



INSIGHTSIAS

SIMPLIFYING IAS EXAM PREPARATION

CURRENT AFFAIRS

OCTOBER 2019

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GENERAL STUDIES – 1

Topics: Indian culture will cover the salient aspects of Art Forms, Literature and Architecture from ancient to modern times.

1. Chalukya Dynasty

What to study?

For Prelims: Recent findings and their significance, Chalukya- spread, ruling, key features and cultural contributions.

Context: Inscriptions found on an ancient temple at Huligemmana Kolla near **Pattadakalu in Karnataka** indicate that the place may have once been the royal burial site of the Chalukya dynasty.

Background:

There are eleven temples with lingas and a tower developed during the Chalukya dynasty and another linga without the tower, which has an inscription on it stating that it served as the funerary casket-bearing shrine of **Vikramaditya-II**. This inscription claims the spot served as a royal burial site.

Popular belief was that these temples are a depiction of the holy Jyotirlinga. It is now found that these temples are nothing but the graves of the Chalukyan royal family.

Who are Chalukyas?

Ancient dynasty who ruled large parts of southern and central India between **the 6th and the 12th centuries**.

During this period, they ruled as three related yet individual dynasties:

1. The earliest dynasty, known as the "Badami Chalukyas", ruled from Vatapi (modern Badami) from the middle of the 6th century.
2. After the death of Pulakeshin II, the Eastern Chalukyas became an independent kingdom in the eastern Deccan. They ruled from Vengi until about the 11th century.
3. The Western Chalukyas, of 10th century ruled from Kalyani (modern Basavakalyan) until the end of the 12th century.

Art and Architecture:

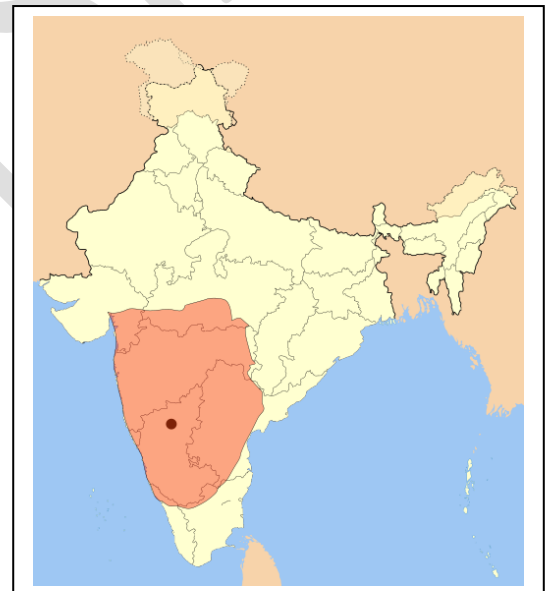
They built cave temples depicting both religious and secular themes. The temples had beautiful mural paintings also.

1. The temples under the Chalukyas are a good example of **the Vesara style of architecture**. This is also called the Deccan style or Karnataka Dravida or Chalukyan style. It is a combination of Dravida and Nagara styles.
2. **Pattadakal**: is a UNESCO World Heritage site. There are ten temples here – 4 in Nagara style and 6 in Dravida style. Virupaksha temple and Sangameshwara Temple are in Dravida style. Papanatha temple is in Nagara style.

Facts for prelims:

1. Pattadakal is a complex of 7th and 8th century CE Hindu and Jain temples in northern Karnataka.
2. Located on the west bank of the **Malaprabha** River.
3. The monument is a protected site under Indian law and is managed by the Archaeological Survey of India (ASI).
4. Other names this place was known by were Kisuvolal meaning "valley of red soil", Raktapura meaning "city of red", and Pattada-Kisuvolal meaning "red soil valley for coronation".

Sources: the Hindu.



2. Skandagupta

What to study?

For Prelims and mains: His legacy, contributions and inscriptions.

Context: Union home minister Amit Shah recently inaugurated an international seminar on the role of **Gupta dynasty emperor Skandagupta** at Banaras Hindu University in Varanasi. Extolling the greatness of Skandagupta, Shah said history has been unfair to Gupta period rulers.

The Gupta period is known as the golden period of ancient Indian history and **Skandagupta Vikramaditya is known as the Saviour of India as he successfully fought the battle against the invading Huns.**

Who is Skandagupta?

1. He ascended the throne in 455 AD and ruled till 467 AD.
2. During the 12 year rule, he not only defended the great culture of India but also from external aggression and defeated the Huns (**Bhitari pillar inscription**), who had invaded India from the north west.
3. **By defeating Pushyamitras** during his initial years of ascendancy, Skandagupta proved his ability to rule and took upon himself the title of Vikramaditya.
4. **The Junagadh rock**, which contains inscription of the earlier rulers Ashoka and Rudradaman, has an inscription engraved on the orders of Skandagupta's governor Parnadatta. **The inscription states that Skandagupta appointed governors of all provinces, including Parnadatta as the governor of Surashtra.**
5. **Skandagupta issued five types of gold coins:** Archer type, King and queen type, Chhatra type, Lion-slayer type and Horseman type.
6. **His silver coins are of four types:** Garuda type, Bull type, Altar type and Madhyadesha type.

Sources: the Hindu.

3. Guru Ravidas

What to study?

For Prelims and mains: Contributions and significant role in Bhakti movement.

Context: Yielding to the protests against the Supreme Court-directed demolition of **a Guru Ravidas temple** in south Delhi, the Centre has agreed to allot the same site to the devotees to construct a new temple.

Who is Guru Ravidas?

1. He was a poet and saint of the **Bhakti movement**.
2. Born in Varanasi to the 'untouchable' leather tanners caste.
3. He is believed to be a disciple of the bhakti saint-poet **Ramananda** and a **contemporary of the bhakti saint-poet Kabir**.
4. One of his famous disciples was the saint, **Mirabai**.
5. Ravidas' devotional songs were included in the Sikh scriptures, **Guru Granth Sahib**.
6. The **Panch Vani text of the Dadupanthi** tradition within Hinduism also includes numerous poems of Ravidas.
7. Ravidas **taught** removal of social divisions of caste and gender, and promoted unity in the pursuit of personal spiritual freedoms.
8. Among Ravidas's moral and intellectual achievements were the conception of "**Begampura**", a city that knows no sorrow; and a society where caste and class have ceased to matter.

Sources: the Hindu.

4. Vishwa Shanti Stupa

What to study?

For Prelims: About Vishwa Shanti Stupas- significance, key facts on Rajgir.

For Mains: Teachings of Buddha and Mahaveer- significance.

Context: Golden Jubilee of *Vishwa Shanti Stupa in Rajgir.*

About Vishwa Shanti Stupa (World peace pagoda):

- Constructed atop **the Ratnagiri Hill**, it is **the world's highest peace pagoda**.
- Conceptualised by neo-Buddhist organisation **Nipponzan Myohoji and built by Japanese monk Fujii Guruji**.
- Built completely with marble, **the stupa comprises four golden statues of Lord Buddha** with each representing his life periods of birth, enlightenment, preaching and death.
- **There are 7 Peace Pagoda or Shanti Stupas in India**, other Stupas are Global Vipassana Pagoda Mumbai, Deekshabhoomi Stupa Nagpur and Buddha Smriti Park Stupa Patna.

About Rajgir:

- The **first Buddhist Council**, immediately after the **Mahaparinirvana** of Lord Buddha, was convened at this place which presently is called Rajgir.
- It was at the **Gridhakuta**, the hill of the vultures, where Buddha made **Bimbisara** convert to Buddhism.
- Rajgir is also known as **Panchpahari** as it is surrounded by five holy hills.
- The legend has it that the ancient city **Rajagriha** existed even before Lord Buddha attained enlightenment. It was **the ancient capital city of the Magadh rulers** until the 5th century BC when **Ajatashatru** moved the capital to **Pataliputra** (which is now known as Patna).
- **Lord Mahavira** too spent 14 years of his life at Rajgir and nearby areas.

Sources: pib.

5. Kartarpur Sahib Corridor Agreement

What to study?

For Prelims and Mains: Location and significance of the corridor, issues involved in its construction.

Context: India signs **the Kartarpur Sahib Corridor Agreement** with Pakistan.

The Agreement lays down a **formal framework for operationalisation of the Kartarpur Sahib Corridor**.

The highlights of the Agreement are:

1. Indian pilgrims of all faiths and persons of Indian origin can use the corridor;
2. The travel will be Visa Free;
3. Pilgrims need to carry only a valid passport;
4. Persons of Indian Origin need to carry OCI card along with the passport of their country;
5. The Corridor is open from dawn to dusk. Pilgrims travelling in the morning will have to return on the same day;
6. The Corridor will be operational throughout the year, except on notified days, to be informed in advance;
7. Pilgrims will have a choice to visit as individuals or in groups, and also to travel on foot;
8. India will send the list of pilgrims to Pakistan 10 days ahead of travel date. Confirmation will be sent to pilgrims 4 days before the travel date;
9. The Pakistan side has assured India to make sufficient provision for 'Langar' and distribution of 'Prasad'.

What is the “Kartarpur Corridor” project?

The corridor – often dubbed as the “*Road to Peace*” – will **connect Gurdwara Darbar Sahib in Pakistan’s Kartarpur with Dera Baba Nanak shrine in India’s Gurdaspur district.**



The shrine and its significance:

- The gurdwara in Kartarpur stands on the bank of the *Ravi*, about 120 km northeast of Lahore.
- It was here that **Guru Nanak assembled a Sikh community and lived for 18 years until his death in 1539.**
- The shrine is visible from the Indian side, as Pakistani authorities generally trim the elephant grass that would otherwise obstruct the view.
- Indian Sikhs gather in large numbers for darshan from the Indian side, and binoculars are installed at Gurdwara Dera Baba Nanak.

Sources: pib.

6. Paramahansa Yogananda

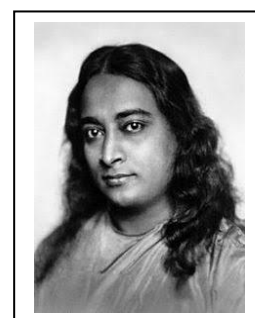
What to study?

For Prelims and mains: About Yogananda, his teachings and Kriya Yoga.

Context: Finance Minister Releases Commemorative Coin on **Paramahansa Yogananda to Mark his 125th Birth Anniversary.**

About Paramahansa Yogananda:

1. Born in 1893, he was **an Indian monk, yogi and guru** who introduced millions to the teachings of meditation and Kriya Yoga through his organization **Self-Realization Fellowship (SRF) / Yogoda Satsanga Society (YSS) of India.**
2. He is considered as **the “Father of Yoga in the West.”**
3. He was **the first major Indian teacher to settle in America, and the first prominent Indian to be hosted in the White House.**
4. He published his book **Autobiography of a Yogi** in 1946.



What is Kriya Yoga?

The “science” of Kriya Yoga is the foundation of Yogananda’s teachings.

Kriya Yoga is **“union (yoga) with the Infinite through a certain action or rite (kriya).**

- The Kriya Yogi mentally directs his life energy to revolve, upward and downward, around the six spinal centers (medullary, cervical, dorsal, lumbar, sacral, and coccygeal plexuses) which correspond to the twelve astral signs of the zodiac, the symbolic Cosmic Man.
- One-half minute of revolution of energy around the sensitive spinal cord of man effects subtle progress in his evolution; that half-minute of Kriya equals one year of natural spiritual unfoldment.

Sources: pib.

7. Tipu Sultan

What to study?

For Prelims: Contributions of Tipu.

For Mains: A critical analysis of Controversies surrounding, what is the way out?

Context: Karnataka Chief Minister B.S. Yediyurappa has dropped hints that lessons on **Tipu Sultan** may be dropped from State syllabus textbooks, saying that the issue would be “reviewed.”

Concerns:

The “removal” of Tipu from textbooks will fundamentally alter the history of early modern India, and make invisible one of the key individuals in the society and politics of South India in the second half of the 18th century, when the East India Company was rapidly expanding Britain’s colonial footprint over the country.

Background:

The controversy surrounding Tipu Sultan, the 18th century ruler of Mysore, has emerged in Karnataka once again. Previously, it was over the celebrations of his Jayanti and now over lessons related to him in the text books.

Who was Tipu Sultan?

He was **a ruler of the Kingdom of Mysore and the eldest son of Sultan Hyder Ali of Mysore.**

In the wider national narrative, Tipu has so far been seen as **a man of imagination and courage, a brilliant military strategist** who, in a short reign of 17 years, mounted the most serious challenge the Company faced in India.

Contributions of Tipu Sultan:

1. Fought **the first Anglo-Mysore War (1767-69)** at the age of 17 and subsequently, against the **Marathas and in the Second Anglo-Mysore War (1780-84).**
2. He fought Company forces **four times** during 1767-99 and was killed defending his capital Srirangapatnam in **the Fourth Anglo Mysore War.**
3. Tipu **reorganised his army along European lines**, using new technology, including what is considered **the first war rocket.**
4. Devised **a land revenue system** based on detailed surveys and classification, in which **the tax was imposed directly on the peasant, and collected through salaried agents in cash**, widening the state’s resource base.
5. **Modernised agriculture, gave tax breaks for developing wasteland, built irrigation infrastructure and repaired old dams, and promoted agricultural manufacturing and sericulture.** Built **a navy** to support trade.
6. Commissioned **a “state commercial corporation”** to set up factories.

Why there are so many controversies surrounding him?

1. There are concerns raised against Tipu Sultan on nearly every historical figure, perspectives differ.
2. Haider and Tipu had strong territorial ambitions, and invaded and annexed territories outside Mysore. In doing so, they burnt down **entire towns and villages, razed hundreds of temples and churches, and forcibly converted Hindus.**
3. The historical record has Tipu boasting about having forced **“infidels” to convert to Islam, and of having destroyed their places of worship.**
4. The disagreement then, is between those who see the “Tiger of Mysore” as a bulwark against colonialism and a great son of Karnataka, and those who point to **his destruction of temples and forced conversions of Hindus and Christians to accuse him of tyranny and fanaticism.**

Conclusion and way ahead:

Placing a personality in binary terms, i.e. extreme good or bad is **neither rational nor progressive.**

- Historical perspectives should be critically analysed only to study from the past so as to live in a better present and build a better tomorrow.
- Attempts to see such narratives in political, communal or religious lines to create divisions in society should be vehemently opposed.
- **It is improper to judge figures of the past by canons of the present.** History should be used to teach people about tolerance and brotherhood rather than dividing based on communal lines.

Sources: the Hindu.

Topics: Modern Indian history from about the middle of the eighteenth century until the present- significant events, personalities, issues.

1. Veer Savarkar

What to study?

For Prelims and mains: Contributions and role in freedom struggle.

Context: Had it not been for **Vinayak Damodar Savarkar**, the 1857 uprising would have been viewed through the lens of the British, Union Home Minister Amit Shah said recently.

Who is Veer Savarkar?

1. Born on May 28, 1883 in Bhagur, a city in Maharashtra's Nashik.
2. In his teenage, Savarkar formed a youth organization. Known as **Mitra Mela**, this organization was put into place to bring in national and revolutionary ideas.
3. He was **against foreign goods and propagated the idea of Swadeshi**. In 1905, he burnt all the foreign goods in a bonfire on Dussehra.
4. He championed atheism and rationality and also disapproved orthodox Hindu belief. In fact, he even dismissed cow worship as superstitious.
5. In his book, **The History of the war of Indian Independence**, Savarkar wrote about the guerilla warfare tricks used in 1857 Sepoy Mutiny.
6. The book was banned by Britishers, but **Madam Bhikaji Cama published** the book in Netherlands, Germany and France, which eventually reached many Indian revolutionaries.
7. He was arrested in 1909 on charges of plotting **an armed revolt against the Morle-Minto reform**.
8. He also Worked on abolishment of untouchability in Ratnagiri. Dr Babasaheb Ambedkar also compared his work to Lord Buddha.
9. He founded **the two-nation theory in his book 'Hindutva'** calling Hindus and Muslims two separate nations. In 1937, Hindu Mahasabha passed it as a resolution.
10. It was in year 1964, when Savarkar declared his wish to **attain Samadhi and started hunger-strike on February 1, 1966** and passed away on February 26, 1966. He believed that his purpose of life is solved as India has gained Independence.
11. In 2002, Port Blair airport at Andaman and Nicobar's Island was renamed after Veer Savarkar International Airport.

Sources: the Hindu.

2. Azad Hind Government

What to study?

For Prelims and Mains: Particulars of Azad Hind Government- objectives, accomplishments and other related key facts.

Context: 76th anniversary of the formation of Azad Hind Government on 21st October, 2019.

About Azad Hind Government:

Netaji Subhash Chandra Bose had announced the establishment of the provisional government of Azad Hind in occupied Singapore in 1943.

1. Known as **Arzi Hukumat-e-Azad Hind**, it was **supported by the Axis powers of Imperial Japan, Nazi Germany, the Italian Social Republic, and their allies**.
2. With this, Bose had launched a struggle to free India from British rule under the banner of **the provisional government-in exile during the latter part of the Second World War**.

Why was it set up?

Bose was convinced that **armed struggle was the only way to achieve independence for India**. Under his provisional government, **the Indians living abroad had been united**.

The Indian National Army drew ex-prisoners and thousands of civilian volunteers from the Indian expatriate population in Malaya (present-day Malaysia) and Burma (now Myanmar).

The formation:

October 21, 1943: Announced the setting up of the provisional government on the battlefield of Singapore which was once the bulwark of the British Empire.

Under the provisional government:

1. Bose was **the head of the state, the prime minister and the minister for war and foreign affairs.**
2. **Captain Lakshmi** headed the women's organisation.
3. **S A Ayer** headed the publicity and propaganda wing.
4. **Rash Behari Bose** was designated as the supreme advisor.

The provisional government was also formed in the Japanese-occupied Andaman and Nicobar Islands. The islands were reoccupied by the British in 1945.

How it came to an end?

Bose's death was seen as the end to the Azad Hind movement. The Second World War, also ended in 1945 with the defeat of the Axis powers.

Sources: pib.

3. Tanaaji Malusare and the Battle of Singhadgad

What to study?

For Prelims and mains: About Tanaaji, the battle and its outcomes.

Context: A Bollywood movie is being made based on **Subedar Tanaaji Malusare.**

Who was Tanaaji Malusare?

- He was a **Maratha military leader and a close aide of Chhatrapati Shivaji.**
- Hailing from the **Malusare clan**, Tanaaji is popularly remembered for **the Battle of Singhadgad** that took place in the year 1670.
- In the battle, **Tanaaji fought against Udaybhan Rathore**, a formidable Rajput warrior, who was put in charge of **Fort Kondhana (later named Singhadgad) by Jai Singh.**

Battle of Singhadgad, 1670:

In the year 1665, **the Treaty of Purandar** was signed between Jai Singh and Shivaji. Amongst several demands, the treaty had required the Maratha ruler to give up **Fort Kondhana** to the Mughals. After it was taken over by the Mughals, **the fort was guarded by Rajput, Pathan and Arab troop guards and was said to be impenetrable.**

This deeply disturbed and enraged Shivaji's mother **Rajmata Jijabai.** Upon knowing this, Shivaji entrusted Tanaaji, the only man he could think of capable of reconquering the fort Kondhana at any cost.

Outcomes of the battle:

1. Even though the attack by Tanaaji took the Mughals by surprise, the latter nonetheless outnumbered the Marathas.
2. The two clashed for long. Malusare was gravely wounded in the fight and died.
3. Enraged by the death of their general, the Marathas fought under the leadership of his brother, **Suryaji Malusare**, and eventually vanquished the enemy.
4. The fort was renamed as **Singhadgad (lion's fort) by Shivaji** to honour Tanaaji.

Sources: the Hindu.

The Freedom Struggle – its various stages and important contributors /contributions from different parts of the country.

1. Satnami Rebellion

What to study?

For Prelims and mains: Who are Satnamis? Why they revolted against Mughal Empire? Outcomes and significance.

Who are Satnamis?

1. Originally, they were **a militant sect of Hindu Worshippers**.
2. Founded by a saint named "**Birbhan**" in 1657 in Narnaul in Haryana.
3. The major religious activity of this sect is **to chant and meditate the true names (Sat-Nam) of God**, specially Rama and Krishna.
4. This sect is **thought to be an offshoot of Ravidasi sect** and comprised of lower strata of the Hindu society, particularly, leather workers, sweepers, carpenters, Goldsmiths etc.
5. The followers of this sect kept their heads shaven (thus called **Mundiya**s) and abstained from liquor and meat.
6. The religious granth of the Satnamis is called **Pothi**.

The revolt of 1672:

1. In 1672, they rebelled against the mighty Mughal Empire.
2. The revolt triggered when a Mughal soldier killed a Satnami. The Satnamis killed the soldier in revenge and in turn Mughal soldiers were sent.
3. Satnamis attacked Narnaul, the main township in the area and destroyed the Mughal garrison. **They even set up their own administration.**
4. Next, they marched towards Shahjahanabad (old Delhi), armed with the latest European-designed muskets that their leader had taught them to make.
5. The rebellion was **crushed when Aurangzeb himself took personal command** and sent 10,000 troops with artillery to crush the Satnamis.

Other reasons for the revolt:

The killing of the youth may have been the immediate trigger, the reasons for the revolt were to do with the growth of the Satnami sect. The entrenched caste structure of the era forced marginalised groups to join the fold and they protested against the high taxation policies. Their rise was seen as a threat by the supporters of the Mughal administration, the upper castes.

Conclusion:

Though the Satnami rebellion was crushed, its memory endures to this day. That a group of marginalised people fought the systemic oppression in society, established a new community and defended it.

Sources: the Hindu.

Topics: Role of women and women's organization.

1. Kanyashree scheme

What to study?

For Prelims: Key features of the Scheme.

For Mains: Significance and performance of the scheme.

Context: The state government of West Bengal is setting up **Kanyashree University** in Nadia district and **Kanyashree colleges across the state so as to empower girls.**

About Kanyashree scheme:

What is it? Kanyashree is **a conditional cash transfer scheme** aiming at improving the status and wellbeing of the girl child by incentivising schooling of teenage girls and delaying their marriages until the age of 18. It received the United Nations Public Service Award last year.

Performance of the scheme: Through the initiative, cash was deposited into the bank account of girls for every year they remained in school and were unmarried. This initiative led to a “drastic reduction in child marriage, increase in female education and female empowerment.”

Facts for prelims:

The United Nations, in 2017, awarded the West Bengal government **the first place for Public Service for its “Kanyashree” scheme.**

Sources: the hindu.

2. Kanya Sumangala Yojana

What to study?

For Prelims and mains: Key features and significance of the programme.

Context: *Kanya Sumangala Yojana* to be launched for girl child in UP.

Key features:

1. It will provide a fund worth Rs 15000 to every family where a girl child is born. The amount will be released to the family in a phased manner.
2. The scheme has been designed in a way that the parents will have to take proper care of the girl child with respect to her health and education and other aspects, in order to get the benefit.

Sources: the Hindu.

Topics: Population and associated issues, poverty and developmental issues.

1. Global Hunger Index

What to study?

For Prelims: GHI- key facts, Performance of India and other countries.

For Mains: GHI- findings on India, concerns and challenges, remedies.

Context: The **2019 Global Hunger Index** report has been released.

The GHI ranks countries on a 100-point scale, with 0 being the best score (no hunger) and 100 being the worst. Values less than 10 reflect low hunger, values from 20 to 34.9 indicate serious hunger; values from 35 to 49.9 are alarming; and values of 50 or more are extremely alarming.

What is Global Hunger Index?

The report **is a peer-reviewed publication released annually by Welthungerhilfe and Concern Worldwide.**

The GHI scores are based on a formula that captures three dimensions of hunger—**insufficient caloric intake, child undernutrition, and child mortality—using four component indicators:**

1. **UNDERNOURISHMENT:** the share of the population that is under-nourished, reflecting insufficient caloric intake
2. **CHILD WASTING:** the share of children under the age of five who are wasted (low weight-for-height), reflecting acute undernutrition.
3. **CHILD STUNTING:** the share of children under the age of five who are stunted (low height-for-age), reflecting chronic undernutrition.
4. **CHILD MORTALITY:** the mortality rate of children under the age of five.

Key findings:

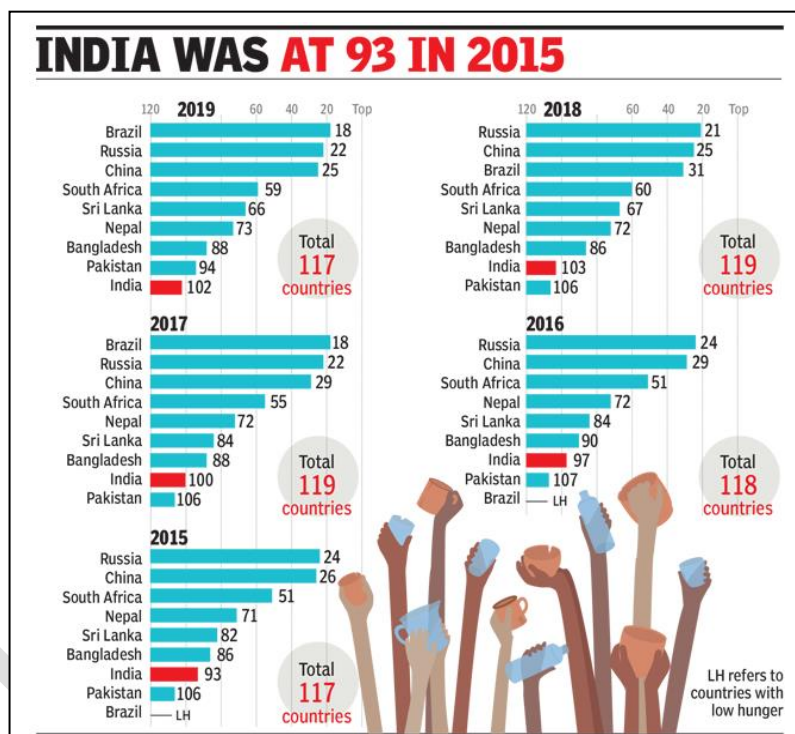
Global scenario:

1. The report is **topped by Central African Republic.**
2. It is becoming difficult to feed the world due to climate change.
3. While there has been progress in reducing hunger, but the gains are now being threatened and severe hunger persists in many regions across the world.

- Multiple countries have higher hunger levels now than in 2010, and approximately 45 countries are set to fail to achieve low levels of hunger by 2030.
- Among the 117 countries, 43 have “serious” levels of hunger.** The Central African Republic is in the “extremely alarming” level in the hunger index.
- The Global Hunger Index recommends various steps the countries could take to tackle this serious problem:** Prioritizing resilience among the most vulnerable groups, better response to disasters, addressing inequalities, action to mitigate climate change are among measures suggested in the report.

India’s ranking:

- India **ranked 102** on the index among 117 qualifying countries with a score of 30.3. Even North Korea, Niger, Cameroon fared better than India.
- India bagged the top spot in **child wasting rate** in the world with an increase of 4.3 percentage points in nine years.
- Around 90 per cent of children aged between 6 and 23 months in the country don’t even get minimum required food.
- Despite the Swachh Bharat campaign, **open defecation is still practiced in India**. It jeopardises the population’s health and severely impacts children’s growth and their ability to absorb nutrients.



Concerns for India:

- These findings point at a serious food crisis since wasting is “a strong predictor of mortality among children under five and is usually the result of acute significant food shortage and/or disease.
- India’s hunger indicators have a huge impact on the total indicators of the region owing to its large population.
- The data shows that India's poor scores were pulling down South Asia to a point where it does worse than even sub-Saharan Africa.

What needs to be done?

In India, to combat the malnutrition levels both **immediate and long term interventions are needed.**

- Around 85 to 90% of wasting can be managed at the community level.
- Now, the nutritional rehabilitation centres are coming up across the country. It can help in taking care of the institutional needs of the children who are already malnourished.
- But to prevent it from happening, mothers need to be educated about nutrition at anganwadis, access to clean drinking water and sanitation has to be ensured, and livelihood security is needed.
- However, **for immediate intervention**, nutritional formulation needs to be made available at community level.
- The **government can utilise the existing network of public distribution system**, have the self-help groups prepare packaged, portioned nutritional formulations to help the moderately malnourished before wasting happens.

Sources: the Hindu.

Mains Question: Why despite India being a large agricultural country a large population is malnourished? Discuss in detail the reasons and challenges associated with malnutrition in India.

2. What is a Randomised Controlled Trial?

What to study?

For Prelims and mains: What is RTC? Why is it used, significance and criticisms.

Context: The new Economics Nobel laureates - Abhijit Banerjee, Esther Duflo and Michael Kremer - are considered to be instrumental in using **randomised controlled trials** to test the effectiveness of various policy interventions to alleviate poverty.

What is a randomised controlled trial?

It is an experiment that is designed to **isolate the influence that a certain intervention or variable has on an outcome or event.**

Why is randomised controlled trial so popular?

1. At any point in time, there are **multiple factors that work in tandem to influence various social events.**
2. RCTs allow economists and other social science researchers **to isolate the individual impact that a certain factor alone has on the overall event.**
3. **For instance**, to measure the impact that hiring more teachers can have on children's learning, researchers must control for the effect that other factors such as intelligence, nutrition, climate, economic and social status etc., which may also influence learning outcomes to various degrees, have on the final event.
4. Randomised controlled trials promise to overcome this problem through the use of randomly picked samples.

Significance:

Many development economists believe that RCTs can help governments to find, in a thoroughly scientific way, the most potent policy measures that could help end poverty rapidly.

Criticisms of randomised controlled trials:

As per economist **Angus Deaton**, who won the economics Nobel Prize in 2015, "Understanding and misunderstanding randomised control trials" that simply choosing samples for an RCT experiment in a random manner does not really make these samples identical **in their many characteristics. While two randomly chosen samples might turn out to be similar in some cases, he argued, there are greater chances that most samples are not really similar to each other.**

Other economists argue that **social science research, including research in the field of development economics, may be inherently unsuited for such controlled research** since it may be humanly impossible to control for multiple factors that may influence social events.

Sources: the Hindu.

Topics: Important Geophysical phenomena such as earthquakes, Tsunami, Volcanic activity, cyclone etc., geographical features and their location- changes in critical geographical features (including water-bodies and ice-caps) and in flora and fauna and the effects of such changes.

1. Ozone hole

What to study?

For Prelims and Mains: About Ozone hole, how it is formed, ozone layer, CFCs and measures to prevent.

Context: During September and October, the annual ozone hole over the Antarctic reached its peak extent of 16.4 million sq km on September 8, then shrank to less than 10 million sq km. This **has been the smallest observed since 1982.** NASA has described it as great news for the Southern Hemisphere.

Why it's small this year?

There have been abnormal weather patterns in the atmosphere over Antarctica. In warmer temperatures like this year, fewer polar stratospheric clouds form and they don't persist as long, limiting the ozone-depletion process.

What is ozone layer?

A layer of ozone envelops the Earth and **keeps damaging ultraviolet, or UV, radiation from reaching living things on the planet's surface.**

The ozone layer **exists mainly in the stratosphere**, a layer of the atmosphere that reaches from 10 to 50 kilometers (about 6 to 30 miles) above the Earth's surface.

What is ozone hole?

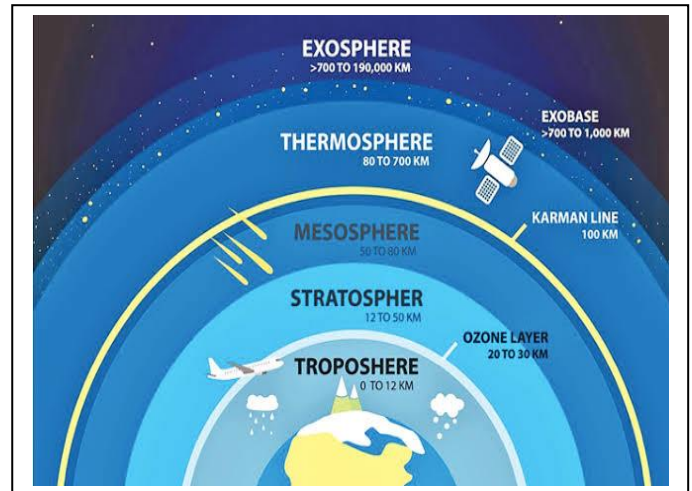
The ozone hole is a region of depleted layers of ozone above the Antarctic region, whose creation is linked to increased cases of skin cancer.

Manufactured chemicals deplete the ozone layer. Each spring over Antarctica, atmospheric ozone is destroyed by chemical processes. This creates the ozone hole, which **occurs because of special meteorological and chemical conditions that exist in that region.**

Factors responsible for the depletion of ozone:

Depletion of ozone is due to many factors, **the most dominant of which is the release of chlorine from CFCs (Chlorofluorocarbons)** which destroys the ozone. CFCs are released by products such as hairsprays, old refrigerators etc.

Sources: Indian Express.



2. El Niño

What to study?

For Prelims and Mains: ENSO- El Nino and La Nia- causes, effects and impacts, global climate change and ENSO cycle.

Context: In a new study, researchers have found that **because of climate change, extreme El Niño events are likely to become more frequent.**

Key findings:

- There is a shift in El Niño behaviour since the late 1970s.
- All events beginning in the eastern Pacific occurred prior to that time, while all events originating in the western-central Pacific happened since then.
- Therefore, **climate change effects have shifted the El Niño onset location from the eastern Pacific to the western Pacific, and caused more frequent extreme El Niño events.**

What is El Nino?

El Nino is **a climatic cycle characterised by high air pressure in the Western Pacific and low air pressure in the eastern.**

During this event, **there is a warming of the sea surface temperature in the eastern and central equatorial Pacific Ocean.**

It is **one phase of an alternating cycle known as El Niño Southern Oscillation (ENSO).**

What causes El Nino?

El Nino **sets in when there is anomaly in the pattern.**

1. *The westward-blowing trade winds weaken along the Equator and due to changes in air pressure, the surface water moves eastwards to the coast of northern South America.*
2. The *central and eastern Pacific regions warm up for over six months and result in an El Nino condition.*

Impact:

1. The temperature of the water could rise up to 10 degrees Fahrenheit above normal.
2. Warmer surface waters increase precipitation and bring above-normal rainfall in South America, and droughts to Indonesia and Australia.
3. Favours eastern Pacific hurricanes and tropical storms. Record and unusual rainfall in Peru, Chile and Ecuador are linked to the climate pattern.
4. Reduces upwelling of cold water, decreasing the uplift of nutrients from the bottom of the ocean. This affects marine life and sea birds. The fishing industry is also affected.
5. A recent WHO report on the health consequences of El Nino forecasts a rise in vector-borne diseases, including those spread by mosquitoes, in Central and South America. Cycles of malaria in India are also linked to El Nino.

Sources: Indian Express.



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GENERAL STUDIES – 2

Topics: Indian Constitution- historical underpinnings, evolution, features, amendments, significant provisions and basic structure; Comparison of the Indian constitutional scheme with that of other countries.

1. Pardoning powers of President

What to study?

For Prelims: Overview of pardoning powers of President and Governor.

For Mains: Concerns and issues associated,

Context: The President has commuted death sentences to life imprisonment in at least 20 cases over the past nine years, based on the recommendations received from the Ministry of Home Affairs (MHA).

Clemency powers of the President under article 72:

It says that **the President shall have the power to grant pardons, reprieves, respites or remissions of punishment or to suspend, remit or commute** the sentence of any person convicted of any offence.

- **Pardon** –A pardon completely absolves the offender from all sentences and punishment and disqualifications and places him in the same position as if he had never committed the offence.
- **Commutation**- Commutation means exchange of one thing for another. In simple words to replace the punishment with less severe punishment. For example for Rigorous imprisonment-simple imprisonment.
- **Reprieve** – Reprieve means temporary suspension of death sentence. For example- pending a proceeding for pardon or commutation.
- **Respite** – Respite means awarding a lesser punishment on some special grounds. For example- the Pregnancy of women offender.
- **Remissions** – Remission means the reduction of the amount of sentence without changing its character, for example, a sentence of 1 year may be remitted to 6 months.

The President can exercise these powers:

1. In all cases where the punishment or sentence is by a court martial;
2. In all cases where the punishment or sentence is for an offence against any law relating to a matter to which the executive power of the Union extends;
3. In all cases where the sentence is a sentence of death.

The pardoning power of President is wider than the governor and it differs in the following two ways:

1. The power of the President to grant pardon extends in cases where the punishment or sentence is by a Court Martial but Article 161 does not provide any such power to the Governor.
2. The President can grant pardon in all cases where the sentence given is sentence of death but pardoning power of Governor does not extend to death sentence cases.

Key facts:

- This power of pardon shall be exercised by the President on the advice of Council of Ministers.
- Further, the constitution does not provide for any mechanism to question the legality of decisions of President or governors exercising mercy jurisdiction.
- But the SC in **Epuru Sudhakar case** has given a small window for judicial review of the pardon powers of President and governors for the purpose of ruling out any arbitrariness.
- The court has earlier held that court has retained the power of judicial review even on a matter which has been vested by the Constitution solely in the Executive.

Sources: the Hindu.

Mains Question: Can the Supreme Court exercise the power of pardon or remission under Article 32 of the Constitution similar to the President's power under Article 72 (by President) or 161 (by Governor)? Examine.

2. Seditious Law

What to study?

For Prelims: What is Seditious? IPC 124?

For Mains: Concerns over this law and its misuse, need for scrapping of this law.

Context: Recently, a Bihar court directed the filing of an FIR against 49 eminent persons who signed an open letter to the Prime Minister expressing concerns over mob lynching.

- However, many experts opined that this move is shocking, disappointing, and completely disregards the true meaning of the law.

Need of the hour:

Many would agree that the writers of the letter were doing precisely what every citizen ought to do in a democracy — raise questions, debate, disagree, and challenge the powers that be on issues that face the nation. Therefore, the court decision warrants an urgent and fresh debate on the need to repeal the seditious law, for it has no place in a vibrant democracy.

Charges of seditious- recent concerns:

1. There have been many incidents in recent times where **“misguided” people have been termed “anti-national”**.
2. **Law enforcement agencies forget the fact that the sentiment could have been demonstrated** through a slogan, a cheer, a statement, protest against a nuclear power project, or an innocuous post on social media. In all these cases, the state, across regimes, has filed charges of seditious.
3. **Authorities often forget the fact that seditious can't be applied to instances of criticism of the government or a political functionary.** More importantly, words alone are not enough for such a charge to be slapped. Incitement to violence is the most crucial ingredient of the offence of seditious.
4. Going through the numbers that the National Crime Records Bureau puts out every year, it is clear that despite the rise in seditious cases, convictions happen in barely a few. Even if these people are not convicted, **the slapping of these charges is a way the governments over the years have been sending a strong message to its own people—obey or be ready to face consequences.**

What is Section 124-A of the Indian Penal Code?

Whoever by words, either spoken or written, or by signs, or by visible representation, or otherwise, brings or attempts to bring into hatred or contempt, or excites or attempts to excite disaffection towards, the Government established by law shall be punished with imprisonment for life or any shorter term, to which fine may be added, or with imprisonment which may extend to three years, to which fine may be added, or with fine.

Why should it be scrapped?

Draconian laws such as the Section 124-A only serve to give a legal veneer to the regime's persecution of voices and movements against oppression by casting them as anti-national.

Short term measures to be put up in place:

1. **All speech-related offences should be madeailable offences**; this would lessen the harmful impact of using arrest and custody as a way of harassing anyone exercising their rights under Article 19(1)(a).
2. **The offences should be made non-cognisable** so that there is at least a judicial check on the police acting on the basis of politically motivated complaints.
3. **In the case of hate speech**, it is important to raise the burden of proof on those who claim that their sentiments are hurt rather than accept them at face value. And finally, it is crucial that courts begin to take action against those who bring malicious complaints against speech acts.

Observations made by the Supreme Court:

1. In 1962, the Supreme Court decided on the constitutionality of Section 124A in **Kedar Nath Singh v State of Bihar**. It upheld the constitutionality of sedition, but limited its application to "acts involving intention or tendency to create disorder, or disturbance of law and order, or incitement to violence". It distinguished these from "very strong speech" or the use of "vigorous words" strongly critical of the government.
2. In 1995, the Supreme Court, in **Balwant Singh v State of Punjab**, acquitted persons from charges of sedition for shouting slogans such as "Khalistan Zindabaad" and "Raj Karega Khalsa" outside a cinema after Indira Gandhi's assassination. Instead of looking at the "tendency" of the words to cause public disorder, the Court held that **mere sloganeering which evoked no public response did not amount to sedition, for which a more overt act was required**; the accused did not intend to "incite people to create disorder" and no "law and order problem" actually occurred.

Sources: the Hindu.

Mains Question: Urgent and fresh debate on the need to repeal the sedition law, for it has no place in a vibrant democracy is the issue at the hour. Discuss.

3. Indian Penal Code

What to study?

For Prelims: What is IPC? How was it brought about? Key provisions.

For Mains: Why it needs a review? Areas of concern and reforms needed.

Context: The **Home Ministry** is all set to overhaul **the Indian Penal Code** designed by the British. Rebooting the code introduced by the British in 1860 was necessary as **it is primarily based on the spirit of "master and servant"**.

Efforts to overhaul:

WHAT IS IT?

- **Sedition law:** Section 124A of the Indian Penal Code, 1860
- **Definition:** Whoever by words, either spoken or written, or by signs, or by visible representation, or otherwise brings or attempts to bring into hatred or contempt, or excites or attempts to excite disaffection towards, the government established by law in India, shall be punished
- **Punishment:** Imprisonment for life, to which fine may be added, or imprisonment which may extend to three years, to which fine may be added, or just a fine

WHAT THE SUPREME COURT SAID:

LANDMARK JUDGEMENTS

1962 KEDAR NATH SINGH VS STATE OF BIHAR The Supreme Court held that "a citizen has a right to say or write whatever he likes about the government, or its measures, by way of criticism or comment, so long as he does not incite people to violence"	1982 P. ALAVI VS STATE OF KERALA Where the court held that sloganeering, criticising of Parliament or the judicial set-up did not amount to sedition	1995 BALWANT SINGH AND ANR VS STATE OF PUNJAB The SC says: "Raising some slogan ("Khalistan Zindabad") a couple of times...which neither evoked any response nor any reaction from the public cannot attract such punishment"
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1. Recently the Ministry wrote to all States and Union Territories seeking suggestions to amend various sections of the IPC.
2. Two committees comprising legal luminaries have also been constituted by the Ministry.

What is IPC?

The IPC replaced **Mohammedan Criminal Law**, which had a very close relationship with Islam. Thus, the IPC laid the foundation of secularism.

It was widely appreciated as a state-of-the-art code and was, indeed, **the first codification of criminal law in the British Empire.**

How significant it is?

Today, it is the longest serving criminal code in the common-law world.

- Paying a compliment to **Macaulay's masterpiece**, James Stephen had remarked that **"The Indian Penal Code is to the English criminal law what a manufactured article ready for use is to the materials out of which it is made. It is to the French Penal Code and, I may add, to the North German Code of 1871, what a finished picture is to a sketch."**
- Today, most of the commonwealth follows the IPC and legislators would find it difficult to improve it in terms of precision, comprehensibility, comprehensiveness and accessibility.

Why it needs a review?

IPC, 1860 requires a thorough revision **to meet the needs of the 21st century.** In 1860, the IPC was certainly ahead of the times but has been unable to keep pace since then.

1. Macaulay had himself favoured **regular revision of the code whenever gaps or ambiguities were found or experienced.**
2. Even though **the IPC has been haphazardly amended more than 75 times**, no comprehensive revision has been undertaken in spite of **the 42nd report of the law commission in 1971 recommending it — the amendment bills of 1971 and 1978 lapsed due to the dissolution of the Lok Sabha.**
3. **Most amendments have been ad hoc and reactive**, in response to immediate circumstances like the 2013 amendment after the Delhi gangrape case.

Areas that need reforms:

Some of the concepts underlying the code are either problematic or have become obsolete.

1. A re-examination of the **sedition law**, inserted in 1898, is necessary.
2. The **offence of blasphemy** should have no place in a liberal democracy and, therefore, there is a need to repeal Section 295A, which was inserted in 1927.
3. **Criminal conspiracy** was made a substantive offence in 1913. The offence is objectionable because it was added to the code by the colonial masters to deal with political conspiracies.
4. Under **Section 149 on unlawful assembly**, the principle of constructive liability is pushed to unduly harsh lengths.
5. The **distinction between "culpable homicide" and "murder"** was criticised even by Stephen as the "weakest part of the code", as the definitions are obscure.
6. **Sexual offences under the code reveal patriarchal values and Victorian morality.** Though the outmoded crime of adultery gives the husband sole proprietary rights over his wife's sexuality, it gives **no legal protection to secure similar monopoly over the husband's sexuality.**
7. **Section 377** also needs a review.

Sources: the Hindu.

4. Citizenship (Amendment) Bill

What to study?

For Prelims: Key features of the Bill, Citizenship Act 1955, Citizenship- acquisition and types available.

For Mains: Issues over the Bill, why NE States oppose to this bill?

Context: With political positions on *the Citizenship Amendment Bill (CAB)* largely unchanged, the government, which is hoping to move a new version of it during the winter session of Parliament, faces tough negotiations.

The Citizenship Amendment Bill:

1. It seeks **to allow illegal migrants from certain minority communities in Afghanistan, Bangladesh and Pakistan eligible for Indian citizenship** by amending the Citizenship Act of 1955.
2. It seeks to **grant citizenship to people from minority communities** — Hindus, Sikhs, Buddhists, Jains, Parsis and Christians — after 6 years of stay in India even if they do not possess any proper document. The current requirement is 12 years of stay.
3. The Bill provides that the **registration of Overseas Citizen of India (OCI) cardholders may be cancelled if they violate any law.**

The Bill, however, **does not extend to illegal Muslim migrants.** It also does not talk about other minority communities in the three neighbouring countries, such as Jews, Bahais etc.

However, the bill is being criticised for the following reasons:

1. It violates the basic tenets of the Constitution. Illegal immigrants are distinguished on the basis of religion.
2. It is perceived to be a demographic threat to indigenous communities.
3. The Bill makes illegal migrants eligible for citizenship on the basis of religion. This may violate Article 14 of the Constitution which guarantees the right to equality.
4. It attempts to naturalise the citizenship of illegal immigrants in the region.
5. The Bill allows cancellation of OCI registration for violation of any law. This is a wide ground that may cover a range of violations, including minor offences.

Need for Citizenship (Amendment) Bill, 2016:

1. There are thousands of Hindus, Sikhs, Jains, Buddhists, Christians and Parsis who have entered India after facing religious persecution in countries like Pakistan, Bangladesh and Afghanistan without any valid document.
2. These refugees have been facing difficulty in getting Long Term Visa (LTV) or Citizenship.
3. The existing Citizenship law does not allow anyone granting Indian nationality if he or she can not show proof of documents on country of birth and therefore they have to stay at least 12 years in India.
4. Those Hindus who are persecuted due to religion has no other place to go except India.

Concerns, issues and consequences of these changes:

- **Introduced religion as a new principle into the citizenship law:** By marking out Muslims as a residual category, it reiterates the narrative of partition, without incorporating the principles of inclusion which were present in both the constitution of India and the Citizenship Act of 1955 at its inception.
- While **religious persecution is a reasonable principle for differentiation, it cannot be articulated in a manner that dilutes the republican and secular foundations** of citizenship in India, and goes against constitutional morality.

Special concerns of NE indigenous people:

1. The Bill has not been sitting well with the Assamese as **it contradicts the Assam Accord of 1985**, which clearly states that illegal migrants heading in from Bangladesh after March 25, 1971, would be deported.
2. **Mizoram fears** Buddhist Chakmas and Hindu Hajongs from Bangladesh may take advantage of the Act.
3. **Meghalaya and Nagaland** are apprehensive of migrants of Bengali stock.
4. **Groups in Arunachal Pradesh** fear the new rules may benefit Chakmas and Tibetans.
5. **Manipur** wants **the Inner-line Permit System** to stop outsiders from entering the state.

Sources: the Hindu.

5. How a US President can be Impeached?

What to study?

For Prelims: How is US President impeached?

For Mains: Impeachment process in India.

Context: House Democrats recently unveiled plans to open up **the impeachment inquiry into President Donald Trump with public hearings, after criticism from Republicans that the process has been overly secretive.**

Background:

No US President has ever been removed as a direct result of impeachment. **The House did impeach two Presidents** — Andrew Johnson (1968) and Bill Clinton (1998) — but the Senate did not convict them. In between, President Richard Nixon (1974) resigned before he could be removed.

What is Impeachment?

It is a provision **that allows Congress to remove the President of the United States.**

Under the US Constitution:

1. The House of Representatives (Lower House) has the “the sole power of impeachment” while the Senate (Upper House) has “the sole power to try all impeachments”.
2. The Chief Justice of the US Supreme Court has the duty of presiding over impeachment trials in the Senate.

Grounds for impeachment:

1. The President can be removed from office for “treason, bribery, or other high crimes and misdemeanors”.
2. Essentially, it means an abuse of power by a high-level public official. This does not necessarily have to be a violation of an ordinary criminal statute. Historically, in the US, it has encompassed corruption and other abuses, including trying to obstruct judicial proceedings.

The process:

1. It begins with **an investigation by a House committee.** If they find that there is enough evidence of wrongdoing, it will refer the matter to the full House.
2. **HOUSE VOTE:** When the full House votes, if one or more of the articles of impeachment gets a majority vote, the President is impeached. Next, the proceedings move to the Senate.
3. **SENATE TRIAL & VOTE:** The Senate holds a trial, overseen by the chief justice of the Supreme Court. A team of lawmakers from the House, known as managers, play the role of prosecutors. The President has defence lawyers, and the Senate serves as the jury. If at least two-thirds of the Senators present find the President guilty, he is removed and the Vice President takes over as President.

Sources: the Hindu.

Topics: Separation of powers between various organs dispute redressal mechanisms and institutions.

1. SC/ST judgment

What to study?

For Prelims: Features of SC/AT act and amendments, A 338A.

For Mains: SC's guidelines and rationale behind, need for amendment and need for a permanent solution over the issue.

Context: Supreme Court has recalled **its directions in a March 20, 2018 verdict** that had effectively diluted provisions of arrest under **the Scheduled Castes & Scheduled Tribes (Prevention of Atrocities) Act, 1989.** This was following a plea by the Centre seeking a review of that judgment.

Background:

Dilution of the stringent provisions of **the Scheduled Castes and Scheduled Tribes (Prevention of Atrocities) Act** had sparked angry and violent protests by Dalits across the country.

Observations made by the court:

The struggle for equality and civil rights of SC/ST communities was still not over. They are still discriminated. Untouchability has not vanished and rued that those involved in scavenging had still not been provided modern facilities.

Key Guidelines issued by the Supreme Court in September 2018 and rationale behind it:

1. Supreme court gave the judgement on the pretext that Innocents cannot be terrorised by the provisions of the SC/ST Act and their fundamental rights need to be protected.
2. The court said that public servants could be arrested only with the written permission of their appointing authority, while in the case of private employees, the Senior Superintendent of Police concerned should allow it.
3. A preliminary inquiry should be conducted before the FIR was registered to check if the case fell within the ambit of the Act, and whether it was frivolous or motivated, the court ruled.

Way ahead:

The amendments to the Scheduled Castes and Scheduled Tribes (Prevention of Atrocities) Act, 2018 is a move in the right direction. However, no matter how strong a piece of legislation is, all will depend on how well it is implemented.

If the implementing agency does not do its bit then the legislative effort would not be successful in the long run. The administrative set up, which includes police machinery, investigating agencies and judiciary, has to work together to effectively implement such a law.

Sources: the Hindu.

2. How Supreme Court chooses the Chief Justice of India?

What to study?

For Prelims and mains: CJI- appointment, eligibility, roles and functions, reforms needed.

Context: Chief Justice of India Ranjan Gogoi has recommended **Justice Sharad Arvind Bobde** as his successor and **the 47th Chief Justice of India** in keeping with convention and the seniority norm.

How it works?

The Chief Justice of India is traditionally **appointed by the outgoing Chief Justice of India** on the day of his (or her) retirement.

By convention, the outgoing Chief Justice of India **selects the most senior then-sitting Supreme Court judge.**

Seniority at the apex court is determined not by age, but by:

1. The date a judge was appointed to the Supreme Court.
2. If two judges are elevated to the Supreme Court on the same day:
 - a) The one who was sworn in first as a judge would trump another.
 - b) If both were sworn in as judges on the same day, the one with more years of high court service would 'win' in the seniority stakes.
 - c) An appointment from the bench would 'trump' in seniority an appointee from the bar.

Is it a part of the Constitution?

The Constitution of India does not have any provision for criteria and procedure for appointing the CJI. **Article 124(1)** of the Indian Constitution says there "shall be a Supreme Court of India consisting of a Chief Justice of India".

The closest mention is in **Article 126**, which deals with the appointment of an acting CJI.

In the absence of a constitutional provision, **the procedure relies on custom and convention.**

What is the procedure?

The procedure to appoint the next CJI is laid out in the Memorandum of Procedure (MoP) between the government and the judiciary:

1. The procedure is initiated by the Law Minister seeking the recommendation of the outgoing CJI at the 'appropriate time', which is near to the date of retirement of the incumbent CJI.
2. The CJI sends his recommendation to the Law Ministry; and in the case of any qualms, the CJI can consult the collegium regarding the fitness of an SC judge to be elevated to the post.
3. After receiving recommendation from the CJI, the law minister forwards it to the Prime Minister who then advises the President on the same.
4. The President administers the oath of office to the new CJI.

Does the government get a say?

Except for the law minister seeking the recommendation from the incumbent CJI, and forwarding it to the Prime Minister, **the government has no say in the appointment of the CJI.**

Vis-à-vis the appointment of the CJI and the appointment of SC judges, the key difference is that in the former, the government cannot send the recommendation of the CJI (or the collegium) back to them for reconsideration; while in the latter, the government can do so. However, if the collegium reiterates those names, then the government cannot object any further.

Sources: the Hindu.

Topics: Functions and responsibilities of the Union and the States, issues and challenges pertaining to the federal structure, devolution of powers and finances up to local levels and challenges therein.

1. What Legal Rights do Deities Enjoy?

What to study?

For Prelims: Meaning of legal entities, recognition and rights.

For Mains: Significance and challenges associated.

Context: Among the parties in the Ayodhya title suit appeals, Lord Ram is considered a litigant in court since he is considered as a **juristic person**.

Who is recognised as a juristic person?

In **Shiromani Gurdwara Parbandhak Committee vs Som Nath Dass and Others (2000)**, the Supreme Court said: "The very words Juristic Person connote **recognition of an entity to be in law a person which otherwise it is not**. In other words, it is **not an individual natural person but an artificially created person which is to be recognised to be in law as such.**"

Gods, corporations, rivers, and animals, have all been treated as juristic persons by courts.

The Practice of treating deities as juristic persons:

1. **Started under the British:** Temples owned huge land and resources, and British administrators held that **the legal owner of the wealth was the deity, with a shebait or manager acting as trustee.**
2. In 1887, the Bombay High Court held in **the Dakor Temple case:** "Hindu idol is a juridical subject and the pious idea that it embodies is given the status of a legal person."
3. This was **reinforced in the 1921 order in Vidya Varuthi Thirtha vs Balusami Ayyar**, where the court said, "under the Hindu law, the image of a deity is a 'juristic entity', vested with the capacity of receiving gifts and holding property".

Is every deity a legal person?

However, **not every deity is a legal person**. This **status is given to an idol only after its public consecration, or pran pratishtha**. In **Yogendra Nath Naskar vs Commissioner Of Income-Tax (1969)**, the Supreme Court ruled: "It is not all idols that will qualify for being 'juristic person' but only when it is consecrated and installed at a public place for the public at large."

Rights deities have:

1. Own property.
2. Pay taxes

3. Sue and being sued.
4. Do not have fundamental rights or other constitutional rights (Sabarimala case).

Other legal entities:

In May, the Punjab and Haryana High Court held that the “*entire animal kingdom*” has a “distinct legal persona with corresponding rights, duties, and liabilities of a living person”.

On March 20, 2017, the Uttarakhand High Court declared that *the Ganga and Yamuna would be legally treated as “living people,”* and enjoy “all corresponding rights, duties and liabilities of a living person”.

Sources: the Hindu.

Parliament and State Legislatures – structure, functioning, conduct of business, powers & privileges and issues arising out of these.

1. In News- What election manifestos must do, why they matter?

What to study?

For Prelims: Guidelines on Election Manifesto, statutory backing.

For Mains: Why political parties come up with Election Manifesto? Need for, concerns and measures to make them accountable.

What are Manifestos?

Election manifestos are not legally enforceable documents. This has been reiterated by the Supreme Court in 2015.

They are a formality, and their release is often no more than a photo-op in the campaign of political parties. They are frequently delayed, leaving no time for voters to go through the contents in order to make informed choices.

