Institutions are the specialized institutions set up primarily to provide development/ project finance especially in developing countries. These are usually owned by national governments.

5.Restructuring Centrally Sponsored Schemes (CSS): Additionally, it was suggested that Centrally Sponsored Schemes (CSS) should be restructured to make them more flexible for states to adapt and innovate.

Scenario of the Healthcare Sector in India:

1. Healthcare industry comprises hospitals, medical devices, clinical trials, outsourcing, telemedicine, medical tourism, health insurance, medical equipment etc.

2. India's healthcare delivery system can be categorised into 2 major components - Public and Private.

a) The government (public healthcare system) includes limited secondary and tertiary care institutions in key cities and focuses on providing basic healthcare facilities in the form of Primary Healthcare Centres (PHCs) in rural areas.

b) The private sector provides a majority of secondary, tertiary, and quaternary care institutions with major concentration in metros, tier-I and tier-II cities.

3.Market Statistics:

a) The Indian healthcare sector is expected to record a 3-fold rise, growing at a CAGR (Compound Annual Growth Rate) of 22% between 2016–22 to reach USD 372 billion in 2022 from USD 110 billion in 2016.

b) In the Economic Survey of 2022, India's public expenditure on healthcare stood at 2.1% of GDP in 2021-22 against 1.8% in 2020-21 and 1.3% in 2019-20.

c) The Indian medical tourism market was valued at USD 2.89 billion in 2020 and is expected to reach USD 13.42 billion by 2026. Telemedicine is also expected to reach USD 5.5 billion by 2025.

Challenges with the Health Sector in India are:

1) Inadequate access to basic healthcare services such as shortage of medical professionals, a lack of quality assurance, insufficient health spending, and insufficient research funding are the biggest concerns.

2) India's public expenditure on healthcare is only 2.1% of GDP in 2021-22 while Japan, Canada and France spend about 10% of their GDP on public healthcare. Even neighbouring countries like Bangladesh and Pakistan have over 3% of their GDP going towards the public healthcare system.

3) Preventive care is undervalued in India, despite the fact that it has been shown to be quite beneficial for the patients in terms of unhappiness and financial losses.

4) In India, R&D and cutting-edge technology-led new projects receive little attention.

5) Policymaking is crucial in providing effective and efficient healthcare services. In India, the issue is of supply rather than demand, and policymaking can help.

6) In India, there is a shortage of doctors, nurses, and other healthcare professionals.

Way Forward

1. There is an urgent need to improve the infrastructure of public hospitals, which are overburdened as a result of India's large population.

2. The government should encourage private hospitals because they make a significant contribution and the difficulties are severe and cannot be tackled just by the government, the private sector must also engage.

3. To improve the sector's capabilities and efficiency, more medical personnel must be recruited.

9.11 Transport 4 All Challenges

Why in News?

Recently, the Minister Housing and Urban Affairs has launched the Transport 4 All Challenge Stage-2.

About Transport 4 All Challenge:

1. It is an initiative of the Ministry of Housing and Urban Affairs, Government of India.

2. To bring together cities, citizens, and start-ups to develop solutions that improve public transport to better serve the needs of all citizens.
3. It focuses on digital innovation and invites cities, citizens, and innovators to come together and develop digital solutions to improve public transport to better serve the needs of all citizens.

3 Stages of the Challenge:

Through Digital Innovation Challenge comprises 3 stages:

1. Stage I PROBLEM IDENTIFICATION: Cities, with the support of NGOs, identify key periodic problems that citizens and public transport operators face
2. Stage II SOLUTION GENERATION: Start-ups develop samples of solutions to improve public transport with inputs from cities and NGOs.
3. Stage III PILOT TESTING: Cities engage Start-ups for large-scale pilots and refine the solutions based on citizen feedback.

Significances of Transport 4 all Challenge:

1. The solutions which are developed as part of the Challenge aim to integrate formal and informal modes of public transport.
2. Solutions which prove the ability to meet the needs of citizens—those living in cities, would be conducted in selected cities across the country.

9.12   Shakti Policy

Why in News?

Recently, the Ministry of Power has announced a Scheme for Procurement of Total Power of 4500 MW for 5 years under B (v) of SHAKTI Policy.

- The scheme will operate on Finance, Own and Operate (FOO) basis.

What are the Key Features of the Scheme?

1. Under the scheme, PFC Consulting Ltd has invited bids for the supply of 4,500 MW.
2. PFC Consulting Limited (A wholly owned subsidiary of PFC Ltd) has been designated as the Nodal Agency by the Ministry of Power.
3. The Ministry of Coal has been requested to allocate around 27 MTPA (Million Tonnes per Annum) for this.
4. This scheme is expected to help the states that are facing power shortage and also help generation plants to increase their capacities.

What is SHAKTI Policy?

