INSIGHTSIAS

CURRENT AFFAIRS

DECEMBER 2018

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GENERAL STUDIES - I

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

1. HORNBILL FESTIVAL

- The Union Home Minister inaugurated the hugely popular **Hornbill Festival 2018** in **Kohima**, coinciding with the **Formation Day of Nagaland.**
- Hornbill Festival offers unique opportunity for states to interact and exhibit their cultural heritage in the true spirit of **"Ek Bharat, Shrestha Bharat".**

Significance of Nagaland Geographically:

- Nagaland is geographically located at the **vantage point**.
- **It is the gateway to the South-East Asia.**
- North-East is the pivot of our Government's **'Act East' Policy**.

Hornbill Festival:

- Nagas celebrate this festival to revive, protect, sustain and promote the richness of the Naga heritage and traditions.
- It occurs during **1 – 10 December on an annual basis**.
- It is also called the **"Festival of Festivals"**.
- The festival pays tribute to Hornbill, the most admired and revered bird for the Nagas for its qualities of alertness and grandeur.
- It is organized by State Tourism and Art & Culture Departments and also supported by Union Government.
- Hornbill Festival was established on 1st December 1963 and was inaugurated by the then President Dr. S Radhakrishnan.

Source: PIB

2. MAYURBHANJ CHHAU

What to study?

- *For Prelims and Mains: About Mayurbhanj Chhau.*

About Mayurbhanj Chhau:

- Mayurbhanj Chhau dance form has a long history. Originally *a tribal dance*, which originated from the forests of *Mayurbhanj, Odisha* in the 18th century, it got the status of *a martial art form* in the 19th century.
- Slowly & steadily Mayurbhanj Chhau left its martial character and mellowed. Under the Royal Patronage it received proper attention & direction and showed a bright future and utmost perfection as a dance of excellent style in the field of eastern art and culture of India.

Background:

- Chhau is found in *three styles named after the location where they are performed*, i.e. the *Purulia Chau of Bengal, the Seraikella Chau of Jharkhand, and the Mayurbhanj Chau of Odisha*.
- The most prominent difference among the three subgenres is regarding the use of masks. While, *the Seraikela and Purulia subgenres of Chhau use masks during the dance, the Mayurbhanj Chhau uses none*.

Sources: the hindu.

3. KAMSALE DANCE

What to study?
- *For Prelims and Mains: Kamsale dance- key facts and significance.*

About Kamsale:
- Kamsale is known as *Beesu Kamsale*. It is *a unique folk art performed by the devotees of God Mahadeshwara*.
- Kamsale also refers to *a brass made musical instrument*. Its origin is traced to the Mythological period. The kamsale comprises a cymbal in one hand and a bronze disc in the other and is used to produce a rhythmic clang.
- It is *a group dance form performed by the menfolk in villages in the Mysore, Nanjanagudu, Kollegala and Bangalore areas* in Karnataka.
- Kamsale is used both *as an instrument and also as a prop by the dancers themselves*.
- The Kamsale nritya is closely connected to a tradition of Male Mahadeshwara, or Lord Shiva worship by the *haalu kuruba community*. Most of the dancers are also drawn from this community.
- The dance is performed to rhythmic and melodious music that is sung in praise of "Lord Male Mahadeshwara" or "Shiva". The dance is *a part of a 'diiksha'*, or oath and is taught by teacher or spiritual leader.

Sources: the hindu.

4. HERITAGE PARK FOR HINDUS, BUDDHISTS IN ELUM VALLEY IN PAK

What to study?
- *For Prelims: About Elum Valley and its geographical location.*
- *For Mains: Significance and concerns over the proposed heritage park.*

Context: The *Khyber Pakthunkhwa province in Pakistan is planning to construct a heritage park in Elum Valley*, which carries a historical significance to both the Hindus and the Buddhists, to promote religious tourism.
- Under the project, the Elum Valley would be made a safe abode for the followers of Hinduism and Buddhism and as well as for tourists visiting the heritage park.
- Under the project, fencing of the entire Elum Valley would be done and a separate track would be constructed in the heritage park.

Elum Valley and its significance:
- Elum Valley is located between the Swat and Buner districts in the province, Elum Valley has been a site of divinity and pilgrimage for both the Hindu and the Buddhist communities.
- According to Hindu belief, Lord Ram spent time meditating there during his 14 years of exile, while Buddhists believe it to be the site where a previous incarnation of Lord Buddha gave up his life.

Sources: the hindu.

5. KARMAPA NOW A DOMINICAN CITIZEN

What to study?
- *For Prelims and Mains: About Karma Kagyu school and its significance, issue over denial of visa to Karmapa.*

Context: The *17th Karmapa, Ogyen Trinley Dorje*, who has been out of India since May 2017, has taken the citizenship and passport of Dominica, a Caribbean island country. The passport of Dominica allowed Karmapa the visa-free entry into many Commonwealth countries.

About Karma Kagyu school:
- The Karma Kagyu lineage belongs to one of the *4 main schools of Tibetan Buddhism*. As a lineage of direct oral transmission it places particular emphasis on meditation and the realization of the direct experience of mind gained through the guidance of a teacher.

- The Karma Kagyu lineage has its roots in the teachings of the historical Buddha and developed into a practical way to enlightenment in India and Tibet.
- For over a 1000 years Buddhist Masters (Mahasiddhas) such as Naropa and Maitripa in India as well as the famous Tibetan Yogis Marpa and Milarepa shaped the lineage as a practical everyday practice for lay people.

Karmapa:
- Since the 12th century the Karmapas have been the heads of the Karma Kaygü lineage and responsible for the continuation of this direct transmission lineage.

Sources: the hindu.

6. PRAYAGRAJ KUMBH MELA 2019

What to study?
- *For Prelims: About Kumbh Mela- places where it is held, mythological significance and Astrological significance.*
- *For Mains: Crowd Management during such huge gatherings- challenges and solutions.*

Context: Prayagraj Kumbh Mela 2019, a religious fair that will be held from January 15, 2019 to March 4, 2019.

About Kumbh Mela:
- The Kumbh Mela (the festival of the sacred pitcher) is anchored in Hindu mythology. It is *the largest public gathering and collective act of faith, anywhere in the world*. The Mela draws tens of millions of pilgrims over the course of approximately 55 auspicious days to bathe at the sacred *confluence of the Ganga, the Yamuna, and the mystical Sarasvati*. Primarily, this congregation includes Ascetics, Saints, Sadhus, Sadhvis, Kalpvasis, and Pilgrims from all walks of life.

Celebration:
- Kumbh Mela is a religious pilgrimage that is *celebrated four times over a course of 12 years*. The *geographical location of Kumbh Mela spans over four locations in India* and the Mela site keeps rotating between one of the four pilgrimage places on four sacred rivers as listed below:
  1. *Haridwar* on the Ganges in Uttarakhand.
  2. *Ujjain* on the Shipra in Madhya Pradesh.
  3. *Nashik* on the Godavari in Maharashtra.
  4. *Prayagraj* at the confluence of the Ganges, the Yamuna, and the mythical Sarasvati in Uttar Pradesh.

Selection of site:
- Each site's celebration is based on a distinct set of astrological positions of the Sun, the Moon, and the Jupiter. The celebrations occur at the exact moment when these positions are fully occupied, as it is considered to be the holiest time in Hinduism.

Sources: the hindu.

7. 'ADOPT A HERITAGE' PROJECT

What to study?
- *For Prelims: Adopt a Heritage, Monument Mitras and World Tourism Day.*
- *For Mains: Need for conservation of heritage sites.*

Context: The government recently handed over a Memorandum of Understanding to Resbird Technologies under the *'Adopt a Heritage' project* for the development of a mobile audio guide application for five iconic sites.

The five iconic sites are as follows:
- Rajasthan – Amer Fort.
- Assam – Kaziranga.
- Goa – Colva Beach.
- Kerala – Kumarakom.
- Bihar – Mahabodhi Temple.

Significance:

- The shortlisted agencies would become 'Monument Mitras' through the innovative concept of 'Vision Bidding', which will give them the opportunity to associate their CSR activities with a heritage site if the Vision Bid is selected.

Adopt a Heritage Project:

- *What is it?* The **'Adopt A Heritage: Apni Dharohar, Apni Pehchaan'** of Ministry of Tourism was launched on World Tourism Day i.e. 27th September, 2017. This project is a key initiative of Ministry of Tourism in close collaboration with Ministry of Culture and Archeological Survey of India (ASI), to develop the heritage sites / monuments and making them tourist-friendly to enhance the tourism potential and their cultural importance in a planned and phased manner.

- *How it works?* The project plans to entrust heritage sites/monuments and other tourist sites to private sector companies, public sector companies and individuals for the development of tourist amenities. The project aims to develop synergy among all partners.

Archaeological Survey of India –
- **Founder: Alexander Cunningham**
- The **Archaeological Survey of India (ASI)**, under **Ministry of Culture**, is the premier organization for the archaeological researches and protection of the cultural heritage of the nation.
Prime Objective of ASI:
- The prime objective is maintenance of ancient monuments and archaeological sites and remains of national importance.
- It regulates all archaeological activities in the country as per the provisions of the **Ancient Monuments and Archaeological Sites and Remains Act, 1958** along with the **Antiquities and Art Treasure Act, 1972.**

- *Monument Mitras:* Successful bidders selected for adopting heritage sites / monuments by the Oversight and Vision Committee shall be called as Monument Mitras. The basic and advanced amenities of the tourist destinations would be provided by them. They would also look after the operations and the maintenance of the amenities. The 'Monument Mitras' would associate pride with their CSR activities.

Aim of the Project:

- The aim of the project is to **provide basic amenities that include cleanliness, public conveniences, safe drinking water, ease of access for tourists, signages, illumination, Wi-fi etc.**

- **Funding of the Project:**

- The project envisages involvement of Private/Public Companies/Organizations and Individuals to adopt Monuments, Natural Heritage Sites and other Tourist Sites, primarily under CSR. **No fund is given by Ministry of Tourism.**

Significance of this project:

- Adopt a Heritage project is meant to address the challenges that the Archaeological Survey of India and other government bodies are facing in operating tourism infrastructure at heritage sites. By allowing private players to build, operate and maintain "tourist-friendly" and "world class amenities at these sites, the expectation is that the project will boost domestic and international tourism.

Other Information:

- Archaeological Survey of India has identified 100 monuments as **"Adarsh Smarak"** for upgradation of existing facilities/amenities like Wi-Fi, cafeteria, interpretation centre, brail signage, modern toilets etc.

Sl.No.	Name of Monument	State
1.	Red Fort	Delhi
2.	Gandikota Fort	Andhra Pradesh
3.	Area surrounding Gangotri Temple and Trail to Gaumukh	Uttrakhand
4.	Mt. Stok Kangri Trek, Lakakh	Jammu and Kashmir
5.	Jantar Mantar	Delhi

6.	Surajkund	Haryana
7.	Qutub Minar	Delhi
8.	Ajanta Caves	Maharashtra
9.	Leh Palace, Leh	Jammu & Kashmir
10.	Hampi (Hazara Rama Temple)	Karnataka

(Q) Discuss the mandate, organizational structure and functioning of Archaeological Survey of India (ASI).

8. BUDDHIST SITE MUSEUM AT LALITGIRI IN ODISHA

What to study?
- *For Prelims: About Lalitgiri, Tantric Buddhism and key facts related.*
- *For Mains: Tantric Buddhism related key facts.*

Context: Buddhist site museum has been inaugurated at *Lalitgiri in Odisha*. Excavations at Lalitgiri have yielded ancient seals and inscriptions.
- Located in Cuttack district, *it will be the third site museum of the Bhubaneswar circle of the Archaeological Survey of India after Ratnagiri and Konrak*.

About Lalitgiri:
- It is a major Buddhist complex in the Indian state of Odisha comprising major stupas, 'esoteric' Buddha images, and monasteries (viharas), one of the oldest sites in the region.
- Together with the Ratnagiri and Udayagiri sites, Lalitagiri is part of Puspagiri University located on top of hills of the same names. The three complexes are known as the *"Diamond Triangle"*. Tantric Buddhism was practiced at this site.
- *Excavations at Lalitgiri* have yielded the remains of four monasteries, showing cultural continuity from the post-Mauryan period till the 13th century CE. The centre of attraction is a relic casket containing corporal remains found inside the Mahastupta.
- *Location:* It is hemmed between the Parabhadi and Landa sandstone hills in the standalone Assian hill range. It is situated in the Mahanga Tahsil in Cuttack district.

Sources: the hindu.

9. TANSEN SAMMAN

What to study?
- *For Prelims and Mains: About Tansen Samman, Tansen festival and Tansen.*

Context: Noted sitar player Manju Mehta has been conferred with the *'Tansen Samman'* for 2018 by the Madhya Pradesh government for her contribution in the field of music.

Key facts:
- The prestigious *'National Tansen Samman'* is a musical award *conferred to the exponents of Hindustani music*. This award carries a cash prize of Rs. 2 Lakh along with a memento.
- *The Tansen Music Festival is organised every year by Madhya Pradesh culture department* in the memory of Tansen, one of the greatest artists in Indian history. *It is held annually in Gwalior*.

About Tansen:
- He was a prominent figure of **Hindustani classical music**.
- He began his career and spent most of his adult life in the court and patronage of the Hindu *king of Rewa, Raja Ramchandra Singh* (1555–1592), where Tansen's musical abilities and studies gained widespread fame.
- This reputation brought him to the attention of the Mughal Emperor Akbar, who sent messengers to Raja Ramchandra Singh, requesting Tansen to join the musicians at the Mughal court.
- Akbar considered him as *a Navaratnas (nine jewels), and gave him the title Mian*, an honorific, meaning learned man.
- Tansen is remembered for his epic *Dhrupad compositions*, creating several new ragas, as well as for writing two *classic books on music Sri Ganesh Stotra and Sangita Sara*.