Guidelines on election manifestos:

1. In 2013, the Election Commission of India, acting on directions given by the Supreme Court, added **guidelines on election manifestos in the Model Code of Conduct (MCC).**
2. In **S Subramaniam Balaji vs Govt. of Tamil Nadu and Others (July 2013)**, a Bench of Justices P Sathasivam and Ranjan Gogoi ruled that the “distribution of freebies of any kind, undoubtedly, influences all people”, and “shakes the root of free and fair elections to a large degree”.
3. The court also directed the Election Commission “to frame guidelines for the same in consultation with political parties”.
4. It suggested that “a separate head for guidelines for election manifesto released by a political party can also be included in the Model Code of Conduct for the Guidance of Political Parties & Candidates”.

Additions to Model Code:

After the Supreme Court’s directions, the Election Commission met with recognised national and state parties for consultations, and then issued the following guidelines under **Part VIII of the MCC:**

1. The election manifesto shall not contain anything repugnant to the ideals and principles enshrined in the Constitution and further that it shall be consistent with the letter and spirit of other provisions of Model Code of Conduct.
2. The Directive Principles of State Policy enshrined in the Constitution enjoin upon the State to frame various welfare measures for the citizens and therefore there can be no objection to the promise of such welfare measures in election manifestos. However, political parties should avoid making those promises which are likely to vitiate the purity of the election process or exert undue influence on the voters in exercising their franchise.
3. In the interest of transparency, level playing field and credibility of promises, it is expected that manifestos also reflect the rationale for the promises and broadly indicate the ways and means to meet the financial requirements for it. Trust of voters should be sought only on those promises which are possible to be fulfilled.”

Prohibitory period for manifestos:

The guidelines also laid down the prohibitory period for the release of manifestos during elections:

1. In case of single-phase election, manifesto shall not be released during the prohibitory period, as prescribed under Section 126 of The Representation of the People Act, 1951.
2. In case of multi-phase elections, manifesto shall not be released during the prohibitory periods, as prescribed under Section 126 of The Representation of the People Act, 1951, of all the phases of those elections.”
3. In Section 126 of the RP Act, the ‘prohibitory period’ signifies the “period of forty-eight hours ending with the hour fixed for conclusion of poll”.

Sources: Indian Express.

2. Legislative Council

What to study?

For Prelims: Features, composition and formation of legislative councils.

For Mains: Significance and issues related.

Context: *Legislative council* abolished in J&K as per **Section 57 of the J&K Reorganisation Bill, 2019**, which reduced the State to the Union Territories of J&K and Ladakh.

What are the Legislative Councils, and why are they important?

India has a **bicameral system** i.e., two Houses of Parliament. **At the state level, the equivalent of the Lok Sabha is the Vidhan Sabha or Legislative Assembly; that of the Rajya Sabha is the Vidhan Parishad or Legislative Council.**

Why do we need a second house?

1. To act as a check on hasty actions by the popularly elected House.
2. To ensure that individuals who might not be cut out for the rough-and-tumble of direct elections too are able to contribute to the legislative process.
3. Having a second chamber would allow for more debate and sharing of work between the Houses.

Arguments against having a second house:

1. Rather than fulfilling the lofty objective of getting intellectuals into the legislature, **the forum is likely to be used to accommodate party functionaries who fail to get elected.**
2. It is also **an unnecessary drain on the exchequer.**
3. Unlike Rajya Sabha which has substantial powers to shape non-financial legislation, **Legislative Councils lack the constitutional mandate to do so.** Legislative Assemblies have the power to override suggestions/amendments made to a legislation by the Council.
4. While Rajya Sabha MPs can vote in the election of the President and Vice-President, **members of Legislative Councils can't. MLCs also can't vote in the elections of Rajya Sabha members.**
5. As regards Money bills, only fourteen days' delay can be caused by the Council, which is more or less a formality rather than a barrier in the way of Money Bill passed by the Assembly.

How is a legislative council created?

Under **Article 169** of the constitution, **Parliament may by law create or abolish the second chamber in a state if the Legislative Assembly of that state passes a resolution to that effect by a special majority.**

Strength of the house:

As per **article 171 clause (1)** of the Indian Constitution, the total number of members in the legislative council of a state shall **not exceed one third of the total number of the members in the legislative Assembly of that state** and the total number of members in the legislative council of a state shall in **no case be less than 40.**

How are members of the Council elected?

1. 1/3rd of members are elected by members of the Assembly.

2. 1/3rd by electorates consisting of members of municipalities, district boards and other local authorities in the state.
3. 1/12th by an electorate consisting of teachers.
4. 1/12th by registered graduates.
5. The remaining members are nominated by the Governor from among those who have distinguished themselves in literature, science, art, the cooperative movement, and social service.

Sources: the Hindu.

Mains Question: Why Some States in India have Bicameral Legislatures? Discuss the relevance of the Legislative Councils in the States.

3. 15 Point Reform Charter for Better Functioning of Parliament

What to study?

For Prelims: Overview of the charter, basic structure of the constitution.

For Mains: Concerns and challenges, need for reforms.

Context: Expressing concern over the functioning of parliamentary institutions in the country and erosion of public trust in them, Vice President Venkaiah Naidu has unveiled **a 15-point reform charter**.

This may serve as **the basis for a new political normal to enable effective functioning of the Parliament and State Legislatures**.

The 15-point charter includes:

1. Parties need to **ensure attendance** of at least 50% of their legislators all through the proceedings of the Houses by adopting a **roster system**.
2. Review of **anti-defection law**.
3. Review of **the whip system** which is “stifling reasonable dissent even on non-consequential matters”.
4. Set up **special courts** for time-bound adjudication of criminal complaints against legislators.
5. Pre and post legislative impact assessment.
6. Address problem of rising number of **legislators with criminal background**.
7. Governments should be **responsive to opposition and opposition to be responsible and constructive** while resorting to available parliamentary instruments
8. Consensus on the proposal for **simultaneous elections**.
9. Steps should be taken for **the effective functioning of the Parliamentary Committees**.
10. The representation of women in legislatures needs to be raised.

Challenges and concerns:

The present pitfalls of our parliamentary democracy are too well known to be elaborated. Briefly, *these include:*

1. Declining number of sittings of legislatures.
2. Persistent disruptions.
3. Declining quality of debates.
4. Growing number of legislatures with criminal record.
5. High degree of absenteeism.
6. Inadequate representation of women.
7. Rising money and muscle power in elections.
8. Lack of inner democracy in functioning of the political parties.
9. Poor knowledge, low argumentative power of the masses, negative influences of poverty and economic disparities.
10. Faulty ‘First Past the Post (FPTP) election system.
11. Society’s perpetual habit of accepting all permeable state to control public and private affairs.

Way ahead:

As an institution, Parliament is central to the very idea of democracy and was **assigned a pivotal role in our Constitution by the founding fathers of the republic**.

Yet, so many decades later, *it has neither evolved nor matured* as it could, might or should have. If anything, slowly but surely, it has diminished in stature and significance. Indeed, it is now more a symbol than the substance of a vibrant democracy that has taken deep roots among our people. The time has come for citizens, whom it represents, to evaluate that performance.

Sources: pib.

Mains Question: In the recent past the parliament has been aggressively pushing bills on many fronts for a better India, however they suffer from the common malady that they are likely to be extremely under-enforced because of weak state capacity. Should Parliament pass laws that the government cannot enforce? Analyse.

Topics: Salient features of the Representation of People's Act.

1. Section 11 of the Representation of the People Act

What to study?

For Prelims: Powers and functions of EC under RPA.

For Mains: Criticisms wrt to Section 11, can this decision be justified and what's the way out?

Context: *Delhi High Court* has sought a response from the Centre and the Election Commission (EC) on a petition challenging *the EC's decision to reduce the disqualification period* of Sikkim Chief Minister Prem Singh Tamang from six years to 13 months.

This was done in accordance with *the Section 11 of Representation of the People Act*.

Background:

Mr. Tamang was convicted of the charge of misappropriation of public funds. His disqualification period of 6 years, which began on August 10, 2018, was to end on August 10, 2024.

Rationale behind the relief:

It is based on Mr. Tamang's main argument. According to him, *the law prevailing at the time of his offence entailed disqualification only if the sentence was for a term of two years or more*; and that the amendment in 2003, under which any conviction under the anti-corruption law would attract the six-year disqualification norm, should not be applied to him.

Section 11 of the RP Act:

The Election Commission may, for reasons to be recorded, remove any disqualification under this Chapter 1 (except under section 8A) or reduce the period of any such disqualification.

What's the criticism now?

While this may seem to be an innocuous condonation, the fact that condonation was granted just before the fresh state elections were to be held, demonstrates arbitrariness. The only inference from the period condoned, that is, four years 11 months, seems to be for the specific purposes of allowing the candidate to contest the state elections.

Therefore, it is also argued that *Section 11 of the Representation of the People Act, 1951*, was unconstitutional since it provided uncanalised, uncontrolled, and arbitrary power to the Election Commission to remove or reduce the disqualification period.

Analysis:

This is morally wrong and a dangerous precedent that may end up reversing the trend towards decriminalising politics.

- Under *Section 11 of the Representation of the People Act, 1951*, the EC indeed has the power to remove or reduce the disqualification attached to a conviction. However, *this has been used rarely, and seldom in a case involving a conviction for corruption*.

- Its because **Disqualification from contest** is a **civil disability created by electoral law** to keep those convicted by criminal courts from entering elected offices. It is not a second punishment in a criminal sense.
- The EC decision **also goes against the grain of a series of legislative and judicial measures to strengthen the legal framework against corruption** in recent years.

Need of the hour:

The apex court has already described **corruption as a serious malady and one impinging on the economy**. In 2013, **the protection given to sitting legislators from immediate disqualification was removed**.

Now, disqualification should be more strictly applied to those convicted for corruption. Legislators handle public funds, and there is good reason to keep out those guilty of misusing them.

Sources: the Hindu.

2. Postal Ballot Facilities Expanded

What to study?

For Prelims: Amendments, definitions and features.

For Mains: The need for and significance of postal ballot.

Context: Election Commission of India has started working on detailed guidelines and SoPs to facilitate **the process of postal ballot paper for Absentee voters of essential services, Senior citizens of more than 80 years and marked PwD electors**.

Background:

On October 22, the Law Ministry amended **the Conduct of Election Rules, 1961**, to extend the facility of postal ballots to people who are unable to cast their vote because of service conditions.

The amendment comes after the EC wrote to the Law Ministry two months ago proposing **that voters on duty in fields such as aviation, shipping, Railways, emergency services, those employed in long-distance road transport, the elderly, the physically-challenged, and journalists covering elections should be allowed to vote by postal ballot in upcoming Assembly elections**.

Key facts:

- A concept of '**absentee voter**' has been introduced and defined for the elections.
- People under the new category can choose **to vote through postal ballot by filling up Form 12D** and submitting it to the nodal officer within five days of notification of an election.
- These votes will be **registered at a special centre specified by the Election Commission (EC)**.

Definition- absentee voter: An absentee voter is someone who is **employed in "essential services"**. The EC will **notify which jobs and professions are covered under "essential services"** after consulting the government.

Way ahead:

There is need for laying special emphasis to ensure that the electors who are also Persons with Disabilities (PwD) and senior citizens are facilitated in every way **to ensure their wider participation in the electoral process**.

There is now need for **the creation of requisite infrastructure and suitable legal framework to facilitate the process**.

Sources: the Hindu.

Topics: Statutory, regulatory and various quasi-judicial bodies.

1. National Health Systems Resource Centre (NHSRC)

What to study?

For Prelims: About NHSRC.

For Mains: Priority Medical Devices and Health technology- need, significance.

Context: Designation of **National Health Systems Resource Centre (NHSRC)** as a **WHO Collaborating Centre for Priority Medical Devices and Health Technology Policy**.

Why do we need such collaborations?

Such global collaborations in the area of health technology will ensure that scientific and technological advances, research and development as well as innovative technologies play a substantial supportive role in healthcare and enable us to reach the public health goals and achieve universal health coverage.

About NHSRC:

Set up under the **National Rural Health Mission (NRHM)** to serve as **an apex body for technical assistance**. Established in 2006.

Mandate is to assist in policy and strategy development in the provision and mobilization of technical assistance to the states and in capacity building for the Ministry of Health and Family Welfare (MoHFW) at the centre and in the states.

Composition:

1. It has **a 23 member Governing Body**, chaired by the Secretary, MoHFW, Government of India with the Mission Director, NRHM as the Vice Chairperson of the GB and the Chairperson of its Executive Committee.
2. Of the 23 members, 14 are ex-officio senior health administrators, including four from the states. Nine are public health experts, from academics and Management Experts.
3. The Executive Director, NHSRC is the Member Secretary of both the Governing body and the Executive Committee.

The NHSRC currently consists of seven divisions – Community Processes, Healthcare Financing, Healthcare Technology, Human Resources for Health, Public Health Administration, Public Health Planning, Quality Improvement in Healthcare.

Priority medical devices project:

Launched by WHO in 2007 in collaboration with the Government of the Netherlands.

Aims:

1. To determine whether medical devices currently on the market were meeting the needs of health care providers and end-users throughout the world and if not, to propose research to identify—and action to remedy—inadequacies or shortcomings.
2. To bring medical devices to the attention of policy makers and to help guide both industry and government on public health spending.

What is a health technology?

It is the application of organized knowledge and skills in the form of devices, medicines, vaccines, procedures and systems developed to solve a health problem and improve quality of lives.

Sources: pib.

2. District Mineral Foundations

What to Study?

For Prelims: About DMFs, composition, funds and jurisdiction, about PMKKKY, pneumoconiosis.

For Mains: reforms needed.

Context: Rajasthan to create **pneumoconiosis fund with DMF money**.

The fund will be **used to execute a comprehensive policy on the disease, which is widely prevalent in the mining state**.

Background:

Pneumoconiosis, a lung disease, mostly affects workers who work in the mining and construction sectors and deal with soil, silica, coal dust and asbestos. The disease includes asbestosis, silicosis and coal workers' pneumoconiosis.

About DMFs:

DMFs were *instituted under the Mines and Minerals (Development and Regulation) (MMDR) Amendment Act 2015*.

They are *non-profit trusts* to work for the interest and benefit of persons and areas affected by mining-related operations.

Objective: to work for the interest of the benefit of the persons and areas affected mining related operations in such manner as may be prescribed by the State Government.

Jurisdiction: Its manner of operation comes under the jurisdiction of the relevant State Government.

The various state DMF rules and the Pradhan Mantri Khanij Kshetra Kalyan Yojana (PMKKKY) guidelines stipulate some "high priority" issues for DMFs, including:

1. Drinking water.
2. Health
3. Women and child welfare.
4. Education
5. Livelihood and skill development.
6. Welfare of aged and disabled.
7. Sanitation.

Pradhan Mantri Khanij Kshetra Kalyan Yojana (PMKKKY):

The programme is meant to provide for the welfare of areas and people affected by mining related operations, using the funds generated by District Mineral Foundations (DMFs).

Objectives of the scheme:

1. To implement various developmental and welfare projects/programs in mining affected areas that complement the existing ongoing schemes/projects of State and Central Government.
2. To minimize/mitigate the adverse impacts, during and after mining, on the environment, health and socio-economics of people in mining districts.
3. To ensure long-term sustainable livelihoods for the affected people in mining areas.

Sources: DowntoEarth.

3. National Medical Commission

What to study?

For Prelims: Key features of the National Medical Commission bill.

For Mains: MCI- issues, performance, concerns and need for superseding.

Context: Government selects 25 members of **National Medical Commission**.

For selecting members of the commission, that replaces the Medical Council of India (MCI), health ministry held a draw of lots.

- The draw of lot was held from the nominations sent by the state governments, union territories and state medical councils.
- The members include 10 Vice-Chancellors (VCs) from different states, nine members from the State Medical Councils (SMCs) and four part-time members from the autonomous boards.

About NMC:

National Medical Commission Act 2019 proposes set up a **National Medical Commission** with **33 members**.

Appointment: These members will be appointed by the central government on the recommendation of a committee.

Composition: The members will include a chairperson, who must be a senior medical practitioner and academic with at least 20 years of experience, 10 ex officio members and 22 part-time members.

The ex officio members will include the presidents of the undergraduate and postgraduate medical education boards, the director general of Indian Council of Medical Research, and a director of one of the AIIMS, among others.

Part-time members, on the other hand, will include experts from the field of management, law, medical ethics, etc. and nominees of states and union territories.

Functions of NMC:

- The NMC will frame policies for regulating medical institutions and medical professionals, assessing the requirements of healthcare-related human resources and infrastructure, and ensuring compliance by the State Medical Councils of the regulations made under the Bill.
- Besides this, the NMC will frame guidelines for determination of fees for up to 50 per cent of the seats in private medical institutions and deemed universities which are regulated under the Bill.

Sources: the Hindu.

4. In News- What is a Waqf?

What to study?

For Prelims and mains: What is Waqf, compositions and functions.

Context: Sunni Waqf Board has offered to drop its claim to the disputed temple-mosque site in Ayodhya and has no objection to the land being taken over by the government for a Ram Temple, a mediation panel of the Supreme Court has said in its report.

What is a waqf?

Property given in the name of God for religious and charitable purposes.

In legal terms, permanent dedication by a person professing Islam, of any movable or immovable property for any purpose recognised by the Muslim law as pious, religious or charitable.

How is waqf created?

- A waqf can be formed through a deed or instrument, or a property can be deemed waqf if it has been used for religious or charitable purposes for a long period of time.
- The proceeds are typically used to finance educational institutions, graveyards, mosques and shelter homes.
- A person creating the waqf cannot take back the property and the waqf would be a continuing entity.
- **A non-Muslim can also create a waqf** but the individual must profess Islam and the objective of creating the waqf has to be Islamic.

How is a waqf governed?

- Governed by **the Waqf Act, 1995**.
- A survey commissioner under the Act lists all properties declared as waqf by making local investigation, summoning witnesses and requisitioning public documents.
- The waqf is **managed by a mutawali**, who acts as a supervisor. It is similar to a trust established under the Indian Trusts Act, 1882, but trusts can be set up for a broader purpose than religious and charitable uses. A trust established can also be dissolved by the board unlike a waqf.

What is a Waqf Board?

It is **a juristic person with power to acquire and hold property and to transfer any such property**.

The board **can sue and be sued in a court** as it is recognised as a legal entity or juristic person.

Composition:

Each state has a Waqf Board headed by a chairperson, one or two nominees from the state government, Muslim legislators and parliamentarians, Muslim members of the state Bar Council, recognised scholars of Islamic theology and mutawalis of the waqfs with an annual income of Rs 1 lakh and above.

Powers and functions:

The Waqf Board has powers under the law to administer the property and take measures for the recovery of lost properties of any waqf, to sanction any transfer of immovable property of a waqf by way of sale, gift, mortgage, exchange or lease. However, the sanction shall not be given unless at least two thirds of the members of the Waqf Board vote in favour of such transaction.

Sources: Indian Express.

5. Removal of State Chief Information Commissioner

What to study?

For Prelims: Who is CIC and ICs? Roles and functions, composition of CIC.

For Mains: Criticisms surrounding functioning of CIC, need for transparency enhancement and measures needed.

Context: Nine Karnataka *information commissioners* ask Governor to suspend their chief.

Why?

Nine commissioners have charged chief information commissioner N C Srinivasa with high-handedness and taking decisions unilaterally.

Removal of State Chief Information Commissioner or State Information Commissioner:

- Subject to the provisions of sub-section (3), the State Chief Information Commissioner or a State Information Commissioner **shall be removed from his office only by order of the Governor on the ground of proved misbehaviour or incapacity after the Supreme Court**, on a reference made to it by the Governor, has on inquiry, **reported that the State Chief Information Commissioner or a State Information Commissioner, as the case may be, ought on such ground be removed.**
- **The Governor may suspend from office, and if deem necessary prohibit also from attending the office during inquiry**, the State Chief Information Commissioner or a State Information Commissioner in respect of whom a reference has been made to the Supreme Court under sub-section (1) until the Governor has passed orders on receipt of the report of the Supreme Court on such reference.

Notwithstanding anything contained in sub-section (1), **the Governor may by order remove from office the State Chief Information Commissioner or a State Information Commissioner if a State Chief Information Commissioner or a State Information Commissioner, as the case may be:**

1. is adjudged an **insolvent**; or
2. has been **convicted** of an offence which, in the opinion of the Governor, involves **moral turpitude**; or
3. engages during his term of office in **any paid employment outside the duties of his office**; or
4. is, in the opinion of the Governor, unfit to continue in office by reason of **infirmary of mind or body**; or
5. has acquired such **financial or other interest** as is likely to affect prejudicially his functions as the State Chief Information Commissioner or a State Information Commissioner.
6. If the State Chief Information Commissioner or a State Information Commissioner in any way, **concerned or interested in any contract or agreement made by or on behalf of the Government of the State or participates** in any way in the profit thereof or in any benefit or emoluments arising therefrom otherwise than as a member and in common with the other members of an incorporated company, he shall, for the purposes of sub-section (1), be deemed to be guilty of misbehaviour.

Sources: the Hindu.

6. Vigilance Awareness Week

What to study?

For Prelims: CVC- eligibility, appointment and removal.

For Mains: Corruption- issues, challenges and ways to prevent.

Context: Vigilance Awareness Week to be observed from 28th October to 2nd November.

Theme of the Vigilance Awareness Week: "Integrity- A way of life"

Background:

- The Central Vigilance Commission aims to promote integrity, transparency and accountability in public life.
- As part of its efforts to promote probity in public life and to achieve a corruption free society, CVC observes Vigilance Awareness Week every year.
- The observation of Vigilance Awareness Week creates greater awareness among public and encourages all the stakeholders to collectively participate in prevention of and fight against Corruption.

About CVC:

It is the apex vigilance institution **created via executive resolution (based on the recommendations of Santhanam committee) in 1964** but was conferred with **statutory status in 2003**.

It **submits its report to the President of India**.

Composition:

Consists of central vigilance commissioner along with 2 vigilance commissioners.

Appointment:

They are appointed by the President of India on the recommendations of a committee consisting of Prime Minister, Union Home Minister and Leader of the Opposition in Lok Sabha (if there is no LoP then the leader of the single largest Opposition party in the Lok Sabha).

Term:

Their term is 4 years or 65 years, whichever is earlier.

Removal:

The Central Vigilance Commissioner or any Vigilance Commissioner can be removed from his office only by order of the President on the ground of proved misbehavior or incapacity after the Supreme Court, on a reference made to it by the President, has, on inquiry, reported that the Central Vigilance Commissioner or any Vigilance Commissioner, as the case may be, ought to be removed.

Sources: pib.

Topics: Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

1. Mahatma Gandhi National Fellowship Programme

What to study?

For Prelims: Key features of the programme, eligibility and targets.

For Mains: Significance and the need for the programme.

Context: Ministry of Skill Development and Entrepreneurship launches **Mahatma Gandhi National Fellowship Programme** with IIM Bangalore.

Details of the programme:

- It is a two-year fellowship programme to boost skill development at the district level.
- Designed under **Skills Acquisition and Knowledge Awareness for Livelihood Promotion (SANKALP)**.
- It aims to address the challenge of non-availability of personnel for implementation of various programmes at national, state and district levels.
- It has an **in-built component of on-ground practical experience with the district administration**.

- Launched on a pilot basis in 75 districts across Gujarat, Karnataka, Meghalaya, Rajasthan, Uttar Pradesh and Uttarakhand.
- **Eligibility:** Eligible fellows for the programme have to be in 21-30 years age-group, have a graduation degree from a recognized university and be citizens of India. Proficiency in official language of state of fieldwork will be mandatory.

Implementation:

1. In the course of their training, fellows will work under the close supervision of state skill development missions (SSDM) and will spend time and effort in understanding skilling challenges and gaps in the district.
2. They are expected to enrich skilling programmes by bringing in fresh thinking to local planning, execution, community interaction and outcome management.
3. Fellows will receive a stipend of Rs. 50,000 in the first year and Rs. 60,000 in the second year.
4. On completion of their engagement, they will be awarded a Certificate in Public Policy and Management from IIM Bangalore.

About SANKALP scheme:

What is it? SANKALP is a **Centrally sponsored scheme** of Ministry of Skill Development & Entrepreneurship (MSDE). It is an **outcome focused scheme** marking shift in government's implementation strategy in vocational education and training from inputs to results.

It will **provide market relevant training to 3.5 crore youth**.

Objective: To enhance institutional mechanisms for skills development and increase access to quality and market-relevant training for the work force.

Implementation:

1. It provides the required impetus to the National Skill Development Mission, 2015 and its various sub missions.
2. It is aligned to flagship Government of India programs such as Make in India and Swachhta Abhiyan and aims at developing globally competitive workforce for domestic and overseas requirements.

Under SANKALP four key result areas have been identified viz: (i) Institutional Strengthening (at National, State & District level); (ii) Quality Assurance of skill development programs; (iii) Inclusion of marginalised population in skill development; and (iv) Expanding Skills through Public Private Partnerships (PPPs).

Sources: pib.

2. Eligibility Criteria for Grant of Maharatna, Navratna and Miniratna Status

What to study?

For Prelims and mains: Eligibility Criteria for Grant of Maharatna, Navratna and Miniratna Status, implications and significance.

Context: Government of India has accorded '**Maharatna**' status to public sector undertaking's (PSU's) **Hindustan Petroleum Corporation Limited (HPCL) and Power Grid Corporation.**

Impact:

1. This will impart greater operational and financial autonomy thus enhancing powers to their Boards to take financial decisions.
2. Boards of these PSUs can **make equity investments to undertake financial joint ventures (JV) and wholly owned subsidiaries and undertake mergers and acquisitions (M&A) in India as well as abroad.** This is however **subjected to a ceiling of 15% of net worth of concerned CPSE, limited to Rs 5,000 crore in one project.**
3. The Boards can also **structure and implement schemes relating to personnel as well as human resource management and training.**

4. Holding companies of a 'Maharatna' PSU are also **empowered to float fresh equity, transfer assets, divest shareholding in subsidiaries**, but are subjected to condition that the delegation will only be in respect of subsidiaries set up by holding company.

Criteria for grant of Maharatna status:

Shall be given to CPSEs:

1. Having Navratna status.
2. Listed on Indian stock exchange with minimum prescribed public shareholding under SEBI regulations.
3. Average annual turnover of more than Rs. 25,000 crore, during the last 3 years.
4. Average annual net worth of more than Rs. 15,000 crore, during the last 3 years.
5. Average annual net profit after tax of more than Rs. 5,000 crore, during the last 3 years.
6. Should have significant global presence/international operations.

Criteria for grant of Navratna status:

The **Miniratna Category – I** and **Schedule 'A' CPSEs**, which have obtained 'excellent' or 'very good' rating under the Memorandum of Understanding system in three of the last five years, and have composite score of 60 or above in the six selected performance parameters, namely,

1. net profit to net worth.
2. manpower cost to total cost of production/services.
3. profit before depreciation, interest and taxes to capital employed.
4. profit before interest and taxes to turnover.
5. earning per share.
6. inter-sectoral performance.

Criteria for grant of Miniratna status:

The **CPSEs which have made profits in the last three years continuously and have positive net worth** are eligible to be considered for grant of Miniratna status.

Sources: the Hindu.

3. Institutes of Eminence Scheme

What to study?

For Prelims: Institutes of Eminence Scheme- features and significance.

For mains: Why are few institutes unwilling to accept this tag?

Context: The decision to accept **the Institute of Eminence (IOE) status** for Delhi University has been deferred following protests from council members.

Why are they worried?

- The scheme would result in **increased privatisation of the university**.
- It would **also be a huge burden on the university** as it called for "world-class" infrastructure, provisions for foreign faculty with differential pay scales and removed caps on fee structures among other issues.

Institutions of Eminence scheme:

1. Implemented under **the Union human resource development (HRD) ministry**.
2. **Aims** to project Indian institutes to global recognition.
3. The **selected institutes will enjoy complete academic and administrative autonomy**.
4. They will **receive special funding**.
5. **The selection** shall be made through challenge method mode by the Empowered Expert Committee constituted for the purpose.
6. **Eligibility:** Only higher education institutions currently placed in the top 500 of global rankings or top 50 of the National Institutional Ranking Framework (NIRF) are eligible to apply for the eminence tag.
7. **The private Institutions of Eminence** can also come up as greenfield ventures provided the sponsoring organisation submits a convincing perspective plan for 15 years.

8. Under the scheme, **Public Institutions of Eminence are eligible for a grant of ₹1,000 crore from the government and no funds will be given to Private Institutions of Eminence.**
9. The IoEs will **enjoy complete academic and administrative freedom.**

Other benefits include the freedom to:

1. to recruit faculty from outside India (limit of 25% of its faculty strength for public institution).
2. to enter into academic collaborations with other Institutions within the country.
3. to admit additionally foreign students on merit subject to a maximum of 30% of the strength of admitted domestic students.
4. to fix and charge fees from foreign students without restriction.
5. To fix curriculum and syllabus, with no UGC mandated curriculum structure.
6. to offer online courses as part of their programmes with a restriction that not more than 20% of the programme should be in online mode.
7. UGC Inspection shall not apply to Institutions of Eminence.

Can granting the Institute of Eminence status make a difference?

If IoEs want to be really competitive globally, they should **internationalise higher education**. It implies that these institutions should give importance to “**enhanced international cooperation and capacity building**”. It is also important for **the institutions to have constant exposure to international standards**. Research and innovation should be the focus of such institutions and funds should be utilised for these purposes. They should lead the way in all aspects including teaching, research and innovation and inspire other institutions of higher education.

Sources: the Hindu.

Topics: Welfare schemes for vulnerable sections of the population by the Centre and States and the performance of these schemes.

1. Surakshit Matritva Aashwasan (Suman)

What to study?

For Prelims and mains: Key features, significance and expected outcomes of the programme.

Context: The Union Government has launched **Surakshit Matritva Aashwasan (SUMAN)** to provide quality healthcare at zero cost to pregnant women, new mothers and newborns.

About the scheme:

It aims to provide dignified and quality health care **at no cost to every woman and newborn visiting a public health facility**.

Under the scheme, the **beneficiaries visiting public health facilities are entitled to several free services**.

These include at least four ante natal check-ups that also includes one checkup during the 1st trimester, at least one checkup under Pradhan Mantri Surakshit Matritva Abhiyan, Iron Folic Acid supplementation, Tetanus diptheria injection.

Eligibility:

All pregnant women, newborns and mothers up to 6 months of delivery will be able to avail several free health care services

Features and benefits:

- The scheme will enable zero expense access to the identification and management of complications during and after the pregnancy.
- The government will also provide free transport to pregnant women from home to the health facility and drop back after discharge (minimum 48 hrs).
- The pregnant women will be able to avail a zero expense delivery and C-section facility in case of complications at public health facilities.
- The scheme will ensure that there is zero-tolerance for denial of services to such patients.

Need for and significance of the scheme:

The scheme aims to bring down the maternal and infant mortality rates in the nation and to stop all preventable maternal and newborn deaths.

The scheme provides a positive and stress-free birth experience to the mother and newborn.

Definition:

The World Health Organization (WHO) defines quality of care for mothers and newborns as “the extent to which health care services provided to individuals and patient populations improve desired health outcomes. In order to achieve this, health care must be safe, effective, timely, efficiently integrated, equitable and people-centered.”

Stats:

According to government, India’s maternal mortality rate has declined from 254 per 1,00,000 live births in 2004-06 to 130 in 2014-16. Between 2001 and 2016, the infant mortality rate came down from 66 per 1,000 live births to 34.

Sources: pib.

2. Van Dhan Internship Programme

What to study?

For Prelims: Van Dhan Vikas Kendras.

For Mains: MFP and its significance.

Context: *Van Dhan Internship Programme* of TRIFED launched.

Key features of the programme:

- Organised by TRIFED under Ministry of Tribal Affairs.
- 18 interns (to be called **Minister’s interns**) from some of the reputed Institutes of Rural Management/ Management Institutions/ Institutes of Social Work/ Social Services of the country are participating.
- These Interns will help the tribal population in becoming self reliant and entrepreneurs.
- They will support the TRIFED activities on livelihood promotion, value addition of Non-Timber Forest Products (NTFTs), marketing and credit linkages.
- They will develop tools and techniques on institutional development including mechanism for determination of a just price or producer price of Minor Forest Products.

About Van Dhan Vikas Kendras initiative:

The initiative **aims to promote MFPs-centric livelihood development of tribal gatherers and artisans.**

It mainstreams the tribal community by **promoting primary level value addition to MFP at grassroots level.**

Significance: Through this initiative, the share of tribals in the value chain of Non-Timber Forest Produce is expected to rise from the present 20% to around 60%.

Implementation:

Implemented through **Ministry of Tribal Affairs** as Nodal Department at the Central Level and **TRIFED as Nodal Agency at the National Level.**

At State level, the State Nodal Agency for MFPs and the District collectors are envisaged to implement at grassroot level.

Locally the Kendras are proposed to be managed by **a Managing Committee (an SHG) consisting of representatives of Van Dhan SHGs in the cluster.**

Composition: As per the plan, TRIFED will facilitate establishment of MFP-led multi-purpose Van Dhan Vikas Kendras, a cluster of 10 SHGs comprising of 30 tribal MFP gatherers each, in the tribal areas.

Significance of MFP:

- Minor Forest Produce (MFP) is a major source of livelihood for tribals living in forest areas. The importance of MFPs for this section of the society can be gauged from the fact that around 100 million forest dwellers depend on MFPs for food, shelter, medicines and cash income.
- It provides them critical subsistence during the lean seasons, particularly for primitive tribal groups such as hunter gatherers, and the landless. Tribals derive 20-40% of their annual income from MFP on which they spend major portion of their time.
- This activity has strong linkage to women's financial empowerment as most of the MFPs are collected and used/sold by women. MFP sector has the potential to create about 10 million workdays annually in the country.

Sources: the Hindu.

3. National Pension Scheme

What to study?

For Prelims: Key features, objectives of the scheme.

For Mains: Significance of the scheme and its role in ensuring financial security of the citizens.

Context: Pension Fund Regulatory and Development Authority (PFRDA) has now permitted Overseas Citizen of India (OCI) to enrol in National Pension Scheme (NPS) at par with Non-Resident Indians.

What is National Pension System (NPS)?

- It is **a government-sponsored pension scheme**. It was **launched in January 2004 for government employees**. However, **in 2009, it was opened to all sections**.
- The scheme **allows subscribers to contribute regularly in a pension account during their working life**. On retirement, subscribers can withdraw a part of the corpus in a lumpsum and use the remaining corpus to buy an annuity to secure a regular income after retirement.
- This system is **managed by PFRDA (Pension Fund Regulatory and Development Authority)**.

Who can join NPS?

1. Any Indian citizen between 18 and 65 years can join NPS.
2. An NRI can join NPS. However, the account will be closed if there is a change in the citizenship status of the NRI.
3. Now, any Indian citizen, resident or non-resident and OCIs are eligible to join NPS till the age of 65 years.

Sources: the Hindu.

Topics: Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources.

1. National Nutrition Survey

What to study?

For Prelims: Key features and findings of the survey.

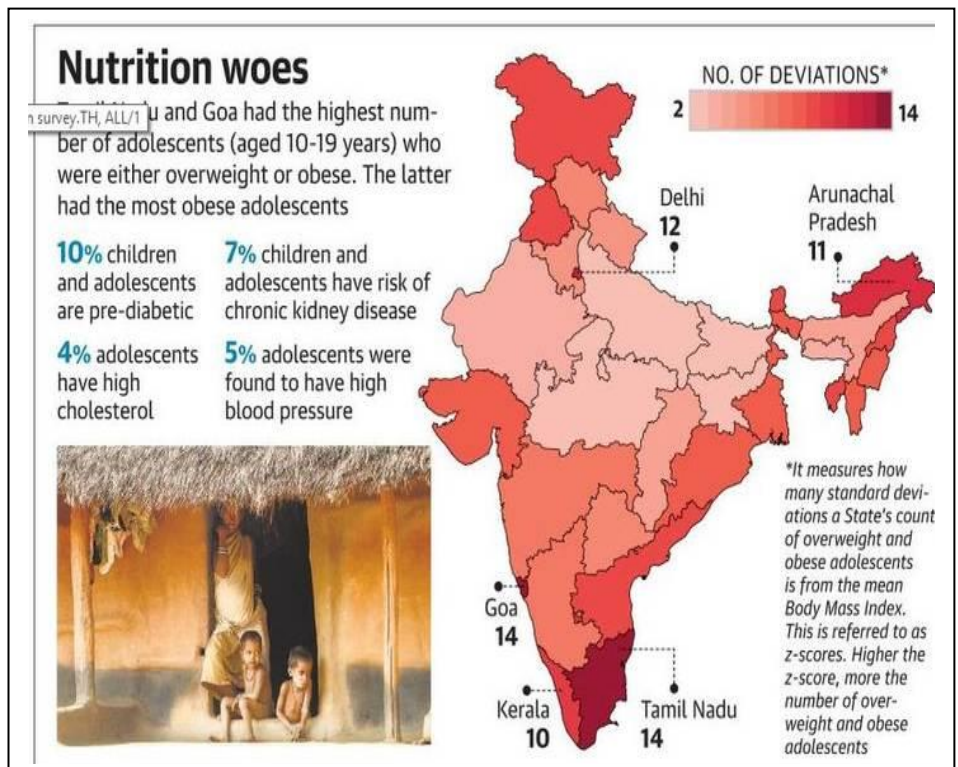
For Mains: Significance, concerns expressed and ways to address them.

Context: With the help of **UNICEF, the Ministry of Health and Family Welfare** recently conducted the first-ever comprehensive **National Nutrition Survey**.

The survey recorded **malnutrition** that included **micronutrient deficiencies and details of non-communicable diseases** such as diabetes, hypertension, cholesterol and kidney function in children and adolescents.

Key findings of the survey:

1. Around 10% of children in the age group of 5 to 9 years and adolescents in the age group 10 to 19 years are pre – diabetic. 5% of them were overweight and 5% suffered from blood pressure.
2. The survey for the first time proved the coexistence of obesity and under nutrition.
3. One in five children in the age group 5 to 9 years were stunted.
4. Tamil Nadu and Goa had the highest number of adolescents who were obese or overweight.



Steps Taken by Government of India to curb incidences of Malnutrition:

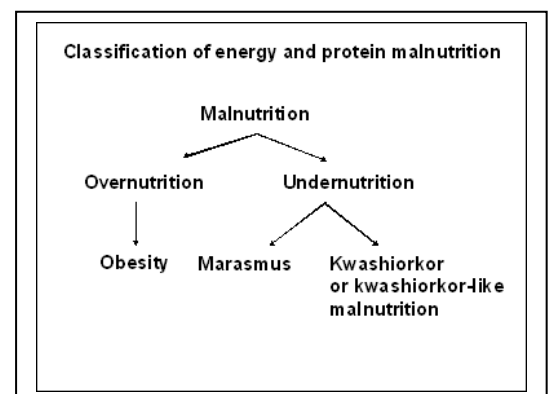
1. **Pradhan Mantri Matru Vandana Yojana (PMMVY): Rs.6,000 is transferred directly** to the bank accounts of pregnant women for availing better facilities for their delivery.
2. **POSHAN Abhiyaan:** aims to reduce stunting, under-nutrition, anaemia and low birth weight babies through synergy and convergence among different programmes, better monitoring and improved community mobilisation.
3. **National Food Security Act (NFSA), 2013,** aims to ensure food and nutrition security for the most vulnerable through its associated schemes and programmes, making access to food a legal right.
4. **Mid-day Meal (MDM) scheme** aims to improve nutritional levels among school children which also has a direct and positive impact on enrolment, retention and attendance in schools.

The United Nations Decade of Action on Nutrition:

On 1 April 2016, the United Nations (UN) General Assembly proclaimed **2016–2025 the United Nations Decade of Action on Nutrition**.

Led by WHO and the Food and Agriculture Organization of the United Nations (FAO), the UN Decade of Action on Nutrition calls for policy action across 6 key areas:

1. creating sustainable, resilient food systems for healthy diets;
2. providing social protection and nutrition-related education for all;
3. aligning health systems to nutrition needs, and providing universal coverage of essential nutrition interventions;
4. ensuring that trade and investment policies improve nutrition;
5. building safe and supportive environments for nutrition at all ages; and
6. strengthening and promoting nutrition governance and accountability, everywhere.



Sources: the Hindu.

Mains Question: With India's double whammy of under nutrition co-existing with equally high and increasing rates of over nutrition, there is a pressing need for reshaping India's nutrition policy with a focus on diet-related diseases. Discuss.

2. School Education Quality Index (SEQI)

What to study?

For Prelims: About the index, indicators and key findings.

For Mains: Need for and significance of the index, challenges present in the sector and ways to address them.

Context: NITI Aayog releases the first edition of *School Education Quality Index (SEQI)*.

About the School Education Quality Index (SEQI):

1. Developed by NITI Aayog **to evaluate the performance of States and Union Territories (UTs) in the school education sector.**
2. **Aim:** To bring an 'outcomes' focus to education policy by providing States and UTs with a platform to identify their strengths and weaknesses and undertake requisite course corrections or policy interventions.
3. The index is developed through a collaborative process, including key stakeholders such as **Ministry of Human Resource and Development (MHRD), the World Bank and sector experts.**

It consists of **30 critical indicators** that assess the delivery of quality education. These indicators are categorized as below:

Category 1: Outcomes;

1. Domain 1: Learning outcomes
2. Domain 2: Access outcomes
3. Domain 3: Infrastructure and facilities for outcomes
4. Domain 4: Equity outcomes

Category 2: Governance processes aiding outcomes.

Significance of the index:

Schooling should result in successful learning outcomes. In this regard, SEQI acts as a credible system of assessment and helps to design necessary remedial actions.

How are they ranked?

1. **To facilitate a like-for-like comparison**, States and UTs have been grouped as Large States, Small States and UTs.
2. States' and UTs' performance on Learning Outcomes is driven by their results on the **National Achievement Survey (NAS) 2017**.
3. Their performance on **Access Outcomes** is primarily driven by enrolment ratios at the secondary level and transition rates from upper-primary to secondary level.
4. In terms of **Infrastructure & Facilities for Outcomes**, States' and UTs' performance is strongly linked to **the presence of Computer Aided-Learning (CAL)** at the elementary level and vocational education at the secondary and senior-secondary level.

Performance of various states:

1. Kerala has emerged on top among 20 large states in terms of quality of school education, followed by Rajasthan and Karnataka, while the most-populous Uttar Pradesh was ranked at the bottom position during 2016-17.
2. Among 20 large states in the country 18 have improved their overall performance between 2015-2016 and 2016-2017, which is otherwise referred to as the incremental performance in the report.
3. The highest incremental performance has been recorded in Kerala. As against 77.6% score in 2015-2016, the state has recorded 82.2% in 2016-2017.

4. The overall performance has declined in Karnataka and Uttarakhand.
5. All seven union territories have shown an improvement in their overall performance scores.
6. The performance and ranks have decreased in Mizoram, Sikkim and Arunachal Pradesh.

Sources: pib.

3. Global Competitiveness Index

What to study?

For Prelims: Performance of India and other countries.

For Mains: Challenges and concerns for India, ways to address them.

Context: GCI 2019 has been released.

- **The Global Competitiveness Index (GCI)**, which was launched in 1979, maps the competitiveness landscape of 141 economies through 103 indicators organised into 12 pillars.
- **The pillars, which cover broad socio-economic elements are:** institutions, infrastructure, ICT adoption, macroeconomic stability, health, skills, product market, labour market, the financial system, market size, business dynamism and innovation capability.

Performance of India:

- Compared to last year, India has **moved down 10 places to rank 68th**. India was ranked 58th last year.
- It is among **the worst-performing BRICS nations along with Brazil** (ranked even lower than India at 71st this year).
- India ranks **high in terms of macroeconomic stability and market size**, while its financial sector is relatively deep and stable despite **the high delinquency rate**, which contributes to weakening the soundness of its banking system.
- In **innovation**, India is well ahead of most emerging economies and on par with several advanced economies.

Concerns and way ahead for India:

- **Major shortcomings:** limited ICT (information, communications and technology) adoption, poor health conditions and low healthy life expectancy.
- **The healthy life expectancy**, where India has been ranked 109th out of total the 141 countries surveyed for the index, is **one of the shortest outside Africa and significantly below the South Asian average**.
- With **a ratio of female workers to male workers of 0.26**, India has been ranked very low at 128th place.

Way ahead for India:

Now, India needs **to grow its skills base**, while its product market efficiency is undermined by a lack of trade openness and the labour market is characterised by a lack of worker rights' protections, insufficiently developed active labour market policies and critically low participation of women.

Performance of other countries:

- Asia-Pacific is the most competitive region in the world, followed closely by Europe and North America.
- The United States may have lost out to Singapore overall, but it remains an innovation powerhouse.
- Nordic countries are among the world's most technologically advanced, innovative and dynamic while also providing better living conditions and social protection.

Global concerns- key observations made by the report:

1. The world is at a social, environmental and economic tipping point.
2. Subdued growth, rising inequalities and accelerating climate change provide the context for a backlash against capitalism, globalization, technology, and elites.
3. There is gridlock in the international governance system and escalating trade and geopolitical tensions are fuelling uncertainty.
4. This holds back investment and increases the risk of supply shocks: disruptions to global supply chains, sudden price spikes or interruptions in the availability of key resources.

5. Ten years on from the global financial crisis, the world economy remains locked in **a cycle of low or flat productivity growth** despite the injection of more than \$10 trillion by central banks.

Sources: the Hindu.

4. Penicillin to Fight Rheumatic Fever

What to study?

For Prelims and mains: Role of Penicillin in fighting rheumatic fever.

Context: The government is planning on the revival of **Penicillin in a bid to fight against drug resistance and to tackle rheumatic heart disease.**

Penicillin:

1. Penicillin is one of the oldest antibiotics known to man and is still effective in many cases as not many organisms have developed resistance to it yet.
2. Discovered in 1928.
3. Penicillin went out of production in India as a result of unrealistic price control.

What is Rheumatic fever?

1. It is **endemic in India.**
2. It remains to be one of the major causes of the cardiovascular disease which accounts for nearly 25 to 45 per cent of acquired heart disease.
3. Though, not all sore throats become rheumatic fever with severe joint pain or end up in rheumatic heart disease.
4. **Rheumatic heart disease** is a condition in which the heart is affected by a disease that eventually leaves no option but to replace the heart valves.

What next?

The government is planning to procure Penicillin centrally for a minimum of 3 years and give it to all children aged between 5 years to 15 years suffering from a sore throat, at least once.

Sources: the Hindu.

5. Ayushman Bharat

What to study?

For Prelims: Overview and key features of the act.

For Mains: achievements, significance, challenges present and ways to address them.

Context: One Year of **Ayushman Bharat.**

Arogya Manthan event was organised by **the National Health Authority**, to mark the completion of one year of Ayushman Bharat PM-JAY.

The purpose of the event is to provide a platform to meet for all the important stakeholders of PM-JAY to meet and discuss the challenges faced in the implementation of the scheme in the past year and to forge new understanding and pathways to improving implementation.

About Ayushman Bharat:

Launched as recommended by **the National Health Policy 2017**, to achieve the vision of **Universal Health Coverage (UHC).**

This initiative has been **designed on the lines as to meet SDG and its underlining commitment, which is "leave no one behind".**

Aim: to undertake path breaking interventions to holistically address health (covering prevention, promotion and ambulatory care), **at primary, secondary and tertiary level.**

Includes the on-going centrally sponsored schemes - **Senior Citizen Health Insurance Scheme (SCHIS) and Rashtriya Swasthya Bima Yojana (RSBY).**

Ayushman Bharat adopts **a continuum of care approach**, comprising of two inter-related components, which are:

1. Health and Wellness Centres (HWCs).
2. Pradhan Mantri Jan Arogya Yojana (PM-JAY).

Key Features of PM-JAY:

1. The **world's largest health insurance/ assurance scheme** fully **financed by the government**.
2. It provides cover of **Rs. 5 lakhs per family per year, for secondary and tertiary care hospitalization** across public and private empaneled hospitals in India.
3. **Coverage:** Over 10.74 crore poor and vulnerable entitled families (approximately 50 crore beneficiaries) are eligible for these benefits.
4. Provides **cashless access** to health care services for the beneficiary at the point of service.

Benefits and significance:

- Helps reduce catastrophic expenditure for hospitalizations, which pushes 6 crore people into poverty each year.
- Helps mitigate the financial risk arising out of catastrophic health episodes.

Eligibility:

1. No restrictions on family size, age or gender.
2. All pre-existing conditions are covered from day one.
3. Covers up to 3 days of pre-hospitalization and 15 days post-hospitalization expenses such as diagnostics and medicines.
4. Benefits of the scheme are portable across the country.
5. Services include approximately 1,393 procedures covering all the costs related to treatment, including but not limited to drugs, supplies, diagnostic services, physician's fees, room charges, surgeon charges, OT and ICU charges etc.
6. Public hospitals are reimbursed for the healthcare services at par with the private hospitals.

Suggestions made by Indian Medical Association (IMA):

1. **Government hospitals should be removed from the ambit** of the scheme as **services there are already free of cost**.
2. The government should **fund public hospitals directly**. Under this scheme, it is being done **through insurance companies by paying 15 per cent to them**.
3. India should not continue the insurance route for healthcare delivery as **the administrative cost and the "unholy nexus" with insurance companies point towards profit maximization rather than quality health care delivery**.
4. **Need of the hour: "Tax funded" universal health coverage** rather than the "for profit" insurance model.

Why some states have not implemented the health protection plan and what is holding back its 100 per cent implementation?

Few states including Delhi, Telangana, West Bengal and Odisha are not covered.

Health is a state subject, and so far these states have declined joining the central government-led scheme.

1. **Delhi government** argues that it's existing health scheme has wider coverage and is "10 times bigger than Ayushman Bharat".
2. **Odisha** has pointed out certain flaws, saying that the existing **Biju Swastya Kalyan Yojana** has special provisions like an extra Rs 2 lakh cover for women, which the Ayushman scheme lacks.
3. **Telangana** too has raised concerns about the rather "narrow ambit" of PM-JAY, saying that its **Aarogyasri scheme** benefits more people.
4. **West Bengal** opted out, refusing to pay its share of the expenditure.

Sources: the Hindu.

6. Youth Co:Lab

What to study?

For Prelims and mains: Youth Co: Lab- establishment, significance and potential.

Context: Atal Innovation Mission (AIM), NITI Aayog, UNDP India Jointly Launch **Youth Co:Lab** to **accelerate youth-led social entrepreneurship and innovation in India.**

How it works?

1. Youth Co:Lab will convene social innovation challenges at the national and sub-national level, which will invite young people in the age group of 18-29 years and start-ups to showcase their proposed ideas and solutions to tackle some of the region's biggest social challenges.
2. Through Youth Co:Lab, young entrepreneurs and innovators will get a chance to connect with governments, mentors, incubators and investors, who will help equip them with entrepreneurial skills.

The first phase of Youth Co:Lab will focus on six SDGs:

1. SDG 5 (Gender Equality).
2. SDG 6 (Clean Water and Sanitation).
3. SDG 7 (Affordable and Clean Energy).
4. SDG 8 (Decent Work and Economic Growth).
5. SDG 12 (Sustainable Consumption and Production).
6. SDG 13 (Climate Action).

What is Youth Co: Lab initiative?

It is an innovative platform for young people to explore their ideas and potentials, and bring to scale viable solutions, to accelerate India's progress on the SDGs.

Co-created in 2017 by UNDP and the Citi Foundation.

Operational in 25 countries across the Asia Pacific region.

Aims to create an enabling ecosystem to promote youth leadership, innovation, and social entrepreneurship.

Need for and significance of this initiative?

With the world's largest youth population millions in the country are entering the workforce every year, it is critical for India to create a robust employment and entrepreneurship ecosystem.

Besides, 21st-century challenges can't be solved with traditional approaches.

Therefore, It is essential to position young people front and centre, to solve the region's most wicked development challenges. It is necessary to ensure that they are motivated and excited to learn future skills, particularly leadership, social innovation, entrepreneurship and communication.

Sources: pib.

7. Transfats

What to study?

For Prelims and Mains: Transfats- what are they, uses, concerns and the need for reduction in their usage.

Context: FSSAI launches 'Trans-Fat Free' logo.

This marked an important milestone in the movement against Trans-Fats and also provided a momentum to accelerate the 'Eat Right India' movement of FSSAI.

What are Trans fats?

- Trans fatty acids (TFAs) or Trans fats are the most harmful type of fats which can have much more adverse effects on our body than any other dietary constituent.
- These fats are largely produced artificially but **a small amount also occurs naturally**. Thus in our diet, these may be present as Artificial TFAs and/ or Natural TFAs.
- **Artificial TFAs** are formed when hydrogen is made to react with the oil to produce fats resembling pure ghee/butter.
- In our diet the major sources of artificial TFAs are the partially hydrogenated vegetable oils (PHVO)/vanaspati/ margarine while the natural TFAs are present in meats and dairy products, though in small amounts.

Harmful effects:

1. TFAs pose a higher risk of heart disease than saturated fats. While saturated fats raise total cholesterol levels, TFAs not only raise total cholesterol levels but also reduce the good cholesterol (HDL), which helps to protect us against heart disease.
2. Trans fats consumption increases the risk of developing heart disease and stroke.
3. It is also associated with a higher risk of developing obesity, type 2 diabetes, heart disease, metabolic syndrome, insulin resistance, infertility, certain types of cancers and can also lead to compromised fetal development causing harm to the yet to be born baby.

Why they are increasingly being used?

TFA containing oils can be preserved longer, they give the food the desired shape and texture and can easily substitute 'Pure ghee'. These are comparatively far lower in cost and thus add to profit/saving.

Permissible limit:

WHO recommendation: Limited to less than 1% of total energy intake. It has called for **the total elimination of TFAs in global food supply by 2023**.

FSSAI has proposed to limit TFA limit in foods to 2% and eliminate trans fats from foods by 2022.

Sources: pib.

8. Larger Pictorial Warnings


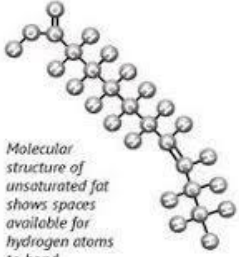

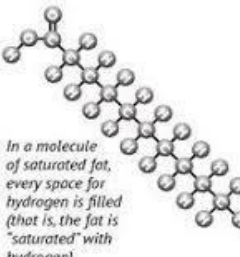

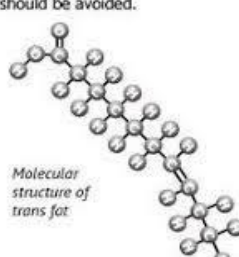
What to study?

For Prelims: Statutory backing to pictorial warnings.

For Mains: Need for larger pictorial warning, it's impact and significance.

Different Kinds of Fat

Fatty acids, which are the building blocks of fat, are long chains of carbon and hydrogen atoms. Essential fatty acids are those needed by the human body that can only be obtained through food. Some fats are harmful, however.

 <p>UNSATURATED FATS</p> <p style="font-size: x-small;">The so-called "good" fats can be found in nuts, avocados and other vegetables. The molecular structure of unsaturated fat causes it to be lower in calories than other fats.</p>  <p style="font-size: x-small;">Molecular structure of unsaturated fat shows spaces available for hydrogen atoms to bond</p>	 <p>SATURATED FATS</p> <p style="font-size: x-small;">These fats are found mostly in animal products. It is recommended that people reduce their consumption of saturated fats in order to stay healthy.</p>  <p style="font-size: x-small;">In a molecule of saturated fat, every space for hydrogen is filled (that is, the fat is "saturated" with hydrogen)</p>	 <p>TRANS FATS</p> <p style="font-size: x-small;">Trans fats are unsaturated (good) fats which have been partially saturated with hydrogen to extend their shelf life. Unfortunately, these trans fats are found to elevate "bad" cholesterol and should be avoided.</p>  <p style="font-size: x-small;">Molecular structure of trans fat</p>
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Context: A new study has shown that *large health warnings on tobacco packets with plain packaging can be highly effective in conveying ill effects of tobacco to people.*

Key findings:

1. Such warnings would be more impactful through increased visibility of the warning thus help prevent initiation and motivate cessation.
2. Packs with 85% graphical warnings were perceived to be more effective in increasing noticeability of the warnings and conveying the intended health message.
3. These warnings are also effective in preventing non-users from initiating tobacco use, and motivating users to quit.

Background:

In October 2014, the Ministry of Health and Family Welfare had first proposed that 85% of a cigarette packet's surface area on both the sides should carry health warnings, up from 40% on one side of the packet. It was opposed by the tobacco industry and put on hold after the parliamentary panel said it needed to analyse the impact on the industry.

Why stricter laws in this regard are necessary?

1. Nearly one million tobacco-related deaths take place in India every year, and in 2011, the total health expenditure burden from all diseases due to tobacco use amounted to more than Rs.1,00,000 crore, which is 12% more than the combined State and Central government expenditure on health in 2011-12.
2. The revenue earned through tobacco excise duty during the same period was a paltry 17% of the health burden of tobacco.
3. Also, 12% of children in India in the 13-15 age group use tobacco. Similarly, in the case of adults in India, the percentage is 35%.