1. The Coal Linkage Policy known as SHAKTI (Scheme to Harness and Allocate Koyla Transparently in India) was launched by Ministry of Power (MoP) in 2017.

2. It provides coal linkages to power plants which lack fuel supply agreements (FSAs) through coal auctions.

<u>What are the objectives of the Shakti Scheme?</u>

1. The aim of the Shakti scheme is to ensure the availability of coal to all the Thermal Power Plants in a transparent way.
2. It is expected to be beneficial not just for the infrastructure sector, but also for the public sector banks which have huge loans unpaid at the end of the power companies.
3. The scheme also aims to reduce the dependence on imported coal and promote domestic industries.

9.13   Chhattisgarh Foundation Day

Why in News?

Recently, the 3rd edition of the 'National Tribal Dance Festival' to be held from 1st November to 3rd November, 2022 was inaugurated at Raipur, Chhattisgarh on the event of state foundation day.

1. Over 1,500 tribal artists from all around the India and 9 other countries, including Mozambique, Mongolia, Tongo, Russia, Indonesia, Maldives, Serbia, New Zealand and Egypt will perform at the event.

About Chhattisgarh

1. On 1st November 2000, 16 Chhattisgarhi speaking districts were carved out of Madhya Pradesh to form the state of Chhattisgarh.
2. It is surrounded by 7 states: Madhya Pradesh, Maharashtra, Andhra Pradesh, Telangana, Orissa, Jharkhand and Uttar Pradesh.
3. Capital of Chhattisgarh is 'Raipur'.
4. It is an important hub for the **production of steel** and electrical power in India, producing almost 15% of the total steel produced in India.
5. Chhattisgarh is mainly famous for its agriculture, engaging almost 80% of its work force.
6. It is also known as 'Dhan Ka Katora' meaning 'Bowl of Rice' for the production of rice.
7. It is the 10th largest state in India with an area of 1,35,190 sq-km.
8. The native language of the people of Chhattisgarh is Chhattisgarhi, however Hindi is also prominently used here.
9. The most familiar tribes found in the state are Miriam, Baiga, Kamars, Halbas, **Gonds**, Bhumja, Kawars, etc.
10. Few of the remarkable festivals celebrated by the tribal societies comprises Bastar Dussehra, Bastar Lokotsav, Koriya Mela, Fagun Wadai, Madai Festival, Goncha Festival, Pola Festival, and many others.
11. Mineral Resources:
a) It is the leading producer of minerals such as coal, iron ore and dolomite.
b) Moreover, considerable reserves of bauxite, limestone and quartzite are available in the state.
c) The state accounts for almost 35% of tin ore reserves of India. Chhattisgarh is the only state in India that produced tin concentrates.
12. Three National Parks located in the state are:
a) Indravati National Park   13. Important Rivers:
b) Guru Ghasidas National Park
c) Kanger Valley National Park

a) It is the part of the catchment area of 4 rivers mainly **Mahanadi, Ganga, Godavari and Narmada**.

b) Under this, the Mahanadi, Shivnath, Arpa, Indravati, Sabari, Leelagar, Hasdo, Pairi, and Sondur are the main rivers that flows through the state.

14. Wildlife Sanctuaries located in the state are:

a) Tamor Pingla Wildlife Sanctuary

b) Pamed Wildlife Sanctuary

c) Gormada Wildlife Sanctuary

d) Badalkhol Wildlife Sanctuary

e) Bhoramdeo Wildlife Sanctuary

f) Bhairamgarh Wildlife Sanctuary

g) Seramsot Wildlife Sanctuary

h) Barnawapara Wildlife Sanctuary

i) Sitanadi Wildlife Sanctuary

j) Nandan Van Wildlife Sanctuary

k) Python Forest Wildlife Sanctuary

l) Narsinghgarh Wildlife Sanctuary

m) Udanti Wild Buffalo Wildlife Sanctuary

15. Recently, the National Tiger Conservation Authority (NTCA) has designated the combined areas of the Guru Ghasidas National Park and Tamor Pingla Wildlife Sanctuary as a Tiger Reserve.

9.14   Issues with Over-The-Top (OTT) Platforms

Background

1. In India, watching Movies and TV shows has always been in the form of theatres and television but now-a-days, the improved technology has made movie watching more convenient through online streaming or Over-The-Top (OTT) services.

2. Over-the-top (OTT) video streaming accounted for almost 46% of the overall growth in Indian media and entertainment industry from 2017 to 2022.

3. However, there has been a bitter debate going on between telecom companies and OTT providers.

4. The telecom companies are alleging that OTTs are taking a 'free ride' on their infrastructure and should pay an access charge.

So, What are OTT platforms?

1. OTT are the platforms that provides audio and video hosting and streaming services.

2. They starts as a content hosting platform, but soon branched out into the production and release of short movies, feature films, documentaries and web-series themselves. Examples: Netflix, Hotstar, Amazon Prime Hulu, Pluto TV, and many more.