10. YEAR END REVIEW – 2018: MINISTRY OF TOURISM

Tourism Statistics:

- **Foreign Tourist Arrivals (FTAs)** during January – November 2018 were 93,67,424 as compared to 88,67,963 in January – November 2017 **(5.6% growth)**.
- During January – November 2018, 20,61,511 tourists arrived on **e-Tourist Visa** as compared to 14,56,615 during January – November 2017 **(41.5% growth)**.
- **Foreign Exchange Earnings (FEEs)** during January – October 2018 were Rs. 1,58,846 Crore as compared to Rs. 1,41,965 Crore in January – October 2017 **(11.9% growth).**
- During 2017, the number of **Domestic Tourist Visits** to the States/UTs was 1652.5 million as compared as 1615.4 million in 2016, **showing growth of 2.3% in 2017 over 2016.**

Development of Tourism Infrastructure:

- Under the **Swadesh Darshan Scheme**, seven projects have been sanctioned during 2018-19.
- Integrated development of identified pilgrimage destinations is being undertaken under the 'National Mission on **Pilgrimage Rejuvenation and Spiritual, Heritage Augmentation Drive' (PRASHAD) Scheme**.
- **Ministry of Tourism provided Central Financial Assistance for infrastructure development during 2018-19 to Cochin Port Trust and Mormugaon Port Trust.**

'ADOPT A HERITAGE' Project:

- Ministry of Tourism in close collaboration with Ministry of Culture and Archaeological Survey of India (ASI) launched a "Adopt a Heritage Project".
- **Objective** – To provide world class facilities at the various natural/cultural heritage sites, monuments and other tourist sites.
- The project plans to entrust to private sector companies, public sector companies and individuals for the development of various tourist amenities.
- MoUs have been signed at the following sites:
  1. Area surrounding Gangotri Temple & Trail to Gaumukh, Uttarakhand
  2. Stok Kangri Trek, Ladakh, Jammu and Kashmir
  3. Red Fort, New Delhi
  4. Gandikota Fort, Andhra Pradesh
  5. Surajkund, Haryana
  6. Jantar Mantar, Delhi
  7. Qutub Minar, Delhi
  8. Ajanta Caves, Maharashtra
  9. Let Palace, Jammu & Kashmir
  10. Hampi (Hazara Rama Temple), Karnataka

Online Learning Management System:

- Ministry of Tourism launched an Online Learning Management System for creating skilled manpower to work as tourist facilitators.
- Objective – to enable the youth living in remotest part to skill themselves and facilitate tourists on Pan India basis.

Incredible India Mobile App:

- Ministry of Tourism launched Incredible India Mobile App on 27th September, 2018 to showcase India as a holistic destination, revolving around major experiences, like spirituality, heritage, adventure, culture, yoga, wellness and more.
- The app has been equipped with features to assist the traveler in each phase of their journey to India.

Legacy Vintage Hotel:

- Ministry of Tourism has introduced the concept of Legacy Vintage Hotels to cover hotels constructed/built with materials from heritage properties/buildings (i.e. properties or buildings which were built/constructed/erected prior to the year 1950).
- Such hotels will help recreate the ambience and atmosphere of the bygone era.

Indian Culinary Institute (ICI), Noida Campus:

- The **Indian Culinary Institute (ICI), Noida campus was inaugurated on 27th April, 2018 for starting culinary courses.**

- The campus also has an "**Indian Culinary Museum"** where the rich historical and diversified culinary objects and other literature will be displayed.
- **Objective** – The main objective of ICI is **to institutionalize a mechanism to support efforts intended to preserve, document, promote and disseminate information about Indian Cuisine, meet the sectoral requirement of specialists specific to Indian Cuisine, as also to promote 'Cuisine' as a Niche Tourism product.**

Source: PIB

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

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1. COMMEMORATIVE POSTAGE STAMP ON RAJKUMAR SHUKLA

What to study?
- *For Prelims and Mains: About Rajkumar Shukla and Champaran Satyagraha- significance and outcomes.*

Context: The government recently released a *Commemorative Postage Stamp on Rajkumar Shukla*.

Background:
- Department of Posts has been paying a tribute to eminent personalities who have made a significant contribution to public life especially freedom fighters. With this stamp, the Department has released 43 issues in the current calendar year.

Who was Rajkumar Shukla?
- In drawing the attention of Mahatma Gandhi to the plight of peasants suffering under an oppressive system established by European indigo planters in Champaran, Bihar, Rajkumar Shukla made a seminal contribution culminating in the launch of the Champaran Satyagraha in 1917 by Mahatma Gandhi.

About the Champaran Satyagraha:
- It was undertaken in the erstwhile undivided Champaran district in northern Bihar. Mahatma Gandhi went there in April, 1917 on learning about the abuses suffered by the cultivators of the district, forced into *growing indigo by British planters/estate owners*.
- Gandhi was so thoroughly persuaded by Rajkumar Shukla, an indigo cultivator from Champaran that he decided to investigate into the matter.
- Gandhi's method of inquiry at Champaran was based on surveys by the volunteers. The respondents who willingly gave statements should sign the papers or give thumb impressions.
- For those unwilling to participate, the reasons must be recorded by the volunteers. The principal volunteers in this survey were mostly lawyers like Babu Rajendra Prasad, Dharnidhar Prasad, Gorakh Prasad, Ramnawami Prasad, Sambhusaran and Anugraha Narain Sinha.

Outcomes:
- In June 1917, the British administration declared the *formation of a formal inquiry committee with Gandhi aboard*. The Government accepted almost all its recommendations. The principal recommendation accepted was complete *abolition of Tinkathia system*. It was a major blow to the British planters who became resentful. But they could not prevent the passage of Champaran Agrarian Act in Bihar & Orissa Legislative Council on March 4, 1918.
- It was in Champaran that Gandhi first met J. B. Kripalani and Rajendra Prasad; and it was through his work in Champaran that Gandhi attracted the attention (and admiration) of Vallabhbhai Patel and Mahadev Desai.

Sources: the hindu.

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2. PAIKA REBELLION

What to study?
- *For Prelims and Mains: Paika Rebellion- what when and why?*

Context: The government is planning to release the commemorative coin and postage stamp in memory of *Paika Rebellion*.

About Paika rebellion:
- Two-hundred years ago in 1817, a valiant uprising of soldiers led by Buxi Jagabandhu (Bidyadhar Mohapatra) took place in Khurda of Odisha. This is known as Paika rebellion.

Reason for the revolt:
- The Paikas were the traditional land-owning militia of Odisha and served as warriors. When armies of the East India Company overran most of Odisha in 1803, the Raja of Khurda lost his primacy and the power and prestige of the Paikas went on a decline. The British were not comfortable with these aggressive, warlike new subjects and set up a commission under Walter Ewer to look into the issue.
- The commission recommended that the hereditary rent-free lands granted to the Paikas be taken over by the British administration and this recommendation was zealously adhered to. They revolted against the British.
- However, the rebellion had several other underlying causes – like the rise in the price of salt, abolition of the cowrie currency for payment of taxes and an overtly extortionist land revenue policy.
- Although initially the Company struggled to respond they managed to put down the rebellion by May 1817. Many of the Paik leaders were hung or deported. Jagabandhu surrendered in 1825.

Sources: the hindu.

Topic: Post-independence consolidation and reorganization within the country.

1. GOA LIBERATION DAY

What to study?
- *For Prelims and Mains: Liberation of Goa and attainment of statehood.*

Context: Goa recently celebrated the 57th Liberation Day. On this day, Goa attained independence from the 450-years of Portuguese rule.

About Operation Vijay:
- *Portuguese were the first ones to colonize parts of India and were the last to leave*. The Portuguese invaded Goa in the year 1510.
- *Operation Vijay began on December 17, 1961*, when the then Prime Minister Jawaharlal Nehru ordered the invasion. With a force of almost 30,000, the Indian attack overpowered the ill-prepared Portuguese 3,000 member army. With minimal blood shed, the attack was successful and was carried forward to retrieve the other Portuguese-controlled areas, Daman and Diu.
- *At this point on December 18, the Portuguese Governor General Vassalo da Silva gave up control of the Union Territory of Goa, Daman and Diu*. Three days after the attack began, Goa finally became a part of India.

Referendum and Statehood:
- The *Goa Opinion Poll* was *a referendum held in the state of Goa*, India, on 16 January 1967, to decide the future of the Union Territory of Goa, Daman and Diu within the Indian Union.
- Although popularly called an opinion poll, it was in fact, a referendum, as the results of the poll were binding on the government of India.
- The referendum offered the people of Goa a choice between continuing as a union territory or merging with the state of Maharashtra.
- It is the **only referendum** to have been held in **independent India**.
- The people of Goa voted against the merger and Goa continued to be a union territory. Subsequently, *in 1987, Goa became a full-fledged state within the Indian Union*.

Sources: the hindu.

Topic: Salient features of Indian Society, Diversity of India, Social empowerment.

NO RELIGIOUS MINORITY TAG TO LINGAYAT/VEERASHAIVA COMMUNITY

What to study?
- *For Prelims: Religious minority status and its associated benefits, constitutional provisions regarding this.*

- *For Mains: Issues and concerns over the grant of religious minority tag, the need and rising demands, need for criteria.*

Context: The Union government has told the Karnataka High Court that it has rejected the recommendation of the State government to grant *religious minority status to Lingayat and Veerashaiva community*.

- The Union government has reiterated the earlier stand of the Centre that Lingayat/Veerashaiva community is part of Hindu religion.

Background:

- The community has been demanding status of a separate religion for a long time. One part of the community demands the minority status for both Veerashaiva and Lingayats considering them the same, while another wants it only for the Lingayats as it considers Veershaivas to be Hindus.
- The Karnataka government, in March this year, decided to declare Lingayats as a religious minority and include the Veerashaivas who follow Basavanna as a group within the community.

Who are Lingayats?

- Lingayats are *followers of 12th-century social reformer Basavanna* and his vachana (verses) philosophy.
- Their beliefs, practices and faith are different.
- Veerashaivas worship Lord Shiva, the one mentioned in Hindu mythology.
- However, the Shiva that Basavanna referred to in his vachanas (verses) is not the Hindu god Shiva but the ishtalinga (formless God), which people of the community wear around their neck.

Who are Veerashaivas?

- Veerashaivas are *a sub-sect of Lingayats and ardent followers of Lord Shiva*. They preceded Basavanna, the founder of Lingayatism.
- Veerashaivism has its roots in the Vedas and Agamas, and Veerashaivas do not worship any god other than Shiva; they can be found spread across Karnataka, Kerala, Maharashtra, Andhra Pradesh and Telangana.

Who is Basavanna?

- Basavanna was a 12th-century *social reformer*. The revolution that Basavanna led came years after the Buddha. It was Basavanna and his contemporary Sharanas who launched a very strong spiritual, social and religious rebellion against Brahminical hegemony. Basavanna had declared that "work is worship".
- He gave women equal status in his movement through *the vachanas (verses)*. In order to take the social movement closer to the people, Basavanna and all the other Sharanas voiced their concerns in simple Kannada vachanas so that even lay people could comprehend them.

Sources: the hindu.

Topic: *Role of women and women's organization, population and associated issues, poverty and developmental issues.*

1. GENDER GAP INDEX 2018

What to study?

- *For Prelims: Highlights of the report and performance of various countries.*
- *For Mains: Significance of the findings, gaps and ways to address them.*

Context: World economic forum has released the 2018 gender gap index.

Performance of various countries:

- Iceland has been ranked as Number 1. It is followed by Norway, Sweden and Finland.
- Other countries in top 10 include Nicaragua, Rwanda, New Zealand, Philippines, Ireland and Namibia.
- As per the report, at the current speed it will take about 108 years to close the overall gender gap in the world. And after 202 years there will be parity in the workplace in the world at the current rate of change.
- Syria, Iraq, Pakistan and finally Yemen showed the biggest overall gender gaps of the countries surveyed.

Performance of India:

- India *has been ranked at 108*.
- It has *recorded improvement in wage equality for similar work and has fully closed its tertiary education gender gap for the first time*.
- It ranks 142nd out of 149 countries in *the economic opportunity and participation subindex*.

- *India continues to rank third-lowest in the world on health and survival*, remaining the world's least-improved country on this subindex over the past decade.
- India has slightly *improved in WEF's wage equality for similar work indicator*, where it stood at 72nd place. The country has also closed its tertiary education enrolment gap for the first time in 2018 and has managed to keep its primary and secondary gaps closed for the third year running.

About Global gender gap report:
- *It is published annually by the world economic forum since 2006*.
- Global gender gap index is a part of this which measures gender equality across *four pillars– they are economic opportunity, political empowerment, educational attainment and health and survival*.

- Interestingly, *India has the second-largest artificial intelligence (AI) workforce* but one of the largest AI gender gaps, with only 22% of roles filled by women.

Way ahead for India:
- India needs to get more women into senior and professional roles to make more improvement in the rankings.

Sources: the hindu.

(Q) The World Economic Forum Global Gender Gap Report 2018 ranked India at 142 out of 149 countries on the economic participation and opportunity gap. Analyse the present status of women economic participation and opportunity gap in India.

2. BETI BACHAO BETI PADHAO

What to study?
- *For Prelims: BBBP.*
- *For Mains: Declining CSR- concerns, challenges and solutions.*

Context: A three-state field-level campaign on *Beti Bachao Beti Padhao (BBBP)* is being organised by the Union Government from the first week of January 2019.
- As a part of the campaign, over 900 cultural programmes across various districts of Maharashtra, 100 programmes in Goa and 30 programmes in UT of Dadra & Nagar Haveli would be held.

About BBBP:
- Beti Bachao Beti Padhao (BBBP) Scheme was launched in January, 2015. The scheme is aimed at promoting gender equality and the significance of educating girls.
- *The Scheme is targeted at improving the Child Sex Ratio* through multi sectoral interventions including prevention of gender biased sex selection and promoting girls' education and her holistic empowerment.
- *It is a tri-ministerial effort* of Ministries of Women and Child Development, Health & Family Welfare and Human Resource Development.

Significance and the need for scheme:
- The trend of decline in the Child Sex Ratio (CSR) has been unabated since 1961. The decline from 945 in 1991 to 927 in 2001 and further to 918 in 2011 is alarming. The social construct discrimination against girls on one hand, easy availability, affordability and subsequent misuse of diagnostic tools on the other hand, have been critical in increasing Sex Selective Elimination of girls leading to low Child Sex Ratio.
- *Child Sex Ratio* is defined as number of girls per 1000 of boys between 0-6 years of age. Hence, a decline in the CSR is a major indicator of women disempowerment. The ratio reflects both, pre-birth discrimination manifested through gender biased sex selection and post birth discrimination against girls.