Why larger pictorial warnings are necessary?

Besides being unaware of all the risks associated with tobacco use, a vast majority of consumers in India of bidi and chewing tobacco are poor and less exposed to awareness campaigns. Hence, larger images on both sides of the packet are the most effective and powerful way to communicate health risks to this population. They also provoke a greater emotional response, decrease tobacco consumption and increase motivation to quit.

Sources: the Hindu.

9. WHO issues first World report on Vision

What to study?

For Prelims: Key findings and highlights of the study.

For Mains: Concerns and measures needed to overcome the challenges.

Context: WHO has launched its *first World report on vision.*

Key findings:

- At least 2.2 billion people have vision impairment or blindness, of which over 1 billion cases could have been prevented or have yet to be addressed.
- The burden of eye conditions and vision impairment is not borne equally: it is often far greater in people living in rural areas, those with low incomes, women, older people, people with disabilities, ethnic minorities and indigenous populations.
- The unmet need of distance vision impairment in low- and middle-income regions is estimated to be four times higher than in high-income regions.
- Low- and middle-income regions of western and eastern sub-Saharan Africa and South Asia have rates of blindness that are eight times higher than in all high-income countries. Rates of cataract and trachomatous trichiasis are higher among women, particularly in low- and middle-income countries.

- US\$14.3 billion is needed to address the backlog of 1 billion people living with vision impairment or blindness due to short and far sightedness, and cataracts.

Main causes of rising cases of vision impairment:

Ageing populations, changing lifestyles and limited access to eye care, particularly in low- and middle-income countries, are among the main drivers of the rising numbers of people living with vision impairment.

Other main drivers of the most common eye conditions include:

1. **Myopia** (near-sightedness): Increased time spent indoors and increased “near work” activities are leading to more people suffering from myopia. Increased outdoor time can reduce this risk.
2. **Diabetic retinopathy**: increasing numbers of people are living with diabetes, particularly Type 2, which can impact vision if not detected and treated. Nearly all people with diabetes will have some form of retinopathy in their lifetimes. Routine eye checks and good diabetes control can protect people’s vision from this condition.
3. **Late detection**: Due to weak or poorly integrated eye care services, many people lack access to routine checks that can detect conditions and lead to the delivery of appropriate preventive care or treatment.

Way ahead:

- Eye conditions and vision impairment are widespread, and far too often they still go untreated.
- People who need eye care must be able to receive quality interventions without suffering financial hardship.
- Including eye care in national health plans and essential packages of care is an important part of every country’s journey towards universal health coverage.

Sources: down to earth.

10. The WHO India Country Cooperation Strategy 2019–2023

What to study?

For Prelims: What is CCS?

For Mains: India CCS, significance and other things necessary in this regard.

Context: ‘The WHO India Country Cooperation Strategy 2019–2023: A Time of Transition’ has been launched.

Overview of India CCS:

1. The India CCS is one of the first that fully aligns itself with the newly adopted **WHO 13th General Programme of Work and its 'triple billion' targets, the Sustainable Development Goals (SDGs) and WHO South-East Asia Region’s eight Flagship Priorities.**
2. It captures the work of the United Nations Sustainable Development Framework for 2018–2022.
3. The CCS outlines how WHO can support the Ministry of Health & Family Welfare and other allied Ministries to drive impact at the country level.
4. The strategy document builds on other key strategic policy documents including India’s **National Health Policy 2017**, the many pathbreaking initiatives India has introduced — from Ayushman Bharat to its National Viral Hepatitis programme and promotion of digital health amongst others.

What is Country Cooperation Strategy?

1. CCS provides a strategic roadmap for WHO to work with the Government of India towards achieving its health sector goals, in improving the health of its population and bringing in transformative changes in the health sector.
2. It builds upon the work that WHO has been carrying out in the last several years.
3. In addition, it identifies current and emerging health needs and challenges such as non-communicable diseases, antimicrobial resistance and air pollution.

The four areas identified for strategic cooperation of WHO with the country encompass:

1. To accelerate progress on UHC.

2. To promote health and wellness by addressing determinants of health.
3. To protect the population better against health emergencies.
4. To enhance India's global leadership in health.

Way ahead:

1. Besides the health priorities detailed in the strategy, focus needs to be given on other equally pertinent health areas of environmental and occupational health, accidents and road injuries, and good nutrition and food safety.
2. A mechanism needs to be institutionalized wherein every ministry has a health section/department, so that every policy factors in its health implications.

WHO 'Triple Billion' targets:

It is a strategic *plan for the next five years*.

It aims for:

1. One billion more people to be benefitted from Universal Health Coverage (UHC)
2. One billion more people to be protected from health emergencies
3. One billion more people to be covered for better health and well-being.

Sources: pib.

11. POSHAN Atlas

What to study?

For Prelims: POSHAN Abhiyan – features and the atlas.

For Mains: Significance of the campaign and government efforts to address malnutrition in the country.

Context: *The ministry of Women and Child Development (WCD) in association with the Bill & Melinda Gates Foundation and Deendayal Research Institute is developing a POSHAN atlas under POSHAN abhiyan.*

About the POSHAN Atlas:

Aim: to map the crops and food grains grown in different regions of the country so that nutritious protein rich food in local areas can be promoted.

Need for and significance of the atlas:

According to the World Bank *Global Nutrition Report – 2018*, malnutrition costs India at least \$10 billion annually in terms of lost productivity, illness and death and is seriously retarding improvements in human development and further reduction of childhood mortality.

The solution to tackling malnutrition lies in **promoting regional cropping patterns and embracing local food that are rich in protein**. The atlas will help tackle malnutrition effectively.

What else is needed?

Community Management of Acute Malnutrition is a proven approach to manage severe acute malnutrition and moderate acute malnutrition in children under five. It involves **timely detection of acutely malnourished children in the community and provision of treatment for those without medical complications** with nutrient-dense foods at home.

Recommendations to solve malnutrition by Food and Nutrition Security Analysis, India, 2019:

Recommendations are grouped by the **three pillars of food security: availability, access and utilisation**.

Availability:

1. Encourage and incentivise agricultural diversification.
2. Promote innovative and low-cost farming technologies.
3. Increase the irrigation coverage and enhance knowledge of farmers in areas such as appropriate use of land and water.
4. The government should improve policy support for improving agricultural produce of traditional crops in the country.

Accessibility:

1. The targeting efficiency of all food safety nets should be improved, especially that of the Targeted Public Distribution System (TPDS), to ensure that the poorest are included.
2. **Fortification** of government-approved commodities within the social safety net programmes can improve nutritional outcomes.
3. Child feeding practices should be improved in the country, especially at the critical ages when solid foods are introduced to the diet.

Utilisation:

1. **Storage capacity** should be improved to prevent post-harvest losses.
2. All the major welfare programmes need to be **gender sensitive**.
3. **Funds for food** to all yield great returns and help in unlocking the full potential of citizens besides strengthening the workforce.

Sources: pib.

Mains Question: Why despite India being a large agricultural country a large population is malnourished? Discuss in detail the reasons and challenges associated with malnutrition in India.

12. National Diabetes and Diabetic Retinopathy Survey

What to study?

For Prelims: Key findings of the survey.

For Mains: Measures necessary, challenges present.

Context: *National Diabetes and Diabetic Retinopathy Survey report for 2015-19* has been released. The survey - **conducted during 2015-2019 by Rajendra Prasad Centre for Ophthalmic Sciences, All India Institute of Medical Sciences (New Delhi) and released by the health ministry.**

Key findings:

- Prevalence of diabetes in India has been recorded at 11.8% in the last four years with almost same percentage of men and women suffering from the disease.
- The prevalence of diabetes among males was 12%, whereas among females it was 11.7%. Highest prevalence of diabetes (13.2%) was observed in the 70-79 years' age group.
- The prevalence of any form of diabetic retinopathy (DR) in diabetic population aged up to 50 years was found to be 16.9%.
- Prevalence of blindness among diabetics was 2.1% and visual impairment was 13.7%.

According to the World Health Organisation (WHO):

1. There are estimated 72.96 million cases of diabetes in adult population of India.
2. The prevalence in urban areas ranges between 10.9%-14.2% and prevalence in rural India is at 3.0-7.8% among population aged 20 years and above with a much higher prevalence among individuals aged over 50 years.

Background:

Diabetes and diabetic retinopathy have been emerging as a significant non-communicable disease leading to ocular morbidity (blindness). It is estimated that diabetic retinopathy was responsible for 1.06% of blindness and 1.16% of visual impairment globally in 2015.

Sources: pib.

13. State of the World's Children report

What to study?

For Prelims: Key findings of the report.

For Mains: Concerns and challenges raised, ways to address them.

Context: UNICEF released its **State of the World's Children report for 2019**.

Ranking of countries: The report has ranked countries in the order of 'highest burden of death among children of under-5' to the 'lowest burden of death among children of under-5'.

The report analyses **the global state of children's health vis-a-vis malnutrition, obesity, anaemia and other health issues**.

Key findings:

Global scenario:

- One in three children under the age of five years — around 200 million children worldwide — are either undernourished or overweight.
- This puts them at risk of poor brain development, weak learning, low immunity, increased infections and, in many cases, death.
- It describes a triple burden of malnutrition: Undernutrition, hidden hunger caused by a lack of essential nutrients, and overweight among children under the age of five.

India specific:

1. In India, every second child is affected by some form of malnutrition.
2. 35% of Indian children suffer from stunting due to lack of nutrition, 17% suffer from wasting, 33% are underweight and 2% are overweight.
3. Among countries in South Asia, India fares the worst (54%) on prevalence of children under five who are either stunted, wasted or overweight.
4. It has the highest burden of deaths among children under five per year.
5. One in five children under age 5 has vitamin A deficiency, which is a severe health problem in 20 states.
6. Every second woman in the country is anaemic, as are 40.5% children.
7. One in ten children are pre-diabetic.
8. Poverty, urbanisation as well as climate change are some of the factors that are driving poor diet.

Efforts by government recognised:

1. The report said **POSHAN Abhiyaan or the National Nutrition Mission** is playing a major role in improving nutrition indicators across India.
2. The **Anaemia Mukh Bharat programme** to fight anaemic prevalence has been recognized as one of the best programmes implemented by governments across the world to address malnutrition.
3. **The 6X6X6 strategy (six target beneficiary groups, six interventions and six institutional mechanisms) of the programme** has been highlighted for using anaemia testing and treatment as the entry point to provide information on healthy diets.

India's neighbours:

Afghanistan and Bangladesh have 49% and 46% children under five who are either stunted, wasted or overweight. Sri Lanka and the Maldives are the better performing countries in the region, at 28% and 32%, respectively.

UNICEF has laid out recommendations for nutritious, safe and affordable diets for children across the world:

1. Empower families to reduce demand for unhealthy food.
2. Incentivize food suppliers to provide healthy, affordable food.
3. Create accurate, easy-to-understand labelling.
4. Scale up nutrition by protecting water and sanitation systems.
5. Collect and analyzing quality data to track progress.

Sources: the Hindu.

14. Global Tuberculosis (TB) Report

What to study?

For Prelims: Key findings of the report.

For Mains: India's TB burden, efforts and measures needed.

Context: The report has been *released by WHO*.

The report provides a *comprehensive and up-to-date assessment of the TB epidemic and progress* in the response at global, regional and country levels for India.

Key findings and observations:

1. **Tuberculosis incidence rate** in India has *decreased by almost 50,000 patients* over the past one year (26.9 lakh TB patients in India in 2018).
2. **Incidence per 1,00,000 population** has *decreased from 204 in 2017 to 199 in 2018*.
3. Number of patients *being tested for rifampicin resistance* has increased from 32% in 2017 to 46% in 2018.
4. **Treatment success rate** has increased to 81% for new and relapse cases (drug sensitive) in 2017, which was 69% in 2016.

Global scenario:

1. TB remains the top infectious killer in the world claiming over 4,000 lives a day.
2. However, more people received life-saving treatment in 2018 than ever before, largely due to improved detection and diagnosis.
3. **Reduction in the number of TB deaths:** 1.5 million people died from TB in 2018, down from 1.6 million in 2017.
4. **Number of new cases of TB has been declining** steadily in recent years.
5. **The burden remains high among low-income and marginalized populations:** around 10 million people developed TB in 2018.

Challenges present:

1. Fragile health infrastructure and workforce shortages.
2. Weak reporting systems.
3. More out-of-pocket expenditure.
4. Drug resistance.
5. Fight against TB remains chronically underfunded.

Way ahead:

- The world must *accelerate progress if it is to reach the Sustainable Development Goal of ending TB by 2030*.
- **Sustained progress on TB** will require strong health systems and better access to services. That means *a renewed investment in primary health care and a commitment to universal health coverage*.
- **There is an urgent need for funding of TB research and development**, with an annual shortfall of US\$1.2 billion.
- **Priority needs include** a new vaccine or effective preventive drug treatment; rapid point-of-care diagnostic tests; and safer, simpler, shorter drug regimens to treat TB.

Global TB targets:

SDG 3.3 includes a target of ending the TB epidemic by 2030

The World Health Assembly-approved Global TB Strategy aims for a 90 per cent reduction in TB deaths and an 80 per cent reduction in the TB incidence rate by 2030 compared with 2015 levels. The Strategy established milestones for 2020 of a 35% reduction in TB deaths and a 20% reduction in the TB incidence rate from 2015 levels.

The UN Political Declaration on TB in 2018 includes 4 new global targets:

1. Treat 40 million people for TB disease in the 5-year period 2018-22 (7 million in 2018).
2. Reach at least 30 million people with TB preventive treatment for a latent TB infection in the 5-year period 2018-22.
3. Mobilize at least US\$13 billion annually for universal access to TB diagnosis, treatment and care by 2022.
4. Mobilize at least US\$2 billion annually for TB research.

TB facts:

1. Tuberculosis (TB) is caused by bacteria (*Mycobacterium tuberculosis*) that most often affect the lungs. Tuberculosis is curable and preventable.
2. About one-quarter of the world's population has latent TB, which means people have been infected by TB bacteria but are not (yet) ill with the disease and cannot transmit it.
3. The highest burden of TB in 2018 is in 8 countries: Bangladesh, China, India, Indonesia, Nigeria, Pakistan, the Philippines, and South Africa.

Sources: the Hindu.

15. Asbestos in Baby Powder

What to study?

For Prelims: About Asbestos and its use.

For Mains: Concerns over its use and need for a blanket ban.

Context: Johnson and Johnson (J&J) recalled 33,000 bottles of one lot of its talcum powder supplied in the United States (US) on October 18, 2019, as asbestos was found in it.

What is talc, and why is asbestos relevant?

Talc is a mineral in clay mined from underground deposits. It's the softest mineral known to man and that makes it useful in a wide range of consumer and industrial products.

Asbestos is also found underground, and veins of it can often be found in talc deposits, leading to a risk of cross-contamination, geologists say.

About Asbestos:

Asbestos is **a set of six naturally occurring silicate minerals**, which all have in common their eponymous asbestiform habit: i.e., long (roughly 1:20 aspect ratio), thin fibrous crystals, with each visible fiber composed of millions of microscopic "fibrils" that can be released by abrasion and other processes.

They are commonly known by their colors, as blue asbestos, brown asbestos, white asbestos, and green asbestos.

Uses and applications:

1. Manufacturers and builders use asbestos for its desirable physical properties. Some of those properties are sound absorption, average tensile strength, affordability, and resistance to fire, heat, and electricity. It was used in such applications as electrical insulation for hotplate wiring and in building insulation.
2. When asbestos is used for its resistance to fire or heat, the fibers are often mixed with cement or woven into fabric or mats. These desirable properties led to asbestos being used very widely.

Health effects:

Inhalation of asbestos fibers can cause serious and fatal illnesses including lung cancer, mesothelioma, and asbestosis (a type of pneumoconiosis).

Sources: the hindu.

16. Anthrax

What to study?

For prelims and mains: Anthrax- causes, effects, symptoms and prevention, location of Pobitora sanctuary.

Context: Anthrax scare at Assam's *Pobitora sanctuary* after death of 2 buffaloes *Asiatic Water Buffaloes*.

What is anthrax?

A disease caused by *Bacillus anthracis*, a germ that lives in soil.

Affects animals such as cattle, sheep, and goats more often than people. **People can get anthrax from contact with infected animals, wool, meat, or hides.**

Spread: It **does not spread directly from one infected animal or person to another**; it is spread by spores. These spores can be transported by clothing or shoes.

Symptoms & Infection:

Respiratory infection in humans initially presents with cold or flu-like symptoms for several days, followed by pneumonia and severe (and often fatal) respiratory collapse.

Gastrointestinal (GI) infection in humans is most often caused by consuming anthrax-infected meat and is characterized by serious GI difficulty, vomiting of blood, severe diarrhea, acute inflammation of the intestinal tract, and loss of appetite.

Cutaneous anthrax, also known as **Hide porter's disease**, is the cutaneous (on the skin) manifestation of anthrax infection in humans.

Treatment:

- The standard treatment for anthrax is a 60-day course of an antibiotic. Treatment is most effective when started as soon as possible.
- Although some cases of anthrax respond to antibiotics, advanced inhalation anthrax may not. By the later stages of the disease, the bacteria have often produced more toxins than drugs can eliminate.

Use in Bioterrorism:

Anthrax has been used in biological warfare by agents and by terrorists to intentionally infect. It was spread in US through a mail. It killed 5 people and made 22 sick.

Facts for prelims:

Pobitora Wildlife Sanctuary has **the highest concentration of one-horned rhinos in the world**.

Asiatic water buffalo is **the state animal of Chhattisgarh**.

Asian buffalo is a large bovine native to the Indian Subcontinent and Southeast Asia. It has been **listed as Endangered** in the IUCN Red List since 1986, as the remaining population totals less than 4,000.

Sources: the Hindu.

17. UN Report on Lead Concentration in Paints

What to study?

For Prelims: Lead and its concentration, effects on health, permissible limits.

For Mains: Need for and ways to limit its concentration.

Context: **World Lead Prevention Week** started on October 20, 2019.

On the sidelines, the **United Nations Environment Programme (UNEP)** has released **a report on lead concentration in items like paints**.

Permissible limit:

- **Ninety ppm** is the concentration limit recommended by the Model Law and Guidance for Regulating Lead Paint published by the UNEP in 2018.
- It is the lowest and most protective regulatory limit for lead paints that has been set in India and some other countries.

Key findings:

1. Only 13 countries have laws which prescribe that **lead concentration should not be more than 90 particles per million (ppm)**.
2. These 13 countries are part of 73 countries out of the UN's 193 members, which, as of September 30, 2019, had confirmed that they had legally binding controls on lead in paint, according to the UNEP report.
3. The **largest economic burden of lead exposure was borne by low- and middle-income countries**.

Lead and its concentration:

Lead is added to paints for various reasons, including enhancing the colour, reducing corrosion and decreasing the drying time.

However, lead can reach soil, dust and groundwater through weathering or peeling of the paint.

It has several adverse health impacts:

1. Lead exposure accounted for 1.06 million deaths from long-term effects and 24.4 million disability adjusted life years known as DALYs in 2007.
2. Lead can cause permanent damage to the brain and nervous system, resulting in decreased IQ and increased behavioural problems.
3. It can also cause anaemia, increase the risk of kidney damage and hypertension, and impair reproductive function.
4. Young children and pregnant women (whose developing foetus can be exposed) are especially vulnerable to the adverse effects of lead. Even relatively low levels of exposure can cause serious and irreversible neurological damage.

What needs to be done?

1. The **cost of eliminating the use of lead compounds in decorative paint is much lower than removing these paints from surfaces in homes**.
2. By contrast, the economic cost is low for eliminating the use of lead compounds in new decorative paints. In fact, many manufacturers have already successfully reformulated their paint products to avoid the intentional addition of lead.
3. According to the paint industry, **the reformulation of residential and decorative paints to eliminate lead additives is feasible, and the technical and cost impacts are manageable**.

Need of the hour: establishing laws and informing people about the hazardous effects of lead in paints remained key measures to curb its growing menace.

Sources: Down to earth.

18. QS Indian University Rankings

What to study?

For Prelims: Indicators and top performers.

For Mains: Significance of the rankings and ways to improve the higher education system.

Context: QS Indian University Rankings have been released recently. This is **the second edition** of the standalone rankings for India's higher education institutions.

The rankings include public, private, higher education or deemed universities.

How are the institutions ranked?

The methodology used eight indicators to determine the institutions' rankings. These were: academic reputation (weight of 30%), employer reputation (20%), faculty-student ratio (20%), the proportion of staff with a PhD (10%), papers per faculty from Scopus database (10%), citations per paper from Scopus database (5%), the proportion of international students (2.5%), and the proportion of international faculty (2.5%).

Key findings:

1. Indian Institutes of Technology (IITs) dominate the list, with **seven IITs figuring in the top ten** rankings.

2. Like last year, IIT-Bombay leads followed by the Indian Institute of Science (IISc).
3. This year, IIT-Delhi has improved its performance by one rank to overtake IIT-Madras.
4. Delhi University, University of Hyderabad and the Indian Institute of Science are the only other non-IIT institutions in the top ten.

Way ahead for India:

The rankings are an affirmation of faith in the premier Indian higher educational institutions. The Human Resource Development (HRD) ministry has been taking several steps to improve the global rankings, especially the world-renowned IITs by providing more funds and launching the Institutes of Eminence scheme under which institutes would be freed from regulatory framework. However, there's still work to be done beyond the top universities.

Sources: Indian Express.

19. Intensified Mission Indradhanush

What to study?

For Prelims and mains: Key features and significance of the programme.

Context: To ensure that not a single child in the country misses out on vaccination, the government will launch the '**Intensified Mission Indradhanush 2.0**' on October 31 with **a special focus on improving coverage in areas with "low" immunisation.**

Key facts:

- Through 'IMI 2.0', the health ministry aims to reach each and every child below the age of two years and all pregnant women still uncovered/partially covered in 271 districts of the country and 652 blocks of Uttar Pradesh and Bihar.
- IMI 2.0 will include four rounds of vaccination, with each round involving a seven-day immunisation drive to be conducted each month.
- The IMI programme is supported by 12 ministries and departments and is being monitored by the cabinet secretary at the national level.

Existing gaps:

The current national full immunisation coverage rate stands at 87 per cent. According to government data, 260 lakh children are born every year and an estimated 31 lakh out of them would not receive complete rounds of vaccination in the first year of their life due to various reasons.

Mission Indradhanush:

To strengthen and re-energize the programme and achieve full immunization coverage for all children and pregnant women at a rapid pace, the Government of India launched "**Mission Indradhanush**" in December 2014.

Goal of Mission Indradhanush: The ultimate goal of Mission Indradhanush is **to ensure full immunization with all available vaccines for children up to two years of age and pregnant women.**

Intensified Mission Indradhanush (IMI):

To further intensify the immunization programme, the government launched the Intensified Mission Indradhanush (IMI) on October 8, 2017.

- Through this programme, Government of India aims to reach each and every child up to two years of age and all those pregnant women who have been left uncovered under the routine immunisation programme/UIP.
- Intensified Mission Indradhanush will cover low performing areas in the selected districts (high priority districts) and urban areas. Special attention will be given to unserved/low coverage pockets in sub-centre and urban slums with migratory population.

Sources: the Hindu.

20. New Guidelines Released for Peritoneal Dialysis Services

What to study?

For Prelims: What is Peritoneal dialysis.

For Mains: Concerns and challenges present, need for govt intervention.

Context: Ministry of Health and Family Welfare has come out with a set of guidelines for establishing **peritoneal dialysis services** under **the Pradhan Mantri National Dialysis Programme**.

The new guidelines, among other things, **envisage providing training to community health workers to provide support to persons on peritoneal dialysis at home or in primary health care settings.**

Significance of these guidelines:

- The guidelines aim to serve as a comprehensive manual to states that intend to set up peritoneal dialysis services and for providers of peritoneal dialysis as a 'best practice' document to ensure delivery of high quality and cost effective services.
- It also aims to achieve equity in patient access to home-based peritoneal dialysis, reduce the overall cost of care to the system by focusing on efficient leveraging of resources, and bring in consistency of practice, pricing and a full range of product availability.

How is peritoneal dialysis performed?

During peritoneal dialysis, **a cleansing fluid (dialysate) is circulated through a tube (catheter) inside a part of the abdominal cavity** (peritonealcavity).

The **dialysate absorbs waste** products from blood vessels in the abdominal lining (peritoneum) and then is drawn back out of the body and discarded.

Pradhan Mantri National Dialysis Programme:

Rolled out in 2016 as part of **the National Health Mission(NHM)** for provision of free dialysis services to the poor.

The Guidelines for Pradhan Mantri National Dialysis Programme envisage provision of **dialysis services under NHM in PPP (Public Private Partnership) mode.**

Need for govt intervention:

- Every year about 2.2 Lakh new patients of End Stage Renal Disease (ESRD) get added in India resulting in additional demand for 3.4 Crore dialysis every year.
- With approximately 4950 dialysis centres, largely in the private sector in India, the demand is less than half met with existing infrastructure.
- Since every Dialysis has an additional expenditure tag of about Rs.2000, it results in a monthly expenditure for patients to the tune of Rs.3-4 Lakhs annually.
- Besides, most families have to undertake frequent trips, and often over long distances to access dialysis services incurring heavy travel costs and loss of wages for the patient and family members accompanying the patient.
- This therefore leads to financial catastrophe for practically all families with such patients.
- It has been felt that both in terms of provision of this important life saving procedure and also for reducing impoverishment on account of out of pocket expenditure for patients, a Dialysis program is required.

Sources: the Hindu.

Topics: Important aspects of governance, transparency and accountability, e-governance applications, models, successes, limitations, and potential; citizens charters, transparency & accountability and institutional and other measures.

1. Electoral Bond Scheme

What to study?

For Prelims: Key features of Electoral Bonds and highlights of the scheme.

For Mains: Significance of the scheme, benefits and concerns associated.

Context: Sale of Electoral Bonds at Authorised Branches of State Bank of India (SBI).

About Electoral bonds:

What are electoral bonds? Bonds that allow donors to pay political parties using banks as an intermediary.

Key features:

1. Although called a bond, the banking instrument resembling promissory notes will **not carry any interest**.
2. It will be **a bearer instrument**.
3. It will **not carry the name of the payee**.
4. It can be bought for any value, in multiples of Rs 1,000, Rs 10,000, Rs 1 lakh, Rs 10 lakh or Rs 1 crore.

Eligibility:

1. May be purchased by a citizen of India, or entities incorporated or established in India.
2. A person being an individual can buy electoral bonds, either singly or jointly with other individuals.
3. Only the registered Political Parties which have secured not less than one per cent of the votes polled in the last Lok Sabha elections or the State Legislative Assembly are eligible to receive the Electoral Bonds.

Need:

The electoral bonds are aimed at rooting out the current system of largely anonymous cash donations made to political parties which lead to the generation of black money in the economy.

How will the Bonds help?

1. Encourage political donations of clean money from individuals, companies, HUF, religious groups, charities, etc.
2. After purchasing the bonds, these entities can hand them to political parties of their choice, which must redeem them within the prescribed time.

Why is there a controversy?

1. The introduction of the electoral bond scheme is part of what appears to be **a growing trend away from transparency and accountability**, two values which were already sparse in relation to Indian political parties.
2. Opponents to the scheme allege that since the identity of the donor of electoral bonds has been kept anonymous, it could lead to an **influx of black money**.
3. Others allege that the scheme was designed **to help big corporate houses donate money without their identity being revealed**.

Sources: pib.

2. PFMS Portal

What to study?

For Prelims: What is PFMS?, key features, who are arhatiyas?

For Mains: Significance of PFMS and the need for it.

Context: Under pressure from the Centre, the Punjab Food and Civil Supplies Department has directed all government procurement agencies to link the bank accounts of farmers with **the Public Finance Management System (PFMS)** portal before the procurement of paddy begins. This has angered the **arhatiyas** (commission agents), a large number of whom want the government to roll back its decision.

About PFMS:

It is **an end-to-end solution** for processing payments, tracking, monitoring, accounting, reconciliation and reporting.

Administered by **the Department of Expenditure**.

It is **implemented by the Controller General of Accounts**.

Functions:

- It provides scheme managers a unified platform for tracking releases and monitoring their last mile utilisation.
- It provides platform for efficient management of funds through tracking of funds and real time reporting of expenditure and receipts through treasury and bank interface.
- The line ministries/departments utilise this platform to monitor the utilisation of funds provided to the implementing agencies and state governments.
- PFMS is also used for DBT payments under MGNREGA and other notified schemes of the Government of India.

Significance of PFMS:

- Introduction of the PFMS resulted in effectiveness and economy in public finance management through better cash management for government transparency in public expenditure and real-time information on resource availability and utilisation across schemes.
- It also resulted in improved programme administration and management, reduction of float in the system, direct payment to beneficiaries and greater transparency and accountability in the use of public funds.

Sources: Indian Express.

Mains Question: What do you understand by Public finance management system & how it has the potential of increasing transparent & accountability? Also elaborate on the challenges of adopting it.

3. National e-Assessment Scheme (NeAC)

What to study?

For Prelims and mains: NeAC- key features, need for and significance.

Context: National e-Assessment Centre of IT Department inaugurated recently.

About NeAC:

1. NeAC will be an independent office that will look after the work of e-Assessment scheme which is recently notified for faceless e-assessment for income tax payers.
2. There would be a NeAC in Delhi to be headed by Principal Chief Commissioner of Income Tax (Pr.CCIT).
3. There are 8 Regional e-Assessment Centres (ReAC) set up at Delhi, Mumbai, Chennai, Kolkata Ahmedabad, Pune, Bengaluru and Hyderabad which would comprise Assessment unit, Review unit, Technical unit and Verification units.
4. Each ReAC will be headed by Chief Commissioner of Income Tax (CCIT).
5. Cases for the specified work shall be assigned by the NeAC to different units by way of automated allocation systems.



Significance:

In view of the dynamic and all India jurisdiction of all officers of NeAC and ReAC, this kind of connective and collaborative effort of officers is likely to lead to better quality of assessments.

Sources: pib.

4. NCRB Crime Statistics for 2017

What to study?

For Prelims: Key findings.

For Mains: Concerns, challenges and ways to address them.

Context: The National Crime Records Bureau (NCRB) has released its crime statistics for the year 2017.

Key findings:

Women safety: Uttar Pradesh, Maharashtra and West Bengal are deemed **most unsafe for women**.

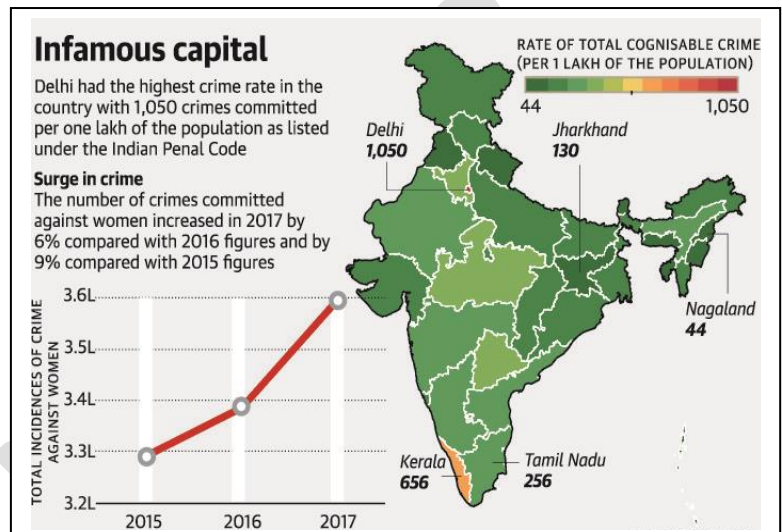
Riots cases: There were 58,880 incidents of rioting in 2017 of which the **maximum incidents were reported from Bihar** at 11,698, followed by Uttar Pradesh at 8,990. Of the total, **communal and sectarian riots** accounted for the largest.

Among union territories, Delhi recorded the most murder cases in 2017 at 487.

Fake news: NCRB for the first time collected data on circulation of "false/fake news and rumours." Maximum incidents were reported from Madhya Pradesh (138).

A new category of **offences committed by various categories of "Anti-National Elements"**: Maximum offences were committed by Left Wing Extremist (LWE) operatives (652), followed by North East insurgents (421) and Terrorists (Jihadi and other elements) (371). **Most killings took place in Chhattisgarh**.

Sources: the Hindu.



5. TechSagar

What to study?

For Prelims and mains: Key features and significance.

Context: TechSagar, national repository of India's cyber tech capabilities launched.

Launched by: National Cyber Security Coordinator's office in partnership with Data Security Council (DSCI) of India.

What is TechSagar?

1. It is a platform to discover India's technological capability through a portal.
2. It is a consolidated and comprehensive repository of India's cyber tech capabilities which provides actionable insights about capabilities of the Indian Industry, academia and research across 25 technology areas like internet of things (IoT), Artificial Intelligence (AI), Machine Learning (ML), blockchain, cloud & virtualisation, robotics & automation, ar/vr, wireless & networking, and more.
3. The portal will list business and research entities from the IT industry, startups, academia, and individual researchers.

Significance:

- The repository will facilitate new opportunities for businesses and academia to collaborate, connect and innovate in future.
- TechSagar will allow targeted search, granular navigation and drill down methods using more than 3000 niche capabilities. As of now, the repository features 4000+ entities from industry, academia and research including large enterprises and start-ups providing a country level view of India's cyber competencies.

About DSCI:

Data Security Council of India (DSCI), is a **not-for-profit**, industry body on data protection in India, **setup by NASSCOM**.

- It is committed to making the cyberspace safe, secure and trusted by establishing best practices, standards and initiatives in cyber security and privacy.
- To further its objectives, DSCI engages with governments and their agencies, regulators, industry sectors, industry associations and think tanks for policy advocacy, thought leadership, capacity building and outreach activities.

Sources: pib.

6. Government e Marketplace (GeM)

What to study?

For Prelims: About GeM and its features.

For Mains: Significance and the need for GeM.

Context: The **Government e-Marketplace (GeM)** has signed a memorandum of understanding (MoU) with Federal Bank to offer various services.

Significance: The MoU will facilitate a cashless, paperless and transparent payment system on the portal and would create an efficient procurement system for government entities.

About GeM:

What is it? GeM is a state-of-the-art national public procurement platform of Ministry of Commerce and Industries, that has used technology to remove entry barriers for bonafide sellers and has created a vibrant e-marketplace with a wide range of goods and services.

Aim: GeM aims to enhance transparency, efficiency and speed in public procurement.

GeM facilities:

1. Listing of products for individual, prescribed categories of Goods/ Services of common use.
2. Look, estimate, compare and buying facility on dynamic pricing basis.
3. Market place buying of majority of common User Items.
4. Buying Goods and Services online, as and when required.
5. Transparency and ease of buying.
6. Useful for low value buying and also for bulk buying at competitive price using Reverse Auction/ e-bidding.
7. Continuous vendor rating system.
8. Return policy.



Benefits of GeM:

1. Enhances transparency.
2. Increased efficiency.
3. Secure and safe.
4. Savings to the government.

Sources: pib.

Topics: Development processes and the development industry the role of NGOs, SHGs, various groups and associations, donors, charities, institutional and other stakeholders.

1. 'Stations' Cleanliness Survey Report

What to study?

For Prelims: Key findings of the survey, top performers.

For Mains: Efforts by Railways to ensure cleanliness, challenges present and ways to address them.

Context: 'Stations' Cleanliness Survey Report' (Cleanliness assessment of Non-suburban and Suburban Stations 2019) has been released.

How are the stations ranked?

The total score is out of 1000 and each component (Process Evaluation, Direct Observation, Citizen Feedback) weighs 33.33% of the total score.

Background:

Railways have been conducting third party audit and cleanliness ranking of 407 major stations annually since 2016. This year the survey was expanded to include 720 stations and suburban stations were also included for the first time.

Key highlights and findings of the report:

1. **Top three cleanest railways stations** are from the western state of Rajasthan- Jaipur, Jodhpur and Durgapura.
2. **Top three railway zones**- North Western Railway followed by South East Central Railway and East Central Railway.
3. Andheri, Virar and Naigaon railway stations were the **top three among 109 suburban stations**.

Efforts in this regard:

Cleanliness programme is being conducted over 6500 stations across Indian Railways to showcase the efforts putting in by Indian Railways to keep trains, stations and railway premises clean. Indian Railways has also banned **single use plastic** across its premises today onwards.

Sources: pib.

2. Village Secretariat Programme

What to study?

For Prelims: Key features of the programme.

For Mains: Significance and the need for this initiative.

Context: Village Secretariat system launched in **Andhra Pradesh**.

Key facts:

1. Under the new system, the AP government, **one Village Secretariat has been set up for every population of 2,000**, with each one comprising close to a dozen village officials (from different departments like police, revenue, etc).
2. The idea behind it, according to the state government, is **to ensure that its services reach people on the ground, and also to strengthen the existing Panchayat Raj system**.
3. Village Secretariats would act as **a bridge between the government and the people** by rendering over 500 types of services at their doorstep.
4. These institutions would **showcase government programmes and make pictorial representations of government schools and hospitals** under the caption '**then and now**' to show how reforms have changed their functioning.

Criticism:

While the ruling YSR Congress Party (YSRCP) has maintained that **this will make government services more accessible**, the system, however, is **in complete contrast to the earlier trajectory of the state**, which had been pushing for e-governance or online services instead under former chief minister N. Chandrababu Naidu.

Sources: the Hindu.

3. Pradhan Mantri Innovative Learning Programme "DHRUV"

What to study?

For Prelims and mains: Key features and significance of the programme.

Context: Pradhan Mantri Innovative Learning Programme- 'DHRUV', a 14 day learning programme, was launched recently from Indian Space Research Organisation (ISRO) Headquarters at Bengaluru.

About DHRUV:

- The programme is called DHRUV (**after the Pole Star**) and every student to be called 'DHRUV TARA'.
- 60 students, 30 each from Science and Performing Arts discipline, have been selected for this ambitious programme in the first batch.
- The programme begins with a tour at ISRO followed by a stay in Delhi, where the selected students will be mentored by renowned experts.
- It is being started to identify and encourage talented children to enrich their skills and knowledge.

Significance:

The programme will act as a platform to explore the talent of outshining and meritorious students, and help them achieve excellence in their specific areas of interest may it be science, performing arts, creative writing, etc.

Sources: pib.

4. Food Safety Mitra (FSM) Scheme

What to study?

For Prelims: Key features of the movement, what are TPCs, need for a limit.

For Mains: Significance and the need for staying healthy, government measures to keep the country healthy and raise awareness about it.

Context: *Food Safety Mitra (FSM) scheme* for strengthening and scaling up 'Eat Right India' movement launched.

What is FSM scheme?

A scheme **to support small and medium scale food businesses** to comply with the food safety laws and facilitate licensing and registration, hygiene ratings and training.

Significance of the scheme:

Apart from strengthening food safety, this scheme would also create new employment opportunities for youth, particularly with food and nutrition background.

How it works?

Food Safety Mitras will be chosen.

They undergo training and certification by FSSAI to do their work and get paid by food businesses for their services.

About Eat Right Movement:

It was launched by the **Food Safety and Standards Authority of India (FSSAI)**.

The movement aims **to cut down salt/sugar and oil consumption by 30% in three years**.

It also aims **to engage and enable citizens** to improve their health and well-being by making the right food choices.

Measures in place:

FSSAI has put in place **robust regulatory measures under three major pillars: Eat Safe, Eat Health and Eat Sustainably** for the programme.

FSSAI has prescribed a limit for **Total Polar Compounds (TPC)** at 25% in cooking oil to avoid the harmful effects of reused cooking oil.

Significance of the campaign:

The country is in need of a movement on preventive health for all in the backdrop of the increasing burden of non-communicable diseases including diabetes, hypertension and heart diseases, widespread deficiencies of vitamins and minerals and rampant food-borne illnesses.

The Eat Right India movement acts as **a crucial preventive healthcare measure to trigger social and behavioural change through** a judicious mix of regulatory measures, combined with soft interventions for ensuring awareness and capacity building of food businesses and citizens alike.

Sources: pib.

5. Naga Peace Accord

What to study?

For Prelims: What is Naga Peace Accord? How the conflict the began? Shillong accord.

For Mains: Significance and the need for peace, challenges remaining and ways to address them.

Context: Four years after the government inked **the Naga peace accord in 2015**, the Centre has now said that the process had almost concluded, despite the fact that the talks had hit a roadblock in its final stages.

Why is it being delayed?

It is mainly because of unrealistic demands. NSCN I-M has issued statements in the past claiming that it wanted a separate Constitution, flag and integration of all contiguous Naga-inhabited areas under Nagalim (Greater Nagaland).

Government of India's stand:

A mutually agreed draft comprehensive settlement, including all the substantive issues and competencies, is ready for inking the final agreement. Respecting the Naga people's wishes, the Government of India is determined to conclude the peace process without delay.

How old is the Naga political issue?

Pre- independence:

1. The British annexed Assam in 1826, and in 1881, the Naga Hills too became part of British India. The first sign of Naga resistance was seen in the formation of **the Naga Club** in 1918, which told the Simon Commission in 1929 "to leave us alone to determine for ourselves as in ancient times".
2. In 1946 came **the Naga National Council (NNC)**, which declared Nagaland an independent state on August 14, 1947.
3. The NNC resolved to establish a "**sovereign Naga state**" and conducted a "**referendum**" in 1951, in which "**99 per cent**" supported an "**independent**" Nagaland.

Post- independence:

On March 22, 1952, **underground Naga Federal Government (NFG) and the Naga Federal Army (NFA)** were formed. The Government of India sent in the Army to crush the insurgency and, in 1958, enacted **the Armed Forces (Special Powers) Act**.

When did the NSCN come into being?

A group of about 140 members led by **Thuingaleng Muivah**, who were at that time in China, refused to accept the **Shillong Accord**, and formed the National Socialist Council of Nagaland in 1980.

As per the accord, **NNC and NFG agreed to give up arms**.

In 1988, the NSCN split into NSCN (IM) and NSCN (K) after a violent clash.

What did the NSCN (IM) want?

A "**Greater Nagalim**" comprising "all contiguous Naga-inhabited areas", along with Nagaland. That included several districts of Assam, Arunachal and Manipur, as also a large tract of Myanmar.

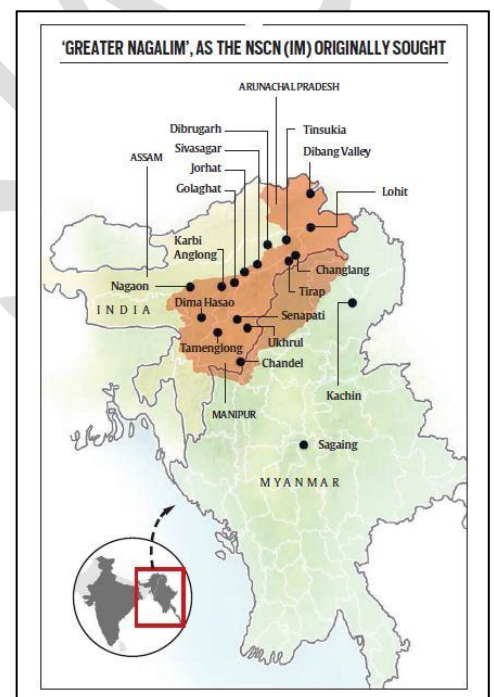
The Nagaland Assembly has endorsed the 'Greater Nagalim' demand — "Integration of all Naga-inhabited contiguous areas under one administrative umbrella" — as many as five times: in December 1964, August 1970, September 1994, December 2003 and as recently as on July 27, 2015.

The ceasefire:

The Government of India signed a ceasefire agreement with NSCN (IM) on July 25, 1997, which came into effect on August 1, 1997.

What's in peace accord?

1. NSCN – IM has been derecognized as a militant organization and talks have been initiated with the government.



2. GOI is open to discuss the Naga territorial issue within the existing boundaries of the neighboring states of Manipur, Assam etc which are being claimed as part of Greater Nagalism.
3. Key issues that have been put under consideration includes AFSPA, demographic changes due to cross border migrations and other tribals like Meitei who are diluting the local populations in the Naga areas.

Sources: the Hindu.

6. Corporate Social Responsibility

What to study?

For Prelims: What is CSR? Who governs them?

For Mains: Need for and significance, a critical evaluation on the need for CSR.

Context: President of India Presents **National Corporate Social Responsibility Awards**.

The **NCSRA** has been **instituted by the Ministry of Corporate Affairs** to recognize outstanding contribution in the field of **Corporate Social Responsibility (CSR)**.

What is Corporate Social Responsibility (CSR)?

It is **the integration of socially beneficial programs and practices into a corporation's business model and culture**.

How is it regulated in India?

India is one of the first countries in the world to make **CSR mandatory for companies following an amendment to the Companies Act, 2013 (Companies Act) in 2014**.

Under the **Companies Act**, businesses can invest their profits in areas such as promoting rural development in terms of healthcare, sanitation, education including skill development, environmental sustainability, etc.

Section 135(1) of the Act prescribes thresholds to identify **companies which are required to constitute a CSR Committee - those, in the immediately preceding financial year of which:**

1. net worth is Rs 500 Crore or more; or.
2. turnover is Rs 1000 Crore or more; or.
3. net profit amounts to Rs 5 Crore or more.

As per **the Companies (Amendment) Act, 2019**, CSR is **applicable to companies before completion of 3 financial years**.

Amount to be spent:

1. Companies are required to spend, in every financial year, at least 2% of their average net profits generated during the 3 immediately preceding financial years.
2. For companies that have not completed 3 financial years, average net profits generated in the preceding financial years shall be factored in.

Treatment of unspent amounts:

1. Amounts to be utilised towards a CSR activity, but unspent must be parked in a special account as prescribed under the provision within 30 days of the end of the relevant financial year.
2. The unspent amount must be utilised by the company for the particular CSR activity within a period of 3 financial years from the date of such transfer, failing which, it must be transferred to **any fund provided for in schedule VII of the Companies Act namely inter alia the Clean Ganga Fund, Swachh Baharat Kosh, Prime Minister's National Relief Fund**.
3. Any unspent amount which does not relate to an ongoing CSR activity must be **transferred to a fund provided for in Schedule VII within a span of 6 months of the end of the relevant financial year**.

Fines and Imprisonment:

Provision for penalty in the form of fine on the company and officers in default, between Rs 50,000 - Rs 25,00,000, has been inserted in case of failure in compliance with Section 135. Additionally, every officer in default may also be imprisoned for a term of up to 3 years.

Social responsibility has a strategic importance for two reasons:

1. A healthy business can only succeed in a healthy society. Thus, it is in the best interest of a company to produce only goods and services which strengthen the health of society
2. If the company wants to succeed in the long term it needs to have the acceptance—or licence to operate—from social actors affected by the company's operations.

Sources: pib.

Mains Question: Do you agree that corporate social responsibility makes companies more profitable and sustainable? Analyse.

Role of civil services in a democracy.

1. 'Mo Sarkar' Initiative

What to study?

For Prelims and mains: Key features and significance of the initiative.

Context: Odisha has launched a new governance initiative- '**Mo Sarkar**'- on the occasion of Gandhi Jayanti

What is it?

The '**Mo Sarkar**' was launched at all police stations across the State along with **21 district headquarters hospitals and three government-run medical college hospitals** at Cuttack, Berhampur and Sambalpur.

The programme will be **effective at all the 30 district headquarters hospitals of the State by October 30.**

The objective of the programme is **to provide service with dignity to people who are coming to government offices for different purposes.**

How it works?

1. The phone numbers of people who are coming to government offices will be collected randomly with the purpose to improve the governance system by collecting feedback on behaviour and professionalism of government officers.
2. The Chief Minister, Departmental Minister, Director General of Police (in case of police stations) and Departmental Minister, Secretary and Director (in case of hospitals) will call on random numbers to collect feedback.
3. The employees will be ranked as good or bad on the basis of the feedback and those with good rank will get out-of-turn promotion and action will be taken against employees with bad rank.

Sources: the Hindu.

Topics: India and its neighbourhood- relations.

1. RCEP: Opportunity, fears in regional trade deal

What to study?

For Prelims: Overview and key features of RCEP.

For Mains: Significance and concerns expressed by India, way ahead.

Context: Eighth **Regional Comprehensive Economic Partnership (RCEP) ministerial meeting** is being held in **Bangkok.**

What is the RCEP?

The Regional Comprehensive Economic Partnership (RCEP) is a trade deal that is currently under negotiation among 16 countries — the 10 member countries of the Association of Southeast Asian Nations (ASEAN), and the six countries with which the ASEAN bloc has free trade agreements (FTA).

- The ASEAN, which includes Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand, and Vietnam, has FTAs with India, Australia, China, South Korea, Japan and New Zealand.

- Negotiations on the details of the RCEP have been on since 2013, and all participating countries aim to finalise and sign the deal by November.

What does the RCEP propose?

- The purpose of RCEP is to create an “integrated market” spanning all 16 countries, making it easier for products and services of each of these countries to be available across this region.
- ASEAN says the deal will provide “a framework aimed at lowering trade barriers and securing improved market access for goods and services for businesses in the region”.
- The negotiations are focussed on areas like trade in goods and services, investment, economic and technical cooperation, intellectual property, competition, dispute settlement, e-commerce, and small and medium enterprises.

Why is the RCEP important?

It is billed as the “largest” regional trading agreement ever — these countries account for almost half of the world’s population, contribute over a quarter of world exports, and make up around 30% of global Gross Domestic Product (the value of all goods and services produced in a year).

How does India stand to gain?

Sections of Indian industry feel that being part of RCEP would allow the country to tap into a huge market, if the domestic industry becomes competitive. Pharmaceuticals and cotton yarn are confident of gains, and the services industry too, may have new opportunities.

And what are the concerns?

1. Several industries feel India needs to be mindful of the amount of access it gives to its market. There is fear that some domestic sectors may be hit by cheaper alternatives from other RCEP countries. Apprehensions have been expressed that cheaper Chinese products would “flood” India.
2. Critics are also not confident that India would be able to take advantage of the deal, given its poor track record of extracting benefits from the FTAs with these countries. India’s trade gap with these countries may widen if it signs the RCEP deal, they say. (See figures with map above)
3. Industries like dairy and steel have demanded protection. The textile industry, which has already raised concerns about growing competition from neighbouring countries with cheaper and more efficient processes, fears the deal would impact it negatively.
4. There are some differences within industries. The bigger players in steel, for example, are apprehensive of the potential impact on their businesses; however, makers of finished goods have argued that limiting steel supply to domestic producers through higher import duties will put them at a disadvantage.

Sources: Indian Express.

2. India- China Informal Summit at Mahabalipuram

What to study?

For Prelims: Historical background of Mahabalipuram.

For Mains: Informal and formal summits- need for and significance, overview Of India- China relations.

Context: Prime Minister Narendra Modi and Chinese President Xi Jinping met in the ancient coastal town of **Mamallapuram** or Mahabalipuram in Tamil Nadu for **a second Informal Summit**.

The two countries convened their **first Informal Summit in central China’s Wuhan in April 2018**, where they exchanged views on issues of global and bilateral significance.

Outcomes:

1. To celebrate the 70th anniversary of diplomatic relations the two countries will organise 70 activities including a conference on a ship voyage that will trace the historical connection between the two civilisations.
2. A high- level economic and trade dialogue mechanism will be established with the objective of achieving enhanced trade and commercial relations.

3. Mutual investments in identified sectors will be encouraged through the development of a manufacturing partnership.
4. Sister- state relations will be established between Tamil Nadu and Fujian Province.

What are Informal Summits?

- They act as supplementary exchanges to annual Summits and other formal exchanges such as the G20 Summit, EU-India Summit and the BRICS Summit among others.
- They allow for “direct, free and candid exchange of views” between countries, something that may not be possible to do through formal bilateral and multilateral meetings that are agenda driven, where specific issues are discussed, and outcomes are more concretely defined.
- They are *impromptu* in the sense that they take place when a need for them is perceived by the concerned nations.

The story of Mahabalipuram’s China connection:

- Mahabalipuram, or Mamallapuram, 56 km south of Chennai on the Tamil Nadu coast had ancient links with Buddhism and China through the maritime outreach of **the Pallava dynasty**.
- The name Mamallapuram derives from **Mamalla, or “great warrior”**, a title by which the Pallava King **Narasimhavarman I** (630-668 AD) was known. It was during his reign that **Hiuen Tsang**, the Chinese Buddhist monk-traveller, visited **the Pallava capital at Kanchipuram**.
- **Narasimhavarman II** (c.700-728 AD), also known as **Rajasimhan**, built on the work of earlier Pallava kings to consolidate maritime mercantile links with southeast Asia.
- Narasimhavarman II sent **a mission to the Tang court in 720 AD**.
- The emissaries of the Pallava king sought the permission of **Emperor Xuangzong** to fight back Arab and Tibetan intrusions in South Asia.
- Pleased with the Indian king’s offer to form a coalition against the Arabs and Tibetans, the Chinese emperor bestowed the title of **‘huaide jun’** (the Army that Cherishes Virtue) to Narayansimha II’s troops.
- **The Descent of the Ganga/Arjuna’s Penance, a rock carving commissioned by Narasimhavarman I**, with its depiction of the **Bhagirathi** flowing from the Himalayas, may serve as a reminder of the geography of India-China relations, and their shared resources.

During the reign of Cholas:

Tamil-Chinese links continued after the Pallavas, flourishing under the Cholas as the Coromandel coast became the entrepot between China and the Middle East. The links extended to a wider area beyond Mahabalipuram, through a layered history that has left a rich tapestry of society, culture, art and architecture, which is diverse and complex, and reaches up to modern times.

The trading missions that the Cholas sent to **the Song court** included Muslims.

A trader named **Abu Qasim** was second-in-command of a mission sent in 1015; the next mission, in 1033, included one Abu Adil.

Sources: the Hindu.

3. European MPs’ Kashmir visit

What to study?

For Prelims: About European Parliament, composition and functioning.

For Mains: The recent visit- concerns and implications.

Context: A delegation of **Members of European Parliament (MEPs)**, consisting of more than 20 MPs, recently visited Kashmir to understand the ground situation after India revoked special status given to the state under **Article 370**.

Observations made:

1. Decision to revoke provisions of **Article 370** that gave special status to Jammu & Kashmir was an internal issue. And it should not be used against India.

2. The recent terror attack on civilians indicate that **Terrorism is not finished yet in Kashmir.**
3. Terrorism should not be seen as only India's problem but **a global problem.** For most of these terrorists trace their origin to Pakistan.
4. After interacting with various groups, they felt that **the situation is not as bad as they thought.**
5. J&K should be promoted as **a dynamic place for building tourism infrastructure, development projects and educational institutes.**

Concerns and issues raised wrt to their visit:

1. When the govt can allow MPs from a foreign country to visit Srinagar to understand the situation, why not allow MPs from opposition parties from India.
2. Why were MEPs not allowed to talk to detained J&K leaders, certain groups and sections.
3. These MPs were invited by a businessperson who runs a non-profit organisation in India. How could the govt honour invitations by such a person?
4. The choice of this delegation has also raised eyebrows. A majority of those travelling to Srinagar belong to anti-immigration and far-right parties in the U.K., France, Italy, Poland and Germany.
5. If the objective of govt's move was to bring back normalcy, then would terror activities recur?
6. Why have the communication networks not been restored completely?
7. It is also being said that the government has committed grave sacrilege by **introducing a third party to assess the ground situation in Kashmir** and that also through an unknown think tank.

Way ahead:

It's high time for the Indian government to understand the implications of this visit and allow for more detailed visits by Indian MPs, journalists and other sections of the society. Meanwhile, communication networks should be restored.

Sources: the Hindu.

Topics: Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.

1. Automatic Exchange of Information (AEOI)

What to study?

For Prelims: Key features of AEOI and CRS.

For Mains: need for and the significance of AEOI.

Context: In the first tranche of information, Switzerland has shared bank account details with the Indian government under the **AEOI (Automatic Exchange of Information) framework.**

Not just India: The Federal tax administration (FDA) of Switzerland has exchanged account details information with 75 countries including India. This is the first time when Switzerland has shared financial details about the active and closed accounts during 2018 under the AEOI framework.

Background:

AEOI Regime between Switzerland and India kicked off from September 1, 2019. Under this mechanism, India will start receiving information on all financial accounts held by Indian residents in Switzerland, for the year 2018.

What does this mean for India, and how will the exchange of information be governed?

- The step is likely to shed more light on the wealth Indians have stashed away in Swiss bank accounts, for so long governed by strict local rules of secrecy.
- In 2018, data from Zurich-based Swiss National Bank (SNB) had shown that after declining for three years, money parked by Indians in Swiss Banks rose 50 per cent to CHF (Swiss Franc) 1.02 billion (Rs 7,000 crore) in 2017 over the previous year.

What is AEOI?

Automatic Exchange of Information (AEOI) is systematic and periodic **transmission of “bulk” taxpayer information by the source country to the residence country**, which is possible under most of **the Double Taxation Avoidance Agreements (DTAAs) and Multilateral Convention on Mutual Administrative Assistance in Tax Matters (MAC)**.