3. These platforms offer a range of content and use artificial intelligence to suggest users the content they are likely to view based on their past viewership on the platform.

4. Currently, India is emerging as one of the fastest growing OTT market in the world and is all set to emerge as the world's 6th largest by 2024.

Factors Responsible for the Growth of OTT Platforms in India are:

1. Increased Urbanization and Westernization: Migration to big cities, increased awareness and cultural changes has led to people developing interest in the stuff uploaded on OTT platforms.

2. Increased Access to Digital Services: High-speed mobile internet at affordable prices, doubling of internet users, increased adoption of digital payments, have given OTTs a competitive edge.

3. Democratization of Media: The OTT industry provides a platform to a number of small content producers and artists in India. It also helps in accessing regional films around the country as well as globally.

4. Increased Convenience: Limited Advertisements, Pause & Play options, flexibility to stream movies anywhere any time (e.g. while traveling) has led to growth of OTT platforms in India.

How OTT Platforms are Regulated in India?

1. In 2021, the Indian government announced new rules to regulate the Over-the-top (OTT) service providers and digital content providers in India.

2. The new rules are known as 'Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021'.

3. As per the new rules, OTT platforms will have to self-classify the content into 5 age-based categories: U (Universal), U/A 7 years, U/A 13 years, U/A 16 years, and A (Adult).

4. The rules also lay down a 'soft-touch self-regulatory architecture' for the OTT platforms and a 3-tier grievance redressal mechanism.

5. Every publisher should appoint a 'Grievance Officer' who will be based in India for receiving and redressing grievances within 15 days.

6. But there is currently no rule or authority in regulating pre-screen content on OTT platforms. However, the government has the powers to issue directives to block certain information to be in public access, under Section 69A of the IT Act, 2000.

Issues Associated with OTT Platforms in India

1. Lack of Direct Regulation: There is no separate law or body for the regulation of OTT platforms. They are only governed by the Ministry of Electronics and Information Technology (MeITy).

2. Threat of Cybercrime: In the process of subscribing to an OTT platform, people share their confidential information like bank details, credit card access, which has the potential to be misused and can lead to cybercrime.

3. Effect on Telecom Revenue Stream: For voice calls and SMS messages, OTT platforms like WhatsApp and Telegram use the network infrastructure provided by telecom service providers like Airtel and Jio. Telecom Service Providers (TSPs) allege that these features negatively affect their revenues

4. Quality of Content: Critics have always pointed out that the content on these platforms contains has nudity and vulgarity, which is negatively affecting the youth and due to the lack of censorship, content on OTT platforms can disrupt social harmony and the moral fabric of society.

Conclusion and Way Forward

1. Considering the present situation, there is a need for an unbiased regulatory body to regulate the contents on OTT platforms.

2. The government should deploy strict guidelines for production of content on OTT and "light-touch regulations" for OTT communication services like WhatsApp, Signal and Telegram, keeping consumer interest and cyber fraud issues in mind.

3. The Ministry of Information and Broadcasting should ensure the quality of digital content being produced on OTT platforms.

9.15   Guru Nanak Dev Jayanti

Why in News?

On 8th November 2022, the 553rd birth anniversary of Guru Nanak Dev was celebrated.

So, Who was Guru Nanak Dev?

1. He was born in 1459 at Talwandi Rai Bhoe village near Lahore, which was later renamed as 'Nankana Sahib'.

2. He was the 1st of the 10 Sikh gurus and the founder of Sikhism.

3. His biggest contributions are:

a) He initiated inter-faith dialogue way back in the 16th century and had conversations with most of the religious denominations of his times.

b) He also wrote compositions which were included in the Adi Granth, compiled by Guru Arjan Dev (1563-1606), the 5th Sikh guru.

c) This came to be known as 'Guru Granth Sahib' after the additions made by the 10th Sikh guru – Guru Gobind Singh (1666-1708).

d) He advocated the 'Nirguna' (devotion to and worship of formless divine) form of bhakti.

e) He even rejected sacrifices, ritual baths, image worship etc.

f) He also set up rules for collective worship (Sangat) involving collective recitation.

g) He gave the basic mantra of 'Ek Onkar' to his followers and insisted on treating all human beings equally, without discriminating on the basis of caste, creed and gender.

4. He died in 1539 at Kartarpur, Punjab.

What is the Relevance of Guru Nanak Dev for Modern India?

1. Tried to build an Egalitarian Society: His idea of equality can be easily understood by the following innovative social institutions, as given by him:

a) Langar: Collective cooking and sharing of food.

b) Pangat: Eating food together without distinctions of high and low caste.

c) Sangat: Collective decision making.