Sources: the hindu.

(Q) Which factors can be held responsible for the decline in the child sex ratio in India? Discuss.

3. TRIPLE TALAQ BILL 2018

What to study?
- *For Prelims: Key features of the Bill.*
- *For Mains: Significance and the need for legislation.*

Context: The Lok Sabha has passed *the Muslim Women (Protection of Rights on Marriage) Bill, 2018*, also known as, Triple Talaq Bill.

- The Bill makes instant triple talaq void and illegal. It seeks to make the practice of instant triple talaq a punishable offence with imprisonment of up to three years.

What's the issue all about- A brief history:

- The case dates back to 2016 when the Supreme Court had sought assistance from the then Attorney General Mukul Rohatgi on pleas challenging the *constitutional validity of "triple talaq", "nikah halala" and "polygamy", to assess whether Muslim women face gender discrimination in cases of divorce*.
- Opposing the practice of triple talaq, *the Centre told the top court that there is a need to re-look at these practices on grounds of gender equality and secularism*.
- The Supreme Court later announced the setting up of *a five-judge constitutional bench to hear and deliberate on the challenges against the practice of 'triple talaq, nikah halala' and polygamy*.
- The issue gained political momentum on March 2017 when the All India Muslim Personal Law Board (AIMPLB) told the Supreme Court that *the issue of triple talaq falls outside the judiciary's realm and that these issues should not be touched by the court*.
- However, on August 22 this year, *the Supreme Court set aside the decade-old practice of instant triple talaq saying it was violative of Article 14 and 21 of the Indian Constitution*.

A Bill in this regard:

- In September, the government had proposed *the Muslim Women (Protection of Rights on Marriage) Bill* in the Parliament and sought to make triple talaq a punishable offence under the law.
- At first, the Bill was passed in the Lok Sabha but it failed to secure a majority in the Rajya Sabha. The Bill was postponed till the winter session of Parliament. Following this, *an ordinance was issued by the government* after the bill failed to get cleared in Rajya Sabha amid protests by the Opposition.

Key provisions of the Bill:

- *The Bill makes all declaration of talaq, including in written or electronic form, to be void (i.e. not enforceable in law) and illegal*.
- *Definition:* It defines talaq as talaq-e-biddat or any other similar form of talaq pronounced by a Muslim man resulting in instant and irrevocable divorce. Talaq-e-biddat refers to the practice under Muslim personal laws where pronouncement of the word 'talaq' thrice in one sitting by a Muslim man to his wife results in an instant and irrevocable divorce.
- *Offence and penalty:* The Bill makes declaration of talaq a cognizable offence, attracting up to three years' imprisonment with a fine. (A cognizable offence is one for which a police officer may arrest an accused person without warrant.) The offence will be cognizable only if information relating to the offence is given by: (i) the married woman (against whom talaq has been declared), or (ii) any person related to her by blood or marriage.
- *The Bill provides that the Magistrate may grant bail to the accused*. The bail may be granted only after hearing the woman (against whom talaq has been pronounced), and if the Magistrate is satisfied that there are reasonable grounds for granting bail.
- *The offence may be compounded by the Magistrate upon the request of the woman (against whom talaq has been declared)*. Compounding refers to the procedure where the two sides agree to stop legal proceedings, and settle the dispute. The terms and conditions of the compounding of the offence will be determined by the Magistrate.
- *Allowance:* A Muslim woman against whom talaq has been declared, is entitled to seek subsistence allowance from her husband for herself and for her dependent children. The amount of the allowance will be determined by the Magistrate.
- *Custody:* A Muslim woman against whom such talaq has been declared, is entitled to seek custody of her minor children. The manner of custody will be determined by the Magistrate.

Significance:

- Time has come to put an end to the suffering of Muslim women who have been at the receiving end of instant talaq for several years. More than 20 Islamic countries have already banned the practice.

Sources: the hindu.

(Q) The triple talaq Bill is a classic example of executive-legislative-judicial collaboration towards ensuring social justice. Critically comment.

4. CAPACITY BUILDING PROGRAMME FOR ELECTED WOMEN REPRESENTATIVES (EWRS) OF PANCHAYATI RAJ INSTITUTIONS.

- The Government of India has initiated the **Capacity Building Programme for Elected Women Representatives (EWRs) of Panchayati Raj Institutions.**
- **Objective of the Capacity Building Programme –** to empower EWRs by developing leadership capacities so that they serve as catalysts for social change and function as peer facilitators in the field, become vocal for their rights and participate effectively in the governance processes.
- **It is a significant endeavour in creating a forum for EWRs to understand their roles and responsibilities in a more prolific manner.**
- Although it is the first step towards harnessing the full potential of EWRs, but this is envisioned as a continuous process in order to instil confidence, courage, conviction, motivation and above all providing hand-holding support to EWRs for mainstreaming them in the governance process.

State Governments' Contribution:

- State Governments have been actively involved in imparting these trainings. Mainly, **State Institute of Rural Developments (SIRDs)** and **State Resource Centers (SRCs) are actively collaborating with Ministry of Women and Child Development** in conducting training programmes across the States.
- This involves collaborating with institutions of the Departments of Panchayati Raj, Agriculture, Women & Child Development, Rural Development, etc.

Background:

- The project is being implemented by **National Institute of Public Cooperation and Child Development (NIPCCD)**, an autonomous body functioning under the aegis of the Ministry of Women and Child Development, Government of India.
- Ministry of Women & Child Development has also developed training modules regarding laws for protection of women and children, development schemes and programmes (State and Center), **Information Communication Technology (ICT)** for the EWRs, **participatory planning and asset creation, monitoring of Public Works and leadership qualities.**
- This approach to build capacities of these grassroots leaders has been envisaged to yield more desired development outcomes.

Source: PIB

5. MAHILA POLICE VOLUNTEERS

What to study?
- *For Prelims: Key features of the scheme.*
- *For Mains: Significance and the need for pan- India implementation.*

Context: The Ministry of Women and Child Development in collaboration with the Ministry of Home Affairs has envisaged engagement of *Mahila Police Volunteers (MPVs)* in the States and Union Territories who will act as a link between police and community and help women in distress.
- All Chief Secretaries of States/UTs have been requested to adopt this initiative in their respective States.

Background:
- *Haryana is the first state to adopt the initiative at Karnal and Mahindergarh District on a pilot basis under Nirbhaya Fund* during the financial year 2016-2017.
- Further, the proposals of Andhra Pradesh, Gujarat, Mizoram, Chhattisgarh, Karnataka and Madhya Pradesh have also been approved for implementation of MPVs.

About the scheme:
- *Originally conceived by the Union Ministry of Women & Child Development*, Mahila Police Volunteer is *a joint initiative with the Union Ministry of Home Affairs*.
- The Mahila Police Volunteers scheme envisages *creation of a link between the police authorities and the local communities in villages through police volunteers* who will be women specially trained for this purpose.
- Their primary job will be *to keep an eye on situations where women in the village are harassed or their rights and entitlements are denied or their development is prevented*.

- In order to provide a link between police and community and facilitate women in distress, **one Mahila Police Volunteer (MPV) is envisaged per Gram Panchayat across the country**. MPV must be atleast 21 years old and class 12th These will be selected through a laid out procedure from among the empowered, responsible, socially aware women who will facilitate police outreach on gender concerns.

Sources: the hindu.

(Q) Discuss the various schemes introduced by India for socio-economic empowerment of women.

6. UJJWALA SANITARY NAPKINS INITIATIVE

What to study?
- ***For Prelims: Features of the scheme.***
- ***For Mains: Significance of the scheme.***

Context: The ***Ujjwala Sanitary Napkins initiative has been launched by three oil marketing companies – IOCL, BPCL and HPCL***.

Key highlights of the scheme:
- The mission, which ***forms part of the CSR initiative of OMCs in Odisha***, is aimed ***to educate women on female hygiene and health, improve accessibility to low cost eco-friendly sanitary pads and boost rural employment and economy***.
- The three companies will set up ***100 manufacturing units at the Common Service Centres (CSC)***covering 93 Blocks across 30 districts of Odisha at an estimated cost of ₹2.94 crore.
- ***At least 10 Ujjwala beneficiary women will get employment at each CSC***. Each facility will have a capacity to produce 1,200-2,000 pads per day and will have a sterilisation room to ensure that the napkins are sterilised before they are packed for use by rural women.
- ***The CSCs are also being provided with raw material***, enough to make 45,000-50,000 pads. These napkins will be priced at ₹40 per pack, each containing eight pads.
- ***The Ujjwala pads will be made of virgin wood pulp sheet, non-woven white sheet and a gel sheet***which are all biodegradable in nature and will leave minimal carbon footprint.

Sources: the hindu.

Topic*: 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. MOUNT SOPUTAN, PACIFIC RING OF FIRE

What to study?
- ***For Prelims: About Mount Soputan, pacific ring of fire and key geographical locations.***
- ***For Mains: Volcanic eruptions- causes, effects and management.***
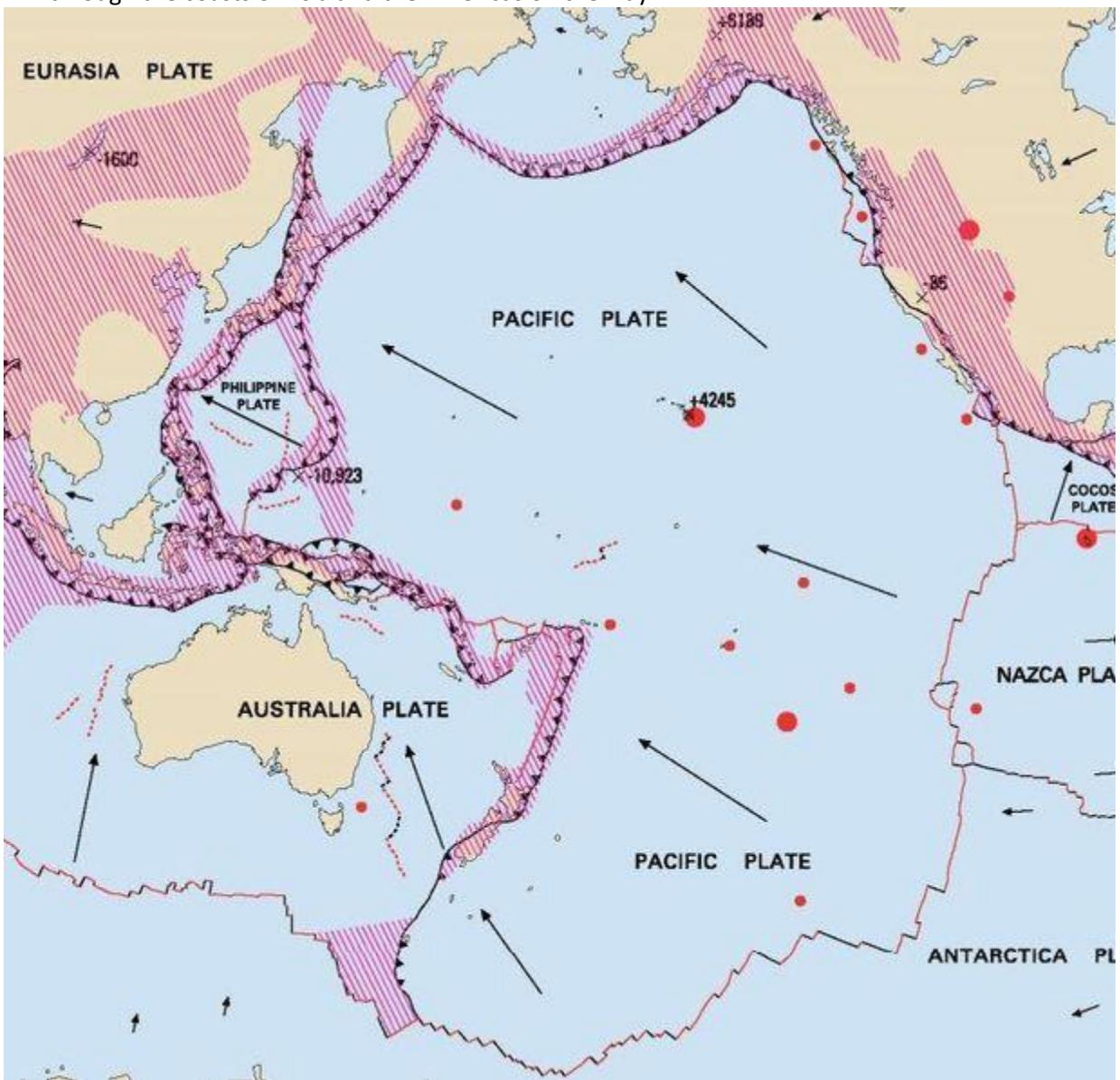
Why in News? One of the most active volcanoes of Indonesia, Mount Soputan volcano, erupted recently. It is ***located on the Sulawesi island in Indonesia***.
- ***Background: Indonesia sit along the Ring of Fire region***, an area where most of the world's volcanic eruptions occur. The Ring of Fire has seen a large amount of activity in recent days, but Indonesia has been hit hard due to its position on a large grid of tectonic plates.
- ***Vulnerable: Indonesia is at the meeting point of three major continental plates – the Pacific, the Eurasian and the Indo-Australian plates – and the much smaller Philippine plate***. As a result, several volcanoes on the Indonesian islands are prone to erupting, with Bali's Mt Agung taking the headlines last year and in 2018. Indonesia is home to roughly 400 volcanoes, out of which 127 are currently active, accounting for about a third of the world's active volcanoes.

What is the Ring of Fire?
- The Ring of Fire is a Pacific region home to over 450 volcanoes, including three of the world's four most active volcanoes – Mount St. Helens in the USA, Mount Fuji in Japan and Mount Pinatubo in the Philippines. It is also sometimes called the circum-Pacific belt.