It **aims to reduce global tax evasion**.

It is to be carried out under **Common Reporting Standard (CRS) of OECD**.

AEOI is **the exchange of information between countries without having to request it**.

Need for AEOI:

1. Tax payers operate cross border whereas tax administration is limited to national borders. This has helped tax evasion by shifting money to other countries by citizens. **Both tax evasion and tax avoidance have escalated**; facilitated by quick transfer of income from one country to another.
2. Vast amounts of **money are kept offshore and go untaxed** to the extent that taxpayers fail to comply with tax obligations in their home jurisdictions.
3. **Tackling this cross-national transfer of money to avoid and evade taxes indicate that national efforts are not enough to fight black money**. Hence there is the need for tax cooperation and tax information exchanges between countries.

Significance and benefits of AEOI:

- Enables the discovery of formerly undetected tax evasion.
- Enable governments to recover tax revenue lost to non-compliant taxpayers.
- It will further strengthen international efforts to increase transparency, cooperation, and accountability among financial institutions and tax administrations.
- Generate secondary benefits by increasing voluntary disclosures of concealed assets and by encouraging taxpayers to report all relevant information.

Sources: the Hindu.

2. Non-Aligned Movement summit

What to study?

For Prelims: What is NAM, objectives, composition and meets.

For Mains: Is NAM losing it's relevance today, what's the way out?

Context: Vice-President Venkaiah Naidu will represent India at the **18th Non-Aligned Movement summit**.

Theme: 'Upholding the Bandung Principles to ensure concerted and adequate response to the challenges of contemporary world'.

Some interesting facts about the latest NAM summit:

1. Prime Minister Modi will skip the meet. This is **the second time in a row that PM Narendra Modi will skip the summit**, marking **India's transformation from a non-aligned country to one which is supposedly multi-aligned**.
2. In 2016, Modi became effectively **the first Indian PM to skip the meeting of heads of states and governments of NAM nations (Held in Venezuela)**.
3. The only other Indian PM to have skipped a NAM summit was **Charan Singh** in 1979 but, unlike Modi, he was no more than a caretaker PM.
4. While this may be yet another sign of the winds of change sweeping India's foreign policy, it's significant that **India's neighbours like Nepal and Bangladesh have again reposed trust in NAM**.

Why PM is skipping the meet?

While NAM, of which India was one of the founding nations, in the past helped deal with challenges like apartheid and colonialism, **it is now increasingly seen as having outlived its usefulness**.

Even as it acknowledges that NAM allows member-states to pursue an independent foreign policy, India clearly believes **NAM will be of little use in furthering India's case on important issues like the menace of terrorism and UNSC reforms**.

The evolution of NAM:

During 1950s, the world was emerging out of the long, dark period of colonialism.

- **Newly independent nations** dreamed they could make their way in this new world without hewing to either of the big powers, the United States and the Soviet Union, eschewing the icy hostilities of the Cold War and bask in the warmth of Third World (as it was then known) cooperation.
- **The co-founders were** India's Jawaharlal Nehru, Indonesia's Sukarno, Egypt's Gamal Abdel Nasser, Yugoslavia's Josip Broz Tito, and Ghana's Kwame Nkrumah were all figures of international consequence, and their collective charisma attracted lesser lights from around the world.
- The **Asian-African Conference of 1955 held in Bandung** was the catalyst for the establishment of the Non-Aligned Movement.
- The actual formation took place in **Belgrade**, where the Non-Aligned Movement was formally established by the leaders of 25 developing countries in 1961.

Why is it losing relevance today? – Criticisms:

1. NAM today has grown into a forum where developing nations could blame all their problems on the big powers.
2. It has become a platform for some of the world's most despicable leaders to preen and posture.
3. NAM's reason to exist ended in 1989, with the collapse of the Soviet Union, and the end of the Cold War. The world was left with a single superpower, the US, but quickly became multipolar, with China and India emerging as strong magnetic forces in their own right.

Way ahead:

There are now new kinds of alignments, more likely to be defined by economics and geography than by ideology. To be aligned is now a virtue, a sign of good leadership.

Countries, especially small ones, can and should aim for multiple alignments of their interests. There is now no country in the world that can claim to be non-aligned.

Sources: the Hindu.

Topics: Effect of policies and politics of developed and developing countries on India's interests, Indian diaspora.

1. India, Hyderabad Nizam heirs win UK court battle with Pakistan for £35m

What to study?

For Prelims: Accession of Hyderabad into India.

For Mains: What was the dispute all about?

Context: The **UK high court** has ruled **in favour of India and the titular 8th Nizam of Hyderabad and his younger brother** in a case they had been fighting against Pakistan relating to who has the rights to £35m (Rs 306 crore) stashed away in a British bank account since Partition.

What is the dispute all about?

- On September 20, 1948, **a corpus of £1 million and one guinea** had been **transferred by the 7th Nizam of Hyderabad's finance minister, Nawab Moin Nawaz Jung, from a government bank account to another in London held by Pakistan's then high commissioner to the UK, Habib Ibrahim Rahimtoola.**
- This was **during the Indian annexation of the princely state of Hyderabad.**
- The **grandson of the 7th Nizam**, Turkey-based Mukkaram Jah, and his younger brother Muffakhm Jah have laid claim to the fund, saying **it had been gifted to them in a trust set up by their grandfather on April 24, 1963.**
- The Pakistan government, on the other hand, says **it was a payment made by the erstwhile princely state to Pakistan for arming Hyderabad when it was about to be invaded by India.**
- On July 8, 1954, the 7th Nizam together with the state of Hyderabad issued a writ before the UK high court against Pakistan and Rahimtoola, **asking for the £1 million to be returned to them.**

- On July 19, 1955, Rahimtoola got the writ set aside on the premise that ***the English courts were interfering with Pakistan's sovereign immunity***.
- The money has stayed frozen in a British bank account ever since and grown to £35 million in the span of seven decades.

Pakistan's arguments:

1. Referred to as ***the Arms for Money Argument***, these funds were transferred to compensate/reimburse/indemnify Pakistan for assistance provided in procuring/facilitating the supply and/or transportation of weapons.
2. The ***funds were transferred in order to keep them out of the hands of India***, referred to by the judge as ***the Safeguarding Argument***.
3. The facts of this case were such as to render it ***non-justiciable*** because the original transfer was governmental in nature and that ***India's annexation of Hyderabad in 1948 was an unlawful act***, which tainted India and Nizam VIII's claim.

What did the court say?

The fund was held by Pakistan through her high commissioner in the UK on trust for Nizam VII and his successors in title. The fund was not held by Rahimtoola personally, nor did either Pakistan or Rahimtoola have any beneficial interest in the fund.

What next?

Now, India and the titular 8th Nizam and his brother, who are the grandsons of the 7th Nizam, have a confidential settlement on how to split the money.

Indian annexation of Hyderabad:

Operation Polo is the code name of the Hyderabad "police action" in September 1948, by the newly independent India against the Hyderabad State.

After the integration, ***the Nizam was retained as the head of state*** in the same manner as the other princes who acceded to India.

Sources: the Hindu.

2. Countering America's Adversaries Through Sanctions Act (CAATSA)

What to study?

For Prelims: About s- 400 missile systems, CAATSA- provisions and brief overview.

For Mains: Issues associated and how CAATSA would affect India- Russia bilateral relations.

Context: The U.S. officials have warned India that with the decision to go ahead with the purchase of the Russian S-400 missile defence system, India may risk sanctions under ***CAATSA law***.

What is CAATSA?

Enacted in 2017, it is ***a US federal law that imposed sanctions on Iran, North Korea and Russia***.

Includes sanctions against countries that engage in significant transactions with Russia's defence and intelligence sectors.

The Act empowers the US President to impose at least five of the 12 listed sanctions on persons engaged in a "significant transaction" with Russian defence and intelligence sectors.

What is S-400?

It is ***an air defence missile system*** that can take down enemies' aircraft in the sky from the surface itself.

It is known as ***Russia's most advanced long-range surface-to-air missile defence system***, capable of destroying hostile strategic bombers, jets, missiles and drones at a range of 380-km.

Why does India want S-400?

S-400 would be like a “booster shot” in the Indian Air Force’s (IAF) arm. India needs to be well-equipped against neighboring threats. Pakistan has over 20 fighter squadrons, with upgraded F-16s, and inducting J-17 from China in large numbers. China has 1,700 fighters, including 800 4-Gen fighters.

Sources: the hindu.

3. ‘Dark Grey’ list of FATF

What to study?

For Prelims: FATF, Grey list, Dark Grey list, G7, About APG.

For Mains: What is Grey list and Black list, how are countries in the list affected? How does FATF’s latest move affects Pakistan?

Context: Pakistan is on the verge of strong action by the international terror financing watchdog FATF and the country may be put in **the ‘Dark Grey’ list**, the last warning to improve.

Pakistan is on the verge of strong action by FATF, **given its inadequate performance, whereby it managed to pass in only six of 27 items.**

What is Dark Grey list?

According to FATF rules there is one essential **stage between ‘Grey’ and ‘Black’ lists, referred to as ‘Dark Grey’.**

- ‘Dark Grey’ means issuance of a strong warning, so that the country concerned gets one last chance to improve, another official said.
- ‘Dark Grey’ was the term used for warning upto 3rd Phase. Now it’s just called warning — that is the 4th phase.

Background:

Pakistan was placed on the Grey List by the Paris-based watchdog in June last year and was given a plan of action to complete it by October 2019, or face the risk of being placed on the black list with Iran and North Korea.

Implications:

If Pakistan continues with the ‘grey list’ or put in ‘Dark Grey’ list, it would be very difficult for the country to get financial aid from the IMF, the World Bank and the European Union, making its financial condition more precarious.

Pakistan and state-sponsored terrorism:

- Pakistan has been accused by neighbouring countries India, Afghanistan and Iran and other nations, such as the United States, the United Kingdom, and France of involvement in terrorist activities in the region and beyond.
- It is also alleged that **Money is transferred to terror organization via Pakistan army.**
- It has been described as **a safe haven for terrorists** by western media and the United States Defense Secretary. It has been time and again proved that Pakistan has been supportive to several terrorist groups despite several stern warnings from the international community
- Besides, **the government of Pakistan has been accused of aiding terrorist organisations** operating on their soil who have attacked neighbouring India.
- However, Pakistan denies all allegations, stating that these acts are committed by non-state actors.

About FATF:

What is it? The Financial Action Task Force (FATF) is an inter-governmental body established in 1989 on the initiative of the G7. It is a “policy-making body” which works to generate the necessary political will to bring about national legislative and regulatory reforms in various areas. The FATF Secretariat is housed at the OECD headquarters in Paris.

Objectives: The objectives of the FATF are to set standards and promote effective implementation of legal, regulatory and operational measures for combating money laundering, terrorist financing and other related threats to the integrity of the international financial system.

Functions: The FATF monitors the progress of its members in implementing necessary measures, reviews money laundering and terrorist financing techniques and counter-measures and promotes the adoption and implementation of appropriate measures globally. In collaboration with other international stakeholders, the FATF works to identify national-level vulnerabilities with the aim of protecting the international financial system from misuse.

Sources: the Hindu.

4. Kurds

What to study?

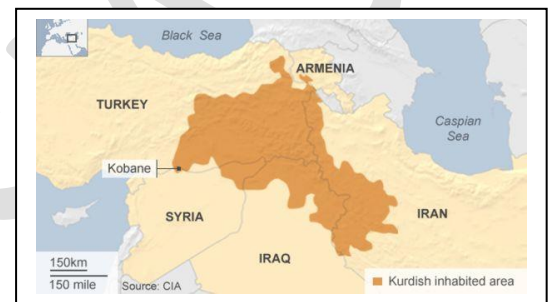
For Prelims: Who are Kurds and Where is Kurdistan?

For Mains: Why are they under attack and what led to these attacks, what is the way out?

Who are Kurds?

At an estimated 25 million to 35 million population, they are **the world's largest stateless ethnic group**. The **majority among the Kurdish people today are Sunni Muslim**, but **there are adherents of other faiths too**, including Sufism and other mystical practices.

- **They live in** the highlands of southern and eastern Turkey, northern Iraq, the northeastern Syria, northwestern Iran, and parts of south Armenia, and are a minority in each of these countries. Small communities live in Georgia, Kazakhstan, Lebanon, and eastern Iran as well.
- Kurds have long had a reputation for being **fearless fighters**, **and they have served as mercenaries in many armies** over the centuries.
- The mediaeval warrior **Saladin, founder of the Ayyubid dynasty** that replaced the **Fatimids** in Egypt and ruled over large parts of the Middle East in the 12th and 13th centuries, was of Kurdish ethnicity.



What's happening now?

Recently, the Trump administration ordered US troops to step aside from the border in northern Syria, effectively paving the way for Turkey to launch an offensive against US-backed Kurdish forces who they regard as enemies.

What are their demands?

The Kurds have never achieved nation-state status, except in Iraq, where they have a regional government called Iraqi **Kurdistan**.

Kurdistan is made up of five different regions: southeastern Turkey, northeastern Syria, northern Iraq, northwestern Iran and southwestern Armenia.

In the early 20th century, the Kurds began working toward the creation of homeland known as Kurdistan. In 1920, **the Treaty of Sèvres** -- one of a series of treaties that the Central Powers signed after their defeat in World War I -- outlined the dissolution of the Ottoman Empire and called for **an autonomous Kurdistan**. Three years later, after the end of the war, Western allies dropped demands for an independent Kurdish state and the Kurdish region was divided among several countries.

Why is Turkey attacking them?

Turkey has two main goals in northeast Syria: to drive the Kurdish YPG militia which it deems a security threat away from its border, and to create a space inside Syria where 2 million Syrian refugees currently hosted in Turkey can be settled.

Latest developments:

1. Kurdish forces who had until recently been America's allies against both the Islamic State and President Bashar al-Assad of Syria, announced an agreement with the Damascus regime, which is backed by Moscow and Tehran, the United States' two great rivals in the region.

2. Turkey has also launched a military operation against Kurdish fighters in northeast Syria.

What could this mean for Islamic state?

Chaos could present Islamic State with an opportunity to stage a revival and the SDF has been conducting operations against IS sleeper cells since capturing its final territorial foothold earlier this year.

Way ahead:

The operation could reshape the map of the Syrian conflict once again, dealing a blow to Kurdish-led forces that have battled Islamic State while widening Turkey's territorial control at the border.

Sources: Indian Express.

5. What Is in the New Brexit Deal?

What to study?

For Prelims and mains: What is Brexit? Why does UK want it? Implications and challenges ahead, overview of the deal.

Context: Britain, European Union reach **a new Brexit deal**, though it must still be formally approved by the bloc and ratified by the European and UK Parliaments.

Key elements of the new deal:

1. UK will honour EU rules till the end of 2020.
2. UK will pay £39 by 'divorce bill'.
3. Rights of EU citizens living in the UK and UK citizens in the EU will be guaranteed.
4. Northern Ireland will be aligned with the EU single market for goods while it will legally part with the EU.
5. There will be customs borders between Great Britain and the Irish Island.

Brexit story so far:

1. In a 2016 referendum, Britons choose to leave the EU.
2. The UK is deeply and bitterly divided on how it should exit the EU, and what its future relationship with the bloc should look like.
3. Former British Prime Minister Theresa May's government and her counterparts in the European Union negotiated a withdrawal agreement last year, but opposition to the deal from the UK Parliament killed it three times.
4. May's Brexit defeats led to her political downfall, and she resigned her premiership in June.
5. New head- Boris Johnson took over in July.
6. Johnson promised that he would deliver Brexit for the United Kingdom, "do or die," by the current deadline of October 31. Johnson has said he'll achieve what May failed to do: get a Brexit deal that can win the support of Parliament. And if he can't, well, the UK would be totally fine breaking away from Europe without a deal.
7. Leaving the EU without any deal promises chaos for both the UK and the rest of Europe — yet some Brexit devotees are willing to take the risk because they believe it would deliver a swift and decisive end to the UK's relationship with the EU.

What caused Brexit to happen?

So far, there seem to be three theories for what drove so many people to vote Brexit:

1. **Immigrants:** Faced with rising immigration locals worried about their jobs and the erosion of the English way of life wanted their government to clamp down on immigration. This was a revolt against unrestricted immigration from poorer Eastern European states, Syrian refugees residing in the EU and millions of Turks about to join the EU.
2. **Elites:** Faced with decades of economic malaise, stagnant real wages and economic destitution in former industrial heartlands ever since the rise of "Thatcherism" and the embrace of Neoliberal policies

by Tony Blair's New Labour the non-Londoners have decided to revolt against the elite. This isn't just about being against the EU as it stands, and its free market and free movement of peoples.

3. **Bureaucracy:** Faced with Brussel's asphyxiating amount of red tape the English people decide to "take back control" of their country's bureaucracy.

The three theories are obviously intertwined at times and contradictory at others, that's why it matters who is going to be negotiating the post-Brexit relationship between the UK and the EU.

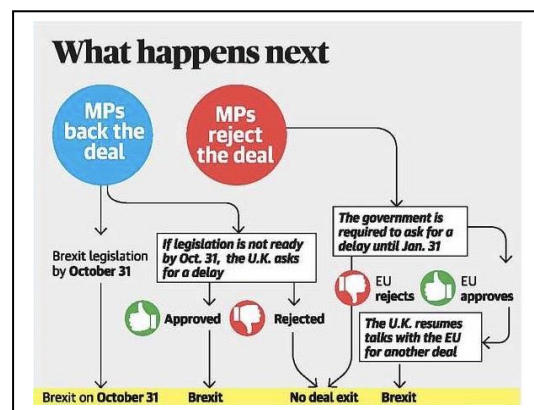
What's the future for the U.K. and E.U.?

This may be the end of negotiations but it's also the beginning of talks for a new chapter in Britain's relations with the European Union. The future relationship will be a matter of debate and negotiation that will most likely take years to crystallize.

In a nonbinding statement, known as **the Political Declaration**, they agreed "to work together to safeguard the rules-based international order, the rule of law and promotion of democracy, and high standards of free and fair trade and workers' rights, consumer and environmental protection, and cooperation against internal and external threats to their values and interests."

A central element of this relationship will **center on how Britain trades with the bloc, which will remain its No. 1 trading partner.**

Sources: the Hindu.



6. Who are the Developing Countries in the WTO?

What to study?

For Prelims: Categories of countries in WTO.

For Mains: Need for, implicating, significance and concerns.

Context: *South Korea* has said that it will no longer seek **special treatment reserved for developing countries** by the World Trade Organization in future negotiations given its enhanced global economic status.

Background:

South Korea, **Asia's fourth-largest economy**, has maintained its developing country status as a member of the WTO since the body's creation in 1995, mainly to guard its agriculture industry.

Who are the developing countries in the WTO?

There are no WTO definitions of "developed" and "developing" countries. Members announce for themselves whether they are "developed" or "developing" countries.

However, **other members can challenge the decision of a member to make use of provisions available to developing countries.**

What are the advantages of "developing country" status?

Developing country status in the WTO **brings certain rights.**

Developing country status **ensures special and differential treatment (S&DT) or provisions which allow them more time to implement agreements and commitments, include measures to increase trading opportunities, safeguard their trade interests, and support to build capacity to handle disputes and implement technical standards.**

Demands by developed countries:

For sometime now, developed countries, mainly the US, have been asking **the WTO to end the benefits being given to developing countries.**

Nearly two-thirds of the members of the World Trade Organization (WTO) have been able to avail themselves of special treatment and to take on weaker commitments under the WTO framework by designating themselves as developing countries.

Sources: the Hindu.

7. BASIC countries

What to study?

For prelims: BASIC Nations.

For mains: Need for, significance and challenges before the grouping.

Context: The 29th **BASIC Ministerial Meeting on Climate Change** was held recently in **Beijing, China**.

Outcomes of the recent meet- demands by BASIC:

1. The developed countries to take urgent action to close gaps and provide support to developing nations as a part of the commitment under the Paris agreement on climate change.
2. Global climate action should promote climate justice by recognising the fundamental equality of all people in accessing economic growth and sustainable development.
3. There is need for people's participation and climate friendly lifestyles for addressing the challenge of climate change.
4. Developed countries should take urgent actions to close the gaps, including revisiting their targets on mitigation under the Convention and the Kyoto Protocol, and fulfilling their commitments of providing support to developing countries.

Who are the BASIC?

The BASIC group was **formed as the result of an agreement signed by the four countries on November 28, 2009**.

They are **a bloc of four large newly industrialized countries – Brazil, South Africa, India and China**.

Significance of the grouping:

- **Objectives:** The signatory nations have a broadly common position on reducing greenhouse gas emissions and raising the massive funds that are needed to fight climate change.
- The BASIC countries constituted one of the parties in the **Copenhagen Accord** reached with the US-led grouping; the Accord, was, however, not legally binding.
- The BASIC group wields considerable heft purely because of the size of the economies and populations of the member countries.
- Brazil, South Africa, India and China put together has **one-third of the world's geographical area and nearly 40% of the world's population**, and when they unitedly speak in one voice this shows their determination.
- BASIC is one of several groups of nations working together **to fight climate change and carry out negotiations within the UNFCCC**.

Need for this grouping:

- **In light of the IPCC Special Report** on 1.5°C released in October last year, the group took note of its findings that highlight the **“high vulnerability of developing countries to climate change effects and high resultant costs of adaptation”**.
- The findings of the IPCC Special Report on Global Warming make it incredibly clear that the impacts of an already warming world are significant, and that impacts at 2°C are catastrophic compared to those of 1.5°C. Yet, **the BASIC ministers recalled the Paris goal of limiting the temperature rise to well under 2°C, and aspiring to limit it to 1.5°C, suggesting their continued pursuit of 2°C as the target temperature limit**.
- The BASIC countries also contend that their **nationally determined contributions (NDCs)**— voluntary pledges of national efforts to reduce greenhouse gas (GHG) emissions—have demonstrated “a high level of ambition in the context of poverty and sustainable development”.

Way ahead:

While developed countries must take the lead to reduce GHG emissions and enable developing countries to scale climate action. It is critical that all countries actively step-up to rapidly reduce global GHG emissions within their own jurisdictions and collectively work with each other to limit warming to 1.5°C.

Sources: pib.

Topics: Important International institutions, agencies and fora, their structure, mandate.

1. Drone Innovators Network Summit 2019

What to study?

For Prelims: Composition and objectives of DIN.

For Mains: Need for regulations and international cooperation, overview of India's drones regulations.

Context: *Drone Innovators Network Summit-2019* is being held in New Delhi. Organised by *the World Economic Forum* under the aegis of the Ministry of Civil Aviation.

Drone Innovators Network (DIN):

Started by *the World Economic Forum* to hasten and contribute to healthy drone policies in need of legislation. Established to **help overcome common challenges regulators are facing in enabling drones and unmanned aviation**, such as how to enable beyond visual line of sight (BVLOS) flights at scale, autonomous operations and flights over densely populated areas.

Composition: Government aviation agencies, academics, and established drone entities.

Inaugural *Drone Innovators Network summit* was held in **Zurich** in 2018.

Drone Regulation in India:

India's Directorate General of Civil Aviation issued **Civil Aviation Requirements (CAR)**, effective 1 December, 2018 for drones.

- As per the regulations, manufacturers of drone are required to comply with the requirements of **No Permission, No Take-off (NPNT)** on the Remotely Piloted Aircraft System (RPAS).
- These regulations (CAR Version 1.0) **only permit operations of drones during daytime Visual Line of Sight**.
- **DigiSky** is a portal for registration and flying of civil drones in India.

Way ahead:

1. As drone technologies evolve and advance at unprecedented speed, regulators from around the world are struggling to keep pace with effective policy that protects populations without stifling the aviation ecosystem.
2. As the scale and scope of change increases; government, industry, and civil society leaders must work together to unlock the potential benefits of these technologies to society, while managing and mitigating their risks.

Sources: pib.

2. Information Fusion Centre (IFC) for the Indian Ocean Region (IOR)

What to study?

For Prelims: Key facts on IOR.

For Mains: IOR- significance, potential, challenges to its security and the need for international collaboration.

Context: The **Information Fusion Centre – Indian Ocean Region (IFC-IOR)** set up last year has started functioning as an information sharing hub of maritime data and “cuing incident responses” to maritime security situations through a collaborative approach.

- The centre is actively interacting with the maritime community and has already built linkages with 18 countries and 15 multinational/maritime security centres.

About IFC- IOR:

- The IFC-IOR was established with the vision of **strengthening maritime security in the region and beyond**, by building a common coherent maritime situation picture and acting as a maritime information hub for the region.
- The IFC has been **established at the Navy's Information Management and Analysis Centre (IMAC) in Gurugram**, which is the single point centre linking all the coastal radar chains to generate a seamless real-time picture of the nearly 7,500-km coastline.
- Through this Centre, information on **"white shipping", or commercial shipping, will be exchanged with countries in the region** to improve maritime domain awareness in the Indian Ocean.

Significance and the need:

- The IOR has a diverse set of littorals and island nations, each with their unique needs, aspirations, interest and values. It is necessary to counter the Rise in maritime piracy in the region.
- IFR-IRO would ensure that the entire region is benefited by mutual collaboration and exchange of information and understanding the concerns and threats which are prevalent in the region.

Why is the Indian Ocean is important?

- It enjoys a privileged location at the crossroads of global trade, connecting the major engines of the international economy in the Northern Atlantic and Asia-Pacific. This is particularly important in an era in which global shipping has burgeoned.
- Indian Ocean is also rich in natural resources. 40% of the world's offshore oil production takes place in the Indian Ocean basin.
- Fishing in the Indian Ocean now accounts for almost 15% of the world's total.
- Mineral resources are equally important, with nodules containing nickel, cobalt, and iron, and massive sulphide deposits of manganese, copper, iron, zinc, silver, and gold present in sizeable quantities on the sea bed.
- Indian Ocean coastal sediments are also important sources of titanium, zirconium, tin, zinc, and copper. Additionally, various rare earth elements are present, even if their extraction is not always commercially feasible.



Sources: the Hindu.

3. UN Security Council

What to study?

For Prelims: About UNSC- composition, objectives and functions.

For Mains: Role and significance of UNSC, need for UNSC reforms, why India should be given permanent membership?

Context: India and Sierra Leone seek to expand bilateral ties and push for **UNSC reforms**.

Reform of the United Nations Security Council (UNSC) encompasses the following key issues:

1. Categories of membership.

2. Question of the veto held by the five permanent members.
3. Regional representation.
4. Size of an enlarged Council and its working methods.
5. Security Council-General Assembly relationship.
6. Admit more permanent members.

Why reforms are necessary?

1. **European and western bias in UNSC P-5.** G-4 wants to expand the permanent seats in the UNSC to 10 to include 6 new members G-4 nations apart from one seat to Africa and one seat to Arabs.
2. It has been 72 years since the foundation of UNSC. The geopolitical realities have changed drastically, but the Council has changed very little.
3. **Veto power** is grossly misused by the permanent members in their own national interest.

Why India should be given a permanent seat in the council?

1. India was among the founding members of United Nations.
2. It is the second largest and a one of the largest constant contributor of troops to United Nations Peacekeeping missions.
3. Today, India has over 8,500 peacekeepers in the field, more than twice as many as the UN's five big powers combined.
4. India, since long time, has been demanding expansion of UNSC and its inclusion as permanent member in it. It has been a member of UNSC for 7 terms and a member of G-77 and G-4, so permanent membership is a logical extension.

Sources: pib.

Mains Question: Do you think, looking at recent developments, India is close to achieve its goal of becoming the permanent member of the United Nations Security Council? Discuss.

4. UN Human Rights Council

What to study?

For Prelims and mains: UNHRC- functions and composition, issues related to reforms.

Context: Venezuela Elected to **UN Human Rights Council.**

About UNHRC:

Established in 2006 with the aim of promoting and protecting human rights around the globe, as well as investigating alleged human rights violations.

Made up of **47 member states**, which are **selected by the UN General Assembly** on a staggered basis each year for three-year-long terms.

Members meet around three times a year to debate human rights issues and pass **non-binding resolutions and recommendations by majority vote.**

Members **serve for a period of three years** and are **not eligible for immediate re-election after serving two consecutive terms.**

The council also carries out the **Universal Periodic Review of all UN member states**, which allows civil society groups to bring accusations of human rights violations in member states to the attention of the UN.

Sources: The Hindu.

5. Asian Development Bank (ADB)

What to study?

For Prelims and mains: ADB- role, mandate, funding and significance.

Context: GoI has signed a 190 million USD loan with the Asian Development Bank (ADB) to upgrade road transport in the state of Rajasthan.

About ADB:

- It is a regional development bank
- established on 19 December 1966.
- headquartered — Manila, Philippines.
- official United Nations Observer.

The bank admits the members of the United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP, formerly the Economic Commission for Asia and the Far East or ECAFE) and non-regional developed countries.

Voting rights:

It is **modeled closely on the World Bank**, and has **a similar weighted voting system** where votes are distributed in proportion with members' capital subscriptions.

Roles and functions:

1. ADB defines itself as a social development organization that is dedicated to reducing poverty in Asia and the Pacific through inclusive economic growth, environmentally sustainable growth, and regional integration.
2. **This is carried out through investments – in the form of loans, grants and information sharing** – in infrastructure, health care services, financial and public administration systems, helping nations prepare for the impact of climate change or better manage their natural resources, as well as other areas.

Sources: the Hindu.

6. G20 Global Smart Cities Alliance on Technology Governance

What to study?

For Prelims: About the Alliance and its objectives.

For Mains: Need for and significance of the alliance.

Context: India has joined **the World Economic Forum's (WEF) G20 Global Smart Cities Alliance on Technology Governance**.

Significance:

India's joining the league is a critical first step towards accelerating global best practices, fostering greater openness and public trust as well as mitigating risks regarding the collection of data in public spaces.

What is it?

- It is a league of 15 of world's leading city networks and technology governance organisations that will work towards advancing responsible and ethical use of smart city technologies.
- Established in June 2019, in conjunction with G20 Summit held in Osaka, Japan.
- It seeks to create global norms and policy standards for the use of connected devices in public spaces.
- The aim of the alliance is to promote the responsible and ethical use of smart city technologies by establishing global norms and policy standards for the use of connected devices in public spaces.

The Global Smart Cities Alliance's founding set of institutional partners include the presidents and host nations of the Group of 20 (G20) in 2019 and 2020; Japan and the Kingdom of Saudi Arabia; the Smart City Mission of India; Cities for All; Cities Today Institute; Commonwealth Local Government Forum; Commonwealth Sustainable Cities Network among others.

Towards a global policy:

The Alliance has committed to co-design and roll out a first-of-its-kind **global policy framework on smart city technologies in advance of the 2020 G20 Summit in Riyadh, Saudi Arabia**. It is currently accepting nominations from cities interested in piloting and contributing to global policy standards.

Need for and significance of the alliance:

- Smart city technologies can help cut decrease traffic congestions, combat crime, improve resilience during natural disasters and reduce greenhouse emissions.
- Without the proper governance, these technologies pose significant risk, notably to privacy and security.
- To ensure data collected in public places is used safely and ethically, the Alliance will develop, pilot collectively implement new global policy standards.

Sources: the Hindu.

7. Interpol

What to study?

For Prelims and mains: Composition, objectives and functions of Interpol.

Context: The Central Bureau of Investigation will host the **91st General Assembly of Interpol** in 2022 as part of the 75th anniversary celebrations of India's Independence.

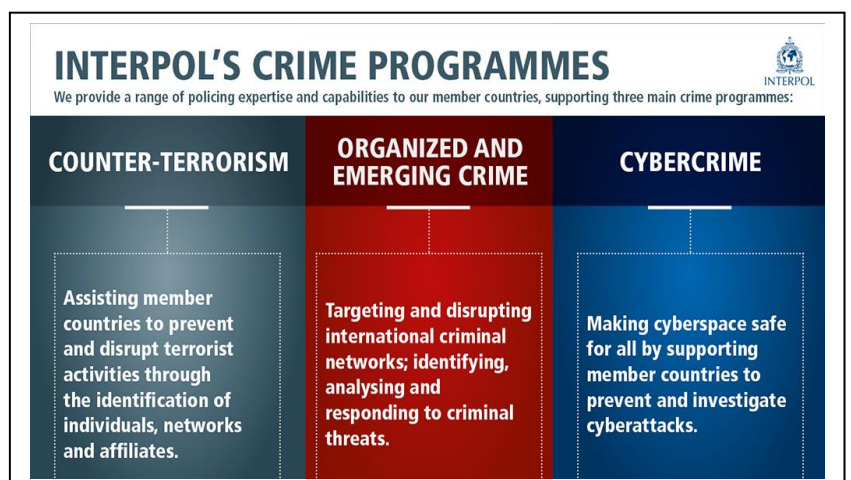
What is Interpol?

- The **International Criminal Police Organisation, or Interpol**, is a 194-member intergovernmental organisation.
- **headquartered** in Lyon, France.
- formed in 1923 as the **International Criminal Police Commission**, and started calling itself Interpol in 1956.
- **India joined the organisation in 1949**, and is one of its oldest members.
- **Interpol's declared global policing goals** include countering terrorism, promoting border integrity worldwide, protection of vulnerable communities, providing a secure cyberspace for people and businesses, curbing illicit markets, supporting environment security, and promoting global integrity.



What is the Interpol General Assembly?

1. It is **Interpol's supreme governing body**, and comprises representatives from all its member countries.
2. It **meets annually** for a session lasting approximately four days, to vote on activities and policy.
3. **Each country is represented by one or more delegates at the Assembly**, who are typically chiefs of law enforcement agencies.
4. The Assembly also **elects the members of the Interpol Executive Committee**, the governing body which "provides guidance and direction in between sessions of the Assembly".



Assembly Resolutions:

The General Assembly's decisions take the form of Resolutions.

Each member country has one vote.

Decisions are made either by a simple or a two-thirds majority, depending on the subject matter.

Sources: the Hindu.

8. IMF Quotas

What to study?

For Prelims: All about IMF Quotas, about IMF.

For Mains: Need for reforms.

Context: As per the latest deal, Members of the **International Monetary Fund (IMF)** agreed to maintain its funding at \$ 1 trillion but postponed changes to its voting structure.

Outcomes of the recent meet:

- The deal is a compromise with the U.S., the Fund's largest shareholder, which has resisted changes to the organisation's voting structure as well as increases in its permanent resource base.
- It will allow **an extension of non-permanent, supplementary sources of funds** – such as the **New Arrangement to Borrow (NAB)**, a renewable funding mechanism that has existed since 1998, and bilateral borrowings from countries - the IMF had entered into these after the 2008 financial crisis to increase its lending ability.
- The agreement extended the bilateral borrowing facility by a year - to the end of 2020 and a potential doubling of the NAB.

Impact:

Specifically, the agreed package will leave IMF quotas (the primary source of IMF funds), which determine voting shares, unchanged. Instead, these will be reviewed before the end of 2023.

What are IMF Quotas?

The IMF is a quota-based institution. Quotas are the building blocks of the IMF's financial and governance structure.

- An individual member country's quota broadly reflects its relative position in the world economy. **Quotas are denominated in Special Drawing Rights (SDRs)**, the IMF's unit of account.

How is it determined?

IMF quotas are distributed according to a four pronged formula that considers a member **country's GDP, its economic openness, its "economic variability" and international reserves.**

Member	Quota (Millions, SDR)	Quota Share (%)	Votes	Vote Share (%)
United States	82994.2	17.46	831407	16.52
Japan	30820.5	6.48	309670	6.15
China	30482.9	6.41	306294	6.09
Germany	26634.4	5.6	267809	5.32
France	20155.1	4.24	203016	4.03
United Kingdom	20155.1	4.24	203016	4.03
Italy	15070	3.17	152165	3.02
India	13114.4	2.76	132609	2.64
Russian Federation	12903.7	2.71	130502	2.59
Brazil	11042	2.32	111885	2.22

Multiple roles of quotas:

Resource Contributions: Quotas determine the maximum amount of financial resources a member is obliged to provide to the IMF.

Voting Power: Quotas are a key determinant of the voting power in IMF decisions. Votes comprise one vote per SDR100,000 of quota plus basic votes (same for all members).

Access to Financing: The maximum amount of financing a member can obtain from the IMF under normal access is based on its quota.

SDR Allocations: Quotas determine a member's share in a general allocation of SDRs.

Quota reviews:

The **IMF's Board of Governors** conducts general quota reviews at regular intervals.

Any *changes in quotas must be approved by an 85% majority of the total voting power, and a member's own quota cannot be changed without its consent.*

Need for reforms:

1. Some IMF members have become frustrated with the pace of governance reforms, as the balance of economic and geopolitical power has shifted, becoming more dispersed across the world, particularly with the emergence of China and India - among the world's largest and fastest growing economies.
2. India's quota is 2.76% and China's is 6.41%, while the U.S.'s quota is 17.46 % (translates to a vote share of 16.52%) giving it a unique veto power over crucial decisions at the IMF, many of which require a supermajority of 85%.
3. The U.S. has resisted diluting its share, wary that it will benefit countries such as China.

Sources: the Hindu.

9. Indian Ocean Rim Association (IORA)

What to study?

For Prelims and Mains: IORA- composition, objectives, functions, significance and relevance.

Context: The **19th IORA Council of Ministers** meeting will be held on November 7 in Abu Dhabi with the **theme** of "Promoting a Shared Destiny and Path to Prosperity in the Indian Ocean".

- The meeting is important as two of India's important partners, **the United Arab Emirates and Bangladesh, will take charge as the new chair and vice-chair of one of the largest regional maritime organisations for the duration of 2019-21.**

About IORA:

1. The Indian Ocean Rim Association was set up with **the objective of strengthening regional cooperation and sustainable development within the Indian Ocean Region.**
2. **Setup in 1997, it Consists** of 22 coastal states bordering the Indian Ocean.
3. The IORA is **a regional forum, tripartite in nature**, bringing together representatives of Government, Business and Academia, for promoting co-operation and closer interaction among them.
4. It is **based on the principles of Open Regionalism for strengthening Economic Cooperation** particularly on Trade Facilitation and Investment, Promotion as well as Social Development of the region.

Indian Ocean Rim Association (IORA) has identified six priority areas, namely:

1. maritime security,
2. trade and investment facilitation,
3. fisheries management,
4. disaster risk reduction,
5. academic and scientific cooperation and
6. tourism promotion and cultural exchanges.

Significance of IORA:

- The existence of IORA is a reminder of the untapped potential of Indian Ocean regionalism.
- Nearly five decades ago, in the aftermath of decolonisation, the attempt to bring together the Indian Ocean states faltered amidst deep divisions within the littoral and due to the negative impact of the Cold War.
- Today, the IORA underlines the region's agency in shaping its own future.

Indian Ocean and its significance:

- As the third largest ocean woven together by trade routes, commands control of major sea-lanes carrying half of the world's container ships, one third of the world's bulk cargo traffic and two thirds of the world's oil shipments, the Indian Ocean remains an important lifeline to international trade and transport.

- Home to nearly 2.7 billion people, Member States whose shores are washed by the ocean are rich in cultural diversity and richness in languages, religions, traditions, arts and cuisines.

Sources: the Hindu.

10. Universal Postal Union (UPU)

What to study?

For Prelims: UPU and other rules governing postal exchange.

For Mains: Pakistan's recent actions and its implications.

Context: In a unilateral decision, Pakistan has stopped exchange of postal mails with India since August 27.

Background:

Other than the UPU, three agreements cover postal exchange between India and Pakistan — **Exchange of Value Payable Article, 1948; Exchange of Postal Article, 1974; and International Speed Post Agreement, 1987.**

Who regulates postal exchange between one country and another?

The United Nations' Universal Postal Union (UPU) frames rules for international mail exchange, and fixes rates for international postal services.

Can one UPU member-country unilaterally stop postal exchange with another?

Under UPU rules, when a country decides to suspend exchange with a country, it must notify the operator of the other country (in India's case, India Post) and, if possible, the duration for which services are being stopped. The UPU's International Bureau too has to be notified.

About Universal Postal Union (UPU):

- A specialized **agency of United Nations** that coordinates postal policies among member nations, in addition to worldwide postal system.
- **Established in 1874** and is **second oldest international organization** worldwide after International Telecommunication Union (ITU) which was established in 1865.
- **Headquartered** in Berne, Switzerland.
- Has **192 member countries**.
- It is **primary forum for cooperation between postal sector players among member countries**.
- UPU has **four units**: the Congress, the Council of Administration, the International Bureau, and the Postal Operations Council.
- **Regulates** 6.40 lakh postal outlets worldwide.
- **India joined the UPU on July 1, 1876** and Pakistan on November 10, 1947.

Functions:

1. Helps to ensure truly universal network of up-to-date products and services.
2. Sets rules for international mail exchanges and makes recommendations for growth in mail, financial and parcel services volumes and also to improve quality of service for customers.

Sources: Indian Express.

11. International Civil Aviation Organization (ICAO)

What to study?

For prelims and mains: ICAO- composition, roles, functions and significance.

Context: India has approached **ICAO (International Civil Aviation Organization)** after Pakistan denied permission for PM Modi to use its air space.

Background:

The overflight clearances are granted by other countries according to ICAO guidelines.

About ICAO:

What is it?

The International Civil Aviation Organization (ICAO) is **a UN specialized agency**, established by States in 1944 to manage the administration and governance of **the Convention on International Civil Aviation (Chicago Convention)**.

Functions:

1. ICAO works with the Convention's 193 Member States and industry groups to reach consensus on international civil aviation Standards and Recommended Practices (SARPs) and policies in support of a safe, efficient, secure, economically sustainable and environmentally responsible civil aviation sector.
2. These SARPs and policies are used by ICAO Member States to ensure that their local civil aviation operations and regulations conform to global norms, which in turn permits more than 100,000 daily flights in aviation's global network to operate safely and reliably in every region of the world.
3. ICAO also coordinates assistance and capacity building for States in support of numerous aviation development objectives; produces global plans to coordinate multilateral strategic progress for safety and air navigation.
4. Also monitors and reports on numerous air transport sector performance metrics; and audits States' civil aviation oversight capabilities in the areas of safety and security.

Chicago convention:

- Convention on International Civil Aviation (also known as Chicago Convention), was **signed on 7 December 1944 by 52 States**.
- Pending ratification of the Convention by 26 States, **the Provisional International Civil Aviation Organization (PICA)** was established.
- It functioned from 6 June 1945 until 4 April 1947. By 5 March 1947 the 26th ratification was received. **ICAO came into being on 4 April 1947**. In October of the same year, ICAO became a specialized agency of the United Nations linked to Economic and Social Council (ECOSOC).
- The **Convention establishes rules of airspace, aircraft registration and safety, and details the rights of the signatories in relation to air travel. The Convention also exempts air fuels in transit from (double) taxation.**

Sources: the Hindu.

12. International Solar Alliance

What to study?

For Prelims and Mains: ISA- key facts, significance and India's solar power potential.

Context: India is hosting the **second Assembly** of ISA. Ministry of New and Renewable Energy is hosting the event.

The **ISA assembly is the highest decision making body. It gives directions on financial and administrative issues.**

About ISA:

The International Solar Alliance (ISA) is an alliance of more than 120 countries initiated by India, most of them being sunshine countries, which lie either completely or partly between the Tropic of Cancer and the Tropic of Capricorn, now extended to all members of UN.

The **Paris Declaration** establishes ISA as an alliance dedicated to the promotion of solar energy among its member countries.

Objectives: The ISA's major objectives include global deployment of over 1,000GW of solar generation capacity and mobilisation of investment of over US\$ 1000 billion into solar energy by 2030.

What it does? As an action-oriented organisation, the ISA brings together countries with rich solar potential to aggregate global demand, thereby reducing prices through bulk purchase, facilitating the deployment of existing solar technologies at scale, and promoting collaborative solar R&D and capacity building.

When it entered into force? When the ISA Framework Agreement entered into force on December 6th, 2017, ISA formally became a de-jure treaty based International Intergovernmental Organization, headquartered at Gurugram, India.

Sources: the Hindu.



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GENERAL STUDIES – 3

Topics: Indian Economy and issues relating to planning, mobilization of resources, growth, development and employment.

1. Sovereign Gold Bond scheme

What to study?

For Prelims: Features of the SGB scheme.

For Mains: The scheme and its significance for India.

Context: Government of India, in consultation with the Reserve Bank of India, has decided to issue Sovereign Gold Bonds.

The Bonds will be sold through Scheduled Commercial banks (except Small Finance Banks and Payment Banks), Stock Holding Corporation of India Limited (SHCIL), designated post offices, and recognised stock exchanges viz., National Stock Exchange of India Limited and Bombay Stock Exchange Limited.

About the Sovereign Gold Bond Scheme:

1. The sovereign gold bond was **introduced by the Government in 2015**.
2. Government introduced these bonds **to help reduce India's over dependence on gold imports**.
3. The move was also aimed at **changing the habits of Indians from saving in physical form of gold to a paper form with Sovereign backing**.

Key facts:

Eligibility: The bonds will be restricted for sale to resident Indian entities, including individuals, HUFs, trusts, universities and charitable institutions.

Denomination and tenor: The bonds will be denominated in multiples of gram(s) of gold with a basic unit of 1 gram. The tenor will be for a period of 8 years with exit option from the 5th year to be exercised on the interest payment dates.

Minimum and Maximum limit: The minimum permissible investment limit will be 1 gram of gold, while the maximum limit will be 4 kg for individual, 4 kg for HUF and 20 kg for trusts and similar entities per fiscal (April-March) notified by the government from time to time.

Joint Holder: In case of joint holding, the investment limit of 4 kg will be applied to the first applicant only.

Collateral: Bonds can be used as collateral for loans. The loan-to-value (LTV) ratio is to be set equal to ordinary gold loan mandated by the Reserve Bank from time to time.

Tenor: The tenor of the Bond will be for a period of 8 years with exit option after 5th year to be exercised on the interest payment dates.

Interest rate: The investors will be compensated at a fixed rate of 2.50 percent per annum payable semi-annually on the nominal value.

Sources: pib.

2. Advance Pricing Agreements (APAs)

What to study?

For Prelims and Mains: APAs- meaning, features and significance.

Context: CBDT inks **the 300th Advance Pricing Agreement**.

APA Programme is **currently in its seventh year**.

What are APAs?

An APA is **an agreement between a taxpayer and the tax authority determining the Transfer Pricing methodology** for pricing the tax payer's international transactions for future years.

Purpose: An APA provides certainty with respect to the tax outcome of the tax payer's international transactions.

Statutory basis:

The **Finance Act, 2012**, inserted sections 92CC and 92 CD in the ITA to provide the legal basis for APA in India.

An APA can be one of the three types – unilateral, bilateral and multilateral:

1. **Unilateral APA** is an APA that involves only the taxpayer and the tax authority of the country where the taxpayer is located.
2. **Bilateral APA (BAPA)** is an APA that involves the tax payer, associated enterprise (AE) of the taxpayer in the foreign country, tax authority of the country where the taxpayer is located and the foreign tax authority.
3. **Multilateral APA (MAPA)** is an APA that involves the taxpayer, two or more AEs of the tax payer in different foreign countries, tax authority of the country where the taxpayer is located and the tax authorities of AEs.

Significance:

The progress of the APA scheme strengthens the government's resolve of fostering a non-adversarial tax regime. The Indian APA programme has been appreciated nationally and internationally for being able to address complex transfer pricing issues in a fair and transparent manner.

Sources: pib.

3. Exchange Traded Funds

What to study?

For Prelims and Mains: What are ETFs, benefits and significance?

Context: The **Further Fund Offer 2 (FFO 2) of Bharat 22 Exchange-Traded Fund (ETF)**, which is part of the government's divestment programme, will shortly open for subscription for anchor investors and for non-anchor investors.

What are ETFs?

Exchange Traded Funds (ETFs) are **mutual funds listed and traded on stock exchanges like shares**.

Index ETFs are created by institutional investors swapping shares in an index basket, for units in the fund.

Usually, ETFs are **passive funds** where the fund manager doesn't select stocks on your behalf. Instead, the ETF simply copies an index and endeavours to accurately reflect its performance.

In an ETF, one can **buy and sell units at prevailing market price on a real time basis during market hours**.

Benefits and significance of ETFs:

- ETFs are **cost efficient**. Given that they don't make any stock (or security choices), they don't use services of star fund managers.
- They **allow investors to avoid the risk of poor security selection by the fund manager**, while offering a diversified investment portfolio.
- The stocks in the indices are carefully selected by index providers and are rebalanced periodically.
- They offer anytime liquidity through the exchanges.

What you need to know about BHARAT 22?

- Bharat 22 consists of 22 stocks of CPSE's, PSB's & strategic holding of SUUTI. Bharat 22 is a well Diversified portfolio with 6 sectors (Basic Materials, Energy, Finance, FMCG, Industrials & Utilities).

POWER OF 22

The new ETF is another tool to raise ₹72,500 crore budgeted through disinvestment

BLUE CHIPS UNDER ONE ROOF

ENERGY ONGC, IOC, BPCL and Coal India	FMCG ITC
BASIC MATERIALS National Aluminum	INDUSTRIALS L&T, Bharat Electronics, Engineers India, NBCC
FINANCIALS SBI, Axis Bank, Bank of Baroda, Indian Bank, PFC and REC	UTILITIES Power Grid, NTPC, GAIL, NHPC, NLC, SJVNL

ANOTHER WAY OF INVESTING

ETFs are akin to mutual funds but with a defined asset basket like shares of an index

They are more liquid than mutual funds as they can be traded on stock exchanges

Value of units of ETF depends on the value of assets held by the fund

- **ICICI Prudential AMC will be the ETF Manager and Asia Index Private Limited (JV BSE and S& P Global) will be the Index Provider.**

Sources: the Hindu.

4. Why state budgets matter?

What to study?

For Prelims: a overview of FRBM Act and basics of Tax to GDP ratio.

For Mains: Key findings and concerns widening state deficit, measures needed.

Context: Recently, RBI released its **annual study of state-level budgets**.

Key findings:

- Except during 2016-17, state governments have regularly met their fiscal deficit target of 3% of GDP. This should allay a lot of apprehensions about state-level finances, especially in the wake of extensive farm loan waivers that many states announced as well as the extra burden that was put on state budgets after the UDAY scheme for the power sector was introduced in 2014-15.
- **Concern:** However, **most states ended up meeting the fiscal deficit target not by increasing their revenues but by reducing their expenditure and increasingly borrowing from the market.**
- There has been **a reduction in the overall size of the state budget in 2017-19**. This retarding fiscal impulse has coincided with a **cyclical downswing in domestic economic activity** and may have inadvertently deepened it.
- Also worrisome is that while states have met their fiscal deficits, **the overall level of debt-to-GDP (Chart 4) has reached the 25% of GDP prudential mark**. A slightly stringent criterion as prescribed by the FRBM Review Committee and in line with the revised FRBM implied **debt target of 20 per cent will put most of the states above the threshold**.
- **States have found it difficult to raise revenues:** States revenue prospects are confronted with low tax buoyancies, shrinking revenue autonomy under the GST framework and unpredictability associated with transfers of IGST and grants.
- Unrealistic revenue forecasts in budget estimates thereby leave no option for states than expenditure compression in even the most productive and employment-generating heads.

Why understanding about state government finances is becoming more and more important?

1. States now have a greater role to play in determining India's GDP than the Centre. **States now spend one-and-a-half times more than the Union government.**
2. They are **the bigger employment generators**. They employ five times more people than the Centre.
3. Since 2014-15, states have increasingly borrowed money from the market.

Thus, this overall trend has serious implications on the interest rates charged in the economy, the availability of funds for businesses to invest in new factories, and the ability of the private sector to employ new labour.

Why fiscal deficit matters? What happens if the debt-to-GDP ratio widens?

- Each year's borrowing (or deficit) adds to the total debt. Paying back this debt depends on **a state's ability to raise revenues**.
- If a state, or all the states in aggregate, find it difficult to raise revenues, a rising mountain of debt — captured in **the debt-to-GDP ratio** — could start a vicious cycle.
- Then, states end up **paying more and more towards interest payments instead of spending their revenues on creating new assets that provide better education, health and welfare for their residents**.
- That is why, the **14th Finance Commission** had mandated prudent levels of both fiscal deficit (3% of state GDP) and debt-to-GDP (25%) that must not be breached.

Sources: Indian Express.

5. Asia-Pacific Trade and Investment Report 2019

What to study?

For Prelims: Overview and key findings of the report.

For Mains: Challenges and concerns highlighted, and ways to address them.

Context: *The Asia-Pacific Trade and Investment Report 2019* was published by **the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) and the United Nations Conference on Trade and Development (UNCTAD).**

Key findings- Effects of NTMs:

- **Non-tariff measures (NTMs) have increased** in the past two decades and are affecting trade as well sustainable development goals (SDGs) in Asian countries.
- NTMs **affect 58 per cent of the trade in Asia-Pacific.**
- NTMs can have **a direct impact on the performance of trading partners.** They can **also impact** issues such as health, safety, environment, climate, public security and peace, which in turn, influence SDGs.
- **Around half the Asia-Pacific's economies have at least one NTM** addressing water and energy efficiency and only 10 per cent have measures addressing illegal, unreported and unregulated (IUU) fishing and illegal timber trade.

- **What's the concern now?**
The implementation of NTMs raises the cost of trade, especially in developing economies. The average cost of these measures alone amounts to 1.6 per cent of gross domestic product, roughly \$1.4 trillion globally.
- The developed economies have a higher standard of NTMs which affects trade of developing economies. In case of Sri Lanka, the country would have needed to invest too much to follow EU standards on IUU.
- Thus, the cost of investment in NTMs can sometimes be higher than the cost of total trade. This makes NTMs burdensome.
- NTMs affected foreign direct investment negatively, which slowed countries' economic activities.

But, why are they imposed?

NTMs assure protection of human health or the environment. They can even boost trade under certain conditions. While trade costs associated with NTMs are estimated to be more than double that of tariffs, NTMs often serve important public policy objectives linked to sustainable development.

What next?

There appears to be more scope for member states in the Asia-Pacific region to address these aspects of sustainable development through trade measures. But NTMs are quite complex and vary from country to country.

Measures proposed:

1. Ensure that NTMs are designed and implemented effectively so that costs are minimised.
2. Build capacity in developing economies to adapt, coordinate or harmonise the use of international standards.
3. Increase cooperation with developed economies to work out regional mechanisms and develop common guidelines on sustainability impact assessment of NTMs.
4. To address trade costs while maintaining the benefits of NTMs, countries need to further enhance cooperation at all levels.
5. Regional initiatives should be actively pursued, such as NTM harmonisation and mutual recognition initiatives in regional trade agreements.
6. Review current NTMs and ensure that new NTMs are systematically followed and monitored.

Case study:

Sri Lanka earned a lot revenue by exporting seafood. But then, the European Union (EU) instituted an import ban on Sri Lankan seafood because of the country's systematic failure to regulate IUU fishing. This was a type of NTM.

On the one hand, the ban helped in conservation of marine resources and encouraged sustainable fishing. At the same time though, fisherfolk in Sri Lanka became poor.

The ban led domestic prices to plummet, which in turn, translated into a decrease in fishing.

What are Non-tariff measures (NTMs)?

NTMs allude to technical measures such as sanitary (for protection of human and animal health), and phytosanitary (for protection of plant health), or SPS, and Technical Barriers to Trade (TBT), which are related to environmental and sustainable standards that are set to block or slow down trade instead of regular tariffs or duties.

Sources: Down to earth.

6. IMF's World Economic Outlook (WEO)

What to study?

For Prelims and mains: Key findings, reasons for slowdown and measures proposed.

Context: IMF's 2019 World Economic Outlook (WEO) has been released.

India- specific observations:

- India retains its rank as **the world's fastest-growing major economy**, tying with China.
- It has **a projected growth rate of 6.1 per cent for the current fiscal year**, despite an almost one per cent cut in the forecast.
- However, India's economy is projected **to pick up and grow by 7 per cent in the 2020 fiscal year**.

Reasons for the cut in growth projection for India:

- India's economy decelerated further in the second quarter, held back by sector-specific weaknesses in the automobile sector and real estate as well as lingering uncertainty about the health of non-bank financial companies.
- "Corporate and environmental regulatory uncertainty" are other factors that weighed on demand.
- The reduction in India's growth projection for this year **"reflects a weaker-than-expected outlook for domestic demand"**.

Measures needed for India to revive its growth:

1. Use monetary policy and broad-based structural reforms to address cyclical weakness and strengthen confidence.
2. A credible fiscal consolidation path is needed to bring down India's elevated public debt over the medium term.
3. This should be supported by subsidy-spending rationalisation and tax-base enhancing measures.
4. Reduce the public sector's role in the financial system, reform the hiring and dismissal regulations.