2. Creating a Just Society:

a) He placed the motto of "kirat karo, Naam Japo and Vand Chhako" (work, worship and share) before his disciples.

b) He stood for karma as the basis of dharma and he transformed the idea of spiritualism into the ideology of social responsibility and social change.

c) He advocated the concept of "dasvandh" or donating 1/10 of one's earnings among needy persons.

3. Promoted Social Harmony:

a) According to him, the whole world is God's creation, and all are born equal. There is only 1 universal creator i.e. "Ek Onkar Satnam".

b) Apart from it, forgiveness, patience and kindness are the core of his teachings.

4. Gender Equality:

a) According to him, "Women as well as men share the grace of God and are equally responsible for their actions to him."

b) Respect for women and gender equality is perhaps the most important lesson to be learnt from his life.

5. Bringing Peace:

a) As per the Indian philosophy, a Guru is the one who shows the right path and his teachings were directed towards the right path.

b) In this context, the ideas of Guru Nanak Dev can help promote peace, equality and prosperity across the world.

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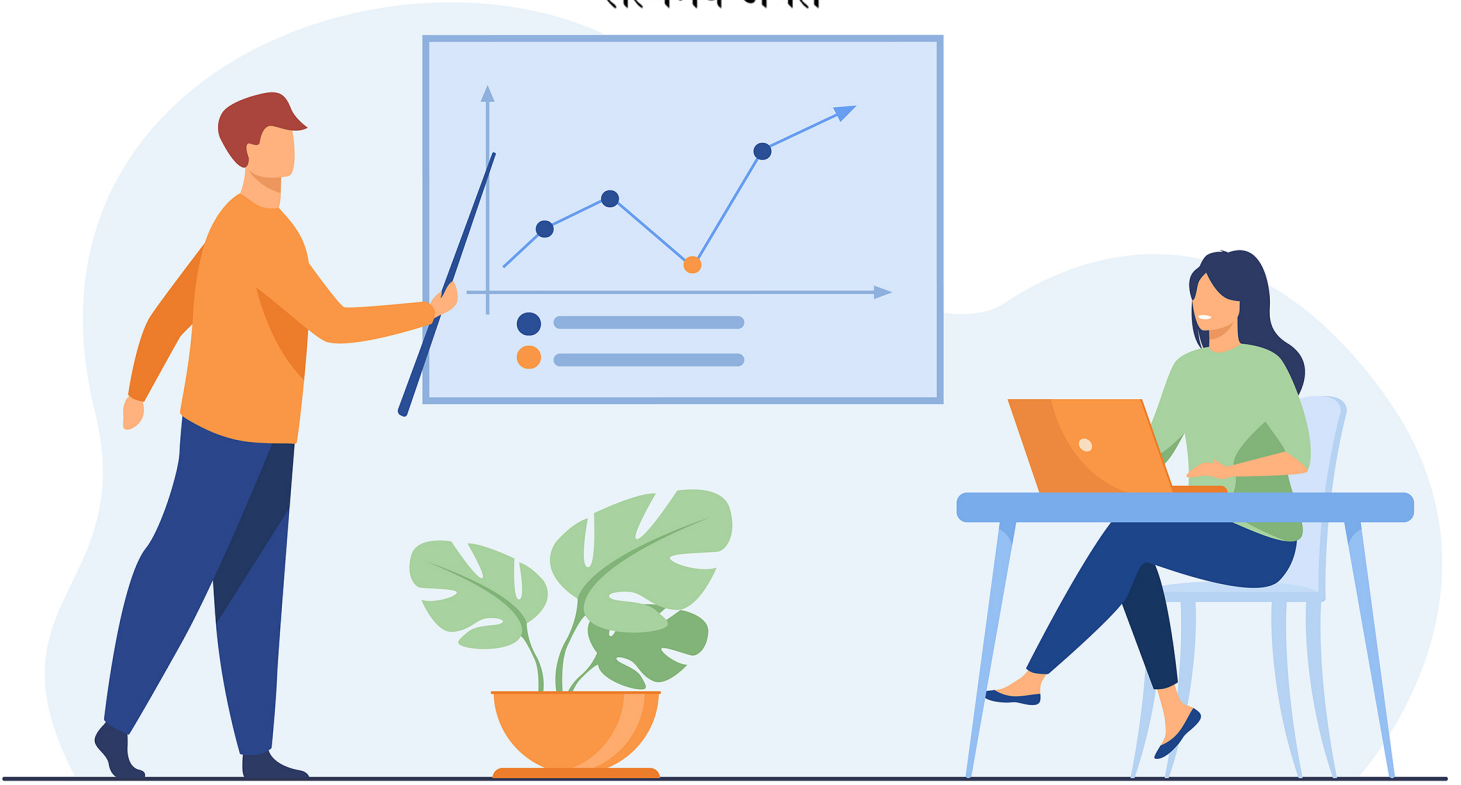
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