- Around 90% of the world's earthquakes occur in the Ring of Fire, and 80% of the world's largest earthquakes. The 40,0000 kilometre horse-shoe-shaped ring loops from New Zealand to Chile, passing through the coasts of Asia and the Americas on the way.

Location:
- It stretches along the Pacific Ocean coastlines, where the Pacific Plate grinds against other, smaller tectonic plates that form the Earth's crust – such as the Philippine Sea plate and the Cocos and Nazca Plates that line the edge of the Pacific Ocean.

Risk:
- The people most at risk from activity in the Ring of Fire are in the US west coast, Chile, Japan and island nations including the Solomon Islands. These areas are most at risk because they lie on so-called subduction zones – which are boundaries that mark the collision between two of the planet's tectonic plates.

How was the Ring of Fire formed?
- The Ring of Fire is the result from subduction of oceanic tectonic plates beneath lighter continental plates. The area where these tectonic plates meet is called a subduction zone.

Why does the Ring of Fire trigger earthquakes?
- The world's deepest earthquakes happen in subduction zone areas as tectonic plates scrape against each other – and the Ring of Fire has the world's biggest concentration of subduction zones.
- As energy is released from the earth's molten core, it forces tectonic plates to move and they crash up against each other, causing friction. The friction causes a build-up of energy and when this energy is finally released it causes an earthquake. If this happens at sea it can cause devastating tsunamis.

- Tectonic plates usually only move on average a few centimetres each year, but when an earthquake strikes, they speed up massively and can move at several metres per second.

Sources: the hindu.

(Q) The greatest concentration of volcanoes is located in the Circum – Pacific region, known as 'Pacific Ring of Fire'. Examine why and also explain features of these volcanoes.

2. WINTER SOLSTICE 2018

What to study?
- ***For Prelims and Mains: All about Winter Solstice- its occurrence, why it occurs, significance and changes associated.***

Context: This year the Winter Solstice on December 21st.

What is Winter Solstice?
- The winter solstice ***happens every year when the Sun reaches its most southerly declination of -23.5 degrees***. In other words, it is when the North Pole is tilted farthest away from the Sun, delivering the fewest hours of sunlight of the year.
- ***The Sun is directly overhead of the Tropic of Capricorn in the Southern Hemisphere*** during the December solstice and is closer to the horizon than at any other time in the year.
- The day after the winter solstice marks the beginning of lengthening days, leading up to the summer solstice in June.
- In the Southern Hemisphere, the opposite is true. Dawn comes early, and dusk comes late. The sun is high and the shortest noontime shadow of the year happens there. In the Southern Hemisphere, people will experience their longest day and shortest night.

Does the winter solstice always occur on December 21st?
- While it more often than not falls on December 21st, the exact time of the solstice varies each year. In the Northern hemisphere the winter solstice is the shortest day of the year, because it is tilted away from the sun, and receives the least amount of sunlight on that day.
- However, the earliest sunset does not occur on the solstice, because of the slight discrepancy between 'solar time' and the clocks we use.
- The shortest day of the year often falls on December 21st, but the modern calendar of 365 days a year – with an extra day every four years – does not correspond exactly to the solar year of 365.2422 days.
- The solstice can happen on December 20, 21, 22 or 23, though December 20 or 23 solstices are rare. The last December 23 solstice was in 1903 and will not happen again until 2303.

What does 'solstice' mean?
- The term 'solstice' derives from the Latin word 'solstitium', meaning 'Sun standing still'.
- On this day the Sun seems to stand still at the Tropic of Capricorn and then reverses its direction as it reaches its southernmost position as seen from the Earth.
- Some prefer the more teutonic term 'sunturn' to describe the event.

Sources: toi.

GENERAL STUDIES -II

***Topic**: Indian Constitution- historical underpinnings, evolution, features, amendments, significant provisions and basic structure.*

CONCURRENT LIST OF THE INDIAN CONSTITUTION

What to study?
- ***For Prelims: Key features of 7th schedule and about concurrent list.***
- ***For Mains: Demand for removal of concurrent list- concerns, need of the hour.***

Context: Telangana TRS chief K Chandrasekhar Rao has called for an economic and political overhaul in India. KCR's pitch, like that of many regional leaders, is an increase in state autonomy by weakening the concurrent list.

- Emphasising the need to decentralise power, KCR has said- The autonomy of states should increase. The Concurrent List should be weakened. There should be a clear division. Subjects which are under the Centre must be transferred to the state.

What is the Concurrent List?

- The Constitution of India has provided for a division of powers between the Central and state governments. ***Under the Seventh Schedule, there are three lists – the Union, State and Concurrent***.
- The ***Union List*** has a range of subjects under which the Parliament may make laws. This includes defence, foreign affairs, railways, banking, among others.
- The ***State List*** lists subjects under which the legislature of a state may make laws. Public order, police, public health and sanitation; hospitals and dispensaries, betting and gambling are some of the subjects that come under the state.
- The ***Concurrent List*** includes subjects that give powers to both the Centre and state governments. Subjects like Education including technical education, medical education and universities, population control and family planning, criminal law, prevention of cruelty to animals, protection of wildlife and animals, forests etc. However, given that there can be conflict when it comes to ***laws passed by Parliament and state legislatures on the same subject, the Constitution provides for a central law to override a state law***.

Debate over Centralisation of power:

- Since 1950, the Seventh Schedule of the Constitution has seen a number of amendments. The Union List and Concurrent List have grown while subjects under the State List have gradually reduced.
- ***The 42nd Amendment Act*** was perhaps one of the most controversial. Effected in 1976 during the Emergency by then Prime Minister Indira Gandhi, the amendment restructured the Seventh Schedule ensuring that State List subjects like education, forest, protection of wild animals and birds, administration of justice, and weights and measurements were transferred to the Concurrent List.
- Former Tamil Nadu Chief Minister CN Annadurai was one of the first ***to advocate for state autonomy and federalism at the Centre***. "It will be sufficient if the Centre retains only such powers as are necessary for preserving the unity and integrity of the country, leaving adequate powers to the states," he said in 1967.

- Taking his idea forward, the Tamil Nadu government under M Karunanidhi constituted ***the PV Rajamannar Committee*** to look into Centre-State relations. While the Committee submitted its reports in 1971, the Tamil Nadu Legislative Assembly adopted a resolution three years later demanding that the Centre accept the state's views on state autonomy and the recommendations of the Rajamannar Committee. The Rajamannar Committee spurred other states to voice their opposition to the Centre's encroachment on subjects that were historically under the state's purview.
- PM Indira Gandhi had constituted ***the Sarkaria Commission*** to look into Centre-State relations. However, the recommendations of the Sarkaria Commission were not implemented by successive central governments.

Sources: the hindu.

(Q) Examine whether Article 246 is the cornerstone of centre state legislative relations? Discuss whether Concurrent list created confusion with respect to extent of legislative power of centre and states?

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

NATIONAL JUDICIAL APPOINTMENTS COMMISSION (NJAC) ACT

What to study?
- *Static Part: A brief overview of NJAC act and the key amendments proposed.*
- *Dynamic and Current: Why was it struck down? How it affected judicial supremacy? What's the way out to fill the vacancies?*

Context: The Supreme Court has dismissed the review petition challenging the striking down of a Constitutional Amendment that sought to give the executive a say in the appointment of top judges on grounds of delay and lack of merit.

Background:
- On 16 October 2015, in a 4-1 majority verdict, the Supreme Court held that both the Constitution (Ninety-ninth Amendment) Act, 2014, and the National Judicial Appointments Commission (NJAC) Act, 2014, were unconstitutional as it would undermine the independence of the judiciary.
- The majority said the two laws affect the independence of the judiciary, and judicial appointments, among other things, should be protected from executive control.

About NJAC and the Act:
- NJAC is a body responsible for the appointment and transfer of judges to the higher judiciary in India. JAC Bill sought to replace the collegium system of appointing the judges of Supreme Court and 24 High Courts with judicial appointments commission wherein the executive will have a say in appointing the judges.
- *A new article, Article 124A*, (which provides for the composition of the NJAC) was to be inserted into the Constitution.
- *The Bill provided for the procedure to be followed by the NJAC for recommending persons for appointment as Chief Justice of India and other Judges of the Supreme Court (SC), and Chief Justice and other Judges of High Courts (HC).*

According to the bill the commission will consist of the following members:
- Chief Justice of India (Chairperson, ex officio)
- Two other senior judges of the Supreme Court next to the Chief Justice of India – ex officio
- The Union Minister of Law and Justice, ex-officio
- Two eminent persons (to be nominated by a committee consisting of the Chief Justice of India, Prime Minister of India and the Leader of opposition in the Lok Sabha or where there is no such Leader of Opposition, then, the Leader of single largest Opposition Party in Lok Sabha), provided that of the two eminent persons, one person would be from the Scheduled Castes or Scheduled Tribes or OBC or minority communities or a woman. The eminent persons shall be nominated for a period of three years and shall not be eligible for re-nomination.

Sources: the hindu.

Topic: 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.

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1. AMENDMENTS TO THE CITIZENSHIP RULES, 2009

What to study?
- *For Prelims: Key features of amendments, Citizenship Amendment Bill, 2016 and Citizenship Act 1955.*
- *For Mains: The Citizenship amendment Bill- need, significance, opposition by states and the need of the hour.*

Context: Union Home Ministry has notified amendments to the *Citizenship Rules, 2009*. The Centre has made the changes under Section 18 of the Citizenship Act, 1955.

Changes:
- The amendments seek to include *a separate column in the citizenship form for applicants* belonging to six minority communities from Pakistan, Afghanistan and Bangladesh.
- Under the amendments, a separate entry in the form will ask the applicant: "Do you belong to one of the minority communities from Afghanistan, Bangladesh and Pakistan — Hindus, Sikhs, Buddhists, Parsis, Sikhs and Christians?"

What necessitated this?
- The contentious Citizenship (Amendment) Bill, 2016, is pending in Parliament. A parliamentary committee has been examining the Bill.
- It has run into strong resistance in Assam because it will pave the way for giving citizenship mostly to illegal Hindu migrants from Bangladesh in Assam, who came after March 1971, in violation of the 1985 Assam Accord.

What is the Citizenship Amendment Bill 2016?
- The Citizenship Amendment Bill was proposed in Lok Sabha on July 19, amending the Citizenship Act of 1955.
- If this Bill is passed in Parliament, illegal migrants from certain minority communities coming from Afghanistan, Bangladesh, and Pakistan will then be eligible for Indian citizenship.
- In short, illegal migrants belonging to the Hindu, Sikh, Buddhist, Jain, Parsi or Christian religious communities from Afghanistan, Bangladesh or Pakistan would not be imprisoned or deported.
- Moreover, these citizens gain permanent citizenship after six years of residency in India instead of 11 years — as mentioned in the Citizenship Act (1955).
- The registration of Overseas Citizen of India (OCI) cardholders may get cancelled if they violate any law.

What is the Citizenship Act 1995?
- *Under Article 9 of the Indian Constitution, a person who voluntarily acquires citizenship of any other country is no longer an Indian citizen*.
- *Citizenship by descent:* Persons born outside India on or after January 26, 1950, but before December 10, 1992, are citizens of India by descent if their father was a citizen of India at the time of their birth.
- From December 3, 2004, onwards, persons born outside of India shall not be considered citizens of India unless their birth is registered at an Indian consulate within one year of the date of birth.
- In Section 8 of the Citizenship Act 1955, if an adult makes a declaration of renunciation of Indian citizenship, he loses Indian citizenship.

Who is an illegal immigrant?
- According to the Citizenship Act (1955), an illegal immigrant is defined as a person who enters India without a valid passport or stays in the country after the expiry of the visa permit. Also, the immigrant who uses false documents for the immigration process.

What are the guidelines to become an Indian citizenship?
- Citizenship is granted to an individual by the government of the country when he/she complies with the legal formalities, so it's like a judicial concept.

In India, the Citizenship Act, 1995 prescribes five ways of acquiring citizenship:
- Birth
- Descent
- Registration
- Naturalization
- Incorporation of the territory.

Sources: the hindu.

2. JAMMU AND KASHMIR CRIMINAL LAWS (AMENDMENT) BILL, 2018

What to study?
- *For Prelims and Mains: Key features and significance of the Bill, features of RPC.*

Context: The Jammu and Kashmir State Administrative Council (SAC) under the chairmanship of Governor Satya Pal Malik has approved the *'Prevention of Corruption (Amendment) Bill, 2018'* and the *'Jammu and Kashmir Criminal Laws (Amendment) Bill, 2018'*.

Significance:

- With this, *Jammu and Kashmir has become the first state in the country to have a law banning sexual exploitation of women by those in positions of authority, having a fiduciary relationship or a public servant*.

Key features of the Bill:

- The Bill seeks *to amend the Ranbir Penal Code*, whereby specific offence under *section 354 E* is being inserted to provide for the offence of 'Sextortion'.
- Amendments are being made in section 154, 161 and Schedule of Criminal Procedure Code and section 53 A of the Evidence Act so as to bring sextortion at par with similar offences prescribed under Ranbir Penal Code.
- Amendment is also being made in *the Prevention of Corruption Act* to amend the definition of misconduct and provide that demand for sexual favours would also constitute misconduct within the meaning of section 5.

What necessitated this?

- The amendment came after an order was passed by Jammu and Kashmir High Court. The court had directed the state to examine the concept of 'Sextortion; in the context of applicable laws.
- "So that illegal acts, unwarranted demands for sexual favours and inappropriate contacts by the person in authority are made punishable."

About Ranbir Penal Code:

- *Indian Penal code is not applicable to Jammu and Kashmir* and in place of IPC, a similar criminal law Ranbir Penal Code applies in the state.
- The code was introduced by Ranbir Singh during the Dogra Dynasty and it came in effect from 1932. The provision of code was prepared by Thomas Babington Macaulay.

Sources: the hindu.

3. REVIEW OF AADHAAR VERDICT

What to study?

- *For Prelims: Key features of Aadhar, Money Bill.*
- *For Mains: Features and significance of the verdict, Security concerns and ways to address them.*

Context: A review petition has been filed in the Supreme Court seeking *re-examination of its verdict by which the centre's flagship Aadhaar scheme was held as constitutionally valid*.