Global scenario:

1. The world economy is projected to grow only 3 per cent this year and 3.4 per cent next year amid a **"synchronised slowdown"**.
2. China's economic growth will slow down to 5.8 per cent next year.
3. In the Euro area, growth is projected to be only 1.2 percent this year and 1.4 next year, with the German economy expected to grow by a dismal 0.5 per cent this year.
4. United States is expected to slightly better with a 2.1 per cent growth projected for this year and 2.4 per cent for the next.
5. **Reasons for slowdown:** rising trade barriers, uncertainty surrounding trade and geopolitics, and structural factors, such as low productivity growth and an aging population in developed countries.

Sources: the Hindu.

7. BHIM 2.0

What to study?

For Prelims: About UPI, BHIM and NPCI.

For Mains: Cashless economy- need, significance, challenges and role of BHIM in furthering this.

Context: Govt launches **BHIM 2.0** with new functionalities, additional language support.

What is BHIM?

Bharat Interface for Money (BHIM) is a UPI based payment interface.

Developed by **National Payments Corporation of India (NPCI).**

Allows real time fund transfer.

Launched in December, 2016.

What's new in BHIM 2.0?

- Donation gateway, increased transaction limits for high value transactions, linking multiple bank accounts, offers from merchants, option of applying in IPO, gifting money.
- It also supports three additional languages -- Konkani, Bhojpuri and Haryanvi -- over and above the existing 13.

What is UPI?

Unified Payments Interface (UPI) is a system that powers multiple bank accounts into a single mobile application (of any participating bank), merging several banking features, seamless fund routing & merchant payments into one hood. It also caters to the "Peer to Peer" collect request which can be scheduled and paid as per requirement and convenience. Each Bank provides its own UPI App for Android, Windows and iOS mobile platform(s).

About NPCI:

NPCI is an umbrella organisation for operating retail payments and settlement systems in India.

- It is **an initiative of Reserve Bank of India (RBI) and Indian Banks' Association (IBA)** under the provisions of **the Payment and Settlement Systems Act, 2007**, for creating a robust Payment and Settlement Infrastructure in India.
- It has been incorporated as a **not for profit company.**
- In 2016 the shareholding was broad-based to 56 member banks to include more banks representing all sectors.

Sources: pib.

8. Global Wealth Report 2019

What to study?

For Prelims: Key findings of the report.

For Mains: Factors behind rise in wealth, relationship between wealth and savings and economic activity.

Context: The **Credit Suisse Group**, a Switzerland-based multinational investment bank, has released **the 10th edition of its annual Global Wealth Report.**

How is wealth defined and calculated?

Wealth is defined in terms of "**net worth**" of an individual. This, in turn, is calculated by adding up the value of financial assets (such as money) and real assets (such as houses) and then subtracting any debts an individual may have.

Key findings:

1. China has overtaken the United States this year to become “**the country with most people in the top 10% of global wealth distribution**”.
2. **44% of total wealth with 0.9%**: 47 million people – accounting for merely 0.9% of the world’s adult population – owned \$158.3 trillion.
3. **Bottom half of wealth holders collectively accounted for less than 1%** of total global wealth in mid-2019, while the richest 10% own 82% of global wealth and the top 1% alone own 45%.
4. **Global financial crisis** of 2008-09 has hurt those at the bottom of the pyramid more than the wealthiest as inequalities within countries grew in the wake of the GFC. As a result, **the top 1% of wealth holders increased their share of world wealth**.

India specific findings:

1. India remains one of the fastest wealth creators in the world, with household wealth in dollar terms growing faster than any other region.
2. **Wealth per Indian adult** is at \$14,569 (₹10.31 lakh as on 21 October). However, the average number is skewed heavily by a few wealthy individuals.
3. India accounts for 2% of the world’s millionaires.

The wealth distribution
India was among the regions with the highest percentage change in wealth per adult at 3.3%. Wealth per adult in the country is estimated at \$14,569 as of mid-2019.

Region	Change in wealth per adult 2018-19 (in %)	Wealth per adult 2019 (in \$)
India	3.3	14,569
Latin America	3.2	22,502
North America	2.7	417,694
China	2.6	58,544
Europe	1.2	153,973
Africa	0.4	6,488
Asia Pacific	-0.3	54,211
World	1.2	70,849

Source: Global wealth databook 2019

What are the drivers of the wealth of nations?

Overall size of the population: A country with a huge population, in terms of final calculation, this factor reduces the wealth per adult. Also, a big population provides a huge domestic market and this creates more opportunities for economic growth and wealth creation.

Country’s saving behaviour: A higher savings rate translates into higher wealth. **Overall, a percentage point rise in the savings rate raises the growth rate of wealth per adult by 0.13% each year on average.**

General level of economic activity as represented by aggregate income, aggregate consumption or GDP: The expansion of economic activity increases savings and investment by households and businesses, and raises the value of household-owned assets, both financial and non-financial.

Sources: Indian Express.

9. Merger of BSNL and MTNL

What to study?

For Prelims and mains: The merger, need, challenges and significance and outcomes, reasons for the crisis.

Context: Union Cabinet approves revival plan of BSNL and MTNL.

The revival plan includes:

1. Allotment of spectrum for 4G services.
2. Debt restructuring by raising of bonds with sovereign guarantee.
3. Reducing employee costs.
4. Monetisation of assets.
5. In-principle approval of merger of BSNL & MTNL.

What’s the crisis all about?

For some time now, BSNL is trying hard to sustain itself in a competitive market and was willing to accept what the government decides.

The government was in a Catch-22 situation wherein it had to decide **between survival of BSNL/MTNL on one side and safeguarding the interests of employees.**

Challenges faced by PSUs:

Overstaffing: BSNL has a huge employee base of 1.66 lakh and MTNL 21,679. Private players have just 25,000-30,000 employees across India.

Huge expenses: About 60% of BSNL's revenues go towards managing employee expenses, while for MTNL it is around 87%.

Increased competition: Triggered after entry of Reliance Jio in September 2016. PSUs failed to keep up with the change. The low data tariffs with free voice calls impacted the industry as a whole and not just PSUs.

The survival of the PSUs was largely dependent on the attitude of its employees, who could not approach a professional attitude with the change in times.

Excessive interference by **the Department of Telecommunications.**

What else can be done?

1. If the government is agreeable to an upgrade of its management, and **to bring in a commercially driven partner** who can leverage the massive resources of the PSUs and generate revenues, then the revival package would be worth it.
2. Both the firms, especially BSNL, **have huge assets**, be in terms of real estate or optical fibre, which will be very essential for the smooth rollout of next-generation technology 5G.
3. BSNL **has huge infra assets** and Right of Ways are an advantage, which can be shared with private players. Their real estate is very valuable with presence in all major city centres with premium real estate.

Way ahead:

With the proposed measures, it is expected that BSNL will come out of losses by 2023-24 while MTNL will be back to profits in 2025-26, according to estimates. Both the PSUs have a debt of around Rs 20,000 crore.

Sources: pib.

10. What is AGR?

What to study?

For Prelims: What is AGR? How is it calculated?

For Mains: What is the impact of latest ruling? Issues and ways to address them.

Context: The Supreme Court has upheld **the definition of Adjusted Gross Revenue (AGR)** calculation as stipulated by the Department of Telecommunications.

This means that **telecom companies will have to pay up as much as Rs 92,642 crore to the government.**

What is AGR?

Adjusted Gross Revenue (AGR) is **the usage and licensing fee that telecom operators are charged by the Department of Telecommunications (DoT).**

It is **divided into spectrum usage charges and licensing fees, pegged between 3-5 percent and 8 percent respectively.**

How is it calculated and what's the contention?

As per DoT, **the charges are calculated based on all revenues earned by a telco – including non-telecom related sources such as deposit interests and asset sales.** Telcos, on their part, insist that **AGR should comprise only the revenues generated from telecom services.**

Impact of the ruling:

1. Clearly this judgment has significantly damaging implications for India's telecom industry, which is already reeling under huge financial stress and is left with only four operators.
2. Significant investment of several billion dollars has been made in creating world class networks. This order has huge impact on two private operators while most of the other impacted operators have exited the sector.

Sources: the Hindu.

Topics: Effects of liberalization on the economy, changes in industrial policy and their effects on industrial growth.

1. Enterprise Development Centres (EDCs)

What to study?

For Prelims and mains: What are EDCs, need and significance.

Context: Union micro, small and medium enterprises sector (MSME) ministry is planning to launch **enterprise development centres (EDCs)** in every district.

What are EDCs?

Aimed at developing a cadre of indigenous entrepreneurs in the MSMEs, the EDCs will be **similar to incubators for start-ups**.

They shall be **run by special purpose vehicles in partnership with the private sector, business management organisations, local industry associations**.

Key features, roles and functions of EDCs:

1. Offer “**enterprise development courses**, vocational guidance and skill development for budding entrepreneurs”.
2. Have “**enterprise clinics**” for struggling firms, which the government hopes will reduce the number of small businesses falling into a debt trap financed by bank loans.
3. Offer **credit facilitation and syndication, export promotion and supplier inclusion**.
4. **Incentives and loans by the government for the sector** will also flow through the EDCs, after determining the capabilities of the firm through set parameters.

Sources: the Hindu.

2. World Bank’s Ease of Doing Business

What to study?

For Prelims: About the index, top and bottom performers, performance of India.

For Mains: Challenges for India and ways to address these challenges to reach the target set.

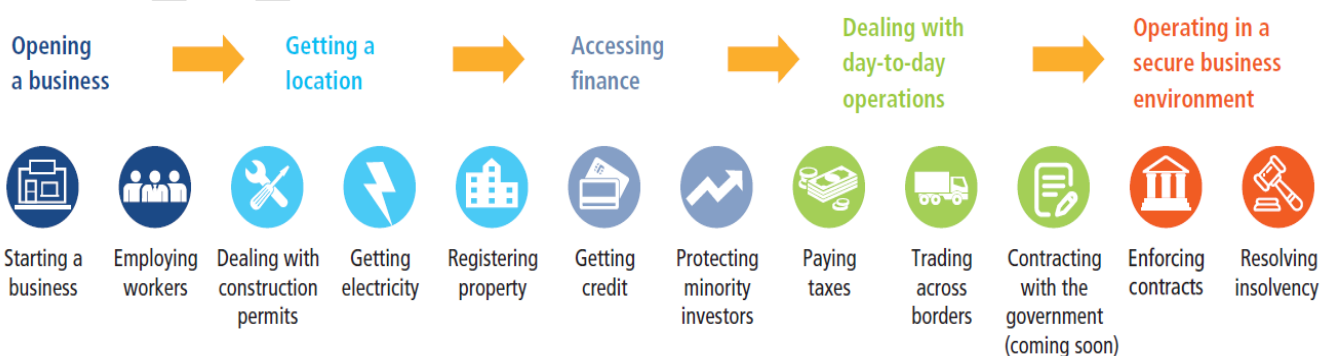
Context: World Bank’s ease of doing business ranking released.

10 top improvers are Saudi Arabia, Jordan, Togo, Bahrain, Tajikistan, Pakistan, Kuwait, China, India, and Nigeria.

About Doing Business project:

It provides **objective measures of business regulations and their enforcement across 190 economies and selected cities at the subnational and regional level**.

Launched in 2002, looks at domestic small and medium-size companies and measures the regulations applying to them through their life cycle.



Indicators:

This year's study covers 12 indicator sets and 190 economies. **Ten of these areas**—starting a business, dealing with construction permits, getting electricity, registering property, getting credit, protecting minority investors, paying taxes, trading across borders, enforcing contracts, and resolving insolvency—are included in the ease of doing business score and ease of doing business ranking.

Doing Business **also measures regulation on employing workers and contracting with the government, which are not included in the ease of doing business score and ranking.**

Performance of India:

- India went up 14 rungs in the 2020 survey to score a 63, making it the **one of world's top 10 most improved countries for the third consecutive time.**
- However, India failed to achieve government's **target of being at 50th place.** It was 77th last year.
- This is **the third year in a row that India has made it to the top 10 in Doing Business,** which is a success which very few countries have done over the 20 years of the project.

Challenges:

1. India still lags in areas such as enforcing contracts (163rd) and registering property (154th).
2. It takes 58 days and costs on average 7.8% of a property's value to register it, **longer and at greater cost than among OECD high-income economies.**
3. It takes 1,445 days for a company to resolve a commercial dispute through a local first-instance court, **almost three times the average time in OECD high-income economies.**

What helped India improve its ranking?

1. Sustained business reforms over the past several years.
2. India conducted four reforms in the 12-month period to May 1. Among other improvements, India made the process of obtaining a building permit more efficient.
3. Importing and exporting also became easier for companies with the creation of a single electronic platform for trade stakeholders, upgrades to port infrastructure and improvements to electronic submission of documents.

Way ahead:

In 2015, the government's goal was to join the 50 top economies on the ease of doing business ranking by 2020. While the competition to move up the ladder would increase and become much tougher, India is on track to be within top 50 of the Ease of Doing business in the next year or two. And to come under 25 or below 50, the government needs **to announce and start implementing next set of ambitious reforms now, as these reforms takes a few years to be realized on the ground.**

Sources: the Hindu.

3. NIRVIK Scheme

What to study?

For Prelims and mains: Key features and significance of the scheme.

Context: The Export Credit Guarantee Corporation of India (ECGC) is optimistic that **the Nirvik scheme** announced by the Union Government recently would give a fillip to export lending and insurance cover for export credit.

About NIRVIK:

Export Credit Guarantee Corporation of India (ECGC) announced this scheme to ease the lending process and enhance loan availability for exporters.

Key features of the scheme:

1. Insurance cover guaranteed will cover up to 90% of the principal and interest.
2. The increased cover will ensure that foreign and rupee export credit interest rates are below 4 percent and 8 percent respectively for the exporters.

3. The insurance cover will include both pre and post-shipment credit.
4. The gems, jewellery and diamond (GJD) sector borrowers with limit of over Rs 80 crore will have a higher premium rate in comparison to the non-GJD sector borrowers of this category due to the higher loss ratio.
5. For accounts with limits below Rs 80 crore, the premium rates will be moderated to 0.60 per annum and for those exceeding Rs80 crore, the rates will be 0.72 per annum for the same enhanced cover.
6. It mandates inspection of bank documents and records by ECGC officials for losses exceeding Rs.10 crore as against the present Rs 1crore.
7. The banks shall pay a premium to ECGC monthly on the principal and interest as the cover is offered for both outstandings.

Benefits of the scheme:

1. It will enhance accessibility and affordability of credit for exporters.
2. It will help make Indian exports competitive.
3. It will make ECGC procedures exporter friendly.
4. The insurance cover is expected to bring down the cost of credit due to capital relief, less provision requirement and liquidity due to quick settlement of claims.
5. It will ensure timely and adequate working capital to the export sector.

Sources: the Hindu.

Topics: Infrastructure: Energy, Ports, Roads, Airports, Railways etc.

1. One Nation One FASTag

What to study?

For Prelims: Key features and overview of the scheme.

For Mains: Benefits, challenges in implementation and significance of the scheme.

Context: One Nation One FASTag scheme inaugurated recently.

The government has already announced that **FASTags will be mandatory for all vehicles at all National Highways from December 1.**

Features of the scheme- One Nation One FASTag:

1. The scheme will be implemented from December 1, 2019, and can be availed upon activation by new cars having Radio Frequency Identification (RFID) tags on national and state highways throughout the country.
2. The plan aims to integrate the collection of toll digitally and ensure seamless mobility of vehicles across India.

- The payment method is a part of **the National Electronic Toll Collection (NETC) programme**. The **National Payments Corporation of India (NPCI)** collects the payments.

What is 'FASTag'? How they operate?

- Stickers affixed to the windscreen of vehicles.
- Use RFID technology to enable digital, contactless payment of tolls without having to stop at toll gates.
- The tags are linked to bank accounts and other payment methods.
- Sensors are placed on toll barriers, and the barriers open for vehicles having valid FASTags.
- A FASTag is valid for five years and needs to be recharged only as per requirement.



Why do we need this scheme?

According to the National Highways Authority of India (NHAI), these devices will make passing through tolls considerably smoother since drivers will no longer have to carry cash or stop to make a transaction. Cameras at toll booths will take photos of passengers in a vehicle, which will be useful for the Ministry of Home Affairs as there will be a record of a vehicle's movement.

Sources: Indian Express.

Topics: Major crops cropping patterns in various parts of the country, different types of irrigation and irrigation systems storage, transport and marketing of agricultural produce and issues and related constraints; e-technology in the aid of farmers.

1. World Cotton Day

What to study?

For Prelims and mains: Significance of the day, key facts related to Cotton.

Context: **World Cotton Day** being observed from 7th October to 11th October 2019 in Geneva.

About the World Cotton Day:

- Organised by **the World Trade Organisation (WTO)** in collaboration with the Secretariats of the United Nations Food and Agriculture Organization (FAO), the United Nations Conference on Trade and Development (UNCTAD), the International Trade Centre (ITC) and the International Cotton Advisory Committee (ICAC).
- WTO is hosting the event at the request of **the Cotton – 4 countries**, Benin, Burkina Faso, Chad and Mali.

Objectives of the event:

- To give exposure and recognition to cotton and all its stakeholders in production, transformation and trade.
- To engage donors and beneficiaries and strengthen development assistance for cotton.

3. To seek new collaborations with the private sector and investors for the cotton related industries and production in developing countries and promote technological advances, as well as further research and development on cotton.

Significance of the day:

- The Day will celebrate the many advantages of cotton, from its qualities as a natural fibre, to the benefits people obtain from its production, transformation, trade and consumption.
- It will also serve to shed light on the challenges faced by cotton economies around the world because cotton is important to least developed, developing and developed economies worldwide.

Cotton, its significance and the need for support:

Cotton is a global commodity that is produced all over the world.

A **single tonne of cotton** provides **year-round employment for five people on average**.

Cotton is a **drought – resistant** crop ideal for arid climates, it occupies just 2.1 % of the world's arable land, yet it meets 27% of the world's textiles need.

In addition to its **fibre used in textiles and apparel, food products are also derived from cotton like edible oil and animal feed** from the seed.

Facts for Prelims:

In India, various grades of raw cotton are produced including:

SUVIN, the finest quality of Extra Long Staple Cotton produced in Tamil Nadu having the highest fibre length.

Natural coloured cotton that is grown in Dharwad in the state of Karnataka in different colours like dark brown, medium brown, green and cream colours will also be on display.

Efforts to promote Cotton in India:

Between 2011 and 2018, India implemented a **Cotton Technical Assistance Programme (Cotton TAP-I)** of about USD 2.85 million for seven African countries namely Benin, Burkina Faso, Mali and Chad and also Uganda, Malawi and Nigeria.

The technical assistance **focused on improving the competitiveness of the cotton and cotton-based textiles and apparel industry** in these countries through a series of interventions which had significant outcomes leading to a demand for a follow-on project.

Sources: pib.

Topics: Issues related to direct and indirect farm subsidies and minimum support prices; Public Distribution System objectives, functioning, limitations, revamping; issues of buffer stocks and food security; Technology missions; economics of animal-rearing.

1. PM – KISAN scheme

What to study?

For Prelims: Key Features of the scheme.

For Mains: Significance, relevance and need for the scheme, concerns and challenges over its implementation, is it sufficient?

Context: Cabinet approves relaxation of Aadhaar seeding of data of the beneficiaries under **Pradhan Mantri Kisan Samman Nidhi (PM-Kisan)**.

What's the issue?

Under the scheme, funds were to be released on the basis of Aadhaar seeded database.

However, it has not been possible to get 100% Aadhaar seeding for release of funds as per the prescribed time schedule before release of instalments after 1st August, 2019.

About Pradhan Mantri Kisan Samman Nidhi:

- Under this programme, vulnerable landholding farmer families, having cultivable land upto 2 hectares, will be provided **direct income support at the rate of Rs. 6,000 per year**. This income support will be

transferred directly into the bank accounts of beneficiary farmers, in three equal installments of Rs. 2,000 each.

- The **complete expenditure of Rs 75000 crore for the scheme will borne by the Union Government** in 2019-20.

What is a small and marginal landholder family?

It comprises of husband, wife and minor children up to 18 years of age, who collectively own cultivable land up to two hectares as per the land records of the concerned states.

Significance of the scheme:

Around 12 crore small and marginal farmer families are expected to benefit from this. It would not only provide assured supplemental income to the most vulnerable farmer families, but would also meet their emergent needs especially before the harvest season. It would pave the way for the farmers to earn and live a respectable living.

INTERIM BUDGET 2019-20

Pradhan Mantri Kisan Samman Nidhi (PM-KISAN)

Direct income support of ₹6,000 p.a for farmers, effective 01.12.2018

To benefit 12 cr small and marginal farmer families having cultivable land upto 2 ha

Direct transfer into the bank accounts in three equal instalments

First installment upto 31.03.2019, to be paid this year itself

₹75,000 cr in outlay for 2019-20 and ₹20,000 cr in RE 2018-19

Similar programmes by states:

1. **Bhavantar Bhugtan Yojana in Madhya Pradesh** was sought to provide relief to farmers by providing the differential between MSPs and market prices.
2. **The Rythu Bandhu scheme of the Telangana** provides ₹4,000 per acre for every season to all the farmers of the state. Similar initiatives have also be framed in Jharkhand and Odisha.
3. **Krushak Assistance for Livelihood and Income augmentation (KALIA) of Odisha** is more complicated in design and implementation. It commits to give Rs 5,000 per SMF, twice a year, that is Rs 10,000 a year.

Benefits of direct cash transfers:

1. Immediate impact on reducing hunger and rural poverty.
2. Help households to overcome credit constraints and manage risk. This can increase productive investment, increase access to markets and stimulate local economies.
3. Income support can be used to make a repayment or at least activate a bank account which can then receive a loan.
4. Increase investment in agricultural inputs, including farm implements and livestock.
5. Serve as an important complement to a broader rural development agenda, including a pro-poor growth strategy focusing on agriculture.

Challenges with cash transfers- criticisms:

1. Cash transfers are **not greatly superior in terms of leakages** compared to other schemes of in-kind transfer such as the public distribution system (PDS).
2. A targeted cash transfer scheme envisions the role of the state to only providing cash income to the poor. This kind of approach seeks **to absolve the state of its responsibility in providing basic services such as health, education, nutrition and livelihood.**
3. Cash transfer scheme **cannot be substituted for subsidies and other institutional support systems** such as the National Food Security Act-powered public distribution system. In fact, such cash transfer schemes could be counterproductive and may lead to more distress.
4. Cash transfer is **neither a substitute for the structural reforms needed in agriculture, nor does it adequately compensate the farmer for the risks and uncertainty of crop cultivation.**
5. In the absence of proper tenancy records, **it will benefit the absentee landlords.**
6. It is **no substitute for the lack of investment in agriculture**, which has declined at 2.3% per annum in real terms.

Sources: pib.

2. 20th Livestock Census

What to study?

For Prelims: Overview and key findings.

For Mains: Livestock rearing in India- significance, challenges and ways to address them.

Context: *Department of Animal Husbandry & Dairying releases 20th Livestock Census.*

Significance: The Census will prove beneficial not just for policy makers but also for agriculturists, traders, entrepreneurs, dairying industry and masses in general.

key results of the Census:

1. **Total Livestock population** is 535.78 million- an **increase of 4.6% over Livestock Census-2012.**
2. **Total Bovine population (Cattle, Buffalo, Mithun and Yak)-** 302.79 Million in 2019- an increase of about 1% over the previous census.
3. **A decline of 6 % in the total Indigenous/ Non-descript cattle population** over the previous census.

About livestock census:

- Conducted periodically since 1919-20.
- Covers all domesticated animals and its headcounts.

Significance of livestock in poverty alleviation:

1. Livestock rearing is a key livelihood and risk mitigation strategy for small and marginal farmers, particularly across the rain-fed regions of India.
2. **Share in agricultural gdp:** Livestock products comprised 32 per cent of the total value of agriculture and allied activities in 2006-07 which was a noticeable increase from 27 per cent in 1999-2000 and from 1980-81 when it represented 14 per cent of the agricultural gross domestic product.

Why livestock rearing needs special attention?

Livestock rearing at the household level is largely a women-led activity, and therefore income from livestock rearing and decisions related to management of livestock within the household are primarily taken by women. Livestock rearing, particularly in the rain-fed regions of the country, is also emerging as **a key risk mitigation strategy for the poorest**. They face increasingly uncertain and erratic weather conditions which negatively impact crop productivity and wage labour in the agriculture sector.

Challenges ahead:

1. Although livestock products make important contributions to food security and poverty reduction for many low-income rural families, **the policy and institutional framework has failed to serve the needs of these poorest households and to get them onto the conveyor belt of development.**
2. A lack of public services in animal health that reach out to the poorest in rural areas and a failure to link small holder livestock keepers to better paying markets.
3. **The institutional and policy frameworks tend to support intensive and commercial livestock rearing**, both in the provision of services and also in facilitating access to markets.
4. Livestock producers, including traditional pastoralists and smallholders, are both **victims of natural resource degradation and contributors to it.**
5. **Animal health systems have been neglected in many parts** and this has led to institutional weaknesses that in turn lead to poor delivery of animal health services and higher risks to livelihoods and human health.

Way ahead:

Livestock wealth is much more equitably distributed than wealth associated with land. Thus, when we think of the goal of inclusive growth, we should not forget that from equity and livelihood perspectives, livestock rearing must be at the centre of the stage in poverty alleviation programmes.

Sources: pib.

3. National Milk Sample Safety Quality Survey

What to study?

For Prelims: Key findings of the survey and overview of chemical contaminants found.

For Mains: Concerns raised and ways to address them.

Context: National milk sample safety quality survey has been released by **the Food Safety and Standard Authority of India (FSSAI)**.

- This is **the first-of-its-kind comprehensive survey** FSSAI has conducted through **a third-party agency**.
- It **covered both organised (retailers and processors) as well as non-organised (local dairy farms, milk vendors and milk mandis) sectors**.

Key findings:

1. Around one-tenth of processed milk samples have safety issues, while over a third of the samples, even those of major brands, failed to meet one quality standard or another.
2. In the survey of 2,607 processed milk samples, 10.4% had safety issues while another 37.7% missed at least one quality standard.
3. Both raw and processed samples were found non-compliant on account of **low fat or low SNF (solid not fat) or both**. Proportion of fat and solid non-fat in milk varies widely by species and depends on breed as well as quality of feed and fodder.
4. In the survey of 3,825 raw milk samples, about 47% missed one quality parameter or another, while another 4.8% had safety issues.
5. On an average only, 7% of the milk had safety issues, and that most of the milk sold both in raw and processed form was fit for human consumption.
6. Out of the total 6,432 samples of liquid milk which were tested, 456 samples (7.1 per cent) were found to be unsafe due to contaminants such as Aflatoxin-M1, antibiotics or pesticides.

Aflatoxin M1 (AFM1):

1. Aflatoxins are toxins produced by certain fungi which are generally found in agricultural crops like maize, peanuts, cotton seed and others. They are carcinogenic in nature, which means they can cause cancer.
2. Consumption of food containing aflatoxin concentrations of one milligram/kilogram or higher has been suspected to cause aflatoxicosis, the prognosis of which consists of acute liver failure, jaundice, lethargy and nausea, eventually leading to death.

According to FSSAI standards, the **permissible limit of aflatoxins in milk is 0.5 µg/kg**.

Sources: the Hindu.

4. 'Feed our future' Cinema Ad Campaign

What to study?

For Prelims: About the campaign and WFP.

For Mains: Hunger and Malnutrition- challenges, concerns and ways to address them.

Context: The **United Nations World Food Programme (WFP)** have launched a **cinema advertisement campaign 'Feed Our Future'**.

About the campaign:

Objective: To raise awareness and take steps against hunger and malnutrition in India.

Launched in collaboration with UFO Movies.

- The ad shows the reality that millions of people facing across the world.
- The ad shows that the world has to face great loss when children's voices are silenced due to hunger.

About WFP:

The World Food Programme (WFP) is **the food assistance branch of the United Nations** and the world's largest humanitarian organization addressing hunger and promoting food security.

The WFP strives *to eradicate hunger and malnutrition, with the ultimate goal in mind of eliminating the need for food aid itself.*

It is *a member of the United Nations Development Group and part of its Executive Committee.*

Born in 1961, WFP pursues *a vision of the world in which every man, woman and child has access at all times to the food needed for an active and healthy life.*

The WFP is *governed by an Executive Board which consists of representatives from member states.*

The WFP operations are *funded by voluntary donations* from world governments, corporations and private donors.

WFP food *aid is also directed to fight micronutrient deficiencies, reduce child mortality, improve maternal health, and combat disease, including HIV and AIDS.*

The objectives of the World Food Programme are:

1. Save lives and protect livelihoods in emergencies.
2. Support food security and nutrition and (re)build livelihoods in fragile settings and following emergencies.
3. Reduce risk and enable people, communities and countries to meet their own food and nutrition needs.
4. Reduce under-nutrition and break the inter-generational cycle of hunger.
5. Zero Hunger in 2030.

Efforts by India to fight hunger and malnutrition:

India has all the ingredients in place to achieve **SDG 2**, which is to end hunger, achieve food security, improve nutrition and promote sustainable agriculture prior to the 2030 targets.

In 2015, India, along with other countries, signed the declaration on **the 2030 Agenda for Sustainable Development**, comprising 17 SDGs. Within this agenda, ending hunger, achieving food security and improved nutrition, and promoting sustainable agriculture was set as SDG 2.

NFSA as well as the POSHAN Abhiyan are substantial steps taken by India to put the SDG firmly on the map.

Sources: the Hindu.

Topics: Science and Technology- developments and their applications and effects in everyday life Achievements of Indians in science & technology; indigenization of technology and developing new technology.

1. RUCO (Repurpose Used Cooking Oil) initiative

What to study?

For Prelims: RUCO- features.

For Mains: Need for regulation of used cooking oil and uses of used cooking oil.

Context: To mark the **150th birth anniversary of Mahatma Gandhi** on 2nd October as Rashtriya Swachhta Diwas, publicity vans were flagged off in Delhi, to generate awareness among the people about the OMCs' initiative of converting Used Cooking Oil to Biodiesel.

- The publicity involves wide social media campaign to spread awareness and educate people about the ill effects of used cooking oil and ways to dispose it off for converting it to biodiesel.

Concerns associated with the consumption of used cooking oil (UCO):

- During frying, several properties of oil are altered, **Total Polar Compounds(TPC)** are formed on repeated frying.
- The toxicity of these compounds is associated with several diseases such as hypertension, atherosclerosis, Alzheimer's disease, liver diseases.

Limit set by FSSAI:

FSSAI has fixed a limit for Total Polar Compounds at **25 percent** beyond which the vegetable oil shall not be used.

What are Total Polar Compounds (TPC)?

1. The level of TPC increases every time oil is re-heated.
2. TPC accumulation in oil without food is slower than that in oil frying with food.

About RUCO:

1. **Launched** by FSSAI.
2. The initiative will **enable collection and conversion of used cooking oil to bio-diesel**.
3. FSSAI wants businesses using more than 100 litres of oil for frying, to maintain a stock register and ensure that UCO is handed over to only registered collecting agencies.

Potential and significance of the initiative:

1. India has the potential to recover 220 crore litres of used cooking oil for the production of biodiesel by 2022 through a co-ordinated action.
2. While biodiesel produced from used cooking oil is currently very small, but a robust ecosystem for conversion and collection is rapidly growing in India and will soon reach a sizable scale.

Sources: pib.

2. The Gandhian Challenge

On the **150th birth Anniversary of Mahatma Gandhi**, AIM, NITI Aayog's Atal Tinkering Labs (ATL) and UNICEF India, including Generation Unlimited, have launched '**The Gandhian Challenge**'.

What is it?

- This innovation challenge provides **a platform for every child across India to ideate innovative solutions for a sustainable India of their dreams, using Gandhi's principles**.
- The winners of The Gandhian Challenge will be awarded in New Delhi by NITI Aayog's Atal Innovation Mission and UNICEF on the occasion of **Children's Day** in November.
- The contest – **open for every child in India from 2 October to 20 October** – also celebrates 70 years of partnership between Government of India and UNICEF India to enable Every Right for Every Child.
- **Ideas and solutions to the Gandhian Challenge may be expressed through broad categories:** Art & Innovation (Letters, poems, painting, videos and photos, among others) and Science, Technology & Innovation (Robotics, IoT, sensors and 3D printers, among others).

About AIM:

AIM is the Government of India's flagship initiative **to promote a culture of innovation and entrepreneurship in the country**. **Objective:** to develop new programmes and policies for fostering innovation in different sectors of the economy, provide platform and collaboration opportunities for different stakeholders, create awareness and create an umbrella structure to oversee innovation ecosystem of the country.

Six major initiatives of AIM:

1. **Atal Tinkering Labs**-Creating problem-solving mindset across schools in India.
2. **Atal Incubation Centers**- Fostering world class start-ups and adding a new dimension to the incubator model.
3. **Atal New India Challenges**-Fostering product innovations and aligning them to the needs of various sectors/ministries.
4. **Mentor India Campaign**- A national Mentor network in collaboration with public sector, corporates and institutions, to support all the initiatives of the mission.
5. **Atal Community Innovation Center**- To stimulate community centric innovation and ideas in the unserved /underserved regions of the country including Tier 2 and Tier 3 cities.
6. **ARISE**- To stimulate innovation and research in the MSME industry.

Generation Unlimited:

1. It is a new **UNICEF-led global partnership**.
2. Aims **to ensure that every young person age 10-24 is in some form of school, learning, training, self-employment, or age-appropriate employment by 2030**.

3. Also aims **to co-create and scale up proven solutions related to secondary age-education, skills for learning, employability and decent work, and empowerment, with a focus on girls.**

Sources: pib.

3. All you wanted to know about Nobel Prizes

Context: The **2019 Nobel Prize in Medicine** has been awarded jointly to William G. Kaelin Jr, Sir Peter J. Ratcliffe and Gregg L. Semenza **“for their discoveries of how cells sense and adapt to oxygen availability.”**

Why does this matter?

- The oxygen-sensing ability of the body has a role in the immune system and the earliest stages of development inside the womb.
- If oxygen levels are low, it can trigger the production of red blood cells or the construction of blood vessels to remedy this.
- More red blood cells mean the body is able to carry more oxygen and is why athletes train at altitude.
- So, drugs that mimic it may be an effective treatment for anaemia.
- Tumours, meanwhile, can hijack this process to selfishly create new blood vessels and grow.
- So, drugs that reverse it may help halt cancer.

Nobel Prize- overview:

Alfred Nobel, a Swedish chemist, engineer, industrialist, and the inventor of dynamite, in his last will and testament in 1895, gave the largest share of his fortune to **a series of prizes in Physics, Chemistry, Physiology/Medicine, Literature, and Peace, to be called the “Nobel Prizes”.**

In 1968, the sixth award, the Prize in Economic Sciences was started.

The Nobel Prize **consists of a Nobel Medal and Diploma, and a document confirming the prize amount.**

Between 1901 and 2018, the Prizes have been awarded 590 times, the recipients during this period being 908 Laureates and 27 organisations.

How candidates are nominated?

1. The Nobel Committees of four prize-awarding institutions every year invite thousands of members of academies, university professors, scientists, previous Nobel Laureates, and members of parliamentary assemblies among others to submit candidates for the Nobel Prizes for the coming year.
2. The nominators are selected in such a way that as many countries and universities as possible are represented over time.
3. **One cannot nominate himself/herself** for a Nobel Prize.

The institutions that choose winners:

The Nobel Committees of the prize-awarding institutions are responsible for the selection of the candidates, the institutions being:

1. Nobel Prize in Physics, Nobel Prize in Chemistry: The Royal Swedish Academy of Sciences
2. Nobel Prize in Physiology or Medicine: The Karolinska Institutet
3. Nobel Prize in Literature: The Swedish Academy
4. Nobel Peace Prize: A five-member Committee elected by the Norwegian Parliament (Storting)
5. Prize in Economic Sciences: The Royal Swedish Academy of Sciences

The following Indians (or individuals of Indian origin) have been honoured with the Nobel: Rabindranath Tagore (Literature, 1913), C V Raman (Physics, 1930), Hargobind Khorana (Medicine, 1968), Mother Teresa (Peace, 1979), Subramanian Chandrashekar (Physics, 1983), the Dalai Lama (Peace, 1989), Amartya Sen (Economics, 1998), Venkatraman Ramakrishnan (2009), and Kailash Satyarthi (Peace, 2014).

Sources: Indian Express.

4. 2019 Nobel Prize in Physics

Context: Three scientists- Canadian-American cosmologist James Peebles and Swiss astronomers Michel Mayor and Didier Queloz- have jointly been awarded **the 2019 Nobel Prize in physics** for encouraging the growth of **the "understanding of our place in the Universe"**.

Details:

1. Peebles findings:

He won one-half of the prize for theoretical discoveries that have contributed to our understanding of **"how the Universe evolved after the Big Bang"**.

Using theoretical tools and calculations, he drew **a link between the temperature of the radiation emitted after the Big Bang and the amount of matter it created**.

His work showed that **the matter known to us -- such as stars, planets, and ourselves -- only makes up five percent**, while the other 95 percent is made up of "unknown dark matter and dark energy".

2. Michel Mayor and Didier Queloz:

They shared the prize for their discovery of **an exoplanet outside our solar system orbiting a solar-type star in the Milky Way**.

They were able to detect a gaseous ball similar in size to Jupiter, orbiting a star 50 light years from our own Sun. Harnessing **the Doppler effect**, the pair proved the planet, known as 51 Pegasus b, was orbiting its star.

Sources: the Hindu.

5. 2019 Nobel Prize in Chemistry

John B. Goodenough, M. Stanley Whittingham and Akira Yoshino "for the development of **lithium-ion batteries**"

What are lithium-ion batteries?

Lithium is the lightest of all metals, has **the greatest electrochemical potential and provides the largest energy density for weight**.

Although slightly lower in energy density than lithium metal, **lithium-ion is safe, provided certain precautions** are met when charging and discharging.

In 1991, the Sony Corporation commercialized the first lithium-ion battery. Other manufacturers followed suit.

Why are they important?

1. The energy density of lithium-ion is typically twice that of the standard nickel-cadmium.
2. There is potential for higher energy densities.
3. The load characteristics are reasonably good and behave similarly to nickel-cadmium in terms of discharge.
4. The high cell voltage of 3.6 volts allows battery pack designs with only one cell.
5. Lithium-ion is a low maintenance battery, an advantage that most other chemistries cannot claim.
6. There is no memory and no scheduled cycling is required to prolong the battery's life.
7. In addition, the self-discharge is less than half compared to nickel-cadmium, making lithium-ion well suited for modern fuel gauge applications.
8. Lithium-ion cells cause little harm when disposed.

Limitations:

1. It is fragile and requires a protection circuit to maintain safe operation.
2. Aging is a concern with most lithium-ion batteries.
3. Some capacity deterioration is noticeable after one year, whether the battery is in use or not.
4. Expensive to manufacture - about 40 percent higher in cost than nickel-cadmium.
5. Not fully mature - metals and chemicals are changing on a continuing basis.

6. 2019 Nobel Prize in Physiology or Medicine

William G. Kaelin Jr, Sir Peter J. Ratcliffe and Gregg L. Semenza “for their discoveries of how cells sense and adapt to oxygen availability”

What we knew so far?

The rate at which we respire depends on **the amount of oxygen being carried in the blood.**

Specialised cells present next to large blood vessels in the neck sense the blood oxygen level and alert the brain to increase the rate of respiration when the oxygen level in the blood goes down. This discovery won a Nobel Prize in 1938.

- At the beginning of the last century, scientists knew that specialised cells present in the kidneys make and release a hormone called **erythropoietin**. When oxygen level is low, as in high altitudes, more of this hormone is produced and released, leading to increased production of red blood cells in the bone marrow — helping the body adapt to high altitudes.
- Besides increasing red blood cells, the body also grows new blood vessels to increase blood supply.

What are the main contributions of 2019’s winners?

- Both Prof. Semenza and Sir Ratcliffe independently studied **how the erythropoietin gene is regulated by varying oxygen levels.**
- Both researchers found that **the oxygen-sensing mechanism is not restricted to kidneys where the erythropoietin is produced but by diverse cells in tissues other than the kidney.**

Significance of the discovery:

- Oxygen is essential for animal life: it is used by the mitochondria present in virtually all animal cells in order to convert food into useful energy.
- While oxygen is essential for the survival of cells, excess or too little oxygen can lead to adverse health consequences.
- Oxygen supply temporarily reduces in muscles during intense exercise and under such conditions the cells adapt their metabolism to low oxygen levels.
- Proper growth of the foetus and placenta depends on the ability of the cells to sense oxygen.
- Many diseases can be treated by increasing the function of a particular pathway of the oxygen-sensing machinery.

7. The Nobel Prize in Literature 2019

Polish author Olga Tokarczuk and Austrian novelist Peter Handke would receive 2018 and 2019 Nobel Prize for Literature. The prize was postponed in 2018 after the academy was hit by a sexual assault scandal.

Peter Handke “for an influential work that with linguistic ingenuity has explored the periphery and the specificity of human experience”

8. The Nobel Peace Prize 2019

Abiy Ahmed Ali (PM of Ethiopia) “for his efforts to achieve peace and international cooperation, and in particular for his decisive initiative to resolve the border conflict with neighbouring Eritrea”

History of the Ethiopia-Eritrea conflict:

- In April 1993, Eritrea broke from its federation with Ethiopia, becoming an independent country that was located strategically at the mouth of the Red Sea on the Horn of Africa, in close proximity to one of the world’s most crucial shipping lanes. Independence was the outcome of a 30-year war by Eritrean liberation fighters against Ethiopia, which had annexed the small multiethnic territory to its north in 1962.
- Just over five years after Independence, however, war broke out between the two countries over the control of Badme — a border town of no apparent significance, but which both Addis Ababa and Asmara coveted.

9. The Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel 2019

Abhijit Banerjee, Esther Duflo and Michael Kremer “for their experimental approach to alleviating global poverty”.

Esther Duflo has become *the second woman to win prize after Elinor Ostrom (2009) of US*.

This year’s Laureates have introduced *a new approach to obtaining reliable answers about the best ways to fight global poverty*.

In brief, it involves dividing this issue into smaller, more manageable, questions – for example, the most effective interventions for improving educational outcomes or child health.

They have shown that these smaller, more precise, questions are often best answered via carefully designed experiments among the people who are most affected.

10. Facebook’s new cryptocurrency- Libra

What to study?

For prelims and mains: various cryptocurrencies, their uses, concerns over their regulation and issues associated.

Context: Despite several high-profile defections and intense criticism from US regulators and politicians, Facebook officially launches *Libra*.

The Libra Association, the nonprofit that will govern the currency, officially signed on 21 charter members at the organization's inaugural meeting in Geneva.

What is Libra?

Facebook says Libra is a “*global currency and financial infrastructure*”. In other words, it is a digital asset built by Facebook and powered by a new Facebook-created version of blockchain, the encrypted technology used by bitcoin and other cryptocurrencies.

Who is in charge of Libra?

The currency will be serviced by a collective of companies called the “*Libra Association*”. It functions as what is known as a “stablecoin”, pegged to existing assets like the dollar or euro, in the aim of making it less subject to the volatility that many cryptocurrencies experience.

The Libra Association is described by Facebook as *an independent, not-for-profit organisation based in Switzerland*.

Privacy concerns surrounding cryptocurrencies:

1. Cryptocurrencies allow anonymous funding potentially acting as conduits for money laundering and terror financing.
2. The anonymity of cryptocurrency has made way for cybercriminals to hold victims hard drives hostage to extort payment from them in terms of bitcoins.
3. Since cryptocurrency is borderless, it can be really attractive for terrorist finances as they can transfer funds across countries in a cheap way.
4. Certain characteristics of cryptocurrency like speed, cost, security make it a lucrative source to finance such activities
5. Cryptocurrency is being used to fund child pornography, sexual exploitation, and human trafficking
6. Most new users know close to nothing of the technology, or how to verify the genuineness of a particular crypto currency.
7. **Intense volatility** of cryptocurrency.

Sources: the Hindu.

11. India Innovation Index 2019

What to study?

For Prelims: Highlights of the index.

For Mains: Significance, performance of states, gaps existing and ways to address them.

Context: NITI Aayog with *Institute for Competitiveness* as the knowledge partner has released *the India Innovation Index (III) 2019*.

Key findings:

1. Karnataka is *the most innovative major state in India*.
2. **Others in top 10:** Tamil Nadu, Maharashtra, Telangana, Haryana, Kerala, Uttar Pradesh, West Bengal, Gujarat, and Andhra Pradesh.
3. The top ten major states are majorly concentrated in southern and western India.
4. Sikkim and Delhi take the top spots among *the north-eastern & hill states, and union territories/city states/small states respectively*.
5. Delhi, Karnataka, Maharashtra, Tamil Nadu, Telangana, and Uttar Pradesh are *the most efficient states in translating inputs into output*.

The Report Card		
Most Innovative States		
Rank	States	Score
1	Karnataka	35.65
2	Tamil Nadu	32.98
3	Maharashtra	29.93
4	Telangana	22.06
5	Haryana	20.55
6	Kerala	19.58
7	Uttar Pradesh	19.08
8	West Bengal	18.21
9	Gujarat	16.86
10	Andhra Pradesh	14.51

States ranked on 33 indicators

National index needed to help states compete to innovate	India was at 57th position in IIL in 2018 among 126 countries
--	--

About the index:

The index attempts to create an extensive framework for the continual evaluation of the innovation environment of 29 states and seven union territories in India and intends to perform the following three functions:

1. Ranking of states and UTs based on their index scores.
2. Recognizing opportunities and challenges.
3. Assisting in tailoring governmental policies to foster innovation.

The Index is *calculated as the average of the scores of its two dimensions* - Enablers and Performance.

1. The Enablers are the factors that underpin innovative capacities, grouped in five pillars: (1) Human Capital, (2) Investment, (3) Knowledge Workers, (4) Business Environment, and (5) Safety and Legal Environment.
2. The Performance dimension captures benefits that a nation derives from the inputs, divided in two pillars: (6) Knowledge Output and (7) Knowledge Diffusion.

Significance of the index:

India has a unique opportunity among its myriad challenges to become the innovation leader in the world. Cluster-based innovation should be leveraged upon as the focal point of competitiveness.

The index is a great beginning to improve the environment of innovation in the country as it focuses on both the input and output components of the idea.

The index is a good effort to benchmark the performance of the state with each other and promote competitive federalism.

Sources: pib.

12. National Digital Health Blueprint

What to study?

For prelims: NDHB- highlights.

For mains: Need for, significance of NDHB, challenges in health sector and ways to address them.

Context: National Digital Health Blueprint report submitted to Health Ministry.

Background:

In **August** this year, the government released **NDHB** which aims to create **National Digital Health Eco- System**.

Highlights of the National Digital Health Blueprint (NDHB):

1. It lays out the 'building blocks' for the implementation of *the National Health Stack (NHS)*, which aims to deploy Artificial Intelligence (AI) in leveraging health records.

2. Keeping true to the government's larger agenda, of 'data as a public good', the blueprint proposes the **linking of multiple databases to generate greater and granular data that can be leveraged by the public as well as private sector** – including insurance companies, hospitals, apps and researchers.
3. The blueprint proposes **a National Digital Health Mission** "as a purely government organisation with complete functional autonomy adopting some features of some of the existing National Information Utilities like UIDAI and GSTN."

Concerns:

1. This National Blueprint illustrates yet another example of **the Centre moving forward with a major digitisation program involving the data of millions of citizens without a data protection law in place.**
2. Data security is a prerequisite for any data movement. Currently, data privacy in health is a grey area.
3. Data researchers and activists have expressed concerns about the development of this policy, which proposes **a health data set-up on a foundation of India Stack** – a bouquet of privately-owned proprietary software applications.

Sources: pib.

13. National Digital Health Blueprint

What to study?

For prelims: NDHB- highlights.

For mains: Need for, significance of NDHB, challenges in health sector and ways to address them.

Context: National Digital Health Blueprint report submitted to Health Ministry.

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Highlights of the National Digital Health Blueprint (NDHB):

4. It lays out the 'building blocks' for the implementation of **the National Health Stack (NHS)**, which aims to deploy Artificial Intelligence (AI) in leveraging health records.
5. Keeping true to the government's larger agenda, of 'data as a public good', the blueprint proposes the **linking of multiple databases to generate greater and granular data that can be leveraged by the public as well as private sector** – including insurance companies, hospitals, apps and researchers.
6. The blueprint proposes **a National Digital Health Mission** "as a purely government organisation with complete functional autonomy adopting some features of some of the existing National Information Utilities like UIDAI and GSTN."

Concerns:

4. This National Blueprint illustrates yet another example of **the Centre moving forward with a major digitisation program involving the data of millions of citizens without a data protection law in place.**
5. Data security is a prerequisite for any data movement. Currently, data privacy in health is a grey area.
6. Data researchers and activists have expressed concerns about the development of this policy, which proposes **a health data set-up on a foundation of India Stack** – a bouquet of privately-owned proprietary software applications.

Sources: pib.

14. Air-independent Propulsion

What to study?

For Prelims: Features and operation.

For Mains: Significance and the need for it.

Context: DRDO is a step closer to boosting endurance of submarines with **the indigenous Air Independent Propulsion (AIP) System.** It has successfully tested the operation of the indigenous land-based prototype.

What is Air-independent propulsion?

It is **any technology which allows a non-nuclear submarine to operate without the need to access atmospheric oxygen (by surfacing or using a snorkel).**

It can **augment or replace the diesel-electric propulsion system of non-nuclear vessels.**

It is **based on the combustion of stored oxygen and ethanol to augment battery-powered propulsion.**

Significance of AIP:

- AIP significantly improves stealth because it **enables a submarine to generate electricity for services and battery charging and propulsion while completely submerged.**
- AIP systems also **generate electricity**, powering a submarine to operate and also generate oxygen, lighting and amenities for crew.
- The Non-nuclear submarines running on battery power or AIP **can be virtually silent.**

Sources: the hindu.

Topics: Achievements of Indians in science & technology; indigenization of technology and developing new technology.

1. Vikram Sarabhai

What to study?

For prelims: Key contributions of Vikram Sarabhai.

For mains: Contributions of India and Indians to the development of space technology.

Context: Department of Atomic Energy organizes a Curtain Raiser programme to mark the Centenary Celebrations of **Dr Vikram Sarabhai.**

About Vikram Sarabhai and his contributions:

Vikram Sarabhai was born on August 12, 1919. Sarabhai was instrumental in forming India's future in astronomy and setting up the country's space research facilities.

Key contributions:

1. Based on his persuasion, the Indian government agreed to set up the Indian National Committee for Space Research (**INCOSPAR**) in 1962.
2. Sarabhai was the **first chairman of the committee.**
3. The INCOSPAR was restructured and **renamed as Indian Space Research Organisation (ISRO) in 1969.**
4. Sarabhai founded the **Physical Research Laboratory in Ahmedabad in the year 1947.** The laboratory started its operation from RETREAT, Sarabhai's residence in Ahmedabad. Its first topic of research was cosmic rays.
5. He also set up **India's first rocket launch site in Thumba**, a small village near the Thiruvananthapuram airport in Kerala.
6. Vikram Sarabhai was also responsible for bringing cable television to India. His constant contact with NASA paved a way for the establishment of **Satellite Instructional Television Experiment (SITE) in 1975.**
7. Sarabhai was the mastermind behind building **India's first satellite, Aryabhata.**
8. He was one of the founding members of the **Indian Institute of Management, Ahmedabad (IIMA).**
9. Vikram Sarabhai received the **Padma Bhushan** in 1966 for his contribution to India's progress. He was also awarded the **Padma Vibhushan** in 1972, posthumously.

Sources: pib.

Topics: Awareness in space.

1. Deep Carbon Observatory

What to study?

For Prelims: Why study carbon in earth? About CDO.

For Mains: Significance of the project and challenges involved.

Context: Deep Carbon Observatory (CDO) has released a report on Carbon, its emissions and availability. The study's results are concerning due to **past extinction events linked to the mass release of atmospheric CO₂**.

Key findings:

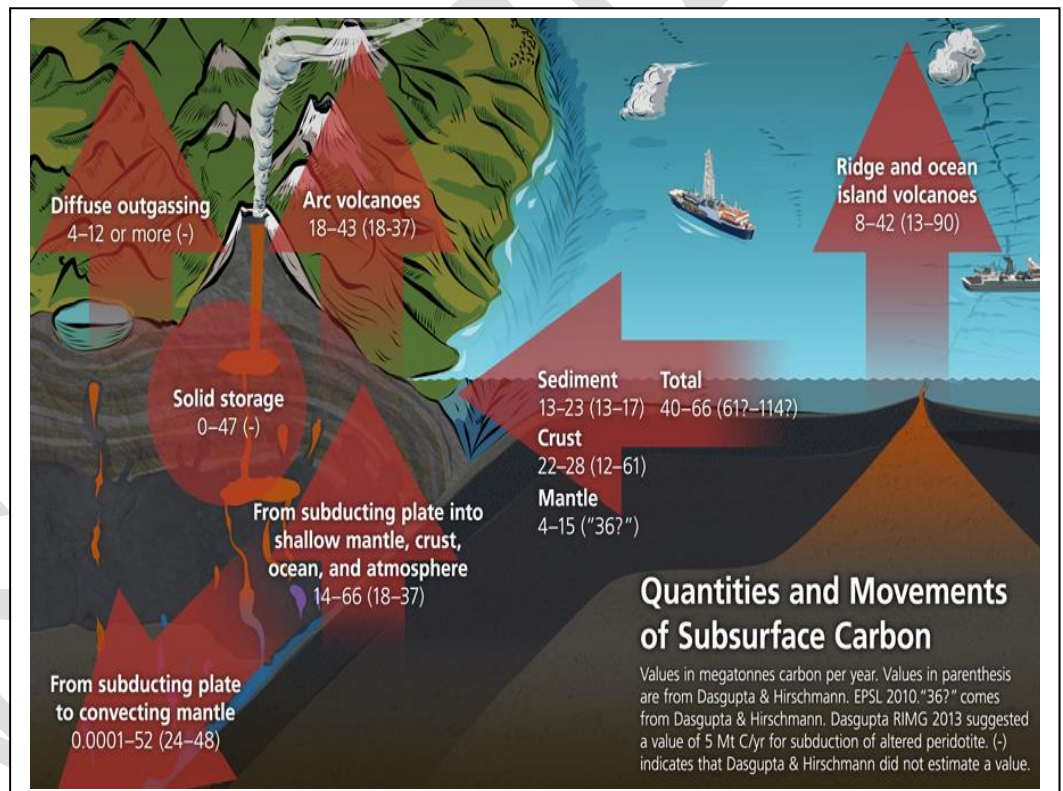
1. Less than one percent of the planet's carbon is found above surface.
2. The rest of the carbon – about 1.85 billion gigatonnes – is trapped in the planet's crust and mantle.
3. The carbon that is found in the oceans, the land and the atmosphere, for the most part, appears to be disturbed by human activity.
4. Human emissions of the greenhouse gas are 100 times greater than all of Earth's volcanoes.
5. Human activity contributes about 10 gigatonnes of CO₂ into the atmosphere each year. Natural geological process underground, for comparison, release about 10 times less of the global warming gas.
6. Carbon dioxide emissions into the atmosphere and oceans from volcanoes account for about 280 to 360 million tonnes.
7. The burning of fossil fuels, deforestation and other human activities contribute between 40 and 100 times the amount of CO₂ into the atmosphere.

About Deep Carbon Observatory (DCO):

It is a global community of more than 1000 scientists on a **ten-year quest** to understand the quantities, movements, forms, and origins of carbon in Earth.

Why study carbon in Earth?

Carbon plays a fundamental role on Earth. It forms the chemical backbone for all essential organic molecules produced by living organisms. Carbon-based fuels supply most of society's energy. Atmospheric carbon dioxide affects Earth's climate. Yet despite its importance, remarkably little is known about the physical, chemical, and biological behaviour of carbon in the vast majority of Earth's interior.



Sources: the Hindu.

2. Geotail

Context: An instrument on **Chandrayaan-2, CLASS**, designed to detect signatures of elements in the Moon's soil, had detected charged particles during the mission. This happened in September, during the orbiter's passage through the "geotail".

What is Geotail?

A region in space that allows the best observations. The region ***exists as a result of the interactions between the Sun and Earth.***

How is it formed?

1. The Sun emits the solar wind, which is a continuous stream of charged particles.
2. These particles are embedded in the extended magnetic field of the Sun. Since the Earth has a magnetic field, it obstructs the solar wind plasma.
3. This interaction results in the formation of a magnetic envelope around Earth.
4. On the Earth side facing the Sun, the envelope is compressed into a region that is approximately three to four times the Earth radius.
5. On the opposite side, the envelope is stretched into a long tail, which extends beyond the orbit of the Moon.
6. It is this tail that is called the ***geotail.***
7. Once every 29 days, the Moon traverses the geotail for about six days.

Sources: Indian Express.