- The review petition has been filed against the September 26 verdict of the five-judge constitution bench which had said there was nothing in the Aadhaar Act that violated right to privacy of an individual. The court had also upheld the passage of the Aadhaar Bill as a Money Bill by the Lok Sabha.

Background:

- While declaring the scheme as constitutionally valid, the top court had struck down some of its provisions including its linking with bank accounts, mobile phones and school admissions. The constitution bench had held that Aadhaar would remain mandatory for filing of Income Tax returns and allotment of Permanent Account Number (PAN).

Need for review- demands by the petitioner:

- The petition claimed that the Aadhaar program, which had been in existence prior to the enactment of the Aadhaar Act, 2016, had itself become *an "instrument of transfer of sensitive personal data"* belonging to citizens to foreign entities acting as biometric service providers at a time when the UIDAI in 2010 had no cyber or technical infrastructure to store such information.
- This, the petition claimed, poses *a massive national security risk*, more so when, according to a Press Information Bureau notification, 100 crore enrolments had already taken place before April 4, 2016.

What was the contention against Aadhaar before the Supreme Court?

The main questions raised during the hearing on Aadhaar were:

- Is the Aadhaar Act, 2016, constitutionally valid given that it was passed in Parliament as a Money Bill?
- Why does every citizen need one identity proof — a unique identification number — to acquire government benefits? Can't this be done using other documents, like ration card or passport?
- Does Aadhaar take away our right to privacy — upheld as a fundamental right by a nine-judge Constitution bench of the court in August last year.
- What happens if Aadhaar data becomes a tool for mass surveillance by the state, as the movement and activities of users can be tracked by collecting metadata?

Supreme Court: Majority Judgement Conclusions:

- Supreme Court felt that **the technology has become a vital tool for ensuring good governance in a welfare state**.
- Schemes such as PDS, scholarships, Mid-day Meals and LPG subsidies involve huge amount of money and Aadhaar helped welfare reach of the poor as **a fool-proof mechanism**.
- Majority opinion upholds Aadhaar as **a reasonable restriction on privacy**. It fulfils Government's aim to provide dignity to the marginalised.
- Aadhaar unique ID cannot be duplicated, whereas, PAN, Ration Card can be duplicated. **It upheld the passage of the Aadhaar Act as a Money Bill**.
- The authentication records should not be retained for more than 6 months. Archiving of records for five years is bad in law.
- **SC struck down Section 33 (2)**, which allowed the disclosure of Aadhaar information for national security reasons on the orders of an officer not below a Joint Secretary level.

Sources: the hindu.

(Q) The Supreme Court finds a pragmatic middle path between the Aadhaar scheme excesses and its benefits to the marginalised. Analyze.

4. GOVERNMENT REJECTS SEPARATE TIME ZONE FOR NE STATES

What to study?

- *For Prelims: All about time zones, IST.*
- *For Mains: Two time zones- need, concerns, challenges, benefits and alternatives.*

Context: Govt rejects demand for different time zone for northeastern states for 'strategic reasons'.

Background:

- The debate for a separate time zone for the northeast has been in existence for as long as the history of modern India goes. Amidst the pros and cons of having two time zones for the country, no implementable solution has been proposed so far.
- Back in October this year, the CSIR-National Physical Laboratory (CSIR-NPL) and the National Measurement Institute (NMI) of India explored the possibility and also proposed an implementable solution.

Proposed time zones: IST-I and IST-II:

- The custodian of Indian Standard Time (IST) proposed two time zones IST-I and IST-II for the country as follows:
    1. IST-I would be same as current IST, that is, UTC +5:30.
    2. IST-II would be UTC +6:30 owing to the difference of one hour between eastern and western part of the country.
- The borderline between two time zones would have been 89°52'E, the narrow border between Assam and West Bengal. States west of this line would have followed IST-I (UTC +5:30) while states east of this line (Assam, Meghalaya, Nagaland, Arunachal Pradesh, Manipur, Mizoram, Tripura, Andaman & Nicobar Islands) would have followed IST-II (UTC +6:30).

What is a time zone?

- Earth is divided into 360 vertical lines or the longitudes. A shift in every longitude gives a time difference of four minutes; so, the planet is divided into 24 time zones.
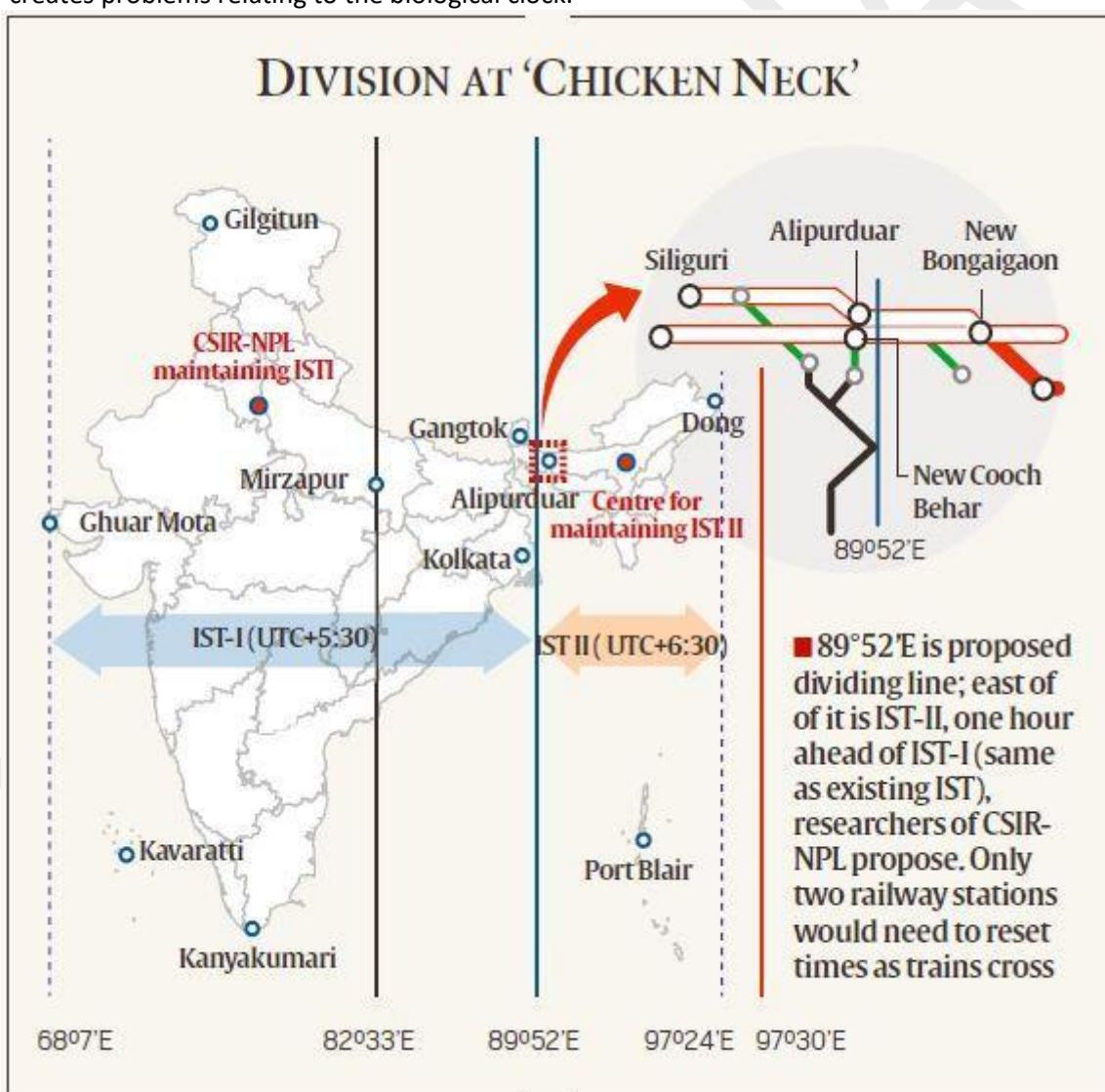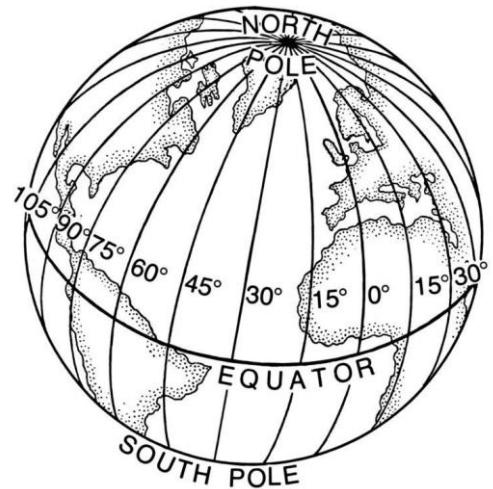
- **Longitude** is the angular distance between a point on any Meridian and the prime meridian in Greenwich. The time at Greenwich is called as Greenwich Mean Time (GMT).

Need for two time zones:

- India extends from 68°7'E to 97°25'E, with the spread of 29 degrees, which amounts to almost two-hours from the geographical perspective.

- For decades, legislators, activists, industrialists and ordinary citizens from India's northeast have complained about the effect of IST on their lives.

Following are the factors which compelled the people from northeast to demand a different time zone:

- **Loss of daylight hours and excess electricity usage**. A different time zone would allow sunsets to take place later, allowing the citizens to better use their daylight hours.

- **Effect on biological clocks of citizens**. The longitudinal extremes of the country are assigned a single time zone which not only creates the loss of daylight hours but also creates problems relating to the biological clock.

DIVISION AT 'CHICKEN NECK'

Concerns:

- **India has a huge population**; if the country were divided into two time zones, there would be chaos at the border between the two zones. It would mean resetting clocks with each crossing of the time zone. There is scope for more dangerous kinds of confusion. Railway signals are not fully automated and many routes have single tracks. Trains may meet with major accidents owing to human errors. Just one such accident would wipe out any benefits resulting from different time zones in the country.

- *Partitioning the already divided country further into time zones may also have undesirable political consequences*. Moreover, research shows that the energy saving from creating two time zones is not particularly large.
- *With a time difference of one hour in the mornings and in the evenings, there would be nearly 25% less overlap between office timings in the two zones*. This could be important for banks, offices, industries and multinational companies which need to be constantly interconnected. This will be further detrimental to productivity and to the interests of the eastern region.
- *There is already a sense of alienation* between the relatively prosperous and industrialised western zone and the less developed eastern zone. The people in the Northeast sense a distance from the mainland and a separateness in clock time may accentuate it.
- *Having a separate time zone for the eastern region will provide no energy or other benefits to the rest of the country*. Moreover, India will continue to be in off-set time zones, five and a half hours in the west and six and a half in the eastern region ahead of.

Sources: the hindu.

(Q) Critically analyse the need for multiple time zones in India?

5. NEW HIGH COURT FOR ANDHRA PRADESH

What to study?
- *For Prelims and Mains: About the new high court and its location, constitutional provisions with regard to constitution of High Courts and their composition.*

Context: In pursuance of *article 214 of the Constitution and the Order issued by the Supreme Court of India and in exercise of powers conferred under clause (a) of sub-section (1) of section 30, sub-section (1) of section 31 and sub-section (2) of section 31 of the Andhra Pradesh Reorganisation Act, 2014*, the President has constituted a separate High Court for the State of Andhra Pradesh, namely, the High Court of Andhra Pradesh, from the 1st day of January, 2019 with the principal seat of such High Court at Amaravati in the State of Andhra Pradesh and the High Court of Judicature at Hyderabad shall become the High Court for the State of Telangana.

- The new High Court for Andhra Pradesh will be the *25th High Court in the country*. The new Andhra HC is expected *to function from a temporary structure in Amaravati* till a permanent building is set up at the 'Justice City' being planned in Amaravati.

Constitutional provisions related to High Court in India:
- *Article 214* provides that every State shall have a High Court, however, *Article 231* states that *Article 214* shall not be a bar for constituting a common high court for two or more States.
- *Only Parliament may by law establish a Common High Court for two or more States*. This means that, unless Parliament by law establishes a Common High Court for two or more States, every State has to have a High Court, i.e., upon formation of a new State a new High Court is also formed.
- *Article 216* provides that every High Court shall consist of a Chief Justice and such other number of judges as the President may from time to time deem necessary to appoint.
- *Article 217* relates to appointment of HC judges.

Sources: the Hindu.

6. NATIONAL REGISTER OF CITIZENS (NRC)

What to study?
- *For Prelims: Particulars of NRC.*
- *For Mains: Update of NRC- issues associated including ethical concerns.*

Context: The Centre has given an extension of six months to complete the ongoing exercise for updating the *National Register of Citizens (NRC)* in Assam by June 30.

- The decision was taken as the exercise to enumerate citizens in the NRC, a list of Assam's residents, could not be completed within the specified date of December 31, 2018.
- The Supreme Court on December 12, 2018 extended the deadline for the submission of claims and objections by individuals excluded from the first draft of the Assam National Register of Citizens (NRC) to December 31, 2018.

Background:
- On December 6, 2013, the government issued the first notification setting a deadline of three years for completion of the entire NRC process. Since then, five extensions have been given by the government. The draft NRC was published on July 30 and included the names of 2.9 crore people of the total 3.29 crore applicants.
- The Assam government released the final draft of NRC on July 30, 2018. The list incorporates names of 2.89 crore people out of 3.29 crore applicants. The names of 40.07 lakh people have been left out.

Why is NRC being updated in Assam?
- Officially, the NRC process will address the issue of illegal migrants, specifically from Bangladesh. The National Register of Citizens was first published in 1951 to record citizens, their houses and holdings. Updating the NRC to root out foreigners was a demand during the Assam Agitation (1979-1985).

Why is March 24, 1971 the cut-off date?
- There have been several waves of migration to Assam from Bangladesh, but the biggest was in March 1971 when the Pakistan army crackdown forced many to flee to India. The Assam Accord of 1985 that ended the six-year anti-foreigners' agitation decided upon the midnight of March 24, 1971 as the cut-off date.