3. Lunar Reconnaissance Orbiter (LRO)

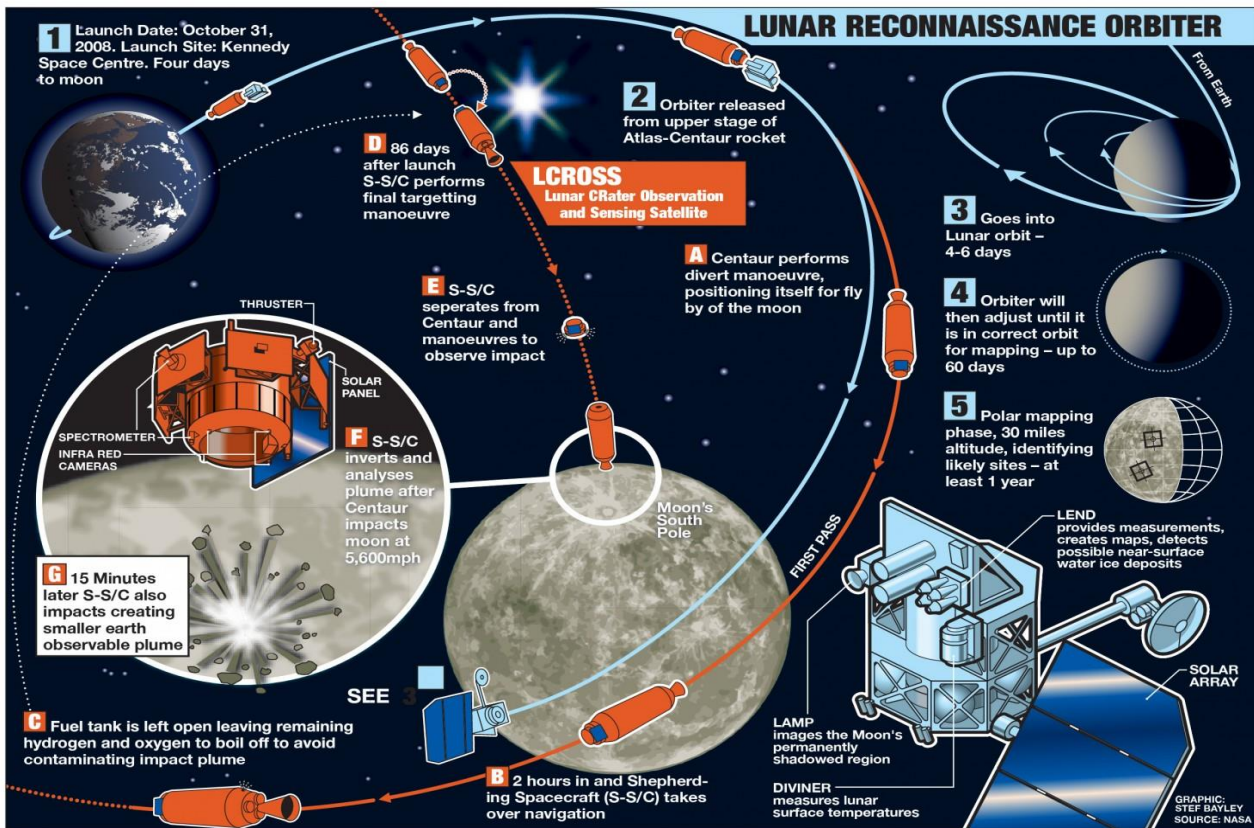
What to study?

For Prelims and Mains: About LRO- mission objectives, components and significance, Significance of Lunar water and benefits.

Context: Ten years ago (Oct. 9), NASA slammed a hunk of space junk into the moon, forever changing our perception of Earth's nearest neighbour.

Background:

The space agency's ***Lunar Crater Observation and Sensing Satellite (LCROSS) and Lunar Reconnaissance Orbiter (LRO)*** missions launched together on June 18, 2009, riding atop a United Launch Alliance Atlas V rocket. LRO sped to lunar orbit, where it continues to operate today. But LCROSS remained attached to the Atlas V's Centaur upper stage and went into a long, elliptical path around Earth that put it on an intentional collision course with the moon.



About Lunar Reconnaissance Orbiter (LRO):

It is a **NASA mission to the moon** within the **Lunar Precursor and Robotic Program (LPRP)** in preparation for future manned missions to the moon and beyond (Mars).

LRO is **the first mission of NASA's 'New Vision for Space Exploration'**.

The objectives of LRO are to:

- Identify potential lunar resources.
- Gather detailed maps of the lunar surface.
- Collect data on the moon's radiation levels.
- Study the moon's polar regions for resources that could be used in future manned missions or robotic sample return missions.
- Provide measurements to characterize future robotic explorers, human lunar landing sites and to derive measurements that can be used directly in support of future Lunar Human Exploration Systems.

Sources: the hindu.

4. NASA ICON Mission

What to study?

For Prelims and mains: Key features and significance of the mission, why study ionosphere?

Context: National Aeronautics and Space Administration (NASA) has launched a satellite ICON to detect dynamic zones of Earth's Ionosphere. The satellite Ionosphere Connection Explorer (ICON) was launched from an aircraft over the Atlantic Ocean near the Florida coast.

About ICON Mission:

1. The ICON satellite will study the Earth's Ionosphere. It includes various layers of the uppermost atmosphere where free electrons flow freely.
2. The ICON mission is the 39th successful launch and satellite deployment by Pegasus rocket. This mission is operated by the University of California.

- It was originally planned to launch in late 2017 but delayed due to the problems with the Pegasus XL rocket.
It is equipped with 780-watt solar arrays to power the instruments.

Earth's Atmospheric Layers:

Troposphere: It starts at the Earth's surface and extends 8 to 14.5 kilometers high (5 to 9 miles). This part of the atmosphere is the most dense. Almost all weather is in this region.

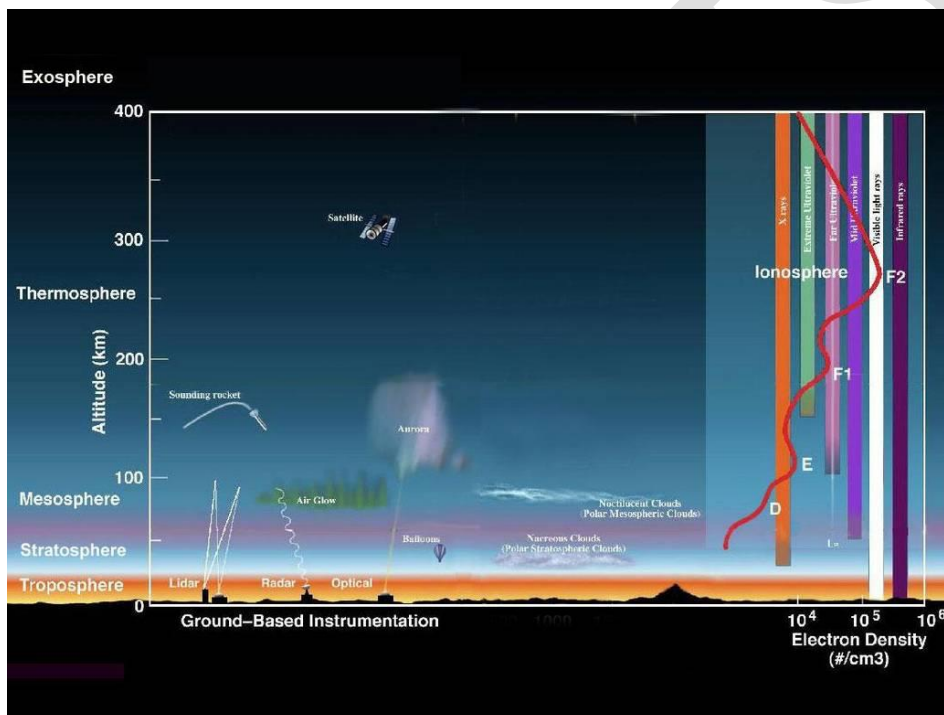
Stratosphere: It starts just above the troposphere and extends to 50 kilometers (31 miles) high. The ozone layer, which absorbs and scatters the solar ultraviolet radiation, is in this layer.

Mesosphere: The mesosphere starts just above the stratosphere and extends to 85 kilometers (53 miles) high. Meteors burn up in this layer.

Thermosphere: It starts just above the mesosphere and extends to 600 kilometers (372 miles) high. Aurora and satellites occur in this layer.

Ionosphere: It is an abundant layer of electrons and ionized atoms and molecules that stretches from about 48 kilometers (30 miles) above the surface to the edge of space at about 965 km (600 mi), overlapping into the mesosphere and thermosphere. This dynamic region grows and shrinks based on solar conditions and divides further into the sub-regions: D, E and F; based on what wavelength of solar radiation is absorbed. The ionosphere is a critical link in the chain of Sun-Earth interactions. This region is what makes radio communications possible.

Exosphere: This is the upper limit of our atmosphere. It extends from the top of the thermosphere up to 10,000 km (6,200 mi).



Sources: the Hindu.

5. Microbial Fuel Cells

What to study?

For Prelims and mains: What are microbial fuel cells, how they work, significance and potential applications?

Context: *Microbial fuel cells* have been installed at a zoo in London.

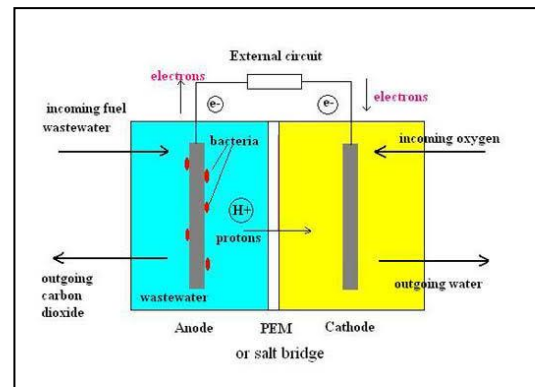
Using these cells, a plant has taken **the botanical world's first selfie**.

What are microbial fuel cells?

A device that converts chemical energy to electrical energy by the action of microorganisms.

How it works?

1. Under sunlight, plants produce sugars and oxygen from water and CO₂ (photosynthesis).
2. These sugars do not remain in the leaves, but are transported throughout the plant to the stem and roots.
3. Some of these sugars are excreted by the roots as a waste product from the plant.
4. Soil micro-organisms break this down further, releasing energy.
5. This energy is captured using an anode (minus) and a cathode (plus) and charge a super capacitor.
6. When the super capacitor is full, the power is discharged and a photo is taken.



Significance:

Unlike solar panels, plants can survive in the shade, naturally moving into position to maximise the potential of absorbing sunlight.

Sources: Indian Express.

6. Thirty Meter Telescope (TMT)

What to study?

For prelims and mains: TMT- objectives and significance, location.

Context: About 70% of Indian contribution to **the Thirty Meter Telescope (TMT)** will be in the form of both hardware and software for the telescope. Indian entities are engaged in developing observatory software as well as telescope control system.

About TMT:

The **Thirty Meter Telescope (TMT)** is an **astronomical observatory with an extremely large telescope (ELT)**. It is **an international project being funded by** scientific organisations of Canada, China, India, Japan and USA.

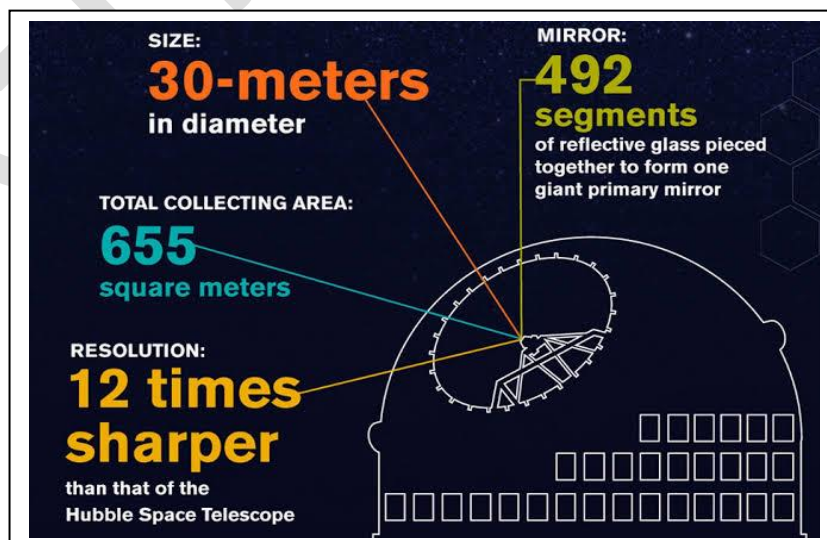
Planned location: Mauna Kea on the island of Hawaii in the US state of Hawaii.

Purpose: The TMT is designed for near-ultraviolet to mid-infrared observations, featuring adaptive optics to assist in correcting image blur.

Significance:

1. TMT will enable scientists to study fainter objects far away from us in the Universe, which gives information about early stages of evolution of the Universe.
2. It will give us finer details of not-so-far-away objects like undiscovered planets and other objects in the Solar System and planets around other stars.

Sources: Down to Earth.



7. Copernicus Programme

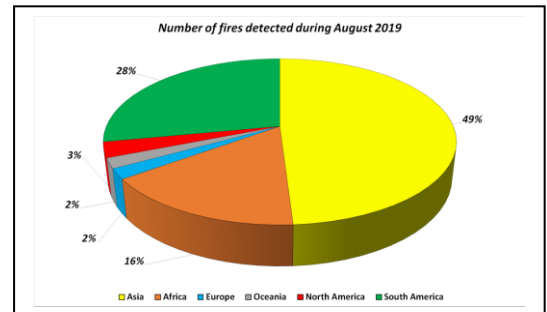
What to study?

For Prelims and mains: Key features, objectives and significance of the programme, wildfires- causes, impact and prevention.

Context: Data from *the Sentinel-3 World Fire Atlas* have been released. Data have been recorded under *the Copernicus Sentinel-3 mission*.

Key findings:

- There were almost **five times as many wildfires in August 2019 compared to August 2018**- 79 000 fires in August this year, compared to just over 16 000 fires detected during the same period last year.
- **49% of fires were detected in Asia**, around 28% were detected in South America, 16% in Africa, and the remaining were recorded in North America, Europe and Oceania.



About Copernicus programme:

1. Copernicus is the most ambitious **Earth observation programme** to date.
2. It will provide accurate, timely and easily accessible information to improve the management of the environment, understand and mitigate the effects of climate change and ensure civil security.
3. Copernicus is **the new name for the Global Monitoring for Environment and Security programme, previously known as GMES**.
4. This initiative is **headed by the European Commission (EC) in partnership with the European Space Agency (ESA)**.
5. **Services provided by Copernicus:** land management, the marine environment, atmosphere, emergency response, security and climate change.
6. **Sentinel:** ESA is developing a new family of satellites, called Sentinels, specifically **for the operational needs of the Copernicus programme**. The Sentinels will provide a unique set of observations, starting with the all-weather, day and night radar images.

Way ahead:

One of the biggest problems during and after fires is obtaining an overall view of the fires evolution and potential damage. With fires seen from space, **Earth observation is also being used to detect and monitor the active spots over affected areas**.

Quantifying and monitoring fires is important for the ongoing study of climate because they have a significant impact on global atmospheric emissions, with biomass burning contributing to the global budgets of greenhouse gases, like carbon dioxide.

Sources: the Hindu.

Topics: Awareness in the fields of IT, Computers, robotics, nano-technology, bio-technology and issues relating to intellectual property rights.

1. Project Soli

What to study?

For Prelims and Mains: Key features and significance of the project.

Context: Recently launched Google Pixel 4 uses **a radar-based Soli chip** to introduce Motion Sense, a feature that provides similar touchless gesture-based controls.

What is Project Soli?

Google announced Project Soli in 2015. Since then, Google's **ATAP (Advanced Technology and Projects)** division has been developing the technology, which can be used in wearables, phones, computers, cars and IoT devices.

What is Google's Soli chip?

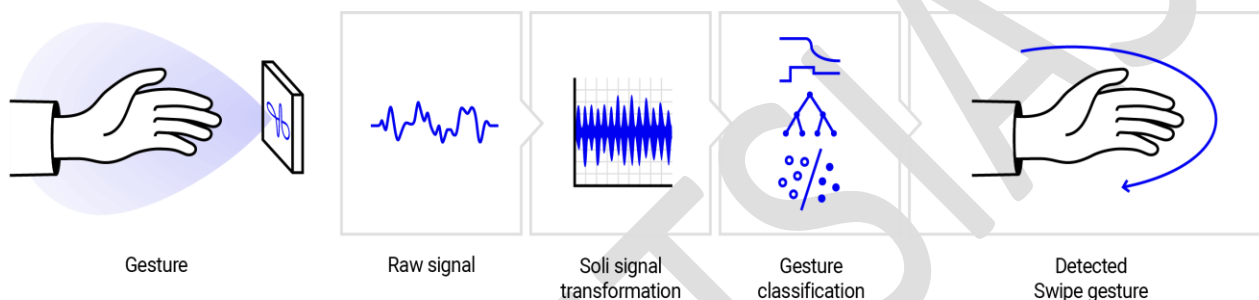
Google's Soli is **a purpose-built chip** to track your motion on a microscopic scale. It **uses miniature radar** for real-time motion tracking of the human hand; it's able to track sub-millimetre motion at high speeds with great accuracy.

Features:

- The Soli chip measures just 8mm x 10mm and it incorporates the sensor and antenna array into a single device, meaning it can be used in even the smallest wearables.
- It has no moving parts, consumes very little energy, isn't affected by light conditions and works through most materials making it a pretty exciting bit of technology.

How does Google's Soli chip work?

The Google Soli chip uses radar, so it works by emitting electromagnetic waves with objects within the beam reflecting information back to the antenna. Information gathered from the reflected signal - things like time delay or frequency changes - give the device information about the interaction.



Why does India not allow the Soli chip?

The Soli radar chip works on the 60 GHz spectrum frequency as it has the least interference for the kind of minute movements Google wants to track. However, the **60 GHz spectrum is not commercially usable in India**. The 60 GHz band is also known as **V-band or WiGig band (Wi-Fi at 60 GHz)** using IEEE 802.11ad protocol.

Sources: the Hindu.

2. DNA Technology Bill

What to study?

For Prelims: DNA Bill- highlights, difference between DNA and RNA.

For Mains: DNA profiling- uses, challenges and concerns.

Context: The **DNA Technology Regulation Bill**, which seeks to control the use of DNA technology for establishing the identity of a person, has been referred to a parliamentary standing committee for examination.

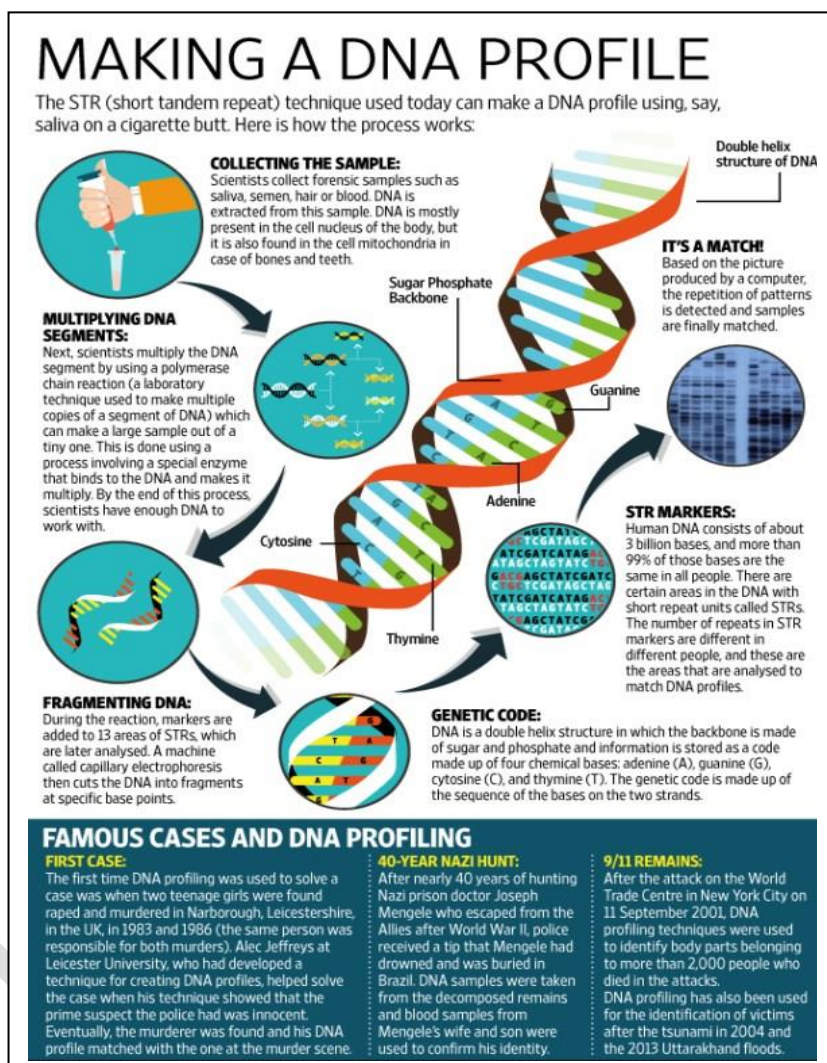
Need for the legislation and its significance:

The utility of DNA based technologies for solving crimes, and to identify missing persons, is well recognized across the world. Therefore, the new bill **aims to expand the application of DNA-based forensic technologies to support and strengthen the justice delivery system of the country.**

Highlights of the Bill:

1. As per the Bill, **national and regional DNA data banks** will be set up for maintaining a national database for identification of victims, suspects in cases, undertrials, missing persons and unidentified human remains.

2. **Punishment:** According to it, those leaking the DNA profile information to people or entities who are not entitled to have it, will be punished with a jail term of up to three years and a fine of up to Rs. 1 lakh. Similar, punishment has also been provided for those who seek the information on DNA profiles illegally.
3. **Usage:** As per the bill, all DNA data, including DNA profiles, DNA samples and records, will only be used for identification of the person and not for “any other purpose”.
4. **The bill’s provisions will enable the cross-matching between persons** who have been reported missing on the one hand and unidentified dead bodies found in various parts of the country on the other, and also for establishing the identity of victims in mass disasters.
5. The Bill establishes a **DNA Regulatory Board** to accredit the DNA laboratories that analyse DNA samples to establish the identity of an individual.



Benefits of the Bill:

1. By providing for the mandatory accreditation and regulation of DNA laboratories, the Bill seeks to ensure that with the proposed expanded use of this technology in the country.
2. There is also the assurance that the DNA test results are reliable and the data remain protected from misuse or abuse in terms of the privacy rights of our citizens.

DNA technology- significance:

1. DNA analysis is an extremely useful and accurate technology in ascertaining the identity of a person from his/her DNA sample, or establishing biological relationships between individuals.
2. A hair sample, or even bloodstains from clothes, from a scene of crime, for example, can be matched with that of a suspect, and it can, in most cases, be conclusively established whether the DNA in the sample belongs to the suspected individual. As a result, DNA technology is being increasingly relied upon in investigations of crime, identification of unidentified bodies, or in determining parentage.
3. It is expected that the expanded use of DNA technology would result not only in speedier justice delivery but also in increased conviction rates, which at present is only around 30% (NCRB Statistics for 2016).

Concerns:

Prone to misuse: Information from DNA samples can reveal not just how a person looks, or what their eye colour or skin colour is, but also more intrusive information like their allergies, or susceptibility to diseases. As a result, there is a greater risk of information from DNA analysis getting misused.

Safety issues: There's also the question of whether the DNA labs accredited by the Regulatory Board are allowed to store copies of the samples they analyse. And if so, how the owners of those samples can ensure the data is safe or needs to be removed from their own indices.

Issues over storage: It's not clear if DNA samples collected to resolve civil disputes will also be stored in the databank (regional or national), although there is no index specific for the same. If they will be stored, then the problem cascades because the Bill also does not provide for information, consent and appeals.

Sources: the Hindu.

3. Quantum Supremacy

What to study?

For Prelims and mains: What is it? Significance.

Context: Google researchers claim to have achieved a major milestone in computer science known as "**quantum supremacy**."

They said their quantum system had executed a calculation in 200 seconds that would have taken a classic computer 10,000 years to complete.

What is quantum supremacy?

It means only that **researchers have been able to use a quantum computer to perform a single calculation that no conventional computer, even the biggest supercomputer, can perform in a reasonable amount of time.**

The case of Google:

1. This calculation involved checking whether the output of an algorithm for generating random numbers was truly random.
2. The researchers were able to use a quantum computer to perform this complex mathematical calculation in three minutes and 20 seconds, according to the paper.
3. They say it would have taken Summit 3—an IBM-built machine that is the world's most powerful commercially-available conventional computer—about 10,000 years to perform the same task.

How do quantum computers work?

Quantum computers work by **harnessing the properties of quantum mechanics.**

Quantum computers **use logical units called quantum bits, or qubits** for short, that can be put into a quantum state where they can simultaneously represent both 0 and 1.

Difference between classical and quantum computers?

1. Classical computers process information in a binary format, called bits, which can represent either a 0 or 1.
2. While the bits in a classical computer all operate independently from one another, in a quantum computer, the status of one qubit effects the status of all the other qubits in the system, so they can all work together to achieve a solution.

How the result is obtained?

But while a conventional computer outputs the same answer to a problem every time you run a calculation, the outputs of a quantum computer are probabilistic. That means it does not always produce the same answer. So to use a quantum computer, you have to run a calculation through the system thousands or even millions of times, and the array of outputs converge around the answer that is most likely to be correct.

Sources: the Hindu.

4. Nanopharmaceuticals.

What to study?

For Prelims: Nanopharmaceuticals- meaning and features.

For Mains: The need for, significance of the technology, challenges involved and the overview of guidelines.

Context: Guidelines Released for Evaluation of **Nanopharmaceuticals** in India.

Guidelines are developed by DBT, ICMR and Central Drugs Standard Control Organization (CDSCO).

Developed *in line with the provisions of Schedule Y of Drugs and Cosmetics Rules, 1945 as well as Second Schedule of the New Drugs and Clinical Trials Rules, 2019* with specific requirements for nanopharmaceuticals.

Need for these guidelines:

Nanocarrier based targeted drug delivery is an emerging field with introduction of **nanopharmaceuticals** in the market. These nanoformulations have higher efficacy, lower toxicity and are safer than the conventional drugs. Therefore, to provide **transparent, consistent and predictable regulatory pathways for nanopharmaceuticals in India** these guidelines were necessary.

Application of these guidelines:

The guidelines apply to the nanopharmaceuticals in the form of **finished formulation as well as Active Pharmaceutical Ingredient (API)** of a new molecule or an already approved molecule with altered nanoscale dimensions, properties or phenomenon associated with the application of nanotechnology intended to be used for treatment, in vivo diagnosis, mitigation, cure or prevention of diseases and disorders in humans.

Significance:

- These guidelines mark one of the most important steps for delineating quality, safety and efficacy assessment of the novel nanoformulations.
- The guidelines will pave the way for significant benefits through such cutting edge technology and contribute to the mission on **"Affordable Health Care for All"**.
- Private investments would also be attracted since **these guidelines would strengthen the regulatory system**.

What are Nanopharmaceuticals?

They are a relatively new class of **therapeutic-containing nanomaterials** that often have unique "nanoproperties" (physiochemical properties) due to their small size (compared with their bulk-phase counterparts) a high surface-to-volume ratio and the possibility of modulating their properties.

- **Nanopharmaceuticals present novel reformulation opportunities for active agents** (e.g., single molecule drugs, proteins, nucleic acids, etc.) that were previously insoluble or could not be targeted to a specific site of the body where they were needed.
- Nanopharmaceuticals can **also increase drug half-life** by reducing immunogenicity and diminishing drug metabolism.
- With these advantages, **nanopharmaceuticals have the ability to extend the economic life of proprietary drugs**, thereby creating additional revenue streams.

Sources: pib.

5. IndiGen Genome project

What to study?

For prelims: What is genome sequencing and how is it done?

For Mains: Significance, need and challenges to the project.

Context: Details of the **IndiGen Genome project, conducted by CSIR**, were recently announced.

The initiative was **implemented by the CSIR-Institute of Genomics and Integrative Biology (IGIB), Delhi and CSIR-Centre for Cellular and Molecular Biology (CCMB), Hyderabad**.

Significance, outcomes and benefits of the project:

The outcomes of the IndiGen will have applications in a number of areas including **predictive and preventive medicine with faster and efficient diagnosis of rare genetic diseases**.

The data will be **important for building the knowhow, baseline data and indigenous capacity in the emerging area of Precision Medicine**.

About Genomics for Public Health in India (IndiGen) programme:

IndiGen programme aims **to undertake whole genome sequencing of thousands of individuals representing diverse ethnic groups from India.**

The objective is to enable genetic epidemiology and develop public health technologies applications using population genome data.

Need for genome sequencing:

1. Ever since the human genome was first sequenced in 2003, it opened a fresh perspective on the **link between disease and the unique genetic make-up of each individual.**
2. Nearly 10,000 diseases — including cystic fibrosis, thalassemia — are known to be the result of a single gene malfunctioning.
3. While genes may render some insensitive to certain drugs, genome sequencing has shown that cancer too can be understood from the viewpoint of genetics, rather than being seen as a disease of certain organs.

Sources: pib.

6. Organoids

What to study?

For Prelims: What are Organoids? Features.

For Mains: Applications and ethical concerns.

Context: We've heard a lot in the last few years about **organoids**, the so-called "brains in a dish" created in labs by neuroscientists.

However, **experts have expressed concerns over** growing mini-brains or organoids in the laboratory that can perceive or feel things.

Why worry about this?

In some cases, scientists have already transplanted such lab-grown brain organoid to adult animals.

- The transplanted organoid had integrated with the animal brain, grown new neuronal connections and responded to light.
- Similarly, lung organoid transplanted into mice was able to form branching airways and early alveolar structures.

These are seen as **a step towards potential "humanisation" of host animals.**

What is an organoid?

Organoids are **a group of cells grown in laboratories into three-dimensional, miniature structures that mimic the cell arrangement of a fully-grown organ.**

- They are **tiny (typically the size of a pea) organ-like structures that do not achieve all the functional maturity of human organs but often resemble the early stages of a developing tissue.**
- Most organoids **contain only a subset of all the cells seen in a real organ, but lack blood vessels to make them fully functional.**

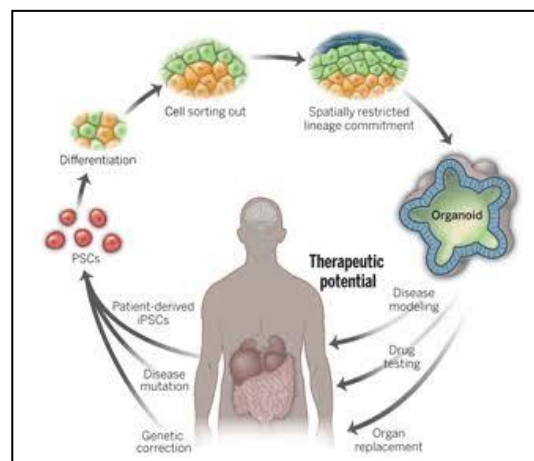
How are organoids grown in the laboratory?

Grown in the lab **using stem cells** that can become any of the specialised cells seen in the human body, or stem cells taken from the organ or adults cells that have been induced to behave like stem cells, scientifically called **induced pluripotent stem cells (iPSC).**

Organoids of the brain, small intestine, kidney, heart, stomach, eyes, liver, pancreas, prostate, salivary glands, and inner ear to name a few have already been developed in the laboratory.

How have organoids helped in our understanding of diseases?

1. Organoids offer new opportunities to studying **proteins and genes that are critical for the development of an organ**. This helps in knowing how a mutation in a specific gene causes a disease or disorder.
2. For example, Researchers have used **brain organoids to study how the Zika virus affects brain development in the embryo**.
3. Since the organoids **closely resemble mature tissues, it opens up new vistas**. These include **studying the complex arrangements of cells in three-dimension and their function in detail, and understanding how cells assemble into organs**.
4. Organoids can be used to study **the safety and efficacy of new drugs and also test the response of tissues to existing medicines**.
5. Organoids will bring **precision medicine closer to reality** by developing patient-specific treatment strategies by studying which drugs the patient is most sensitive to.



What are the ethical challenges of growing organoids?

Scientists argue that organoids do not have sensory inputs and sensory connections from the brain are limited. Isolated regions of the brain cannot communicate with other brain regions or generate motor signals. Thus, the possibility of consciousness or other higher-order perceptive properties [such as the ability to feel distress] emerging seems extremely remote.

Sources: the Hindu.

7. Block Chain Technology

What to study?

For Prelims and Mains: Blockchain technology- what is it? How it operates? Concerns and potential.

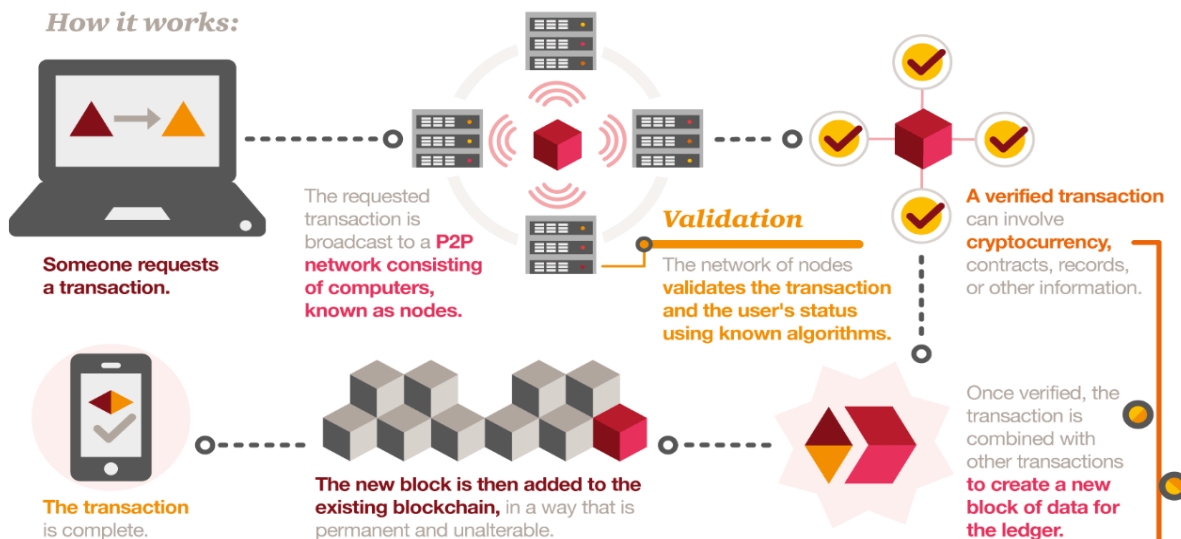
Context: The Tea Board of India is keen to harness latest technologies such as **blockchain** to help end-consumers track the supply chain of tea of Indian origin, by digitising Indian tea marketing channels.

A look at **blockchain technology**

What is it?

The **blockchain** is a decentralized ledger of all transactions across a peer-to-peer network. Using this technology, participants can confirm transactions without the need for a central certifying authority. Potential applications include fund transfers, settling trades, voting, and many other uses.

How it works:



What are Blockchains?

They are **a new data structure that is secure, cryptography-based, and distributed across a network.** The technology supports **cryptocurrencies such as Bitcoin, and the transfer of any data or digital asset.** Spearheaded by Bitcoin, blockchains **achieve consensus among distributed nodes, allowing the transfer of digital goods without the need for centralized authorisation of transactions.**

How it operates?

1. The technology allows transactions to be simultaneously anonymous and secure, peer-to-peer, instant and frictionless.
2. It does this by distributing trust from powerful intermediaries to a large global network, which through mass collaboration, clever code and cryptography, enables a tamper-proof public ledger of every transaction that's ever happened on the network.
3. A block is the "current" part of a blockchain which records some or all of the recent transactions, and once completed, goes into the blockchain as permanent database.
4. Each time a block gets completed, a new block is generated. Blocks are linked to each other (like a chain) in proper linear, chronological order with every block containing a hash of the previous block.

Benefits of blockchain technology:

1. As a public ledger system, blockchain records and validate each and every transaction made, which makes it secure and reliable.
2. All the transactions made are authorized by miners, which makes the transactions immutable and prevent it from the threat of hacking.
3. Blockchain technology discards the need of any third-party or central authority for peer-to-peer transactions.
4. It allows decentralization of the technology.

Uses and possibilities of blockchain are:

1. Confidential communication of cryptocurrency.
2. Safe, cost effective and fast bank transactions.

3. Secure legal documents, health data, notaries and personal documents.
4. Distribution of land records and government financial assistance.
5. Cloudstorage, digital identification, smart communication and digital voting.

Regulation in India:

The current debate in India has, unfortunately, focused too heavily on trading and speculation, looking at cryptocurrencies as an investment tool, rather than understanding **the potential of core blockchain technology and the basic role of cryptocurrencies as an incentive mechanism to secure decentralized transactions.**

- Prevailing cyber laws in India touch almost all aspects of transactions and activities involving **the internet, www and cyber space (IT Act 2000 and amended in 2008, section 463 of IPC, and section 420).** But in today's techno-savvy environment the world is becoming more and more digitally sophisticated and so are the crimes. India's cyber laws are lacking in this respect.
- There are sufficient global examples of countries that have taken cautious steps in regulating the technology, and are focusing on stopping illegal activity without hurting innovation.

Sources: the Hindu.

8. Dirac Metals

What to study?

For Prelims and mains: Dirac and semi- Dirac metals- features, applications and the recent breakthrough.

Context: Researchers from IIT Bombay have discovered special properties in a class of materials called "semi-Dirac metals" - **such materials would be transparent to light of a given frequency and polarisation when it is incident along a particular direction.** The material would be opaque to the same light when it falls on it from a different direction.

What are Dirac metals?

The **quality of conduction** in normal metals like gold and silver depends on **the way energy depends on the momentum of electrons.**

Dirac metals differ from normal metals in that **the energy depends linearly on the momentum.** This difference is responsible for their unique properties.

Semi-Dirac metals behave like Dirac metals in one direction and like normal metals in the perpendicular directions.

What is Unique about semi- Dirac metal?

1. Within any material, charge carriers, such as electrons, acquire an effective mass which is different from their bare mass depending on the nature of the material.
2. The effective mass and the number of states available for the electron to occupy when it is excited by an electric field, determine the conductivity and other such properties.
3. This is also true of a semi-Dirac metal. In particular, **the effective mass becomes zero for conduction along a special direction.**

Examples of semi-Dirac metals are systems such as TiO₂/V₂O₃ nanostructures. There are many known applications for transparent conducting films – the common example being touch screens used in mobiles.

Significance of the recent breakthrough:

The **energy-momentum dispersion relation** can be linear, leading to large velocities and vanishingly small effective masses. The velocities can be over a 100 times more than normal metals, thus increasing the mobility and currents that can be carried across devices made of these so-called Dirac materials.

In the semi-Dirac metals, these properties are direction dependent. **The direction-dependence of the microscopical properties gives the material special optical properties.**

Sources: the Hindu.

9. Edge Computing

What to study?

For Prelims and mains: Meaning, features, significance and concerns.

Context: According to a research, By 2025, companies will generate and process more than 75% of their data outside of traditional centralised data centres — that is, **at the “edge” of the cloud**.

As the use of **Internet of Things (IoT)** devices expands and the need to process IoT data quickly increases, many IT leaders are considering or beginning to employ **edge computing** options.

What is edge computing?

Edge computing **enables data to be analysed, processed, and transferred at the edge of a network**. Meaning, **the data is analysed locally**, closer to where it is stored, in real-time without latency, rather than send it far away to a centralised data centre.

It **allows for quicker data processing and content delivery**.

How is edge computing different from cloud computing?

The basic difference between edge computing and cloud computing lies **in where the data processing takes place**.

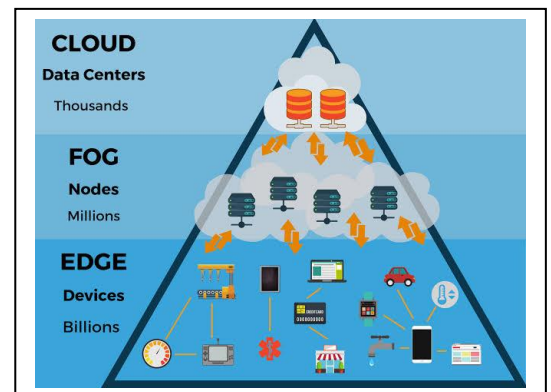
Internet of Things (IoT) systems perform all of their computations **in the cloud using data centres**.

In **Edge computing**, massive amounts of data generated by IoT devices are stored and processed locally. **That data doesn't need to be sent over a network as soon as it processed; only important data is sent** — therefore, an edge computing network reduces the amount of data that travels over the network.

Challenges:

According to experts, **edge computing introduces several new security risks**.

1. One of the most prominent concerns is **the physical security of the devices**, which are more vulnerable to malicious attacks and mishaps of all kinds than typical office equipment and technology safely held within corporate walls.
2. **Micro data centers**, such as those being deployed by telecommunication companies -- in some cases, at the base of cell towers -- introduce a level of physical vulnerability that didn't exist with corporate data centers and large cloud providers.
3. Meanwhile, **many organizations will be challenged to understand, track and monitor what data they have and where, what protections are required at the various points based on the data and vulnerabilities specific to each endpoint and how to govern what could soon be a sprawling infrastructure at many companies**.



Benefits:

Edge computing may **offer some protection against a catastrophic attack where a single incident can compromise large amounts of a company's data**.

In some ways, **it's more resilient, because instead of one or two or even three data centers**, you have distributed data and compute on the edge, which makes it much more resilient to malicious and nonmalicious events.

Way ahead:

Experts believe the true potential of edge computing will become apparent when 5G networks go mainstream in a year from now. Users will be able to enjoy consistent connectivity without even realising it.

Sources: Indian Express.

Topics: Conservation related issues, environmental pollution and degradation, environmental impact assessment.

1. Ban on single-use plastic

What to study?

For Prelims: What are single use plastics?

For Mains: Why ban them? Concerns, need for alternatives.

Context: The government has launched massive campaigns against single-use, or disposable, plastic products, as part of the year-long celebrations to mark 150th birth anniversary of Mahatma Gandhi.

What are Single-use plastics?

They are **disposable plastics meant for use-and-throw**.

These comprise polythene bags, plastic drinking bottles, plastic bottle caps, food wrappers, plastic sachets, plastic wrappers, straws, stirrers and Styrofoam cups or plates.

Are these measures sufficient?

1. Banning its usage while is a welcome move to save the environment, it is only one side of the story.
2. Along with any move to impose a ban, **there should also be equal emphasis on recycling and waste management**.
3. There is a need for a very **comprehensive waste collection, segregation and waste management eco-system** to be in place, which could take multi- billion dollar investment.
4. While there is increased awareness in urban areas, the challenge will be **to find a suitable cost effective alternatives in tier II and tier III towns and remote locations**.

Why these measures are necessary?

25,940 tonnes of plastic waste is generated every day in the country, with 40 per cent plastic waste being uncollected and 60 million tonnes of solid waste generated in one year.

According to **World Wildlife Fund (WWF)**, plastic is harmful to the environment as it is non-biodegradable, takes years to disintegrate.

1. Single-use plastics slowly and gradually break down into smaller pieces of plastic known as microplastics.
2. It can take thousands of years for plastic bags to decompose, thus contaminating our soil and water in the process.
3. The noxious chemicals used to produce plastic gets transmitted to animal tissue, and finally, enter the human food chain.

Government measures in place:

Extended Producer Responsibility (EPR) scheme was introduced in the Plastic Waste Management (PWM) Rules, 2011, and was largely redefined in PWM 2016, wherein producers, importers and brand owners were asked to take primary responsibility for collection of used multi-layered plastic sachets or pouches or packaging.

Challenges ahead for India:

The government has **not put in place a clear roadmap** with timelines to meet the 2022 deadline for eliminating single-use plastics.

The **guidelines do not specify that states and union territories must phase-out single-use plastics by 2022**.

Without a clear roadmap, that target date of 2022 is now more aspirational in nature.

Swachhata Hi Seva India Plog Run- To propagate the idea of shunning plastics, the **Fit India Plog Run** has been launched.

Plogging involves **picking up litter while jogging**.

Sources: pib.

2. Indian Forest Act Amendment

What to study?

For Prelims: Key features of the Indian Forest Act and amendments.

For Mains: Need for review and the expected outcomes.

Context: The Mizoram government has rejected the Centre's proposed amendment to **Indian Forests Act, 1927**, on the ground that it violates the special provisions guaranteed to the state under **Article 371G of the Constitution**.

Background:

Article 371(G) of the Constitution states that the Parliament cannot decide on the matters of the religious and social practices of the Mizos, civil and criminal law of the land, land ownership transfer, and customary law procedure without the consent of the Assembly.

What's the issue?

Mizoram argues that it does not come under the purview of the Indian Forests Act of 1927.

The **Mizoram Forest Act of 1955** governs the state's forests in line with customary laws.

Highlights of the draft amendments:

- The amendment defines **community** as "a group of persons specified on the basis of government records living in a specific locality and in joint possession and enjoyment of common property resources, without regard to race, religion, caste, language and culture".
- **Forest is defined to include** "any government or private or institutional land recorded or notified as forest/forest land in any government record and the lands managed by government/community as forest and mangroves, and also any land which the central or state government may by notification declare to be forest for the purpose of this Act."
- While the preamble of IFA, 1927, said the Act was focused on laws related to transport of forest produce and the tax on it, the amendment has **increased the focus to "conservation, enrichment and sustainable management of forest resources and matters connected therewith** to safeguard ecological stability to ensure provision of ecosystem services in perpetuity and to address the concerns related to climate change and international commitments".
- **Increased role of states:** The amendments say if the state government, after consultation with the central government, feels that the rights under FRA will hamper conservation efforts, then the state "may commute such rights by paying such persons a sum of money in lieu thereof, or grant of land, or in such other manner as it thinks fit, to maintain the social organisation of the forest dwelling communities or alternatively set out some other forest tract of sufficient extent, and in a locality reasonably convenient, for the purpose of such forest dwellers".
- The amendment also introduces **a new category of forests — production forest**. These will be forests with specific objectives for production of timber, pulp, pulpwood, firewood, non-timber forest produce, medicinal plants or any forest species to increase production in the country for a specified period.

Concerns with regard to the proposed amendments:

- The Bill reinforces the idea of bureaucratic control of forests, providing immunity for actions such as use of firearms by personnel to prevent an offence.
- The hard-line policing approach is reflected in the emphasis on creating infrastructure to detain and transport the accused.
- To penalise entire communities through denial of access to forests for offences by individuals. Such provisions invariably affect poor inhabitants, and run counter to the empowering and egalitarian goals that produced the Forest Rights Act.
- For decades now, the Forest Department has resisted independent scientific evaluation of forest health and biodiversity conservation outcomes. In parallel, environmental policy has weakened public scrutiny of decisions on diversion of forests for destructive activities such as mining and large dam construction.
- Impact assessment reports have mostly been reduced to a farce, and the public hearings process has been

- The exclusion of 'village forestry' from the preview of Forest Right Act (forest official supersedes Gram Sabha) is legally contradictory and would add confusion on the ground.
- The draft mentions that the state governments could take away the rights of the forest dwellers if the government feels it is not in line with "conservation of the proposed reserved forest" by payment to the people impacted or by the grant of land.

Sources: the Hindu.

3. Multidisciplinary Drifting Observatory for the Study of Arctic Climate (MOSAiC) Expedition

What to study?

For Prelims: MOSAiC- objectives and composition.

For Mains: Significance of the mission, How climate change is affecting Arctic region? Concerns and measures needed.

Context: India's Vishnu Nandan will be the only Indian aboard **the multidisciplinary drifting observatory for the Study of Arctic Climate (MOSAiC) expedition.**

He will be aboard the German research vessel **Polarstern**, anchored on a large sheet of sea ice in the Central Arctic, drifting along with it during the pitch-black Polar winter.

About MOSAiC:

Spearheaded by **the Alfred Wegener Institute in Germany.**

It is the **largest ever Arctic expedition in history.**

It will be **the first to conduct a study of this scale at the North Pole for an entire year.**

The aim of the expedition will be **to parameterise the atmospheric, geophysical, oceanographic and all other possible variables in the Arctic, and use it to more accurately forecast the changes in our weather systems.**

The international expedition will involve more than 60 institutions from 19 countries.

Significance:

- MOSAiC will contribute to a quantum leap in our understanding of the coupled Arctic climate system and its representation in global climate models.
- The focus of MOSAiC lies on direct in-situ observations of the climate processes that couple the atmosphere, ocean, sea ice, biogeochemistry, and ecosystem.

Why study and understand about changes in the Arctic?

- The Arctic is the key area of global climate change, with warming rates exceeding twice the global average and warming during winter even larger.
- It is well possible that the Arctic ocean will become ice free in summer during the 21st century.
- This dramatic change strongly affects weather and climate on the whole northern hemisphere and fuels rapid economic development in the Arctic.

Sources: the Hindu.

4. Green Crackers

What to study?

For Prelims: What are green crackers? How are they different from traditional ones? How do crackers get different colours?

For Mains: Need for green crackers, observations made by the Supreme Court, what lies ahead?

Context: **Indian Council of Scientific and Industrial Research (CSIR)** has developed green crackers, which are new and improved formulations of the previous sound-emitting crackers and other fireworks.

What are green crackers?

They are less harmful and less dangerous than the conventional ones. They are the crackers with reduced emission and decibel level. They **are known as 'green' firecrackers because they have a chemical formulation that produces water molecules**, which substantially reduces emission levels and absorbs dust.

- It promises a reduction in particulate matters and harmful gases, like nitrous oxide and sulfur oxide, by 30- 35 per cent.
- The green crackers will be 25-30 per cent cheaper to manufacture and manufacturers would not have to make any changes in their facilities.

Need:

- With concern over pollution in major cities growing, there was a demand for a ban on firecrackers.
- Legal battles to this end have been going on for about a decade now, though the movement has intensified in the last couple years.
- A petition was filed in the Supreme Court on behalf of three infants in 2015 by their fathers asking for a complete ban.
- With air pollution level going up 29 times above the World Health Organisation standards in November 2016, the Court suspended the sale of fireworks in the NCR, affecting 50 per cent of the total crackers sold in the country.
- The Court also asked the Central Pollution Control Board (CPCB) and some others to conduct a study on the impact of bursting fireworks during Dussehra and Diwali on the health of the people.

Background:

In its report the CPCB said that due to fireworks on Diwali day, particulate matter 2.5 (tiny particles or droplets in the air that are two and one half microns or less in width, and hinder visibility and adversely affect health) levels go up. It stated when there was less fireworks in 2017, the level had reduced compared to previous years.

What gives colour to the firecrackers?

Red: Strontium salts (Nitrates, carbonates and sulphates of strontium).

Orange: Calcium salts (Carbonates, chlorides and sulphates of calcium).

Yellow: Sodium salts (Nitrates and oxalates of sodium).

Green: Barium salts (Nitrates, carbonates, chlorides and chlorates of barium).

Blue: Copper salts (Carbonates and oxides of copper).

Purple: A combination of copper and strontium compounds.

White: The burning of metals like magnesium, aluminium and titanium).

Sources: pib.

5. Stubble Burning

What to study?

For Prelims and Mains: Crop burning- why, concerns, effects on environment and health, their regulation and the need for a comprehensive policy on this.

Context: The **Union Ministry of Earth Sciences (MoES)** has launched **an advanced Air Quality Early Warning System**, which can predict places neighbouring Delhi that are likely to burn crop residue on a given day.

Key facts:

- The system has been developed by Indian Institute of Tropical Meteorology, Pune, under MoES.
- It uses data of stubble burning incidents from the past 15 years to predict the date and place of the next burning, and help authorities to act in advance.
- Using the data, the Centre for Development of Advanced Computing (C-DAC), under the aegis of the Central Pollution Control Board, creates probability maps to alert government agencies about areas where the chances of stubble burning is going to be high.
- The system can also track pollution load from stubble burning in places neighbouring the national capital, using satellite data. It can predict the air pollution level for next 72 hours. It can also forecast

the level of pollutants like particulate matter (PM) 2.5, PM10, and dust, coming from sources other than stubble burning.

- This will help authorities to take preventive steps to control pollution levels as well as mitigate pollution from existing sources.

Background:

Every year between October and November, air quality deteriorates in Delhi and its neighbouring states, as farmers burn the residue after harvesting paddy to clear the fields and make way for the sowing of wheat, despite there being a ban on burning agricultural residue. Smoke from Punjab and Haryana travels to Delhi leading to a spike in pollution levels.

What is stubble burning?

Stubble burning is a common practice followed by farmers to prepare fields for sowing of wheat in November as there is little time left between the harvesting of paddy and sowing of wheat.

Impact: Stubble burning results in emission of harmful gases such carbon dioxide, sulphur dioxide, nitrogen dioxide along with particulate matter.

Why farmers opt for stubble burning?

1. They do **not have alternatives** for utilising them effectively.
2. The farmers are **ill-equipped to deal with waste** because they cannot afford the new technology that is available to handle the waste material.
3. With less income due to crop damage, farmers are likely to be inclined to light up their fields **to cut costs and not spend on scientific ways of stubble management.**

Advantages of stubble burning:

1. It quickly clears the field and is the cheapest alternative.
2. Kills weeds, including those resistant to herbicide.
3. Kills slugs and other pests.
4. Can reduce nitrogen tie-up.

Alternative solutions that can avoid Stubble Burning:

1. Promote **paddy straw-based power plants**. It will also create employment opportunities.
2. **Incorporation of crop residues in the soil** can improve soil moisture and help activate the growth of soil microorganisms for better plant growth.
3. Convert the removed residues into enriched organic manure through **composting**.
4. New opportunities for **industrial use** such as extraction of yeast protein can be explored through scientific research.

Need of the hour:

Unless Financial assistance is to be provided by the Centre for boosting farm mechanisation, it is difficult to completely stop stubble burning.

States needs to make alternative arrangements for consumption of paddy straw into the soil as per the directions of the NGT.

What needs to be done- Supreme Court's observations?

Incentives could be provided **to those who are not burning the stubble** and disincentives for those who continue the practice.

The existing **Minimum Support Price (MSP) Scheme** must be so interpreted as to enable the States concerned to wholly or partly deny the benefit of MSP to those who continue to burn the crop residue.

The Central government should **convene a meeting with the States.**

Sources: the Hindu.

6. Fly Ash

What to study?

For prelims: What is fly ash, how is it produced and where it can be used?

For mains: Concerns associated with its contamination, what needs to be done and legislative measures necessary.

Context: Supreme Court seeks response from the Centre and others on a plea seeking **directions to restrain thermal power plants in Singrauli, Madhya Pradesh, and Sonebhadra, Uttar Pradesh, from disposing fly ash, toxic residue and industrial waste in the Rihand reservoir and other water bodies.**

What's the issue?

A petition was filed in the court after more than 35 lakh metric tons of fly ash entered into the Govind Vallabh Pant Sagar '**Rihand Reservoir**' from NTPC station in Singrauli.

The reservoir is **the only source of drinking water for the people of Singrauli and Sonebhadra districts, and the entire water has been contaminated, making it unfit for consumption.**

The damage has been caused to the environment **in various contexts** viz ground water damage, damage of standing crops and the agricultural land have become infertile.

What is Fly Ash?

Popularly known as **Flue ash** or **pulverised fuel ash**, it is **a coal combustion product.**

Composition:

Composed of the particulates that are driven out of coal-fired boilers together with the **flue gases.**

Depending upon the source and composition of the coal being burned, **the components of fly ash vary considerably**, but all fly ash includes substantial amounts of **silicon dioxide (SiO₂), aluminium oxide (Al₂O₃) and calcium oxide (CaO)**, the main mineral compounds in coal-bearing rock strata.

Minor constituents include: arsenic, beryllium, boron, cadmium, chromium, hexavalent chromium, cobalt, lead, manganese, mercury, molybdenum, selenium, strontium, thallium, and vanadium, along with very small concentrations of dioxins and PAH compounds. It also has **unburnt carbon.**

How is it regulated?

In the past, fly ash was generally released into the atmosphere, but air pollution control standards now require that it be captured prior to release by fitting pollution control equipment.

- For example, in **the United States**, fly ash is generally stored at coal power plants or placed in landfills. About 43% is recycled, often used as a **pozzolan** to produce **hydraulic cement or hydraulic plaster** and a replacement or partial replacement for **Portland cement** in concrete production.
- In **modern coal-fired power plants**, fly ash is generally captured by **electrostatic precipitators or other particle filtration equipment** before the flue gases reach the chimneys.

Health and environmental hazards:

Toxic heavy metals present: All the heavy metals found in fly ash nickel, cadmium, arsenic, chromium, lead, etc—are toxic in nature. They are minute, poisonous particles accumulate in the respiratory tract, and cause gradual poisoning .

Radiation: For an equal amount of electricity generated, fly ash contains a hundred times more radiation than nuclear waste secured via dry cask or water storage.

Water pollution: The breaching of ash dykes and consequent ash spills occur frequently in India, polluting a large number of water bodies.

Effects on environment: The destruction of mangroves, drastic reduction in crop yields, and the pollution of groundwater in the Rann of Kutch from the ash sludge of adjoining Coal power plants has been well documented.

However, fly ash can be used in the following ways:

1. Concrete production, as a substitute material for Portland cement, sand.
2. Fly-ash pellets which can replace normal aggregate in concrete mixture.

3. Embankments and other structural fills.
4. Cement clinker production - (as a substitute material for clay).
5. Stabilization of soft soils.
6. Road subbase construction.
7. As aggregate substitute material (e.g. for brick production).
8. Agricultural uses: soil amendment, fertilizer, cattle feeders, soil stabilization in stock feed yards, and agricultural stakes.
9. Loose application on rivers to melt ice.
10. Loose application on roads and parking lots for ice control.

The issues which impede its full-scale utilization in India:

Indian fly ash is primarily of the calcareous or class C variety, implying that it possesses not only pozzolanic, but also hydraulic (self-cementing) properties. In contrast, European fly ash is of a silicious or class F variety, implying an absence of hydraulic properties.

The pricing of fly ash is increasingly becoming a contentious issue that is hampering its gainful utilisation. **Imperfections typical of quasi-markets**, such as information asymmetry and high transaction costs, vested interests, technical and technological limitations, and the lack of regulatory oversight and political will, have impeded the flow of fly ash to its most value-adding use.

Sources: the Hindu.

7. Graded Response Action Plan (GRAP)

What to study?

For Prelims and mains: GRAP- features, need for and significance.

Context: Soon, some stricter measures to fight air pollution will come into force in Delhi's neighbourhood, as part of **the Graded Response Action Plan (GRAP)**.

As per the plan:

Measures **aimed at stopping the use of diesel generator sets will extend beyond Delhi to the NCR, where many areas see regular power cuts.**

Measures will be **incremental**. As pollution rises, and it is expected to as winter approaches, more measures will come into play depending on the air quality.

What is GRAP?

Approved by the Supreme Court in 2016.

It works only as **an emergency measure**.

As such, **the plan does not include action by various state governments to be taken throughout the year** to tackle industrial, vehicular and combustion emissions.

When the air quality shifts from poor to very poor, the measures listed have to be followed since **the plan is incremental in nature**.

Has it been helpful?

1. Yes. It has created a step-by-step plan for the entire Delhi-NCR region and getting on board several agencies including pollution control boards, industrial area authorities, municipal corporations, regional officials of the India Meteorological Department, and others.
2. It has been successful in fixing accountability and deadlines. For each action to be taken under a particular air quality category, executing agencies are clearly marked.
3. Coordination among as many as 13 agencies from four states is simplified to a degree because of the clear demarcation of responsibilities.
4. Three major policy decisions that can be credited to EPCA and GRAP are the closure of the thermal power plant at Badarpur, bringing BS-VI fuel to Delhi before the deadline set initially, and the ban on Pet coke as a fuel in Delhi NCR.

Overview of the plan:

1. The plan requires action and coordination among 13 different agencies in Delhi, Uttar Pradesh, Haryana and Rajasthan (NCR areas).
2. At the head of the table is the EPCA, mandated by the Supreme Court.
3. Before the imposition of any measures, EPCA holds a meeting with representatives from all NCR states, and a call is taken on which actions has to be made applicable in which town.

Measures announced:

Severe+ or Emergency- (PM 2.5 over 300 µg/cubic metre or PM10 over 500 µg/cu. m. for 48+ hours):

1. Stop entry of trucks into Delhi (except essential commodities).
2. Stop construction work.
3. Introduce odd/even scheme for private vehicles and minimise exemptions.
4. Task Force to decide any additional steps including shutting of schools.

Severe- (PM 2.5 over 250 µg/cu. m. or PM10 over 430 µg/cu. m.):

1. Close brick kilns, hot mix plants, stone crushers.
2. Maximise power generation from natural gas to reduce generation from coal.
3. Encourage public transport, with differential rates.
4. More frequent mechanised cleaning of road and sprinkling of water.

Very Poor- (PM2.5 121-250 µg/cu. m. or PM10 351-430 µg/cu. m.):

1. Stop use of diesel generator sets.
2. Enhance parking fee by 3-4 times.
3. Increase bus and Metro services.
4. Apartment owners to discourage burning fires in winter by providing electric heaters during winter.
5. Advisories to people with respiratory and cardiac conditions to restrict outdoor movement.

Moderate to poor- (PM2.5 61-120 µg/cu. m. or PM10 101-350 µg/cu. m.):

1. Heavy fines for garbage burning.
2. Close/enforce pollution control regulations in brick kilns and industries.
3. Mechanised sweeping on roads with heavy traffic and water sprinkling.
4. Strictly enforce ban on firecrackers.

Way ahead:

One criticism of the EPCA as well as GRAP has been the focus on Delhi. While other states have managed to delay several measures, citing lack of resources, Delhi has always been the first one to have stringent measures enforced.

For GRAP as well as EPCA, the next challenge is to extend the measures to other states effectively.

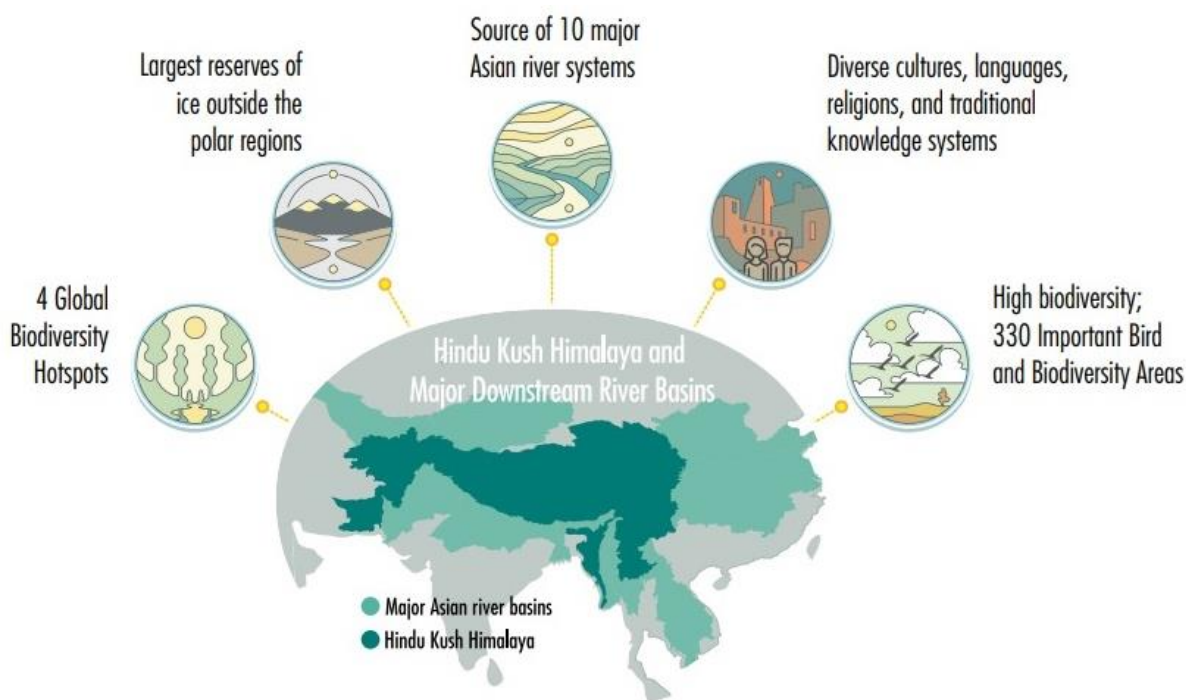
Sources: Indian Express.

8. Hindu Kush- Himalayan Region and the Climate Change

What to study?

For Prelims and Mains: All about third pole, its location, significance and climate change issues associated.

Context: To better gauge the impact of climate change on **the Hindu Kush mountains**, which includes the Himalayas, and spruce up data-gathering, the India Meteorological Department (IMD) will collaborate with meteorological agencies in China and Pakistan, among others, to provide climate forecast services to countries in the region.



240 million

people depend directly on the HKH for their lives and livelihoods

1.9 billion

people depend on the HKH for water, food, and energy

> 35%

of the world population benefits indirectly from HKH resources and ecosystem services

About Hindu Kush-Himalayan region:

The Hindu Kush-Himalayan region spans an area of more than 4.3 million square kilometres in Afghanistan, Bangladesh, Bhutan, China, India, Myanmar, Nepal, and Pakistan.

The region stores more snow and ice than anywhere else in the world outside the polar regions, giving its name: **'The Third Pole'**.

It contains the world's highest mountains, including all 14 peaks above 8,000 metres, is the source of 10 major rivers, and forms a formidable global ecological buffer.

Significance:

- The Third Pole region has enormous socioeconomic and cultural diversity; it is home to many different ethnic communities speaking more than 600 languages and many more dialects.
- It is endowed with rich natural resources and contains all or part of four global biodiversity hotspots.
- The mountain resources provide a wide range of ecosystem services and the basis for the livelihoods to the 210 million people living in the region, as well as indirectly to the 1.3 billion people — one fifth of the world's population — living in the downstream river basins.
- More than 3 billion people benefit from the food and energy produced in these river basins that have their origin in the mountains.

The Third Pole and Climate Change:

- Climate change has become a major concern in the Third Pole.
- Mountain systems are particularly sensitive to climate change and the Third Pole region is home to some of the people most vulnerable to these changes in the world.
- Changes in the river systems and their basins have impacted directly on the wellbeing of millions of people.
- The rate of warming in the Third Pole region is significantly higher than the global average, and the rate is higher at higher altitude, suggesting a greater vulnerability of the cryosphere environment to climate change. This trend is expected to continue.

- Climate change projections suggest that all areas of South Asia are likely to warm by at least 1°C by the end of the century, while in some areas the warming could be as high as 3.5-4°C.
- The life and livelihoods of the people in the Third Pole region is challenged due to climate change, and the stability and prosperity of the region affected by the Third Pole is at risk, which will have implications for all of Asia and for the world.

The threats and challenges faced by the biodiversity in the Hindu Kush region are:

1. Biodiversity is in steep decline driven by human development, pollution, overexploitation of resources and climate change.
2. With the growing impacts of climate change, along with new infrastructure development, trade routes and hydropower dams planned for the fragile region, the effects on the biodiversity is set to worsen further.
3. Along with species loss this will mean the loss of the key environmental services the region provides – such as water and carbon storage – to the rest of Asia.
4. As temperatures rise with climate change, large areas of grasslands, alpine meadows, wetlands and permafrost will disappear on the Tibetan plateau by 2050.
5. Human impact has led to a loss of wildlife populations, plant productivity, changes in growing seasons and plants and entire ecosystems shifting to higher altitudes.
6. Hydropower is a big threat, with over 550 large projects in existence or under construction.
7. New trade routes under China's Belt and Road initiative – such as new rail and roads cutting through fragile landscapes – will bring new opportunities to remote regions, but could facilitate greater resource extraction and illegal wildlife trade.
8. About 40% of the HKH region is designated as protected areas, but actual implementation of conservation measures is patchy.
9. Many of these areas are remote and authorities have little control over border regions sometimes plagued with ongoing conflict. Example: Indo-Burma hotspot.

Facts for Prelims:

The Third Pole Environment (TPE): TPE, an international research program, was launched in 2009 and focuses on the Tibetan Plateau and surrounding mountain ranges.

Sources: the hindu.

9. 'Green wall' of India

What to study?

For Prelims: The proposed green wall, About The Great Green Wall of Africa.

For Mains: Need for, significance and challenges therein.

Context: The Centre is mulling an ambitious plan to create a **green wall** on North- Western part of India.

About the proposed wall:

1. It will be a **1,400km long and 5km wide green belt from Gujarat to the Delhi-Haryana border**, on the lines of the “**Great Green Wall**” running through the width of Africa, from Dakar (Senegal) to Djibouti, to combat climate change and desertification. If approved, this may turn out to be a **legacy programme in India’s efforts to deal with land degradation and the eastward march of the Thar desert.**
2. India seeks replicate the idea as a national priority under its goal **to restore 26 million hectares of degraded land by 2030.**
3. The green belt may not be contiguous, but would roughly cover the entire degraded Aravali range through a massive afforestation exercise.



The need for and significance of the wall:

1. A legacy programme like converting such a huge tract of land as a green belt in high-intensive land-degraded states will be great boost towards meeting India’s target.
2. The idea of forming a green belt from Porbandar to Panipat will **not only help in restoring degraded land through afforestation along the Aravali hill range that spans across Gujarat, Rajasthan, Haryana and Delhi, but also act as a barrier for dust coming from the deserts in western India and Pakistan.**
3. **The Aravalli range**, which separates western India’s Thar desert from the relatively green plains to its east, has lost so much green cover that it is losing its ability to act as a natural barrier against the heat and dust that blows in from the west. **The greener it remains, say ecologists, the less likely that the desert will expand into the rest of the Indian landmass.**

Background:

India has, at present, 96.4 mha of degraded land which is 29.3% of the country’s total geographical area (328.7 mha).

The desertification and land degradation atlas of India, brought out by **the ISRO** in 2016, revealed that Gujarat, Rajasthan and Delhi were among states/UT where more than 50% of the total area was degraded land and those under the threat of desertification.

Sources: the Hindu.

10. C40 Clean Air Cities Declaration

What to study?

For Prelims: About the declaration, its features and significance.

For Mains: Why cooperation at global level is necessary? Challenges and ways to address them.

Context: ‘**Clean Air Cities Declaration**’ was unveiled at the **C40 World Mayors Summit in Copenhagen, an event that occurs once every three years and is designed to implement “substantive clean air policies by 2025”.**

About C40 Clean Air Cities Declaration:

Through this Declaration, mayors commit to **using their power and influence to reduce air pollution and work towards meeting the World Health Organization’s Air Quality Guidelines.**

This means cities will continually reduce their local emissions, and advocate for reductions in regional emissions, resulting in continuous declines in air pollution levels that move towards the WHO guidelines.

Signatories of the declaration pledge to:

1. Set ambitious pollution reduction targets within two years that meet or exceed national commitments, putting them on a path towards meeting World Health Organization guidelines;
2. Implement substantive clean air policies by 2025 that address the unique causes of pollution in their cities; and
3. Publicly report progress on achieving these goals.

Expected outcomes:

1. If the 35 signatories reduce annual average PM2.5 levels to WHO guidelines (10 ug/m³) it could avoid 40,000 deaths each year.
2. C40 research shows that if all C40 cities cleaned their transport, buildings and industry this would reduce GHG emissions by 87%, PM2.5 by nearly 50% and would avoid over 220,000 premature deaths per year.

Sources: the Hindu.

11. Delhi's Odd- Even Rule

What to study?

For Prelims: Overview and features of odd- even rule.

For Mains: It's performance, impact, outcomes and other measures necessary to fight the pollution.

Context: Odd-even road rationing scheme will be implemented in Delhi from November 4 to 15.

Need for the scheme:

The capital city of India is facing worst phase of pollution and it could lead to devastating effect if pollution remains untreated or inadequately treated. Although number of steps have been taken in this regard, strict implementation has been lackluster and inadequate. Further most of the actions themselves lack sound strategy and sustainability. Thus, is urgent need for evolving sustainable and effective measures.

What exactly is the odd-even vehicle rule?

Private vehicles will be allowed to run across the city based on their registration numbers. For example, if a vehicle's registration number ends with an odd digit, it will be allowed on the road on January 1, while that ending with an even number can be driven on the second, and so on.

Where did it come from?

1. This system was implemented in Beijing in 2008 just before the summer Olympics. While the rule was initially said to be temporary, it turned out to be so effective the government made it permanent.
2. Similar road-rationing rules are imposed in many places around the world like Paris, Mexico and Bogota to curb road jams and pollution.

Is it enough?

Experts say the efficacy of the scheme would depend much on the availability of public transport. If public transport is robust, the government would be in a position to include all vehicles in the scheme, including more than 60 lakh two-wheelers that contribute heavily to the city's pollution.

Sources: the Hindu.

12. Definition of Forest

What to study?

For Prelims: Definition and procedure to define forests.

For Mains: Concerns over the way in which forests are defined, need for a comprehensive definition and challenges involved.

Context: Centre clarifies on **definition of forest**.

Clarifications given by the Forest Advisory Committee (FAC) of the Environment Ministry:

States need not take the Centre's approval to define what constitutes unclassified land as forest.

Do we have a comprehensive legal definition for forest?

Since 2014, the Ministry of Environment, Forest and Climate Change (MoEF&CC) has been considering evolving a legal definition of forest and reportedly prepared drafts as late as 2016. These, however, were never made public.

How is a forest defined?

The freedom to define land, not already classified as forests by the Centre or State records, as forest has been the prerogative of the States since 1996 and stems from a Supreme Court order, called the **Godavarman judgment**.

- The Supreme Court judgment **expanded the definition of forest to include lands that were already notified by the Centre as forests**, that appear in government records as forests **as well as those that fell in the "dictionary definition" of forest**.
- The latter clause **allows the States to evolve their own criteria and define tracts of land as forest**, and these would then be bound by forest conservation laws.

Why it is difficult to have an all-encompassing definition of forest?

An all-encompassing definition of forest is difficult for India because **the country has 16 different kinds of forest**.

A tract of grassland in one State might qualify in one region as forest, but not in another. However, **once a State applied a criteria, it couldn't be reversed**.

The onus on the States to define forests is also significant because **the States often claim that they are helpless in preventing encroachment because a patch of land in question hadn't been notified as forest**. A recent instance was the felling of trees in Mumbai's Aarey Colony, which officially isn't classified as forest.

Need for a definition:

1. India's definition of forests has been criticised by scientists in the past on the grounds that it doesn't provide an accurate picture of the extent of biodiversity in rich natural forests.
2. A technical assessment by the United Nations Framework Convention on Climate Change (UNFCCC) of India's submission on forest cover has raised concerns about the country's definition of forests, which experts say exaggerates forest cover and inadvertently masks deforestation.

Sources: the Hindu.

13. Draft National River Ganga Bill, 2018

What to study?

For Prelims: Key highlights of the Bill.

For Mains: Conservation of Ganga- concerns, challenges and measures.

Context: In the next two months, **hydropower projects that do not comply with the Centre's ecological flow notification, which mandates that project developers ensure a minimum supply of water all through the year, could face closure**.

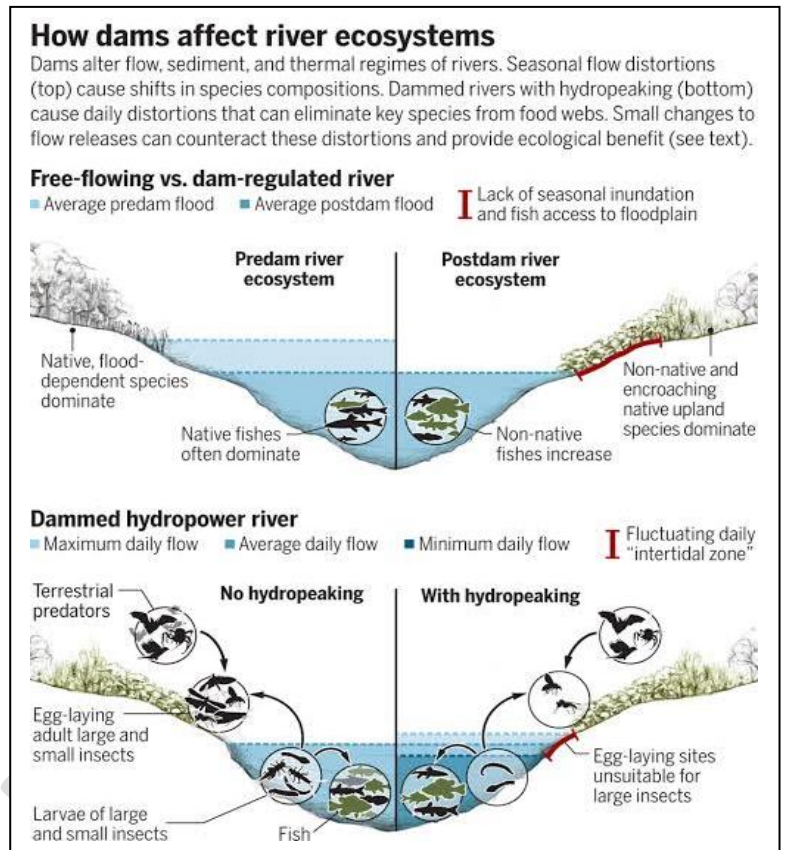
Background:

The Centre's ecological flow notification, as it is called, came into effect last October and gave companies three years to modify their design plans, if required, to ensure that a minimum amount of water flowed during all seasons. Power producers generally hoard water to create reserves to increase power production.

Many environmentalists had long been demanding such provisions which ensure uninterrupted flow of the river.

National River Ganga (Rejuvenation, Conservation and Management) Bill, 2018- highlights:

1. The bill propose to **ban the construction of jetties, ports or “permanent hydraulic structures”** in the Ganga, unless permitted by the National Ganga Rejuvenation Authority.
2. It proposes to create **a management structure** that will supervise the health of the 2,500-kilometre long Ganga which, the draft Bill defines, as ‘India’s national river.’
3. The Bill lays down **a host of restrictions to ensure the “uninterrupted, ecological flow”** of the river. Currently, a host of dams in the upper stretches of the river lead to the river’s flow being obstructed.
4. The proposed legislation specifies that **“unauthorized” activities** that cause obstruction or discontinuity of water in the River Ganga due to engineered diversion of water or stoppage of water.
5. **The Armed Ganga Protection Corps (GPC)** personnel will be provided by the ministry of home affairs and will be deployed by the National Ganga Rejuvenation Authority. The GPC personnel will have power to arrest those who pollute the river covering offences like obstructing the flow of the river to commercial fishing.
6. It specifies that **the upper stretches of the Ganga — from its origins in the glaciers and until Haridwar — would have to maintain:** 20% of the monthly average flow of the preceding 10-days between November and March, which is the dry season; 25% of the average during the ‘lean season’ of October, April and May; and 30% of monthly average during the monsoon months of June-September.



The Bill has listed out a list of offences marked as cognizable which includes:

1. Construction activities causing obstruction in the river.
2. Withdrawal of ground water for industrial or commercial consumption from the land fronting the river and its tributaries.
3. Commercial fishing or aqua culture in the river and its tributaries.
4. Discharging untreated or treated sewage into the river.

Need:

According to a map of Ganga river water quality presented by the Central Pollution Control Board (CPCB) to National Green Tribunal (NGT) in August 2018, **only five out of 70-odd monitoring stations had water that was fit for drinking and seven for bathing. After three decades of efforts to clean the national river, it is a sad state of affairs that the river is not even fit for bathing.**

Sources: the Hindu.

14. Global Mobility Report

What to study?

For Prelims: Key findings of the report and about SuM4All.

For Mains: Concern and challenges, ways to address them, overview of GRA.

Context: Global Mobility Report has been released by **Sustainable Mobility for All (SuM4All) initiative.**

What is SuM4All?

The SuM4All initiative, launched in 2017, is an umbrella platform that brings together 55 public and private organisations and companies to act collectively to implement the SDGs and transform the transport sector.

Key findings:

1. Not a single country — developed or developing — is on track to achieve sustainability in the transportation sector and attain the Sustainable Development Goals (SDGs) mandated by the United Nations.
2. **Developed countries outperformed developing countries** on all mobility policy goals, except per capita transport-related greenhouse gas emissions.
3. The gap is more striking on safety and air pollution, placing a higher burden on developing countries compared with the developed countries.
4. With growing urbanisation, increasing world trade and new technologies, the global mobility system is stressed.
5. More than one billion people or one-third of the global rural population, lack access to all-weather roads and transport services.

What needs to be done?

- **Closing transport access gap in rural areas** can connect this population to education, health and jobs.
- **Improvements in border administration, transport and communication infrastructure** can also increase global gross domestic product (GDP) by up to \$2.6 trillion.
- **Halving the pollution caused by the transport sector** can help an additional 1.6 billion people to breathe cleaner air.

Global Roadmap for Action (GRA):

The report charted a **Global Roadmap for Action (GRA)**, which provides a catalogue of policy measures that have been used and tested around the world to achieve four policy goals — universal access, efficiency, green mobility and safety.

The GRA will **help countries to identify gaps, crucial steps and appropriate policies to ensure that transport sector contributes to attain the SDGs by 2030.**

GRA will work in three ways to the policy agenda on mobility:

1. Charting mobility performances of 183 developed and developing countries.
2. Providing a catalogue of suitable policy measures that have been used and tested around the world to achieve any of the four policy goals.
3. Laying out a methodology to extract from this catalogue of policies those measures that are most impactful and relevant to a country's context.

Sources: Down to earth.

15. UNEP Colombo Declaration

What to study?

For Prelims and Mains: Nitrogen- natural cycle, pollution and ways to prevent it, South Asian Nitrogen Hub, About Colombo declaration, INMS and INI.

Context: UN Environment Programme (UNEP) member states recently adopted the “Colombo Declaration” which calls for tackling global nitrogen challenge.

Highlights of the declaration:

1. The **Colombo Declaration** has been **developed with the technical support of the International Nitrogen Management System (INMS)**, a joint activity of the **UNEP** and the **International Nitrogen Initiative** supported by **the Global Environmental Facility**.
2. The aim is to **halve nitrogen waste by 2030.**

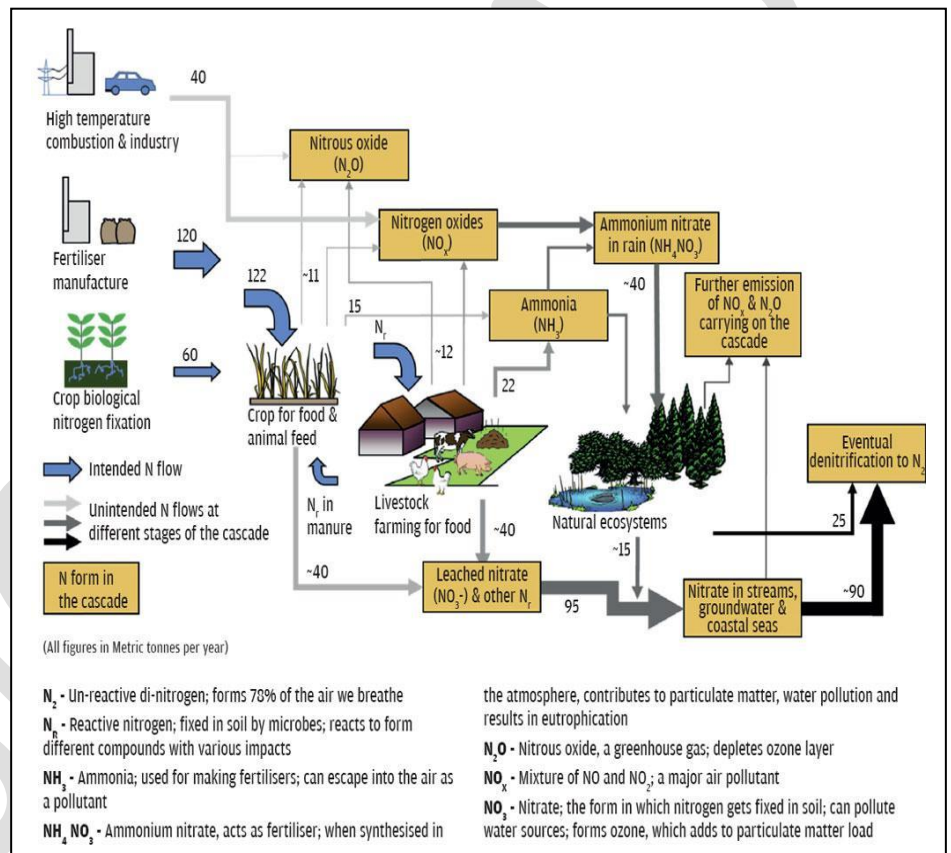
3. A campaign on sustainable nitrogen management called **“Nitrogen for Life”** is to be launched. It stems from the **Sustainable Nitrogen Management Resolution** which was **adopted during the fourth session of the UN Environment Assembly held from 11 – 15 March 2019 at the UNEP headquarters in Nairobi, Kenya.**
4. The Declaration calls upon UN agencies, other international organizations, development partners, philanthropic agencies, academic and civil society organizations to support its implementation.
5. It also urges countries to conduct a comprehensive assessment on nitrogen cycling covering policy, implementation, regulation, and scientific aspects at a national level plus sensitize the citizens to understand the natural nitrogen cycle and how human impacts alter its balance.

What necessitated this?

While a critical element for building structures of living organisms and an essential element for the survival of all living things, nitrogen overuse has negative impacts on the planet, biodiversity and is a contributor to the climate crisis.

How Nitrogen turned into pollutant from nutrient how it is affecting health and environment?

1. Nitrogen is **an inert gas** that’s necessary for life. But we’re changing it into forms that are harmful, overloading the environment with it, and throwing the natural nitrogen cycle out of whack.
2. **Nitrogen compounds running off farmland have led to water pollution problems** around the world, while nitrogen emissions from industry, agriculture and vehicles make a big contribution to air pollution.
3. **Over 80% of the nitrogen in soil is not utilised by humans.** While over four-fifths of the nitrogen is used to feed livestock, only about six per cent reaches humans in case of non-vegetarian diet, as compared to the 20% that reaches the plate of a vegetarian.
4. **Nitrogen becomes a pollutant when it escapes into the environment and reacts with other organic compounds.** It is either released into the atmosphere, gets dissolved in water sources such as rivers, lakes or groundwater, or remains in the soil. While it might lead to favourable growth of species that can utilise this nutrient, nitrogen as a pollutant is often detrimental to the environment and health.
5. According to the World Health Organization, **nitrate-contaminated drinking water can cause reduced blood function, cancer and endemic goiters.** Surplus inputs of nitrogen compounds have been found to cause soil acidification. The lowering pH, as a result of the acidification, can lead to nutrient disorders and increased toxicity in plants. It may also affect natural soil decomposition.



Sources: the Hindu.

Topics: Disaster and management.

1. National Disaster Response Fund (NDRF)

What to study?

For Prelims: Overview of NDRF.

For Mains: It's significance and usage.

Context: Centre approves additional financial assistance of Rs.1813.75 crore from **National Disaster Response Fund (NDRF)** to the State of Karnataka and Bihar.

Background:

The States of Karnataka and Bihar have apprised of the paucity of funds in the SDRF account, resulting in delay in providing relief assistance to the affected people and requested for release of advance additional financial assistance from NDRF.

About NDRF:

Defined in **Section 46 of the Disaster Management Act, 2005 (DM Act)**.

It is **a fund managed by the Central Government for meeting the expenses for** emergency response, relief and rehabilitation due to any threatening disaster situation or disaster.

Constituted to supplement the funds of the State Disaster Response Funds (SDRF) of the states to facilitate immediate relief **in case of calamities of a severe nature**.

National Calamity Contingency Fund (NCCF) was **renamed as National Disaster Response Fund (NDRF)** with the enactment of **the Disaster Management Act in 2005**.

What is it to be used for?

NDRF amount **can be spent only towards meeting the expenses for emergency response, relief and rehabilitation**.

For projects exclusively **for the purpose of mitigation**, i.e, measures aimed at reducing the risk, impact or effect of a disaster or threatening disaster situation a separate fund called **National Disaster Mitigation Fund** has to be constituted.

Sources of Financing NDRF:

Financed through **the levy of a cess on certain items, chargeable to excise and customs duty, and approved annually through the Finance Bill**.

The requirement for funds beyond what is available under the NDRF is met through general **budgetary resources**.

Currently, **a National Calamity Contingency Duty (NCCD)** is levied to finance the NDRF and additional budgetary support is provided as and when necessary.

A provision also exists in the DM Act to encourage any person or institution to make a contribution to the NDRF.

Key features of NDRF:

Located in the "**Public Accounts**" of Government of India under "**Reserve Funds not bearing interest**".

Monitoring: Department of Agriculture and Cooperation under Ministry of Agriculture (MoA) monitors relief activities for calamities associated with drought, hailstorms, pest attacks and cold wave /frost while rest of the natural calamities are monitored by Ministry of Home Affairs (MHA).

Comptroller and Auditor General of India (CAG) audits the accounts of NDRF.

Sources: pib.

2. In News- Coalition for Disaster Resilient Infrastructure (CDRI)

What to study?

For Prelims: composition, objectives and significance of CRDI.

For Mains: Disaster preparedness and the need for information sharing and collaboration between various agencies.

About CDRI:

- A platform where knowledge is generated and exchanged on different aspects of disaster and climate resilience of infrastructure.
- It will create a mechanism to assist countries to upgrade their capacities and practices, with regard to infrastructure development in accordance with their risk context and economic needs.

Benefits and significance:

- This initiative will benefit all sections of society.
- Economically weaker sections of society, women and children, are the most vulnerable to the impacts of disasters and hence, will be benefitted from the improvement of knowledge and practice in creating disaster resilient infrastructure.
- It will also benefit all areas with high disaster risk.
- In India, the north-eastern and Himalayan regions are prone to earthquakes, coastal areas to cyclones and tsunamis and central peninsular region to droughts.

Why do we need a global coalition?

- Many countries, including India, have over the years developed robust disaster management practices that have helped in sharply reducing human casualties in a disaster. However, the economic costs of a disaster remain huge, mainly due to the damage caused to big infrastructure.
- A global coalition for disaster resilient infrastructure would address concerns that are common to developing and developed countries, small and large economies, countries at early and advanced stages of infrastructure development, and countries that have moderate or high disaster risk.

Case study:

According to a recent estimate by the World Bank, **Cyclone Fani**, which hit Odisha in May this year, caused damage to the tune of \$4 billion. The losses in the Kerala floods last year could be in excess of \$4.4 billion, according to a post-disaster needs assessment report by the state government. In the US, there were 10 climate change disasters this year in which losses exceeded \$1 billion.

Sources: Indian Express.

3. International Day for Disaster Reduction

What to study?

For Prelims: About the International Day for Disaster Reduction- theme, significance.

For Mains: All about Sendai framework and its significance.

Context: International Day for Disaster Reduction was observed on October 13th.

Theme: Reduce disaster damage to critical infrastructure and disruption of basic services.

Background:

- In 1989, the UN General Assembly through a resolution had designated the second Wednesday of October as International Day for Natural Disaster Reduction.
- Later on December 21, 2009, the Assembly adopted a new resolution on in which it designated 13 October as the date to commemorate the Day and it also changed the day's name to International Day for Disaster Reduction.
- The main objective of the observance is to raise awareness of how people are taking action to reduce their risk to disasters.

About Sendai Framework:

The "Sendai Framework for Disaster Risk Reduction 2015-2030" was adopted during the **Third UN World Conference on Disaster Risk Reduction held in Sendai, Japan in March, 2015.**

Key features of the Sendai framework:

1. It is the first major agreement of the post-2015 development agenda, with seven targets and four priorities for action.
2. It was endorsed by the UN General Assembly following the 2015 Third UN World Conference on Disaster Risk Reduction (WCDRR).
3. The Framework is for 15-year. It is a voluntary and non-binding agreement which recognizes that the State has the primary role to reduce disaster risk but that responsibility should be shared with other stakeholders including local government, the private sector and other stakeholders.
4. The new Framework is the successor instrument to the Hyogo Framework for Action (HFA) 2005-2015: Building the Resilience of Nations and Communities to Disasters.

Implementation:

The implementation of the Sendai Framework involves adopting integrated and inclusive institutional measures so as to work towards preventing vulnerability to disaster, increase preparedness for response and recovery and strengthen resilience.

Sources: the Hindu.

Topics: Security challenges and their management in border areas; linkages of organized crime with terrorism.

1. Financial Action Task Force (FATF)

What to study?

For Prelims: FATF, Grey list, G7, About APG.

For Mains: What is Grey list and Black list, how are countries in the list affected? How does FATF's latest move affects Pakistan?

Context: The *Asia – Pacific Group of FATF (Financial Action Task Force)* has slammed Pakistan for failing to take actions against terror groups.

Pakistan and state-sponsored terrorism:

- Pakistan has been accused by neighbouring countries India, Afghanistan and Iran and other nations, such as the United States, the United Kingdom, and France of involvement in terrorist activities in the region and beyond.
- It is also alleged that **Money is transferred to terror organization via Pakistan army.**
- It has been described as **a safe haven for terrorists** by western media and the United States Defense Secretary. It has been time and again proved that Pakistan has been supportive to several terrorist groups despite several stern warnings from the international community
- Besides, **the government of Pakistan has been accused of aiding terrorist organisations** operating on their soil who have attacked neighbouring India.

However, Pakistan denies all allegations, stating that these acts are committed by non-state actors.

About FATF:

What is it? The Financial Action Task Force (FATF) is an inter-governmental body established in 1989 on the initiative of the G7. It is a “policy-making body” which works to generate the necessary political will to bring about national legislative and regulatory reforms in various areas. The FATF Secretariat is housed at the OECD headquarters in Paris.

Objectives: The objectives of the FATF are to set standards and promote effective implementation of legal, regulatory and operational measures for combating money laundering, terrorist financing and other related threats to the integrity of the international financial system.

Functions: The FATF monitors the progress of its members in implementing necessary measures, reviews money laundering and terrorist financing techniques and counter-measures and promotes the adoption and implementation of appropriate measures globally. In collaboration with other international stakeholders, the FATF works to identify national-level vulnerabilities with the aim of protecting the international financial system from misuse.

The importance of combating terrorist financing:

- Terrorists need money and other assets, for weapons but also training, travel and accommodation to plan and execute their attacks and develop as an organisation.
- Disrupting and preventing these terrorism-related financial flows and transactions is one of the most effective ways to fight terrorism.
- Not only can it prevent future attacks by disrupting their material support, the footprints of their purchases, withdrawals and other financial transactions can provide valuable information for ongoing investigations.
- Countering terrorism financing is therefore an essential part of the global fight against terror threat.
- As terrorists and terrorist groups continue to raise money with use of various means, countries must make it a priority to understand the risks they face from terrorist financing and develop policy responses to all aspects of it.

Sources: the Hindu.

2. Rehabilitation package to 5,300 J&K displaced families

What to study?

For Prelims: Overview of the rehabilitation programme.

For Mains: Challenges present, need for and significance of the programme.

Context: Cabinet has approved Inclusion of 5,300 **Displaced Persons (DP) families of Jammu & Kashmir** in the **Rehabilitation Package** approved by the Cabinet on 30.11.2016 for **Displaced Families of Pakistan-occupied Jammu and Kashmir (PoJK) and Chhamb** under the **PM's Development Package 2015 for Jammu & Kashmir**. These families initially opted to move outside the State of Jammu & Kashmir but later on returned and settled in the state.

Significance:

- The approval will enable such Displaced Families to become eligible to get one-time financial assistance of Rs 5.5 Lakhs under the existing scheme, and in turn, be able to get some sustained income which the existing scheme is aimed at.
- This will also enable them to earn a reasonable monthly income and be part of mainstream economic activities.
- This will also upgrade the Government's capacity to respond effectively to such DP families need of financial assistance.

Background:

In the aftermath of partition of the country in 1947, thousands of families from Pakistan occupied areas of Jammu and Kashmir migrated to Jammu and Kashmir. Subsequently, during Indo-Pak Wars of 1965 and 1971, a large number of families were displaced from Chhamb Niabat area of Jammu and Kashmir. Series of relief and rehabilitation packages have been extended by the Government of India/State Government of J&K from time to time to mitigate the hardship of displaced persons from PoJK and Chhamb and to rehabilitate them.

Sources: pib.

3. 'Comprehensive Convention on International Terrorism' (CCIT)

What to study?

For Prelims: CCIT- key facts.

For Mains: Significance and the need for convention, terrorism- threats, concerns and need for international cooperation in curbing.

Context: Vice President appeals to world community to ensure early conclusion of UN Comprehensive Convention on International Terrorism.

CCIT:

What is it?

The Comprehensive Convention on International Terrorism is a proposed treaty which intends to criminalize all forms of international terrorism and deny terrorists, their financiers and supporters access to funds, arms, and safe havens. It is a draft proposed by India in 1996 that is yet to be adopted by the UNGA.

What does it call for?

Universal definition of terrorism: no good terrorist or bad terrorist.

Ban on all groups regardless of country of operation, cut off access to funds and safe havens.

Prosecution of all groups including cross border groups.

Amending domestic laws to make cross-border terror an extraditable offence.

It also addresses, among other things, the issue of Pakistan's alleged support for cross-border terrorism in south Asia.

Concerns expressed by various countries:

US + allies: concerns over definition of terrorism, including acts by US soldiers in international interventions without UN mandate.

Latin American countries: concerns over international humanitarian laws being ignored. There are also concerns that convention will be used to target Pakistan and restrict rights of self-determination groups in Palestine, Kashmir etc.

The global impact of terrorism:

1. There was no change in the five countries **most impacted by terrorism**, which include Iraq, Afghanistan, Nigeria, Syria and Pakistan. All of these countries have been ranked in the worst five every year since 2013.
2. Countries in conflict have **a greater availability** of more military-grade small arms and bomb-making capabilities.
3. Countries that are not in conflict tend to be more economically-developed and spend **more on intelligence gathering, policing and counterterrorism**.

HITTING HURDLES

Comprehensive Convention on International Terrorism is a draft proposed by India in 1996, that has yet to be adopted by the UN General assembly

What does it call for?

- ❖ **Universal definition of terrorism:** No good terrorist or bad terrorist
- ❖ Ban on all groups regardless of country of operation, cut off access to fund and safe havens
- ❖ Prosecution of all groups, including cross-border groups
- ❖ Amending domestic laws to make cross-border terror an extraditable offence

Why has CCIT been blocked?

- ❖ **US+allies:** Concerns over definitions of terrorism, including acts by US soldiers in international interventions without UN mandate
- ❖ **Latin American countries:** Concerns over international humanitarian laws and HR being ignored
- ❖ **OIC:** Concerns that convention will be used to target Pakistan, and restrict rights of self-determination groups in Palestine, Kashmir etc

Terror striking every day now -Turkey, Somalia, Afghanistan, Kenya & Bangladesh. Mere condemnation & commiseration @un won't do. Need CCIT
- Syed Akbaruddin, India's ambassador to UN, on Twitter

Sources: the Hindu.

4. Jammu and Kashmir Public Safety Act (PSA)

What to study?

For prelims: Key features of the act.

For mains: Issues related, why is it called a draconian law, need for reforms.

Context: Former Jammu and Kashmir Chief Minister Dr. Farooq Abdullah's detention under **the Public Safety Act (PSA)** has been extended to three months.

What is the J&K PSA?

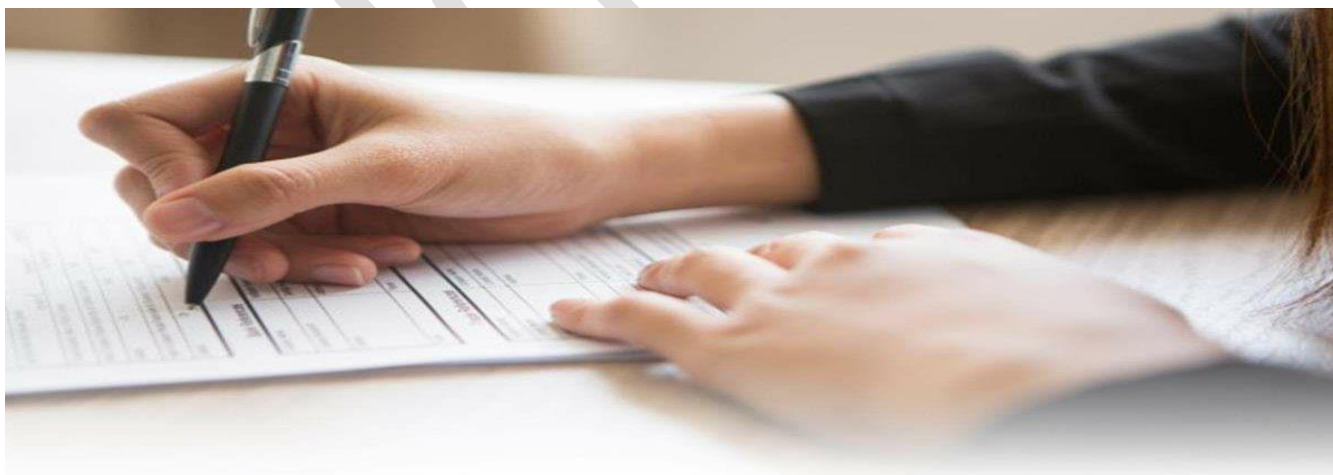
1. The **Jammu and Kashmir Public Safety Act (PSA)** received the assent of the J&K Governor on April 8, 1978.
2. The Act was introduced as **a tough law to prevent the smuggling of timber and keep the smugglers "out of circulation"**.

3. The law allows the **government to detain any person above the age of 16 without trial for a period of two years.**
4. The PSA **allows for administrative detention for up to two years** “in the case of persons acting in any manner prejudicial to the security of the State”, and for administrative detention up to one year where “any person is acting in any manner prejudicial to the maintenance of public order”.
5. **Detention orders under PSA** can be issued by Divisional Commissioners or District Magistrates.
6. **Section 22 of the Act** provides protection for any action taken “in good faith” under the Act: “No suit, prosecution or any other legal proceeding shall lie against any person for anything done or intended to be done in good faith in pursuance of the provisions of this Act.”
7. Under **Section 23 of the Act**, the government is empowered to “make such Rules consistent with the provisions of this Act, as may be necessary for carrying out the objects of this Act”.

Why is it often referred to as a “draconian” law?

- Right from the beginning, the law was **misused widely, and was repeatedly employed against political opponents and separatists** by consecutive governments until 1990.
- In August 2018, the Act was amended to allow individuals to be **detained under the PSA outside the state as well.**
- The **detaining authority need not disclose any facts about the detention** “which it considers to be against the public interest to disclose”.
- The **terms under which a person is detained under PSA are vague and include a broad range of activities** like “acting in any manner prejudicial to the security of the State” or for “acting in any manner prejudicial to the maintenance of public order”.
- The vagueness provided in the act **gives unbridled powers to the authorities.** The detainees, therefore, are effectively debarred from contesting the legality of their detention.
- PSA does **not provide for a judicial review of detention.** To checkmate the J&K High Court orders for release of persons detained under the act the state authorities issue successive detention orders. **This ensures prolonged detention of people.**
- PSC has been used against human rights activists, journalists, separatists and others who are considered as a threat to the law & order. Right to dissent is stifled by these Acts.

Sources: the Hindu.



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GENERAL STUDIES – 4

1. Protection from Online Falsehoods and Manipulation Act 2019

Context: Singapore recently notified *the Protection from Online Falsehoods and Manipulation Act 2019*.

Key highlights of the law:

1. It will enable the government to order social media websites to take down posts deemed to be false.
2. The Act's definition of a falsehood is limited to a statement of fact and does not cover opinions, criticisms, satire or parody.
3. Any minister from the government has the authority to instruct the "Competent Authority" if he believes a false statement of fact has been communicated in Singapore or if he believes it is in the public interest to issue a direction against the statement.
4. The minister will need to explain why the statement is false.
5. A set of binding "Codes of Practice" for technology companies covering three areas — inauthentic online accounts and bots, digital advertising transparency and de-prioritising falsehoods — will be applied to "digital advertising intermediaries" or Internet intermediaries".
6. Once a minister identifies a falsehood, the individual is issued a "Stop Communication Direction" to be complied with within a specified time period. Only when the falsehood is spread with malicious intent do criminal sanctions apply.
7. If found guilty of communicating statements believed to be false to the extent that such a statement is likely to jeopardise the security of the country, influence election outcomes, incite feelings of enmity or hatred etc, he/she will be liable to pay a fine of \$50,000 or be imprisoned for not more than five years or both.

Concern over the law:

Technology companies and rights groups have expressed concerns and worried because this law will hurt innovation and the growth of the digital information ecosystem. They argue that the law imposes limitations on free speech.

What led to the government taking this step?

False statements made online have the potential to divide society, spread hate and weaken democratic institutions.

The law aims **to prevent the "communication of false statements of fact in Singapore and to enable measures to be taken to counteract the effects of such communication"**; to suppress the **"financing and promotion of false statements of fact"**, and to enable measures such that politically motivated paid content is disclosed.

Sources: Indian Express.

2. Regulation of social media

What to study?

For Prelims: Draft rules in this regard.

For Mains: Need for regulation, challenges and concerns with existing rules.

Context: The centre is planning to come up with rules to regulate social media because it can cause "unimaginable disruption" to democracy.

Rules will help in **curbing growing threats to "individual rights and nation's integrity, sovereignty, and security.**

Background:

The Supreme Court had expressed **the need to regulate social media** to curb fake news, defamation and trolling. It had also asked the Union government to come up with guidelines to prevent misuse of social media while protecting users' privacy in three weeks' time.

Existing regulations and misuse:

- In India, social media platforms already come under the purview of **the Information Technology (IT) Act, the 'intermediaries guidelines'** that were notified under the IT Act in 2011 and the Indian Penal Code.
- Under existing laws, **social media channels are already required to take down content if they are directed to do so by a court or law enforcement.**
- There are also reporting mechanisms on these platforms, where **they exercise discretion to ascertain whether a reported post is violating community guidelines and needs to be taken down.**
- These, however, have been reported to be arbitrary – many posts on body positivity and menstruation, for instance, have been taken down in the past while other explicit imagery continues to be allowed.
- **Many of the existing regulations themselves are "dangerously close to censorship** and may have a chilling effect on freedom of speech, which is why cases are being fought on those in courts."
- Another problem of **a lot of regulatory measures is the vagueness of language which is exploited by state agencies to behave in a repressive way.**

Need for regulations:

The speed and reach of social media has meant that subversive rumours and fake news get aired with impunity. This has resulted in serious law and order problems. In India, this phenomenon has assumed dangerous proportions. Fake news on WhatsApp has led to lynchings and communal flare-ups in many parts of the country. This menace needs to be curbed.

Challenges before the government:

Too stringent a policy of policing social media **could violate the individual's right to privacy.**

It's not easy to force Facebook Inc., the owner of WhatsApp, to give up on the app's unique selling proposition to the user of complete end-to-end confidentiality.

Way ahead:

Any conversation on additional regulation of social media brings up concerns about privacy and surveillance. Therefore, any bid at regulating expression online has to be proportional and concrete with adequate redressal mechanisms and without any blanket provisions.

Sources: the Hindu.

3. Why link Aadhaar to Social Media Accounts?

What to study?

For Prelims: Right to Privacy.

For Mains: Linking of Aadhaar- issues, concerns, challenges and other alternatives.

Context: From January, the Supreme Court will hear cases seeking **the linking of Aadhaar with social media profiles of individuals.** It will be the first big legal battle on the right to privacy after the Supreme Court held in a landmark verdict in 2017 that **privacy is a fundamental right.**

Need for linking of Aadhaar?

1. To keep a check on the spread of fake news, pornographic and anti-national content, among other things.
2. The government has referred to **the Blue Whale game**, the online suicide challenge that has reportedly claimed hundreds of deaths in countries like Russia and India.
3. In the case of the Blue Whale challenge, the government found it hard to trace the originator of the online content.

Opposition to this move:

1. Social media platforms like Facebook have been fighting this move to link user profiles with Aadhaar as they believe it would violate the users' privacy policy.

2. Facebook has also defended itself, saying that it cannot share the 12-digit Aadhaar number on WhatsApp as it is end-to-end encrypted, even for Facebook.
3. If the apex court rules in favour of Aadhaar linking with social media accounts, **it would end private communications and experts believe this could also allow the government to use social media platforms as surveillance tools.**

What have the Courts said?

The Supreme Court said on August 20, 2019, that there is a need to find a balance between the right to online privacy and the right of the state to trace the origins of hateful messages and fake news.

On August 21, **the Madras High Court dismissed the original prayer** to link Aadhaar to social media accounts as it violated the Supreme Court's judgment on Aadhaar.

Why this may not be the right move?

Cyberspace is like an ocean -- endless and limitless -- and we just cannot restrict it by or within any geography. There is no Indian internet as such.

Since **Aadhaar has almost all information related to our bank accounts** it is better to avoid treading that path. Also, a social media account is a private account of a person -- it necessarily does not have to be linked to a government database just for the sake of privacy.

Linking with Aadhaar will be jeopardizing the independence and democratic rights of the person for one never knows know that data may be misused by the companies or the government of the day.

What can be done?

1. **Phone verification:** Most of the folks and younger generation use social media from their phones. There are already norms that every phone number needs to be verified -- the need of the hour is to get them implemented more stringently on the ground.
2. Another way is **KYC option of linking social media accounts via the traditional physical verification option or through the references options.**
3. There is also a big **need to create awareness among the users to stop propagating fake news and verify the news** because in the long run an educated consumer of news is the best antidote to fake news.

Way ahead:

As a country, **we must focus on investing on research to develop the technology to save our virtual space and not open our data for any misuse.**

Sources: the Hindu.



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FACTS FOR PRELIMS

1. National Crisis Management Committee (NCMC)

- For effective implementation of relief measures in the wake of natural calamities, the Government of India has set up a **National Crisis Management Committee**.
- **Cabinet Secretary is its Chairman**.
- **Other members:** Secretaries of all the concerned Ministries /Departments as well as organizations are the members of the Committee.
- The NCMC **gives direction to the Crisis Management Group as deemed necessary**.

2. BrahMos Missile

- It flies almost three times the speed of sound at Mach 2.8 and has **a range of 290 km**.
- The missile has been **jointly developed with Russia** and is named after the rivers Brahmaputra and Moskva in Russia.
- It is extremely difficult to be intercepted by surface to air missiles deployed on leading warships around the world.
- The **range of the BrahMos missile can be extended up to 400 km** as certain technical restrictions were lifted after India became a full member of the **Missile Technology Control Regime or MTCR in 2016**.
- It is **a multiplatform** i.e it can be launched from land, air, and sea and **multi capability missile** with pinpoint accuracy that works in both day and night irrespective of the weather conditions.

3. Ancient Buried River

- The Union Water Ministry has excavated **an old, dried-up river in Prayagraj (formerly Allahabad)** that linked the Ganga and Yamuna rivers.
- The “ancient buried river” is around 4 km wide, 45 km long and consisted of a 15-metre-thick layer buried under soil.
- The newly discovered river was a **“buried paleochannel that joins the Yamuna river at Durgapur village, about 26 km south of the current Ganga-Yamuna confluence at Prayagraj**.

4. Military Nursing Service

Context: celebrates 94th Raising Day.

Key facts:

- MNS is **the only all women corps in the Armed Forces**.
- came into being on March 28, 1888 with the arrival of first batch of 10 qualified British Nurses in Bombay (now Mumbai), to organise nursing in Military hospitals in India.
- In 1893 it was designated as **Indian Army Nursing Service (IANS)** and in 1902 as **Queen Alexandra Military Nursing Service (QAMNS)**.
- In 1914 for the first time Nurses were enrolled in India and were attached to QAMNS.
- On October 1, 1926, a permanent Nursing Service for the Indian troops was formed and was designated as the **Indian Military Nursing Service (IMNS)**.
- On September 15, 1943, the IMNS officers became a part of the Indian Army and the members of service became Commissioned Officers.

5. National Council for Promotion of Urdu Language (NCPUL)

Autonomous body under the **Ministry of Human Resource Development (HRD)**, Department of Secondary and Higher Education.

Set up to promote, develop and propagate Urdu language, Council started its operation in Delhi on April 1, 1996.

In its capacity as the **National Nodal Agency for the promotion of the Urdu language** NCPUL is **the principal coordinating and monitoring authority for promotion of Urdu language and Urdu education**.

Important functions include:

- To liaise with the State Governments and other agencies in matters relating to promotion and development of the Urdu language.
- To provide financial assistance and guidance to Non-Government Organizations for propagation of the Urdu language.
- To co-ordinate the activities of the state Urdu academies.

6. National Council for Promotion of Sindhi Language (NCPSL)

Established as an **autonomous registered body** under the Department of Higher Education, Ministry of Human Resource Development (HRD).

Registered under the **Societies Registration Act in 1860** on 26th May 1994 under registration no. 1085 (Vadodara) Gujarat.

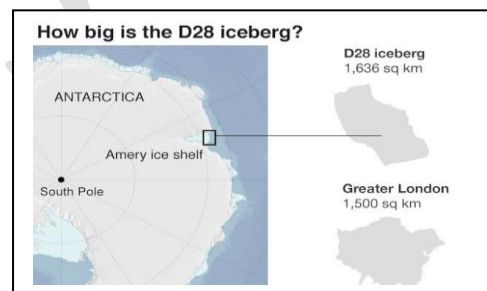
Important functions include:

1. To formulate/implement schemes and project for learning of Sindhi Language through the media of English and Hindi and Modern Indian Languages including teaching through correspondence course.
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7. D28 Iceberg

Context: A more than 1,500 sq.km. D28 iceberg recently broke off Antarctica.

- It is about 210 metres thick and contains 315 billion tonnes of ice.
- The east of Antarctica — where D28 broke off — is different from the west of the continent and Greenland, which are rapidly warming due to climate change.