Who is a citizen in Assam?
- The Citizenship Act of 1955 was amended after the Assam Accord for all Indian-origin people who came from Bangladesh before January 1, 1966 to be deemed as citizens. Those who came between January 1, 1966 and March 25, 1971 were eligible for citizenship after registering and living in the State for 10 years while those entering after March 25, 1971, were to be deported.

Assam NRC:
- The National Register of Citizens (NRC) is a list that contains names of Indian citizens of Assam. It was last prepared after Census in 1951. Assam, which had faced an influx of people from Bangladesh since the early 20th century, is the only state having an NRC.
- The Assam government on July 30, 2018 released the second and final draft of the state's National Register of Citizens (NRC). The draft includes the names of Indian citizens who have been residing in Assam before March 25, 1971.

Sources: the hindu.

(Q) Throw light on the nature of migration in Assam. Examine whether the National Register of Citizens will address the issues arising thereunder?

7. RAJASTHAN GOVERNMENT SCRAPS MINIMUM EDUCATION CRITERIA FOR CIVIC POLL CANDIDATES

What to study?
- *For Prelims: Key features of 73rd and 74th*
- *For Mains: Minimum education criteria- issues, need, concerns and analysis.*

Context: Rajasthan government has approved *to do away with the minimum education qualification required to contest panchayat and urban bodies' elections*.

What's the issue?
- The education criteria was introduced by the previous government, which stipulated that for contesting the zila parishad or panchayat samiti polls, *a contestant must have a minimum qualification of secondary education (Class X)*.
- To contest the sarpanch elections, *an aspirant from the general category must have passed Class VIII and a SC/ST aspirant must have passed Class V*.

Why has it been scrapped?
- Few experts are of the opinion that the requirement of minimum qualification for contesting elections is against the very spirit of *73rd and 74th amendments*.
- *It also violates the right of every citizen to vote and to contest elections*, which form the basic structure of the constitution.

- It may be noted here that due to these restrictions, many able candidates were debarred from contesting elections. In one way, it can be said that *this law has prevented many people from coming to the mainstream*.

What has the Supreme Court said in this regard?
- Even Haryana had passed a similar law mandating minimum education qualification for those contesting in Panchayat Raj Institutions. The constitutional validity of this law of Haryana was questioned in the Supreme Court.
- The Supreme Court had upheld the constitutional validity of the law enacted by Haryana government to bar the illiterate from contesting panchayat polls in the state. The Supreme Court had ruled that "*it is only education which gives a human being the power to discriminate between right and wrong, good and bad*".
- *The Supreme Court's interpretation is based on the fact that uneducated or illiterate people getting elected to the local bodies can easily be misled by officials if they don't know to write and read*. In such cases, administrative actions that they are going can pose many challenges. The Court has further observed that it is only the education which can give people the power to differentiate between right and wrong, and good and bad.

Background:
- **Rajasthan Literacy Rate 2011:** Literacy rate in Rajasthan has seen upward trend and is 66.11 percent as per 2011 population census. Of that, male literacy stands at 79.19 percent while female literacy is at 52.12 percent. In 2001, literacy rate in Rajasthan stood at 60.41 percent.

Sources: the hindu.

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

1. CENTRAL INFORMATION COMMISSION

What to study?
- ***For Prelims: About CIC and appointments of CIC and ICs.***
- ***For Mains: Reasons for delay in appointments, concerns, challenges posed and measures to fast- track appointments.***

Context: The Centre is all set to fill the vacancies in the Central Information Commission (CIC).

Background:
- The 11-member Commission, the highest appeal body available to applicants seeking information under the RTI Act, is currently operating with only three members in the wake of multiple retirements.
- The eight vacancies include the Chief Information Commissioner, who completed his tenure last month.

How is Central Information Commission constituted?
- Under the provision of **Section-12 of RTI Act 2005** the Central Government shall, by notification in the Official Gazette, constitute a body to be known as the Central Information Commission.
- **Composition:** The Central Information Commission shall consist of the Chief Information Commissioner (CIC) and such number of Central Information Commissioners not exceeding 10 as may be deemed necessary.

What is the eligibility criteria and what is the process of appointment of CIC/IC?
- Section 12(3) of the RTI Act 2005 provides as follows.
- The Chief Information Commissioner and Information Commissioners shall be appointed by the President on the recommendation of a committee consisting of
  1. The Prime Minister, who shall be the Chairperson of the committee.
  2. The Leader of Opposition in the Lok Sabha.
  3. A Union Cabinet Minister to be nominated by the Prime Minister.

Who can be CIC and ICs?
- Section 12(5) of the RTI Act 2005 provides that the Chief Information Commissioner and Information Commissioners shall be persons of eminence in public life with wide knowledge and experience in law, science and technology, social service, management, journalism, mass media or administration and governance.
- Section 12(6) of the RTI Act 2005 provides that Chief Information Commissioner or an Information Commissioner shall not be a Member of Parliament or Member of the Legislature of any State or Union

Territory as the case may be, or hold any other office of profit or connected with any political party or carrying on any business or pursuing any profession.

What is the term of office and other service conditions of CIC?
- Section 13 of the RTI Act 2005 provides that the Chief Information Commissioner shall hold office for a term of five years from the date on which he enters upon his office and shall not be eligible for reappointment:
- Section 13(5)(a) of the RTI Act 2005 provides that the salaries and allowances payable to and other terms and conditions of service of the Chief Information Commissioner shall be the same as that of the Chief Election Commissioner.

What is the term of office and other service conditions of IC?
- Section 13(2) of the RTI Act 2005 provides that the Information Commissioner shall hold office for a term of five years from the date on which he enters upon his office and shall not be eligible for reappointment as such Information Commissioners provided.
- Provided that every Information Commissioner shall on vacating his office under this sub-section be eligible for appointment as the Chief Information Commissioner in the manner specified in sub-section (3) of section 12 of the RTI Act 2005:
- Provided further that where the Information Commissioner is appointed as the Chief Information Commissioner, his term of office shall not be more than five years in aggregate as the Information Commissioner and the Chief Information Commissioner.
- Section 13(5)(b) of the RTI Act 2005 provides that the salaries and allowances payable to and other terms and conditions of service of an Information Commissioner shall be the same as that of an Election Commissioner.

Sources: the hindu.

(Q) How is Chief Information Commissioner (CIC) appointed to the office of Chief Information Commission? In your opinion what should be an ideal procedure to appoint CIC ?

2. TELECOM DISPUTES SETTLEMENT & APPELLATE TRIBUNAL (TDSAT)

What to study?
- ***For Prelims and Mains: TDSAT- composition, objectives, functions and powers.***

Context: Telecom Disputes Settlement & Appellate Tribunal (TDSAT) has rejected TRAI's order that had changed the definition of ***'significant market power' (SMP)*** to identify predatory pricing, offering substantial relief to India's older telcos.
- The Telecom Disputes Settlement & Appellate Tribunal (TDSAT) also set aside a rule in the Telecom Regulatory Authority of India (TRAI) ***predatory pricing regulation*** that required top telcos to report all tariffs in the interests of transparency and non-discrimination.

About TDSAT:
- In order to bring in functional clarity and strengthen the regulatory framework and the disputes settlement mechanism in the telecommunication sector, the ***TRAI Act of 1997 was amended in the year 2000 and TDSAT was set up to adjudicate disputes and dispose of appeals with a view to protect the interests of service providers and*** consumers of the telecom sector.
- In January 2004, the Government included broadcasting and cable services also within the purview of TRAI Act. The jurisdiction of TDSAT stands extended to matters that lay before the Cyber Appellate Tribunal and also the Airport Economic Regulatory Authority Appellate Tribunal.

Composition of TDSAT:
- The Tribunal consists of a Chairperson and two Members appointed by the Central Government.
- The ***Chairperson*** should be or should have been a Judge of the Supreme Court or the Chief Justice of a High Court.
- A ***Member*** should have held the post of Secretary to the Government of India or any equivalent post in the Central Government or the State Government for a period of not less than two years or a person who is well versed in the field of technology, telecommunication, industry, commerce or administration.

Powers and Jurisdiction:
- The Tribunal exercises jurisdiction over Telecom, Broadcasting, IT and Airport tariff matters under the TRAI Act, 1997 (as amended), the Information Technology Act, 2008 and the Airport Economic Regulatory Authority of India Act, 2008.
- The Tribunal exercises original as well as appellate jurisdiction in regard to Telecom, Broadcasting and Airport tariff matters. In regard to Cyber matters the Tribunal exercises only the appellate jurisdiction.

Sources: the hindu.

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

1. GUIDELINES FOR CRÈCHES AT WORKPLACES

What to study?
- *Static Part: Maternity Benefit Act- key features, Guidelines on crèches at workplaces.*
- *Dynamic and Current: Significance of the act and challenges in its implementation, what needs to be done?*

Context: The Centre has prepared guidelines for setting up of crèches at workplaces. The guidelines prescribe trained personnel to man the facility as well as infrastructure requirements and safety norms.
- The guidelines are not mandatory but are a yardstick for NGOs and organisations for setting up of creches.

Legal provisions:
- In March this year, Parliament passed the **Maternity Benefit Amendment Act, 2017**, enhancing paid maternity leave from a period of 12 weeks to 26 weeks.
- The law is applicable to all institutions with 10 or more employees.
- It also makes it mandatory for every organisation with 50 or more employees to have a crèche.

The new guidelines include:
- *A crèche be either at the workplace or within 500 metres of it.* Alternatively, it could also be in *the beneficiaries' neighbourhood*.
- The facility should be *open for eight to 10 hours and if the employees have a shift system, then the crèche should also be run accordingly*.
- *A crèche must have a minimum space of 10 to 12 square feet per child* to ensure that she or he can play, rest and learn. There should be no unsafe places such as open drains, pits, garbage bins near the centre.
- *The crèches should have at least one guard*, who should have undergone police verification. There should also be at least one supervisor per crèche and a trained worker for every 10 children under three years of age or for every 20 children above the age of three, along with a helper.
- *No outsiders* such as plumbers, drivers, electricians be allowed inside the crèche when children are present.
- *A crèche monitoring committee* with representations from among crèche workers, parents and administration should be formed.
- There should also be *a grievance redressal committee* for inquiring into instances of sexual abuse.

The Maternity Benefit Act:
- The Maternity Benefit Act, 1961, applies to establishments employing 10 or more than 10 persons in factories, mines, plantation, shops & establishments and other entities.
- The main purpose of this Act is to regulate the employment of women in certain establishments for certain period before and after child birth and to provide maternity benefit and certain other benefits. The Act was amended through the Maternity Benefit (Amendment) Act, 2017.

The amendment has brought in major changes to the law relating to maternity benefits. These are:
- *It extends the period of maternity benefit from 12 weeks to 26 weeks* of which not more than eight weeks can precede the date of the expected delivery. This exceeds the International Labour Organisation's minimum standard of 14 weeks and is a positive development. However, a woman who has two or more surviving children will be entitled to 12 weeks of which not more than six weeks can precede the date of the expected delivery.

- Women who legally adopt a child below the age of three months or a "commissioning mother" will be entitled to maternity benefit for 12 weeks from the date on which the child is handed over to her. A commissioning mother is defined as a biological mother who uses her egg to create an embryo implanted in another woman.
- *It gives discretion to employers to allow women to work from home* after the period of maternity benefit on mutually agreeable conditions.
- It introduces a provision which requires every establishment to intimate a woman at the time of her appointment of the maternity benefits available to her.

Sources: the hindu.

(Q) Examine how far Maternity Benefit (Amendment) Act, 2017 has succeeded in empowering women at workplaces?

2. GUIDELINES TO ENSURE SAFETY OF CHILDREN IN HOSTELS

What to study?
- *For Prelims: Key facts on guidelines and JJ Act, 2015.*
- *For Mains: Need for guidelines, review of JJ Act and measures needed to ensure the welfare of children.*

Context: The Ministry of Women and Child Development will soon formulate guidelines for children's hostels, prescribing the minimum standards of care that should be provided to the children.

Need:
- The decision comes at a time when institutions, housing children on the request of parents at children's homes, are not registering under the *Juvenile Justice (Care and Protection of Children) Act, 2015*.
- Also, the Supreme Court, in the case of *"Exploitation of Children in Orphanages in the State of Tamil Nadu" Vs. Union of India*, had directed the Union and the State Governments to enforce minimum standards of care required for such children living in any facility either created by the Government system or by civil society organisations.

What next?
- The Ministry has directed the National Commission for Protection of Child Rights to draft the guidelines in consultation with stakeholders concerned.
- The guidelines will be notified under the Juvenile Justice Act or the JJ Rules.

About the Juveniles Justice Act, 2015:
- The Juvenile Justice (Care and Protection of Children) Act, 2015 came into force in January, 2016. The new Act repeals the Juvenile Justice (Care and Protection of Children) Act, 2000.
- The JJ Act, 2015 provides for strengthened provisions for both children in need of care and protection and children in conflict with law.

Key provisions:
- *Definition:* The Act clearly defines and classifies offences as petty, serious and heinous, and defines differentiated processes for each category. Keeping in view the increasing number of serious offences being committed by persons in the age group of 16-18 years and recognizing the rights of the victims as being equally important as the rights of juveniles, special provisions are incorporated in the Act to tackle heinous offences committed by individuals in this age group.
- *It establishes a statutory status for the Child Adoption Resources Authority (CARA)*. It also proposes several rehabilitation and social integration measures for institutional and non-institutional children. It provides for sponsorship and foster care as completely new measures.
- *Mandatory registration of all institutions* engaged in providing child care is required according to the Act. New offences including illegal adoption, corporal punishment in child care institutions, the use of children by militant groups, and offences against disabled children are also incorporated in the legislation.
- The new law gives the *Juvenile Justice Board the power to assess* whether the perpetrator of a heinous crime aged between 16 and 18, had acted as a 'child' or as an 'adult.' The board will be assisted in this process by psychologists and social experts.

- It strikes *a fine balance between the demands of the stakeholders* asking for continued protection of rights of juveniles and the popular demand of citizens in the light of increasing incidence of heinous crimes by young boys.

Sources: the hindu.

Mains Questions:
1. **The incidents of rampant physical and sexual abuse of minors in childcare institutions (CCIs) and shelter homes reveal how the state as well as the civil society have failed in their role as protectors and watchdogs. Comment.**
2. **Critically comment on the important provisions of the new Juvenile Justice (Care and Protection of Children) Act, 2015.**

3. RESTRICTED AREA PERMIT (RAP) SYSTEM

What to study?
- *For Prelims: RAP- features, important Islands in Andaman and Nicobar.*
- *For Mains: Need for RAP, challenges faced by indigenous tribes and the need for international collaboration for the protection of these tribes.*

Context: The Centre is planning to revisit its decision to lift the *Restricted Area Permit (RAP)* system from 29 islands of Andaman and Nicobar.

Need for review:
- To develop tourism, the RAP regime, in place since 1963, was lifted around August this year from 29 islands, including the North Sentinel.
- The lifting of the regime proved problematic and the decision had "many pros and cons that needed to be re-looked". Recently, U.S. citizen John Allen Chau was killed in the North Sentinel Island.

What is Restricted Area Permit (RAP) regime?
- RAP regime was notified under the *Foreigners (Restricted Areas) Order, 1963*.
- Under it, foreign nationals are not normally allowed to visit protected or restricted area unless Government is satisfied that there are extra-ordinary reasons to justify their visit.
- Every foreigner, except citizen of Bhutan, who desires to enter and stay in protected or restricted area, is required to obtain special permit from competent authority having power to issue such permits to foreigner, seeking it.
- Citizens of Afghanistan, China and Pakistan and foreign nationals of Pakistani origin are exception and are not allowed to enter such areas.

Sources: the hindu.

(Q) Discuss the threats and challenges faced by the tribes such as Sentinelese in India and how they need to be protected ?

4. WITNESS PROTECTION SCHEME

What to study?
- *For Prelims: Highlights of the draft.*
- *For Mains: Need for the scheme, need for protection of witness, challenges and issues associated.*

Context: The Supreme Court has approved the *Centre's draft witness protection scheme* and has asked all the states to implement it till Parliament comes out with a legislation. The court has also made some changes in the scheme.

Background:
- The issue of witness protection scheme had cropped up earlier when the top court was hearing a public interest litigation (PIL) seeking protection for witnesses in rape cases involving Asaram Bapu.
- During the hearing, Attorney General KK Venugopal had told the top court that the draft scheme, which has now been finalised, would be made into a law "in due course", but till then the court should direct the states to start implementing it.

Highlights of the draft scheme:

- The draft witness protection scheme has been finalised in consultation with the *National Legal Services Authority (NALSA) and Bureau of Police Research and Development (BPRD)*.
- The types of protection measures envisaged under the scheme are to be applied in proportion to the threat and they are not expected to go on for infinite time.
- The scheme envisages that *there should be safeguards that witnesses and accused do not come face to face during investigation or trial* and adequate security measures should be there for the safety of the witnesses.
- The scheme provides for *identity protection* and giving a new identity to the witness.
- The scheme shall extend to the whole of the India *except the State of Jammu & Kashmir*.
- As per the scheme, *police escort* will be provided to witnesses who are threatened and, if needed, they would be relocated to a safe house. The scheme also says mails and phone calls of the witnesses would be monitored to trace the person threatening them. It said a separate witness protection fund will be created in each state to meet the expenses incurred under the scheme.
- *Witness deposition complexes* will be set up in all district courts by the states and union territories within a year where the witnesses could fearlessly depose against the high and mighty without coming face-to-face with the accused.

It has three categories of witnesses based on the threat perception:

- *Category 'A':* Where the threat extends to life of witness or his family members and their normal way of living is affected for a substantial period, during investigation/trial or even thereafter.
- *Category 'B':* Where the threat extends to safety, reputation or property of the witness or his family members, only during the investigation process or trial.
- *Category 'C':* Where the threat is moderate and extends to harassment or intimidation of the witness or his family member's, reputation or property, during the investigation process.

Significance of the scheme:

- The witnesses, being eyes and ears of justice, play an important role in bringing perpetrators of crime to justice. The scheme is the first attempt at the national-level to holistically provide for the protection of the witnesses, which will go a long way in eliminating secondary victimization.
- This scheme attempts at ensuring that witnesses receive appropriate and adequate protection. It also strengthens the criminal justice system in the country and will consequently enhance national security scenario.

Need:

- Victims and witnesses of serious crimes are particularly at risk when the perpetrator is powerful, influential, or rich and the victims or witnesses belong to a socially or economically marginalised community. Girls and women who report sexual violence are often even more vulnerable and face extreme pressure or direct threats from the accused.
- Also, witnesses need to have the confidence to come forward to assist law enforcement and prosecutorial authorities. They need to be assured that they will receive support and protection from intimidation and the harm that criminal groups may seek to inflict upon them in attempts to discourage or punish them from co-operating. Hence, legislative measures to emphasise prohibition against tampering of witnesses have become the imminent and inevitable need of the day.
- In 2003, *Justice V Malimath Committee* on criminal justice system had recommended enacting a separate witness protection law and in 2006, the **Law Commission of India**, in its 198th report, provided for a draft witness protection law.
- Besides, countries such as USA, United Kingdom, China, Italy, Canada, Hong Kong and Ireland have witness protection scheme.

Sources: the hindu.

(Q) The draft Witness Protection Scheme, 2018, is the first attempt at the national-level to holistically provide for the protection of the witnesses, which will go a long way in eliminating secondary victimisation. Discuss.

5. NATIONAL INTEGRATION TOUR

- The National Integration Tours are **educational and motivational** tours for youth of **Jammu & Kashmir and North Eastern States.**

Aim of the National Integration Tour:

- It aims to provide an insight into the **rich heritage of the country** as well as **various developmental and industry initiatives** that are underway.
- This initiative will expose them to various career options and enable them to interact with renowned personalities.

Background:

- The National Integration Tour has been initiated as part of the **Indian Army's ongoing outreach programme to foster the spirit of National Integration** across the entire swathe of the country.

Source: PIB

6. FREIGHT VILLAGE IN VARANASI

- The **Ministry of Shipping** has approved the development of Rs. 156 crore freight village in Varanasi adjoining the **Inland Waterways Terminal on River Ganga**.
- The Varanasi freight village will be developed by the **Inland Waterways Authority of India**.

Advantages:

- It will serve as a **cargo hub, and a centre for aggregation and value addition.**
- It will also **provide support to stimulate development of a professional logistics industry** in Varanasi.

World Bank Study:

- A **World Bank pre-feasibility study** has found Varanasi to be a suitable site for the freight village.
- The traffic volume on inland waterway is expected to increase with the commissioning of the multi modal terminal being built under the **Jal Marg Vikas project.**

> **What is a Freight Village?**
> - A freight village is a designated area where facilities for various modes of transportation, distribution of goods and other logistics are available in a synchronized manner on a large scale.
> - Freight villages are cargo aggregators, offers various logistic choices to a shipper/cargo owner; i.e. choice of railroad; rail-waterway; road-waterway.
>
> **Major Function:**
> - The main function is management and utilization of various modes of transport, synergizing them and decongesting the existing mode of transportation.

Inland Waterways Authority of India:

- It came into existence on **27th October 1986** for development and regulation of inland waterways for shipping and navigation.
- The Authority **primarily undertakes projects for development and maintenance of IWT infrastructure** on national waterways through grant received from **Ministry of Shipping**.

Source: PIB

7. CABINET APPROVES AGRICULTURE EXPORT POLICY, 2018

- The Union Cabinet chaired by Prime Minister has approved the Agriculture Export Policy, 2018.
- The Cabinet has **also approved the proposal for establishment of Monitoring Framework at Centre with Commerce** as the nodal Department with representation from various line Ministries/Departments and Agencies and representatives of concerned State Governments, to oversee the implementation of Agriculture Export Policy.

Vision of the Agriculture Export Policy:

- Harness export potential of Indian agriculture, through suitable policy instruments, to make India global power in agriculture and raise farmers' income.

Objectives:

- To double agricultural exports from present US$ 30+ Billion to US$ 60+ Billion by 2022 and reach US$ 100 Billion in the next few years thereafter, with a stable trade policy regime.

- To diversify our export basket, destinations and boost high value and value added agricultural exports including focus on perishables.
- To promote novel, indigenous, organic, ethnic, traditional and non-traditional Agri products exports.
- To provide an institutional mechanism for pursing market access, tackling barriers and deal with sanitary and phyto-sanitary issues.
- To strive to double India's share in world agri exports by integrating with global value chain at the earliest.
- Enable farmers to get benefit of export opportunities in overseas market.

Background:
- **The Government has come out with a policy to double farmers' income by 2022.**
- Exports of agricultural products would play a pivotal role in achieving this goal.

Source: PIB

(Q) Discuss how the recently released agriculture export policy is a welcome step in the direction of doubling farmers' income by 2022.

8. KHELO INDIA YOUTH GAMES

- After the first edition of the Khelo India School Games 2017, the **second edition, the games has become an initiative of the Central Government, has expanded in its scope, and will allow participants to compete in two categories (under 17 and under 21)**.

About Khelo India –
- **The Khelo India programme has been introduced to revive the sports culture in India at the grass-root level by building a strong framework for all sports in India and establish India as a great sporting nation.**
- To accomplish the above objectives, Khelo India programme has been divided into 12 verticals, namely:
  ➢ Play Field Development
  ➢ Community Coaching Development
  ➢ State Level Khelo India Centres
  ➢ Annual Sports Competition
  ➢ Talent Search and Development
  ➢ Utilization and Creation/Upgradation of Sports Infrastructure
  ➢ Support to National/Regional/State Sports Academics
  ➢ Physical fitness of school children
  ➢ Sports for Women
  ➢ Promotion of sports amongst people with disabilities
  ➢ Sports for Peace and Development
  ➢ Promotion of rural and indigenous/tribal games

- Talented players identified in priority sports disciplines at various levels by the **High-Powered Committee** will be provided **annual financial assistance of INR 5 lakh per annum for 8 years.**
- **Khelo India School Games are a part of the Khelo India programme.**
- There are **16 disciplines** as follows:
- Archery, Athletics, Badminton, Basketball, Boxing, Football, Gymnastics, Hockey, Judo, Kabaddi, Kho-Kho, Shooting, Swimming, Volleyball, Weightlifting, and Wrestling.

Source: PIB

9. DAM SAFETY BILL 2018

What to study?
- ***For Prelims and Mains: Highlights of the Bill and key functions of the National Dam Safety Authority, concerns expressed by states over the Bill.***

Context: The government has introduced the Dam Safety Bill in the Lok Sabha, a legislation that aims to provide a robust legal and institutional framework under Central and state governments for the safety of dams, which will help states and Union territories adopt uniform procedures to ensure safety of reservoirs.

Why Centre is introducing this Bill?
- Though the subject does not fall under the purview of Parliament, the Centre has decided to introduce this bill mainly because dam safety is an issue of concern in the country.
- And there are no legal and institutional safeguards in this regard.

Highlights of Dam Safety Bill, 2018:
- The Bill provides for proper surveillance, inspection, operation and maintenance of all specified dams in the country to ensure their safe functioning.
- The Bill provides for constitution of a *National Committee on Dam Safety* which shall evolve dam safety policies and recommend necessary regulations as may be required for the purpose.
- The Bill provides for establishment of *National Dam Safety Authority* as a regulatory body which shall discharge functions to implement the policy, guidelines and standards for dam safety in the country.
- The Bill provides for constitution of *a State Committee on Dam Safety* by State Government.

Significance:
- The Dam Safety Bill, 2018 will help all the States and Union Territories of India to adopt uniform dam safety procedures which shall ensure safety of dams and safeguard benefits from such dams. This shall also help in safeguarding human life, livestock and property.
- It addresses all issues concerning dam safety including regular inspection of dams, Emergency Action Plan, comprehensive dam safety review, adequate repair and maintenance funds for dam safety, Instrumentation and Safety Manuals. It lays onus of dam safety on the dam owner and provides for penal provisions for commission and omission of certain acts.

Need:
- Over the last fifty years, India has invested substantially in dams and related infrastructures, and ranks third after USA and China in the number of large dams. 5254 large dams are in operation in the country currently and another 447 are under construction. In addition to this, there are thousands of medium and small dams.
- While dams have played a key role in fostering rapid and sustained agricultural growth and development in India, there has been a long felt need for a uniform law and administrative structure for ensuring dam safety.
- The Central Water Commission, through the National Committee on Dam Safety (NCDS), Central Dam Safety Organization (CDSO) and State Dam Safety Organizations (SDSO) has been making constant endeavours in this direction, but these organizations do not have any statutory powers and are only advisory in nature.
- This can be a matter of concern, especially since about 75 percent of the large dams in India are more than 25 years old and about 164 dams are more than 100 years old. A badly maintained, unsafe dam can be a hazard to human life, flora and fauna, public and private assets and the environment.
- India has had 36 dam failures in the past.

Sources: the hindu.

(Q) Discuss the provisions of the Dam Safety Bill 2018 and the role of National Dam Safety Authority. Critically examine how far the Bill goes in ensuring structural and operational safety of dams?

10. SHYAMA PRASAD MUKHERJI RURBAN MISSION

- The **Shyama Prasad Mukherji Rurban Mission (SPMRM)** is under implementation across the country (launched in 2016).
- It is a unique programme, designed to deliver catalytic interventions to rural areas on the threshold of growth.

Funding Support:
- There is a funding support of up to 30% of the estimated investment for each Rurban cluster, given as **Critical Gap Funding (CGF)**, while 70% of the funds is mobilized by the States through convergence with synergic State and Central programmes and private investment and institutional funding.

- **The CGF is now shared between the Centre and the State in a ratio of 60:40 for Plain area States and 90:10 for Himalayan and NE States.**

Various Provisions:

Provision of basic amenities –
- Provision of 24/7 Water Supply to all households,
- Solid and Liquid Waste Management facilities at the household and cluster level

Provision of Inter and Intra village roads –
- Adequate Street Lights and Public Transport facilities using green technologies

Provision of Economic Amenities –
- Various thematic areas in the sectors of Agri Services and Processing, Tourism, and Skill development to promote Small and Medium Scale Enterprises

Background:
- As per Census of **India Statistics**, the rural population in India stands at 833 million, constituting almost 68% of the total population.
- The rural population has shown a growth of 12% during the 2001-2011 period and there has been an increase in the absolute number of villages during the same period.
- Large parts of rural areas are not stand-alone settlements but part of a cluster of settlements, which are relatively proximate to each other. These clusters typically illustrate potential for growth, have economic drivers and derive location and competitive advantages.
- Hence, making a case for concerted policy directives for such clusters; these clusters once developed can then be classified as **'Rurban'**.