8. Homage to Mahatma - young students create two Guinness Book World Records

Context: In a special homage to Mahatma Gandhi on his 150th Birth Anniversary, students from Delhi & NCR region have created **two world records**.

1. The first world record was in the category of '**environmental sustainability lessons to the largest number of students at one place**'. Close to five thousand children participated in this world record.
2. Second record pertains to '**the largest number of assembly & lighting of Solar lamps**'. The number of participants in this record is more than five thousand.

9. Vayoshreshtha Samman

It is a **Scheme of National Awards instituted by the Ministry of Social Justice & Empowerment (D/o Social Justice & Empowerment)**.

- It was **upgraded to the status of National Awards in 2013**.
- The award is for **institutions involved in rendering distinguished service for the cause of elderly persons** especially indigent senior citizens and **to eminent citizens in recognition of their service/achievements**.
- These awards are presented as part of the celebration of **the International Day of Older Persons (IDOP)** on 1st October.

10. International Day of Older Persons

On 14 December 1990, the **United Nations General Assembly** designated **1 October the International Day of Older Persons**.

The theme of the 2019 commemoration is “The Journey to Age Equality”.

Other initiatives in this regard:

1. **The Vienna International Plan of Action on Ageing** – which was adopted by the 1982 World Assembly on Ageing – and endorsed later that year by the UN General Assembly.
2. In 1991, the General Assembly adopted the **United Nations Principles for Older Persons**.
3. In 2002, the Second World Assembly on Ageing adopted the **Madrid International Plan of Action on Ageing**, to respond to the opportunities and challenges of population ageing in the 21st century and to promote the development of a society for all ages.

11. Ex Ekuverin – 19

Tenth edition of the Joint Military Exercise Ekuverin between the **Indian Army and the Maldives National Defence Force** will be held in Pune, Maharashtra.

- The two Forces have been conducting **Exercise Ekuverin meaning ‘Friends’** in the **Dhivehi** language since 2009.
- The 14 days **Joint Exercise held alternatively in India and Maldives** focuses on enhancing interoperability between the two forces for carrying out counter insurgency and counter-terrorism operations in a semi-urban environment under the United Nations mandate.

12. Nomadic Elephant 2019

It is **Indo – Mongolian joint military training**.

Nomadic Elephant-XIV is aimed at training troops in counter insurgency & counter terrorism operations under United Nations mandate.

13. Vande Bharat Express Train

Vande Bharat Express on **Delhi-Katra route** was flagged off recently.

Key facts:

- **The semi-high speed Train 18**, was **rechristened as Vande Bharat Express**, is country's second such train.
- The **first Vande Bharat Express on Delhi- Varanasi route** began operations in February this year.
- The **indigenously developed** Vande Bharat train **can run up to a maximum speed of 160 kmph**, making it **India's fastest train**.

14. PRAKASH Portal

PRAKASH (Power Rail Koyla Availability through Supply Harmony) portal has been launched for **transparency and better coordination in coal supplies to power plants**.

- Aims at bringing better coordination for coal supplies among all stakeholders viz - Ministry of Power, Ministry of Coal, Coal India, Railways and power utilities.
- Portal is **developed by NTPC** and sources data from different stakeholders such as Central Electricity Authority (CEA), Centre for Railway Information System (CRIS) and coal companies. All reports are available in PDF/Excel format.

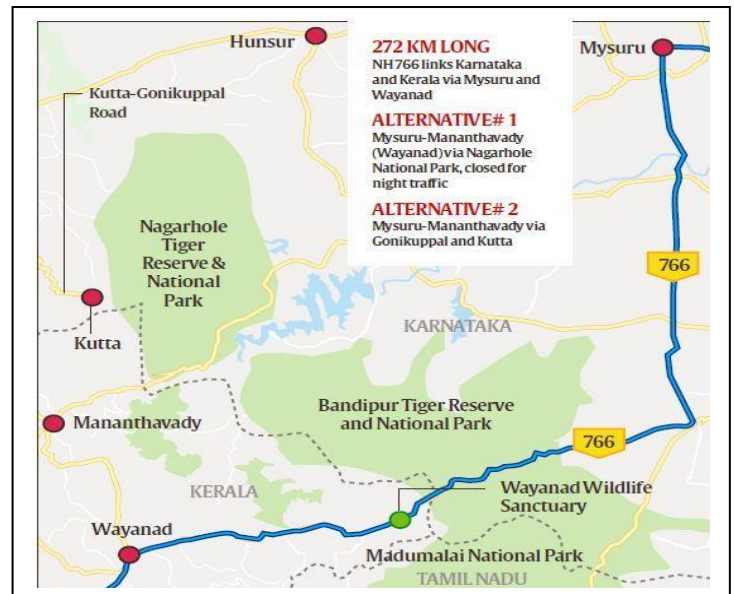
15. Bandipur Tiger Reserve

Context: Kerala's Wayanad district has witnessed a series of protests against a ban on night traffic on the forest stretch of NH 766, a key highway between Karnataka and Kerala that passes through **the Bandipur Tiger Reserve in Karnataka.**

What's the issue?

Although the night ban was first enforced a decade ago, the immediate trigger for the current agitation was a recent Supreme Court direction to the Ministry of Environment, Forest & Climate Change and the National Highway Authority of India (NHAI) to suggest alternative routes so that NH 766 could be shut down permanently. Since then, Wayanad has witnessed an ongoing indefinite hunger strike and several protest marches.

(Note: for prelims, have a look at the location of Bandipur Tiger reserve and adjoining areas).



16. Elephant Endotheliotropic Herpesvirus (EEHV)

Context: It is a rare disease that has killed five elephants in Odisha.

Key facts:

- EEHV is as a type of herpes virus that can cause a highly fatal hemorrhagic disease in young Asian elephants between the ages of 1 and 12.
- If a young elephant dies before reproducing, it affects the population of the species as a whole in the concerned geography.
- When EEHV is triggered, the elephant dies of massive internal bleeding and symptoms which are hardly visible, like reduced appetite, nasal discharge, and swollen glands.
- The disease is usually fatal, with a short course of 28-35 hours.
- Though adult elephants have been found carrying the virus, they do not show any sign of it.
- **The virus spreads from one elephant to another but not to other animals or human beings.**
- There is no true cure for herpes-viruses in animals or in humans because herpes viruses go latent.

17. India's First e-waste Clinic

- India's first e-waste clinic for segregating, processing and disposal of waste from household and commercial units will be **set-up in Bhopal, Madhya Pradesh.**
- In this regard, a Memorandum of Understanding (MoU) was signed between the Central Pollution Control Board (CPCB) and the Bhopal Municipal Corporation (BMC) for its establishment.
- Electronic waste will either be collected door-to-door or could be deposited directly at the clinic by individuals.
- The clinic is being conceived in compliance with **the Solid Waste Management Rules, 2016.**
- The e-waste clinic would enable segregation, processing and disposal of waste from both household and commercial units.

18. Indian Council of World Affairs (ICWA)

- Established in 1943 by a group of Indian intellectuals as a think tank.
- By an **Act of Parliament in 2001**, the ICWA was declared **an institution of national importance.**
- The **Vice President of India is the ex-officio President** of ICWA.
- It is devoted exclusively **for the study of international relations and foreign affairs.**
- The **founder-president** of the Council was **Sir Tej Bahadur Sapru.**
- **Historic international conferences held by ICWA:** 'Asian Relations Conference' in 1947 under the leadership of freedom fighter Sarojini Naidu and 'United Nations and the New World Order' in 1994.

19. World Congress of Poets 2019

39th edition of WCP is being held at **Kalinga Institute of Industrial Technology and Kalinga Institute of Social Sciences (KIIT & KISS) in Bhubaneswar, Odisha.**

Founded in 1969.

This is **the third time WCP is being hosted in India.** Previously, **it was held in Chennai in 1986 and 2007.**

Theme: "Compassion through Poetry".

The eligibility criteria for poets to be participating in the Congress are as follows:

1. The poet should have minimum of one book published with an ISBN.
2. The poet should have a recommendation letter from a poetry society that is legally established and has a legal existence.

20. eDantseva

It is **the first ever national digital platform on oral health information and knowledge dissemination.**

- Launched recently by **the Health and Family Welfare Ministry** in collaboration with **AIIMS and other stakeholders.**
- **Aim:** To sensitize the public about the significance of maintaining optimum oral health and equips them with the tools and knowledge to do so, including awareness on the nearest oral health service facility.

Components:

e-DantSeva contains information about the National Oral Health Program, detailed list of all the dental facility and colleges, Information, Education and Communication (IEC) material and a unique feature called the 'Symptom Checker'.

The website also provides **GPRS route/images/satellite images of the facility for easier access to the general population.**

21. Rafale Fighter Jet

Context: First of 36 **Rafale Fighter Jets** Delivered to India by **France.**

Key facts:

- Rafale is a Medium Multi-Role Combat Aircraft (MMRCA).
- Rafale is a French word meaning "gust of wind".
- It is a French-origin Delta winged, twin-engine multirole fighter aircraft manufactured and designed by Dassault Aviation.
- The Rafale is 15.27 metre long and a wingspan of 10.80 metre. The empty weight of Rafale ranges from 9900 kg to 10600 kg depending on the variant and maximum take-off weight of 24500 kg.
- The engines push the Rafale to attain a high speed of 1.8 Mach (1912 kmph) and a range of more than 3700 km with 3 drop tanks.

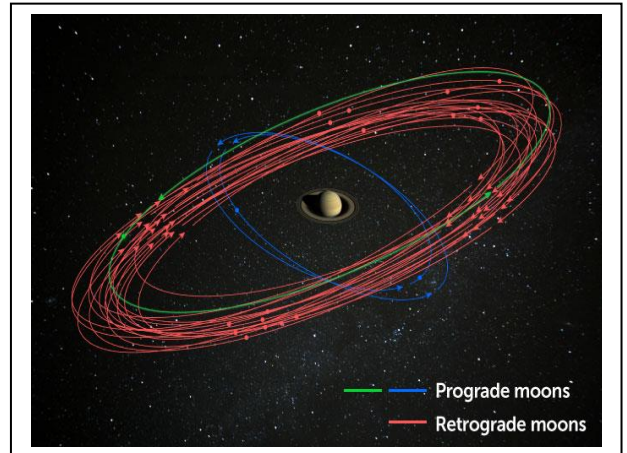
22. Ganga Amantran Abhiyan

- It is a month-long exploratory open-water rafting and kayaking expedition, covering nearly 2,500 kilometers from Devprayag in Uttarakhand to Ganga Sagar in West Bengal.
- This is **the first ever effort by the National Mission for Clean Ganga to raft across the entire stretch of the river** and also the longest ever social campaign undertaken through an adventure sporting activity to spread the message of river rejuvenation and water conservation on a massive scale.
- The expedition will draw attention to the ecological challenges being faced by the Ganga.
- It will cover the five Ganga basin states, namely Uttarakhand, Uttar Pradesh, Jharkhand, Bihar and West Bengal with stops at Rishikesh, Haridwar, Kanpur, Allahabad, Varanasi, Patna, Sonapur and Kolkata.

23. Saturn is the planet with the highest number of moons

Recently the discovery of 20 new moons of Saturn has made Saturn **the planet with the highest number of moons (82)**.

- **The previous record- holder, Jupiter, has 79.**
- This was announced by **the International Astronomical Union's Minor Planet Center.**
- Of Saturn's 20 newfound moons, 17 are retrograde, meaning they orbit in the opposite direction that Saturn rotates. Three orbit in the same direction that Saturn spins. Two of those prograde moons orbit fairly close to the planet while one oddball is farther out.



24. Unrepresented Tribes of Meghalaya

Context: Government of Meghalaya has decided to exclude '**unrepresented tribes**' from the provisions of the Sixth Schedule of the Constitution.

Who are they? The five minor tribes namely, Bodo-Kachari, Hajong, Koch, Mann, and Rabha are clubbed together as 'unrepresented tribes' for nomination in Meghalaya's autonomous tribal councils. They are indigenous to Meghalaya.

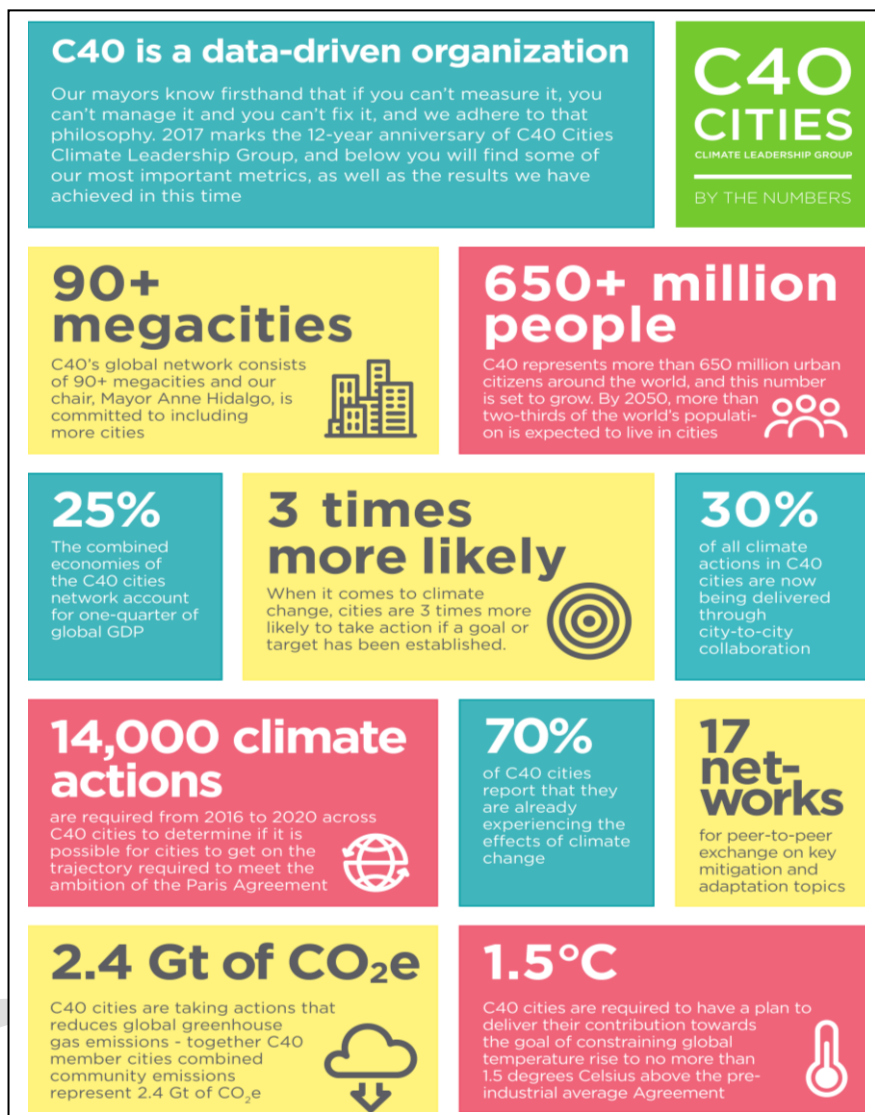
25. C40 Cities Climate Summit

Context: **C40 Cities World Mayors Summit** is being held in Copenhagen.

Key facts:

- **C40** is a network of the world's megacities committed to addressing climate change.
- **The C40 Cities Climate Leadership Group (C40)** is a group of 94 cities around the world.

- C40 is focused on tackling climate change and driving urban action that reduces greenhouse gas emissions and climate risks, while increasing the health, wellbeing and economic opportunities of urban citizens.
- **Composition:** While C40 originally targeted megacities for their greater capacity to address climate change, **C40 now offers three types of membership categories** to reflect the diversity of cities taking action to address climate change, i.e, Megacities, Innovator cities and Observer cities.
- **Criteria:** The categories consider such characteristics as population size, economic output, environmental leadership, and the length of a city's membership.



26. Miscellaneous Facts

Context: Various MoUs/Agreements were recently exchanged during

Official Visit of Prime Minister of Bangladesh to India. Here are few facts relevant for Prelims in this context:

- **Bangladesh opens Chattogram, Mongla ports for India trade: The Port of Mongla** is the second busiest seaport of Bangladesh. It is located in the southwestern part of the country; and lies 62 kilometres north of the Bay of Bengal coastline.
- **MoU on withdrawal of 1.82 cusec of water from Feni river by India for drinking water supply, scheme for Sabroom town, Tripura, India:**

Feni River is a river in southeastern Bangladesh. It is a trans-boundary river with an ongoing dispute about water rights. The Feni River originates in South Tripura district and flows through Sabroom town and then enters Bangladesh.

27. World Mental Health Day 2019

Observed on **October 10** every year.

Objective: to mobilize efforts in support of mental health and provides an opportunity for everyone to talk and discuss mental health issues, and what more needs to be done.

Theme: 'Mental Health Promotion and Suicide Prevention.'

It was **first celebrated in 1992** at the initiative of **the World Federation for Mental Health**, a global mental health organization with members and contacts in more than 150 countries.

28. Gagan Enabled Mariner's Instrument for Navigation and Information (GEMINI) Device

- It is a device that used for seamless and effective dissemination of emergency information and communication on disaster warnings, Potential Fishing Zones (PFZ) and Ocean States Forecasts (OSF) to fishermen.
- The device will help to provide information related to disaster warnings when fishermen move away from the coast beyond 10 to 12 kilometres.
- The GEMINI device receives and transfers the data received from GAGAN satellite/s to a mobile through Bluetooth communication. A mobile application developed by INCOIS decodes and displays the information in nine regional languages.
- It has been **developed by Indian National Centre for Ocean Information Services (INCOIS), and Airports Authority of India (AAI)**.
- It is electronically designed and manufactured by a private industry M/S Acord, Bangalore under Make in India Program.

29. Carpet Export Promotion Council (CEPC)

It is a **non-profit making organization**.

- Setup in 1982 by **the Ministry of Textiles**.
- **Objective:** To promote export of Carpets, all types of Handmade / handmade knotted Carpets, Rugs, Floor Coverings & other allied Products from India.
- **Background:** Indian Handmade Carpet Industry is ranked No. 1 status in the international market achieved highest quantity both in terms of value and production in the world market. India is possessing market share of around 35% of total world import of Handmade Carpets.

30. Phazolicin

- It is a new antibiotic discovered in the soil of a tropical rainforest.
- It was recently isolated deep in **the tropical forests of Los Tuxtlas, Mexico**.
- Found in the root nodules of **wild beans (Phaseolus vulgaris)**, this unusual antibiotic is produced by a **symbiotic soil bacterium** that fixes nitrogen for the plant and keeps harmful microbes away.
- The antibiotic phazolicin is **a class of peptide** produced in the ribosome, and is part of a diverse class of natural products with a variety of biological uses.
- **Benefits:** Not only could this antibiotic attack a diverse group of bacterial cells, the authors found it could also enter the bacteria and bind to its ribosomes, messing with its ability to synthesise proteins - only the second peptide known to do this.

31. Asia Environmental Enforcement Award

Senior Indian Forest Service (IFS) officer Ramesh Pandey has been selected by **United Nations Environment Programme (UNEP)** for prestigious **Asia Environmental Enforcement Award**.

- Ramesh Pandey is recognised for **combating trans-boundary environmental crime**.
- Pandey also introduced **M-Stripes (Monitoring System for Tigers Intensive Protection & Ecological Status)**, a novel software-based patrolling in Dudhwa Tiger Reserve on the recommendation of National Tiger Conservation Authority.

About the award:

The purpose of the Awards are to publicly recognise outstanding achievements by public organisations and individuals in Asia to combat transboundary environmental crime.

The 5 categories in which award will be given are:

1. Collaboration.
2. Impact.
3. Innovation.
4. Integrity.
5. Gender leadership.

32. What is Elastocaloric Effect?

It is **a cooling effect produced when rubber bands are twisted and untwisted.**

How it works? In the elastocaloric effect, the transfer of heat works much the same way as when fluid refrigerants are compressed and expanded. When a rubber band is stretched, it absorbs heat from its environment, and when it is released, it gradually cools down.

Applications: The elastocaloric effect, if harnessed, may be able to do away with the need of fluid refrigerants used in fridges and air-conditioners. These fluids are susceptible to leakages, and can contribute to global warming.

33. Emperor Penguins

It is one of Antarctica's most iconic species.

It is listed as '**near threatened**' in the Red List of International Union for Conservation of Nature (IUCN).

Recent demands:

- Experts have demanded that the IUCN status of species should be changed to 'vulnerable' from 'near threatened'.
- The experts also advocated that the emperor penguin should be listed by the Antarctic Treaty as a Specially Protected Species.
- The 1959 treaty sets aside Antarctica as a scientific preserve, establishes freedom of scientific investigation, and bans military activity on the continent.

34. DHARMA GUARDIAN – 2019

- It is a Joint Military Exercise between India and Japan.
- Exercise DHARMA GUARDIAN is an annual training event which is being conducted in India since 2018.

35. Mobile App "mHariyali"

- Launched by the Ministry of housing and Urban Affairs to encourage public engagement in planting trees and Green drives. The application provides automatic geo – tagging of plants. It will hence enable the nodal officers to periodically monitor the plantation.
- The app is aimed to encourage Public engagement in planting trees and other such Green drives.

36. Rashtriya Sanskriti Mahotsav

Context: **10th Rashtriya Sanskriti Mahotsav** is being held in Jabalpur, MP.

Organised by Ministry of Culture under the **Ek Bharat Shrestha Bharat initiative.**

Background: Rashtriya Sanskriti Mahotsav was conceived in the year 2015. It is organised with an intent to showcase the rich cultural heritage of the country in all its rich and varied dimensions, viz, Handicrafts, Cuisine, Painting, Sculpture and Performing Arts-Folk, Tribal, Classical and Contemporary- all in one place.

The Ek Bharat Shrestha Bharat programme was launched by the Prime Minister on October 31, 2016 to promote engagement amongst the people of different States and UTs so as to enhance mutual understanding and bonding between people of diverse cultures, thereby securing stronger unity and integrity of India.

37. SARAS Aajeevika Mela

It is **an initiative under Deendayal Antyodaya Yojana – National Rural Livelihoods Mission (DAY – NRLM).**

The objective of the initiative is **to bring the rural women SHGs – Self Help Groups under one platform.**

Significance: This is to help them show – case their skills, sell their products and build linkages with buyers. Through the initiative the women will get exposure to understand the demand of urban customers.

38. Hagibis Typhoon

It is the latest typhoon and is said to be Japan's worst storm in decades.

What's the difference between hurricanes, cyclones and typhoons?

- Hurricanes, cyclones and typhoons are all tropical storms. They are all the same thing but are given different names depending on where they appear. When they reach populated areas they usually bring very strong wind and rain which can cause a lot of damage.
- Hurricanes are tropical storms that form over the North Atlantic Ocean and Northeast Pacific. Cyclones are formed over the South Pacific and Indian Ocean. Typhoons are formed over the Northwest Pacific Ocean.

39. LOTUS-HR Project

Context: The launch of the second phase of the Local Treatment of Urban Sewage streams for Healthy Reuse (LOTUS-HR) program was recently held. It is located in Delhi.

- The LOTUS-HR project is jointly supported by Department of Biotechnology, Ministry of Science and Technology, Government of India and Netherlands Organization for Scientific Research.
- The project was initiated in July 2017 and aims to demonstrate a novel holistic (waste) water management approaches that will produce clean water which can be reused for various purposes.

40. World Standards Day

- World Standards Day (WSD) is celebrated each year all over the world on 14 October by the members of the International Electrotechnical Commission (IEC), International Organization for Standardization (ISO) and International Telecommunication Union (ITU) to pay tribute to the collaborative efforts of thousands of experts worldwide, who develop voluntary technical agreements that are published as International or National Standards.
- It is also called International Standards Day.
- The aim of WSD is to raise awareness among regulators, industry and consumers as to the importance of standardization to the global economy.
- The first WSD was observed in 1970.

41. 2019 Booker Prize

Context: *The Testaments* by Margaret Atwood and *Girl, Woman, Other* by Bernardine Evaristo have jointly won this year's Booker prize.

Please note that this year's award was an exception as **the rules do not allow for the award to be either split or withheld.**

However, this year the jury was unanimous after several rounds that this year's award must be shared.

What is the Booker prize?

- Awarded every year to the best novel that was "written in English and published in the UK or Ireland".
- Launched in 1969.
- Sponsored by Man Group.
- It carries an award of £50,000.

Is this the first time the Booker has been shared?

No, the prize has been shared in the past.

- The first time this happened was in 1974 when Nadine Gordimer and Stanley Middleton won it together.
- The second time was in 1992 when Michael Ondaatje and Barry Unsworth won it together. However, since then the rules were tweaked to ensure there are no joint winners.

42. The National Blindness & Visual Impairment Survey India 2015-2019

Released recently, **the survey looks at district-wise prevalence of blindness and visual impairment.**

The prevalence of blindness is highest among those who are at least 80 years old (11.6%).

Cause of blindness:

1. Untreated cataract is the main cause of blindness, at 66.2%. and also, the foremost cause of severe visual impairment, at 80.7% of all cases.
2. Corneal opacity, cataract surgical complications and some posterior segment disorders are some of the other causes of blindness.

43. World Food Day

Celebrated on **October 16** every year to raise awareness on the issues of poverty and hunger.

Established by **Food and Agriculture Organization of the United Nations (FAO)** in November 1979.

The theme of World Food Day 2019 is "Our Actions Are Our Future. Healthy Diets for A #ZeroHunger World".

44. 2019 UNESCO Asia-Pacific Awards for Cultural Heritage Conservation

Sixteen projects from five countries – Australia, Bhutan, China, India and New Zealand – have been recognized by the international Jury of conservation experts in this year's Awards.

Significance: The UNESCO Asia-Pacific Awards for Cultural Heritage Conservation programme recognizes the efforts of private individuals and organizations that have successfully restored and conserved structures and buildings of heritage value in the region.

Awardees from India include:

Award of Distinction:

- **Vikram Sarabhai Library, Indian Institute of Management**, Ahmedabad, India.

Award of Merit:

- **Keneseth Eliyahoo Synagogue**, Mumbai, India.
- **Our Lady of Glory Church**, Mumbai, India.

Honourable Mention:

- **Flora Fountain**, Mumbai, India.

45. Maritime States Development Council

MSDC is **an apex advisory body** for the development of the Maritime sector and aims to ensure integrated development of Major and non-Major Ports.

The MSDC was **constituted in May, 1997** to assess in consultation with State Governments, the future development of existing and new Minor Ports by the respective Maritime States either directly or through captive users and private participation.

46. 'Eat Right Jacket'

- Launched recently by **the Ministry of Health and Family Welfare**.
- These **jackets will be used by the field staff**.
- **Features:** This jacket has a smart design to hold tech devices like tablets/smart phone, a QR code and RFID tag for identification and tracking.
- **Significance:** Apart from providing safety to field staff on duty, this would bring in efficiency, professionalism and transparency in food safety administration and bring in a sense of ownership & visibility of FSOs.

47. 'Eat Right Jhola'

- Launched recently by **the Ministry of Health and Family Welfare**.
- It is **a reusable cloth bag** shall replace plastic bags for grocery shopping in various retail chains.
- These cloth bags are being **provided on rental basis through a private textile rental service company**.

48. 2nd phase of GOAL: Digital Skill Training Programme for Tribal Women

- Jointly **launched by Ministry of Tribal Affairs and Facebook**.
- **Aims** at encouraging, inspiring and guiding tribal women from across India to become local level digitally literate leaders.
- The program will **give technical support to the socially and economically marginalized women** for their needs to succeed, using the technology they may otherwise have not had access to.

49. Tulagi Island

- It is a part of Solomon Islands.
- A Chinese company recently signed an agreement to lease this entire island after Beijing recruited the Pacific nation as its latest ally in the strategically important region.
- Tulagi, an island about two square kilometres (0.8 square miles) with a population of 1,200, is the site of a former Japanese naval base and was the scene of fierce fighting in World War II.



50. Article 161

- Deals with Power of Governor to grant pardons, etc, and to suspend, remit or commute sentences in certain cases.
- It states, the Governor of a State shall have the power to grant pardons, reprieves, respites or remissions of punishment or to suspend, remit or commute the sentence of any person convicted of any offence against any law relating to a matter to which the executive power of the State extends.

51. Air quality Index

- Air Quality Index (AQI) is a tool for effective dissemination of **air quality information to people**.
- **There are six AQI categories**, namely Good, Satisfactory, Moderately polluted, Poor, Very Poor, and Severe.
- **AQI will consider eight pollutants** (PM10, PM2.5, NO2, SO2, CO, O3, NH3, and Pb) for which short-term (up to 24-hourly averaging period) National Ambient Air Quality Standards are prescribed.

52. Mount Kilimanjaro

Context: Differently-abled man from Ernakulam district scales **Mount Kilimanjaro**.

Mount Kilimanjaro is **a dormant volcano in Tanzania**.

- It is **the highest mountain in Africa**, with its summit about 4,900 metres (16,100 ft) from its base, and 5,895 metres (19,341 ft) above sea level.
- The first people known to have reached the summit of the mountain were **Hans Meyer and Ludwig Purtscheller**, in 1889.



53. Saharan Silver Ant

- Saharan silver ant is **the fastest of the world's 12,000 known ant species**.
- It clocks a blistering 855 millimetres — nearly a metre — per second.
- It covers 108 times its own body length per second, a feat topped only by two other creatures, the Australian tiger beetle and the California coastal mite.



54. Web tax in Italy

- Italy has approved a new tax on digital companies as part of its 2020 draft budget.
- The levy will oblige firms such as Facebook, Google and Amazon, to pay a 3% levy on Internet transactions.

55. Mt Paektu

- Mount Paektu or **Changbai** (in Chinese) is a volcanic mountain that last erupted over 1,000 years ago.
- Situated at **the border between Democratic People's Republic of Korea and China**.
- At a height of about 9,000 feet, **it is also the highest peak in the Korean peninsula**.
- A reference to the mountain is made in **the South Korean national anthem as well**.

56. Acute Flaccid Myelitis (AFM)

Context: AFM, being referred to as a *'polio-like condition'*, has been tested negative for the polio virus, as per the Centers for Disease Control and Prevention (CDC) of the United States.

What is AFM?

- It is a neurological illness. It is a weakness or paralysis of the limbs. In case of myelitis, there's inflammation of the spinal cord.
- The symptoms of AFM, particularly, weakening of limbs, are similar to polio.
- While the exact hasn't been identified, the CDC believes that some virus may be the behind it.

57. EX EASTERN BRIDGE-V

It is a ***bilateral joint exercise between Indian Air Force and Royal Air Force Oman (RAFO)***.

The exercise will enhance inter-operability during mutual operations between the two Air Forces and will provide an opportunity to learn from each other's best practices.

58. World's First Graduate-level Research-based AI University

- To be set up in UAE.
- Named after Sheikh Mohamed bin Zayed Al Nahyan, Crown Prince of Abu Dhabi.
- This university will enable graduate students, governments and businesses to advance the artificial intelligence field.

59. Community Policing Scheme 'Prahari'

- **Launched** by Delhi Police.
- To prevent crime and maintain law and order in Delhi.
- Under this scheme, ***civil personnel such as chowkidars and security guards deployed in the commercial and VIP areas will act as the eyes and ears of the police.***
- **Significance:** The move will help to bring professionalism in the work of security guards by giving them appropriate training and enabling frequent police-Prahari interaction and co-operation.

60. What is Merchant Discount Rate?

- It is a ***fee charged from a merchant by a bank for accepting payments from customers through credit and debit cards in their establishments.***

MDR compensates the card issuing bank, the lender which puts the PoS terminal and payment gateways such as Mastercard or Visa for their services.

MDR charges are usually shared in pre-agreed proportion between the bank and a merchant and is expressed in percentage of transaction amount.

Why in News? In a move that may boost digital payments, businesses with an annual turnover of more than ₹50 crore will have to mandatorily offer electronic mode of payments to their customers from 1 November. Besides, no charges or merchant discount rate (MDR) will be levied on either customers or merchants.

61. Danx- 19

- Second edition of ***Defence of Andaman & Nicobar Islands 2019 (DANX-19)***, a large scale joint services exercise, was recently conducted by ***Andaman and Nicobar Command (ANC)***.
- Carried out by ***Indian Army, Navy, Air Force and Coast Guard.***
- **Objective:** to validate defensive plans of Headquarters ANC towards pursuance of the Command's responsibility, namely ensuring territorial integrity of the A&N Islands.

62. World's First Female Spacewalking Team makes history

- The world's ***first female spacewalking team*** made history high above Earth on 18th October, floating out of the International Space Station to fix a broken part of the power network.
- The team included ***astronauts Christina Koch and Jessica Meir.***

- This marked **the first time in a half-century of spacewalking that a woman floated out without a male crewmate.**

63. Shirui Lily Festival

Context: Shirui Lily Festival inaugurated in Manipur.

- **Shirui Lily Festival is an annual five-day State festival celebrated in Ukhrul district to** spread awareness about the endangered state flower 'Shirui Lily' as well as to promote Ukhrul district as a potential tourist destination in Manipur.
- The festival was celebrated by the locals in their own level till 2016, when the State Government in 2017 declared that Shirui Lily festival would be celebrated in state level.
- **Shirui Lily, or *Lilium mackliniae*, is the State Flower of Manipur** found only in the upper ranges of Shirui Hills in Ukhrul district of Manipur.

64. National Tiger Conservation Authority (NTCA)

It is **a statutory body under the Ministry of Environment, Forests and Climate Change.**

Constituted under enabling provisions of **the Wildlife (Protection) Act, 1972, as amended in 2006**, for strengthening tiger conservation, as per powers and functions assigned to it under the said Act.

Composition: Set up **under the Chairmanship of the Minister for Environment and Forests.** The Authority will have eight experts or professionals having qualifications and experience in wildlife conservation and welfare of people including tribals, apart from three Members of Parliament of whom two will be elected by the House of the People and one by the Council of States.

Functions of NTCA are as follows:

1. Ensuring normative standards in tiger reserve management.
2. Preparation of reserve specific tiger conservation plan.
3. Laying down annual/ audit report before Parliament.
4. Instituting State level Steering Committees under the Chairmanship of Chief Minister and establishment of Tiger Conservation Foundation.
5. According approval for declaring new Tiger Reserves.

65. What are meteor showers? Why they happen on an annual basis?

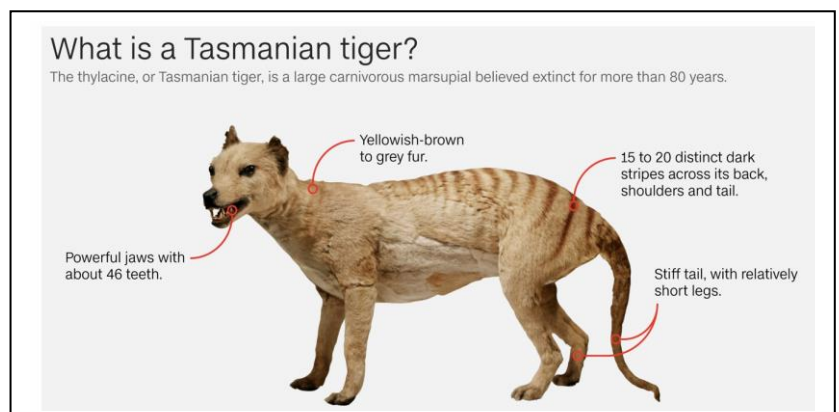
Meteors are bits of rock and ice that are ejected from comets as they manoeuvre around their orbits around the sun.

Meteor showers, on the other hand, are witnessed when Earth passes through the trail of debris left by a comet or an asteroid. When a meteor reaches the Earth, it is called a **meteorite** and a series of **meteorites** when encountered at once, is termed as a meteor shower.

66. Thylacine

Popularly known as the **Tasmanian tiger**, it is a large striped carnivore.

Why in News? It was believed to have gone extinct over 80 years ago -- but newly released Australian government documents show sightings have been reported as recently as two months ago.



67. Bhashan char Island

Context: Rohingyas will be relocated to *the Bhashan Char* from early next month.

Authorities concerned, especially the Bangladesh Navy, have prepared the Bhashan Char for rehabilitation of at least one lakh Rohingyas.

Location: Bhashan Char is located in the estuary of the Meghna river.

It falls in *an ecologically fragile area prone to floods, erosion and cyclone.*

68. Defence Acquisition Council (DAC)

What is it? To counter corruption and speed up decision-making in military procurement, the government of India in 2001 decided to set up an integrated DAC. It is *headed by the Defence Minister.*

Objective: The objective of the DAC is to ensure expeditious procurement of the approved requirements of the Armed Forces, in terms of capabilities sought, and time frame prescribed, by optimally utilizing the allocated budgetary resources.

Functions: The DAC is responsible to give policy guidelines to acquisitions, based on long-term procurement plans. It also clears all acquisitions, which includes both imported and those produced indigenously or under a foreign license.

69. Defence Technologies and Trade Initiative (DTTI)

It came about to expedite scope of *cooperation between partner countries on defence technology that become narrow due to presence of differing bureaucratic processes and legal requirements.*

Essentially, DTTI is an initiative to provide *increased US senior level oversight and engagement to get beyond these obstacles.*

DTTI initiative is led by Undersecretary of Defence for Acquisition and Sustainment from US and Secretary for Defence Protection from India.

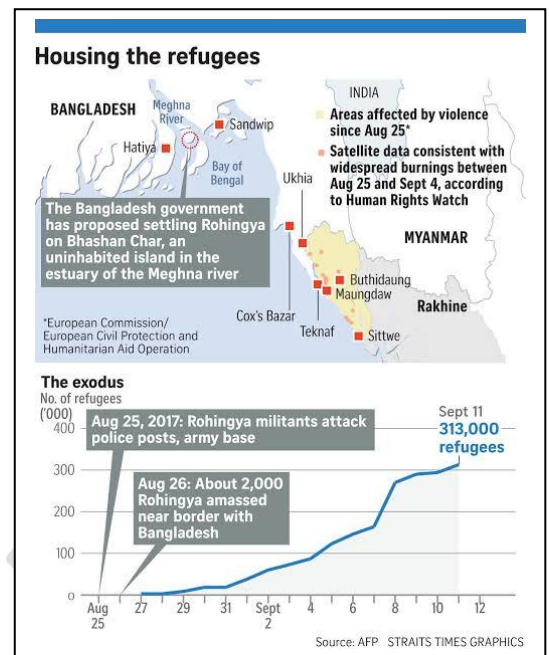
The aim of DTTI is to bring sustained leadership focus to the bilateral defence trade relationship and create opportunities for co-production and co-development of defence equipment.

70. Siachen Glacier

Context: The *Siachen glacier* is “now open” for tourists and tourism.

Key facts:

- Lies in the **Karakoram Range system** which is a part of western Himalayas.
- Lies to the **south of the zone that separates Eurasian Plate** with the Indian Plate, which is the result of convergence boundary interaction in geographical terms.
- It is the **highest battle field** in the world and lies on LoC (Line of Control) between India and Pakistan. It has been continuously contested by Pakistan as its own part which has led to militarisation of the glacier.
- After the Indo-Pakistan war in 1971, an agreement was signed between the two countries in 1972, which came to be known as the **Shimla Agreement**, but it failed to clearly mention who controls the glacier.
- However, in 1984, the Pakistan army tried to enter the glacier, forcing India to launch a military operation known as **“Operation Meghdoot”** and since then we have control over the glacier. A ceasefire agreement was signed between India and Pakistan in 2003
- The glacier is the source of many rivers including **Nubra River**, a tributary of Shyok, which is a part of the Indus River System.
- Siachen Glacier also boasts of the **world’s highest helipad built** by India at Point Sonam, to supply its troops. India also installed the world’s highest telephone booth on the glacier.



- The region is also a home to rare *species* of snow leopard, brown bear etc which may be affected by military presence. This has led to talks in international forums about creating a “Peace Park” in the area and demilitarise it.

71. Palm Oil Imports

Context: India’s apex oil trade body *Solvent Extractors’ Association of India (SEA)* has issued a short advisory asking its members, including importer-crushers and processors, **to avoid importing palm oil from Malaysia.** This is in line with the Union Government’s strong objections to Malaysia’s “unprovoked” remarks and criticism on **India’s move to abrogate Article 370 in Jammu and Kashmir.**

Key facts:

1. India’s total annual palm oil import is approximately 9 million tonne out of which around 3-3.5 million tonne is imported from Malaysia and rest from Indonesia, another major palm oil producing country.
2. Palm oil accounts for almost two-thirds of the country’s total edible oil imports.

72. US-India Strategic Partnership Forum (USISPF)

It is **a non-profit organization**, with the primary objective of strengthening the India-US bilateral and strategic partnership through policy advocacy in the fields of economic growth, entrepreneurship, employment-creation, and innovation.

73. No Assam govt jobs for those with more than two children

The **Assam Cabinet** has decided that **no government jobs will be given to persons having more than two children after January 1, 2021.**

In September 2017, the Assam Assembly had passed the **‘Population and Women Empowerment Policy of Assam’** that specified that job candidates with two children only would be eligible for government employment and the existing government staff were to strictly follow the two children family norm.

74. Deepotsav Mela

The **Uttar Pradesh government** has granted the status of **State fair to the Deepotsav Mela** to be held in Ayodhya during Deepavali.

The festival, in which over **5.5 lakh lamps will be lit** on October 26, will be held at an estimated cost of ₹133 crore.

75. Khadi and Village Industries Commission (KVIC)

It is **a statutory body** established by an Act of Parliament (Khadi and Village Industries Commission Act of 1956). In April 1957, it took over the work of former **All India Khadi and Village Industries Board.**

The Commission has three main objectives which guide its functioning. These are:

1. The Social Objective – Providing employment in rural areas.
2. The Economic Objective – Providing salable articles.
3. The Wider Objective – Creating self-reliance amongst people and building up a strong rural community spirit.

76. India’s Highest Altitude All-Weather Bridge

Col Chewang Rinchen Setu is **India’s highest altitude all-weather permanent bridge.**

Located in eastern Ladakh at nearly 45 km from the country’s border with China.

- The bridge is **strategically located on the 255-km Darbuk-Shayok-Daulat Beg Oldie (DSDBO) section of the road between Leh and Karakoram Pass.**
- Built on **Shyok River.**
- The bridge is sandwiched between strategic **Karakoram and Chang Chenmo ranges.**

77. BrahMos

- **Fastest cruise missile** of its class in the world.
- It **flies almost three times the speed of sound at Mach 2.8 and has a range of 290 km.**
- **Jointly developed** with Russia and is named after the rivers Brahmaputra and Moskva in Russia.
- **Range of the BrahMos missile can be extended up to 400 km** as certain technical restrictions were lifted after India became a full member of **the Missile Technology Control Regime or MTCR in 2016.**

78. Snow Leopard

Context: *First National Protocol to Enumerate Snow Leopard Population* in India Launched.

Launched on the occasion of **International Snow Leopard Day.**

Key facts:

- Listed as **Vulnerable** on the IUCN Red List of Threatened Species.
- **Inhabit alpine and subalpine zones** at elevations from 3,000 to 4,500 m (9,800 to 14,800 ft).
- **State animal of Himachal Pradesh** and the **National Heritage Animal of Pakistan.**
- **Habitat extends through twelve countries:** Afghanistan, Bhutan, China, India, Kazakhstan, Kyrgyzstan, Mongolia, Nepal, Pakistan, Russia, Tajikistan, and Uzbekistan. **China contains as much as 60% of all snow leopard habitat areas.**
- Listed on **Appendix I of the Convention on International Trade of Endangered Species (CITES).**
- **Global Snow Leopard Forum, 2013:** 12 countries encompassing the snow leopard's range (Afghanistan, Bhutan, China, India, Kazakhstan, Kyrgyz Republic, Mongolia, Nepal, Pakistan, Russia, Tajikistan, and Uzbekistan).
- **Bishkek Declaration:** To protect the species and its environment.
- **Global Snow Leopard and Eco-system Protection Program:** It is a joint initiative of range country governments, international agencies, civil society, and the private sector. Goal — secure the long-term survival of the snow leopard in its natural ecosystem.

79. GIA – Group of Intellectuals and Academicians

GIA is **a group of empowered Indian women, intellectuals & academicians working together** to elevate the position of women in our society, committed to work in the service of the nation.

- **Composition:** National leaders, President Awardees, distinguished Supreme Court lawyers, industrialists, professors of prestigious institutions, principals of colleges, directors of institutes, internationally renowned artists/dancers, sportswomen, writers, poets, IT professionals and many others from various fields.
- **Aim:** to become the voice of the most silent and underprivileged section of our nation with legal and academic support.

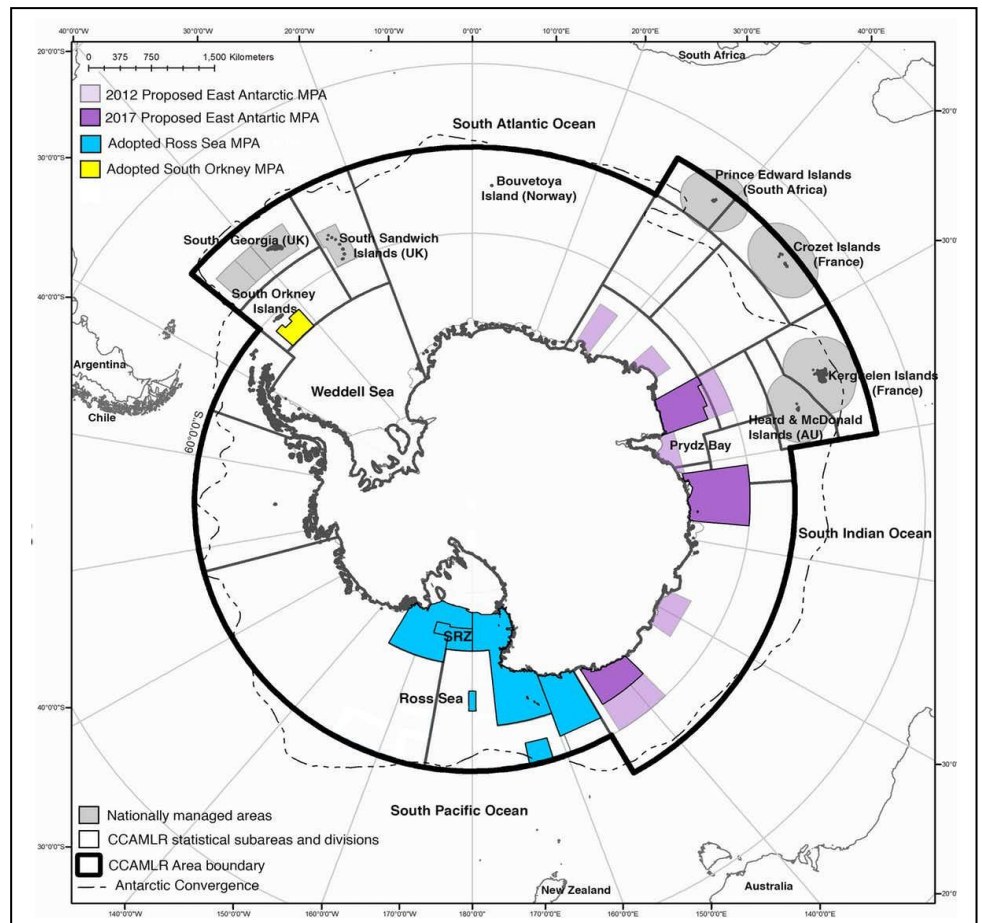
Why in News? GIA delegation presents 'Report from Ground Zero' on Jammu, Kashmir & Ladakh post-Article 370 scrapping.

80. East Antarctic Marine Protected Area

Context: A push by Australia and France to create a massive ocean sanctuary in east Antarctica is in doubt as nations meet in Hobart to discuss the plans, with China and Russia opposing.

Key facts:

- This protected area was **proposed by Australia and the European Union**.
- The area would conserve examples of biodiversity in **the high latitudes of the Indian sector of the Southern Ocean**.
- The area contains distinctive deep water flora and fauna and supports important ecosystem roles, such as feeding areas for marine mammals, penguins and other seabirds.
- **Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR)** already has two existing **marine protected areas (MPAs)**, one on the South Orkney Islands southern shelf (established in 2009), and the other in the Ross Sea region (established in 2016).



81. Chenani-Nashri tunnel renamed

Context: Renamed after Dr Syama Prasad Mookerjee.

Key facts:

- The 9km Chenani Nashri Tunnel is on **NH 44 in Jammu & Kashmir**.
- It is **the longest such state of art tunnel in the country**, connecting Udhampur to Ramban in Jammu.
- It is **the world's sixth road tunnel with a transverse ventilation system enabled and controlled by ABB software**.
- It also boasts features like Integrated Traffic Control System (ITCS), Video Surveillance System, FM Rebroadcast System, Entrance Detection Control System and Active Firefighting System.



82. Open General Export Licences (OGELs)

Government has approved issuance of two **open general export licences (OGELs)** for export of certain parts and components as well as intra-company transfer of technology to select countries.

What is it?

1. The OGEL will be a one-time export licence to be granted to a company for a specific period which will be two years initially.
2. The application for grant of OGEL will be considered by the Department of Defence Production (DPP) on a case-to-case basis.
3. The countries allowed under the OGELs are: Belgium, France, Germany, Japan, South Africa, Spain, Sweden, UK, USA, Canada, Italy, Poland and Mexico.

4. For acquiring the licences, the applicant is mandatory to have Import-Export certificate. The quarterly & end of the year reports on all the transactions done under OGELs should be submitted to DPP for examination and post-export verification.
5. Complete aircraft or complete unmanned aerial vehicles (UAVs) and any components specially designed or modified for UAVs are excluded under this licence.

83. Thotlakonda Monastery

Why in News? The *mahastupa of the 2,000-year-old Buddhist heritage site of Thotlakonda*, reconstructed in 2016 by the state archaeology department, has collapsed during the recent torrential rainfall.

Key facts:

- **Thotlakonda Buddhist Complex** is situated near Visakhapatnam in Andhra Pradesh, India.
- Thotlakonda was well within the influence of ancient *Kalinga*, which was **an important source of dissemination of Buddhism to Sri Lanka and various parts of Southeast Asia**.
- The excavations have established **the existence of a Hinayana Buddhist complex which flourished 2000 years ago**.
- The excavations reveal **Satavahana dynasty** lead and **Roman silver coins** indicating foreign trade; terracotta tiles, stucco decorative pieces, sculptured panels, miniature stupa models in stone, and Buddha footprints were also found.
- The excavations also yielded **twelve inscriptions in the Brahmi script**.

84. Sarayu River

Why in News? 5.50 lakh earthen lamps on the banks of *Saryu River* has helped Uttar Pradesh enter into the Guinness Books of World Records for **lightening of record number of diyas on any occasion**.

Key facts:

- Sarayu **flows through Uttarakhand and Uttar Pradesh**. This river is of ancient significance, **finding mentions in the Vedas and the Ramayana**.
- The Sarayu originates from **Lake Mansarovar in the Himalayas** and is also known as the **Ghaghra and the Manas Nandini**. It merges with the Ganga in Bihar's Saran district.
- It **forms at the confluence of the Karnali and Mahakali in Bahraich District**.
- Ayodhya is situated **on the banks of this river**.
- It flows through **the Kumaon Himalayas**.

85. Kyarr- first Super Cyclone in Arabian Sea in 12 years

Kyarr is **the ninth super cyclone to have developed in the North Indian Ocean**, after Super Cyclone *Gonu* in 2007.

- It is **the first Super Cyclonic storm in Arabian Sea in last 12 years** after Cyclone Gonu ravaged the Oman coast in 2007.
- **What is Super Cyclonic Storm?**
- Intense low pressure system represented on a synoptic chart by more than four closed isobars at 2 hPa interval and in which the wind speed on surface level is 120Kts. And above.

86. Shakti-2019

- It is **a biennial joint exercise between India and France**.
- Commenced in 2011, it is now **conducted alternately in India and France**.
- The 2019 edition will be held in **Rajasthan**.
- The joint exercise will **focus on Counter Terrorism operations in backdrop of semi-desert terrain under United Nations Mandate**.

87. INS Baaz

- It is **the southernmost air station of the Indian Armed Forces**.

- **Located at Campbell Bay on the Great Nicobar island**, the southernmost and largest island of the Nicobar island.
- This island is also **the location of the Indira Point and is less than 250 km by sea from Banda Aceh in Indonesia**.
- **The primary functions of the INS Baaz include** helping build Maritime Domain Awareness by providing information via airborne surveillance using aircraft and Unmanned Aerial Vehicles (UAVs).
- The location has been described as **India's "window into East and Southeast Asia", and is in close vicinity of the Six Degree Channel, also called the Great Channel**, one of the Indian Ocean's busiest shipping lines, carrying strategic cargo to East Asian countries.
- It is also **close to the Strait of Malacca**.
- It is a **part of the Andaman and Nicobar Command, the only tri-services formation of the Indian Armed Forces that was started in 2001**.

88. What is Uluru?

- It is **an ancient sandstone monolith in Central Australia**.
- The rock has a circumference of 9.4 km, and its 1,140-foot summit — taller than Eiffel Tower — has been a popular climbing destination.
- Uluru is **considered sacred by Australia's indigenous Anangu people**.

Why in News? It was permanently closed to climbers recently to meet the wishes of Aboriginal people who hold the red monolith sacred.

89. What is Parole?

Parole is **a system of releasing a prisoner with suspension of the sentence**. The release is **conditional**, usually subject to behaviour, and requires periodic reporting to the authorities for a set period of time.

1. **How is it different from Furlough?** Furlough is given in case of long-term imprisonment. While furlough is seen as a matter of right, to be granted periodically irrespective of any reason and merely to enable the prisoner to retain family and social ties, parole is not a matter of right and may be denied to a prisoner even when he makes out a sufficient case.
2. **Granting authority:** Parole and furlough are covered under **the Prison Act of 1894**. Since **prison is a subject of the state**, the Prison Act of the particular state government defines the rules under which parole is granted. **Parole is granted by the state executive**. If parole is rejected, the convict can move the High Court challenging the order of the competent authority. Also, apart from regular parole, **the superintendent of a jail can also grant parole up to a period of seven days in emergent cases**.

90. Strategic Partnership Council (SPC)

1. Agreement for **the Strategic Partnership Council (SPC)** between India and Saudi Arabia has been signed.
2. India will become **the fourth country with which the Kingdom** has formed a strategic partnership, **the others being the UK, France and China**.
3. **The SPC will have two parallel tracks:** Political, security, culture and society, headed by both countries' foreign ministers; and economy and investment, headed by India's commerce and industry minister and the Saudi energy minister.

91. SEED Awards

Context: Fourteen start-ups selected for 2019 SEED Awards.

1. The awards, an annual affair, are granted to organisations working on sustainable development.
2. The award highlights the contribution of green and social enterprises to advancing the Sustainable Development Goals (SDGs).
3. Every year, awards are decided under various categories. This year's categories includes SEED Low Carbon, SEED Africa Awards, SEED South Africa Climate Adaptation Awards and SEED Gender equality award.

What is SEED?

- Founded by **the United Nations Environment Programme (UN Environment), the United Nations Development Programme (UNDP) and International Union for Conservation of Nature (IUCN)** at the **2002 World Summit on Sustainable Development in Johannesburg**.
- It is **a global partnership for action on sustainable development and the green economy**.
- This initiative works in Asian and African countries including Ghana, India, Indonesia, South Africa, Thailand and Uganda and supports small and growing enterprises with business and capacity-building support.

SEED was **originally conceived as an acronym for Supporting Entrepreneurs for Environment and Development**.

92. Malware

Context: **Nuclear Power Corporation of India Ltd. (NPCIL)** has confirmed that a malware had infected its system at **the Kudankulam Nuclear Power Plant (KKNPP)**.

It was infected by **DTrack, a North Korean virus**.

What is a Malware?

It is short for "**malicious software**," also known as malicious code or "**malcode**." It is code or software that is **specifically designed to damage, disrupt, steal, or in general inflict some other "bad" or illegitimate action on data, hosts, or networks**.

Some of the more **commonly known types of malware are** viruses, worms, Trojans, bots, ransomware, backdoors, spyware, and adware.

93. Mekong River

Why in News? Mekong's water levels fall as new Laos dam begins operations.

Key facts:

The Mekong **originates in Tibet** and flows through China, Myanmar, Laos, Thailand, Cambodia and Vietnam.



94. Indian Brain Atlas

Context: IIIT-Hyderabad creates the **first Indian brain atlas**. It is named as **IBA100**. Other brain atlases include Chinese, Korean and Caucasian.

The **first digital human brain atlas was created by the Montreal Neurological Institute (MNI)**.

Key facts:

- The atlas reveals that **Indian brain is smaller in height, width, and volume compared to the western and eastern populations**.
- This study will **help in the early diagnosis of brain diseases like Alzheimer's**.
- The India-specific brain atlas was **created by using the MRI scans** of 50 individuals of different genders.

95. Cyclone Maha

- The depression over Arabian Sea has intensified into a cyclonic storm. It is named **Maha**. The name is given by Oman.
- This year, **Maha will be the fourth Cyclone in Arabian Sea** to form after Vayu, Hikaa, Kyaar.