Mission's Objective:
- The objective of the **National Rurban Mission (NRuM)** is to stimulate local economic development, enhance basic services, and create well planned Rurban clusters.

Source: PIB

(Q) Write a critical note on the Shyama Prasad Mukherji Rurban Mission.

11. NATIONAL MISSION ON GOVERNMENT E-MARKET (GEM) PORTAL

- The **National Mission on GeM (NMG)** was launched on 5th September 2018 to accelerate the adoption and use of Procurement by Major Central Ministries, States and UTs and their agencies (including CPSUs/PSUs, Local Bodies) on the GeM platform.

Objectives of the NMG:
- Promote inclusiveness by catapulting various categories of sellers and service providers
- Highlight and communicate **'value add'** by way of transparency and efficiency in public procurement, including corruption free governance.
- **Achieve cashless, contactless and paperless transaction**, in line with the Digital India objectives.
- **Increase overall efficiency** leading to significant cost saving on government expenditure in Procurement.
- Maximizing ease in availability of all types of products and services bought by Government buyers.

Background:
- **GeM** is a short form of one stop **Government e-Market Place** hosted by Directorate General of Supplies and Disposals (DGS&D) where common user goods and services can be procured.
- **GeM** has recorded about $1.5 billion worth of transactions since it was launch 18 months ago.

Source: PIB

12. INDIA POST VENTURES INTO NEW ARENA OF E-MARKET PLACE.

- The Ministry of State for Communications (Independent Charge), launched the e-Commerce Portal of the Department of Posts (DoP).

- It will provide an e-Market place to sellers especially to rural artisans/self-help groups/ women entrepreneurs/State and Central PSUs/Autonomous Bodies etc. to sell their products to buyers across the Country.

Major Highlights:
- The small and local sellers (who were left) will now, by leveraging the vast physical and IT network of DoP, be able to maximize their reach and retailing power.
- The buyers can access the products of their choice displayed by sellers on the portal and place online orders by making digital payments.

Post Office Savings Bank (POSB):
- Under Core Banking Solution (CBS), an internet banking facility for Post Office Savings Bank (POSB) customers has been launched.
- Now, nearly 17 Crore POSB accounts will be intra-operable and customers can also transfer funds online to RD and PPF accounts of Post Offices.
- It helps to do transactions without physically visiting post offices.

Deen Dayal SPARSH:
- The Department of Posts had launched a scholarship program for school children called Deen Dayal SPARSH (i.e., Scholarship for Promotion of Aptitude & Research in Stamps as a Hobby).

Objective of Deen Dayal SPARSH –
- To bring philately to the mainstream of the education system and incentivizing it, in 2017.

Meghdoot Award:
- Shri Sinha (Minister of State for Communications) presented the **Meghdoot Awards to the Gramin Dak Sewak (GDS)** and employees of the Department in eight categories in recognition of their outstanding contribution.

Source: PIB

13. TRANSGENDER RIGHTS BILL

What to study?
- *For Prelims: Definitions included and key features of the bill.*
- *For Mains: Significance of the bill, criticisms and the need for a comprehensive review.*

Context: The Lok Sabha has passed *the Transgender Persons (Protection of Rights) Bill, 2016* to give transgender persons equal rights and protection under law through a voice vote.

Background:
- The Bill had gone to the standing committee, and as many as 27 amendments have been accepted by the government.

Criticisms:
- Several civil society groups have been vocal about their opposition to the Bill The Bill disregards many of their suggestions as also some of the crucial points raised by the standing committee report of July 2017.
- This includes *the right of transgender persons to self-identification*, instead of being certified by a district screening committee.
- The panel had also pointed out that *the Bill is silent on granting reservations to transgender persons*.

New definition:
- The amendments passed include a change in the previous definition of transgender persons as "neither wholly female or wholly male", which was criticised as being insensitive.
- *According to the new definition*, a transgender person is somebody "whose gender does not match the gender assigned to that person at birth and includes trans-men or trans-women, persons with intersex variations, gender-queers, and persons having socio-cultural identities such as kinnar, hijras, aravani, and jogta".

Highlights of the Bill:
- The Bill *aims to stop discrimination against a transgender person* in various sectors such as education, employment, and healthcare. It also directs the central and state governments to provide welfare schemes for them.
- The Bill states that a person will be recognised as transgender on the basis of *a certificate of identity issued through the district screening committee*. This certificate will be a proof of identity as transgender and confer rights under this Bill.

- *The bill has prescribed punishments for organised begging*. However, the Bill doesn't provide anything to better to condition in those areas, it doesn't provide for reservation.

- *The Transgender Bill does not mention any punishments for rape or sexual assault of transgender persons* as according to Sections 375 and 376 of the Indian Penal Code, rape is only when a man forcefully enters a woman.

Need of the hour:
- The Bill must recognise that gender identity must go beyond biological; gender identity is an individual's deep and personal experience. It need not correspond to the sex assigned at birth. It includes the personal sense of the body and other expressions such as one's own personal inducing proceeds.

Sources: the hindu.

(Q) Critically examine why the recently passed Transgender bill fails to address the systemic discrimination faced by transgenders in India.

14. NATIONAL E-VIDHAN APPLICATION (NEVA) PROJECT

- Minister of State for Parliamentary Affairs and Water Resources, River Development and Ganga Rejuvenation, gave details on the status of implementation of **National e-Vidhan Application (NeVA) Project**.

e-Vidhan:
- It is a **Mission Mode Project (MMP)** comes under the **Digital India Programme.**
- **Ministry of Parliamentary Affairs (MoPA)** is the **'Nodal Ministry'** for its implementation in all the 31 States/UTs with Legislatures.
- The funding for e-Vidhan is provided by the MoPA and **technical support by Ministry of Electronics and Information Technology (MietY)**.
- The funding of NeVA is through Central Sponsored Scheme i.e. 60:40; and 90:10 for North East & hilly States and 100% for UTs.

Aim of NeVA:
- It aims to bring all the legislatures of the country together, in one platform thereby creating a massive data depository without having the complexity of multiple applications.

Highlights of NeVA:
- Paperless Assembly or e-Assembly is a concept involving of electronic means to facilitate the work of Assembly.
- It **enables automation of entire law making process, tracking of decisions and documents, sharing of information.**
- Through the cloud technology (Meghraj), data deployed can be accessed anywhere at any time.
- **The live webcasting of Lok Sabha TV and Rajya Sabha TV is also available on this application.**
- Doordarshan has already been enabled with provision to incorporate similar facility in respect of State Legislatures.

✓ **Himachal Pradesh is already the first Digital Legislature of the country.**

Central Project Monitoring Unit (CPMU) and Detailed Project Report (DPR):
The CPMU under MoPA, is responsible for reviewing the financial and technical progress of the project. The State will prepare **detailed project report (DPR)** and gap analysis report.
- State level project monitoring committee will carry out the technical scrutiny and financial scrutiny of the DPR and after final approval of the same will be send to the MoPA for approval.
- **After the technical and financial scrutiny, funds will be released for project implementation.**

State Government's Role in the implementation of e-Vidhan:
- The State Government will appoint a **Secretary level officer** to be designated as the nodal officer/representative for e-Vidhan implementation in the State Legislature(s).
  - State Government will bear the funds required for running of e-Vidhan MMP after 3 years.
  - The State Government will ensure capacity building for the effective implementation of e-Vidhan MMP module.
  - **State Government/Legislature will undertake maintenance and replacement of ICT equipment after 3 years.**

- Release of next instalment would not be made in case the utilization certificate and confirmation of release of funds by the state government of their share is not received by the CPMU.

Source: PIB

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

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1. TRANS FATS

What to study?
- ***Static Part: Transfats- what are they and uses.***
- ***Dynamic and Current: concerns and the need for reduction in their usage, WHO guidelines, Initiatives in India.***

Context: The Food Safety and Standards Authority of India (FSSAI) has launched a new mass media campaign in order to create awareness about trans-fats and eliminate them in India by 2022.

About "Heart Attack Rewind":
- "Heart Attack Rewind", *a 30-second public service announcement*, will be broadcast in 17 languages for a period of four weeks on YouTube, Facebook, Hotstar, and Voot. It will also be placed on outdoor hoardings and run on radio stations in Delhi and the National Capital Region.
- The campaign will warn citizens about the health hazards of consuming trans-fats and offer strategies to avoid them through healthier alternatives.
- "Heart Attack Rewind" is a follow-up to an earlier campaign called *"Eat Right"*, which was launched on July 11, 2018. As part of the campaign, edible oil industries took a pledge to reduce trans-fat content by 2% by 2022. Later, food companies also took a pledge to reformulate packaged foods with reduced levels of salt, sugar and saturated fat.

Need for awareness and significance of the campaign:
- Studies have recently shown that 60,000 deaths occur every year due to cardiovascular diseases, which in turn are caused due to high consumption of trans-fats. Since the impact of trans-fats on human health is increasing exponentially, it is very important to create awareness about them.
- This campaign will concentrate on the demand side (consumers), who in turn, will push the supply side (food manufacturers) to come up with various strategies in order to reduce and later replace trans-fats.

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:
- 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. Trans-fats consumption increases the risk of developing heart disease and stroke.
- 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 recommends that trans-fat intake be limited to less than 1% of total energy intake and 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.

WHO recommendations:
- In May 2018, WHO has released draft recommendations on limiting the intake of trans-fats.
- These draft recommendations, the first since 2002, are aimed at controlling non-communicable diseases (NCDs), which are responsible for an estimated 39.5 million death (72%) of the 54.7 million deaths worldwide in 2016.

Key recommendations:
- Saturated fatty acids should not comprise more than 10% of your daily calorie intake.
- Trans-fatty acids should not comprise more than 1% of your daily calorie intake.
- Use heart-healthy polyunsaturated fatty acids (PUFAs) as replacement.
- The recommendations are applicable to both adults and children.

Initiative by Kerala:
- Kerala is planning to launch an initiative to enforce dietary guidelines, involving the reduction of trans-fatty acids (TFAs), salt and sugar in commercially available foods in the State.
- The initiative, with technical support from the World Bank, WHO and the Food Safety and Standards Authority of India (FSSAI), is being launched as unhealthy diet is pushing up metabolic syndrome and premature deaths due to non-communicable diseases (NCDs) among Keralites.

Sources: the hindu.

(Q) A robust and responsive food system is need of the hour to combat undernutrition, non-communicable diseases and hunger around the world. Analyse.

2. OXYTOCIN

What to study?
- *For Prelims: Oxytocin- uses, features and significance.*
- *For Mains: Why Centre had banned its usage, concerns over its increased usage and the need for alternatives.*

Context: The Delhi High Court set aside the government decision to ban private firms from producing and selling oxytocin, a drug used for inducing labour contractions and controlling bleeding.

Observations made by the Court:
- The government's decision was arbitrary and unreasonable. There was no scientific basis behind the Centre's decision restricting private companies from making or supplying the drug, which helps new mothers lactate, to prevent its alleged misuse in the dairy sector for increasing milk production.

Background:
- As per the Centre's April 27 notification, the state-run *Karnataka Antibiotics and Pharmaceuticals Ltd (KAPL)* was solely allowed by the Centre to make the drug to meet the country's needs.

Why was it banned?
- The drug is misused in the dairy industry where livestock is injected with Oxytocin to make them release milk at a time convenient to farmers.
- Oxytocin is also used to increase the size of vegetables such as pumpkins, watermelons, eggplants, gourds, and cucumbers.

Way ahead:
- *Carbetocin:* The World Health Organization (WHO) has come up with a safe and effective alternative to the controversial drug oxytocin.
- While Oxytocin, must be stored and transported at 2–8 degrees Celsius, and becomes less effective when exposed to heat, Carbetocin does not require refrigeration and retains its efficacy for at least three years even if it is stored at 30 degrees Celsius, and in 75% relative humidity.

About Oxytocin:
- Oxytocin has also been dubbed the *hug hormone, cuddle chemical, moral molecule, and the bliss hormone* due to its effects on behaviour, including its role in love and in female reproductive biological functions in reproduction.
- Oxytocin is a hormone that is *made in the brain, in the hypothalamus*. It is transported to, and secreted by, the pituitary gland, which is located at the base of the brain.
- It *acts both as a hormone and as a brain neurotransmitter*.
- The release of oxytocin by the pituitary gland acts to regulate two female reproductive functions: Childbirth and Breast-feeding.

Sources: the hindu.

(Q) Outright ban of drugs is not the solution to the health issues of the country. Comment, in the light of restrictions on the sale and manufacture of oxytocin.

3. 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: over 12,000 women in the US have sued Johnson & Johnson over claims that the talcum powder manufactured by them is the prime cause behind their ovarian cancer. A recent investigation by Reuters claimed that the talcum powder was contaminated by carcinogenic asbestos, making it poisonous and life-threatening for women using it on themselves.

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:
- 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.
- 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.

4. GLOBAL NUTRITION REPORT (GNR)

What to study?
- *Static Part: About GNR.*
- *Dynamic and Current: Why is malnutrition on rise globally, what needs to be done? India's position and measures necessary.*

Context: The *2018 Global Nutrition Report (GNR)* has been released.

Background:
- The Global Nutrition Report was conceived following the first Nutrition for Growth Initiative Summit (N4G) in 2013 as a mechanism for tracking the commitments made by 100 stakeholders spanning governments, aid donors, civil society, the UN and businesses.

Highlights of the report:
- Global burden of malnutrition "remains unacceptably high and progress unacceptably slow". Under-nutrition accounts for around 45% of deaths among children under five in low- and middle-income countries.

- Overweight and obesity has led to around 4 million deaths and 120 million healthy years of life lost across the globe, with around 38.9% adults found to be overweight.
- Among children under five years of age, 150.8 million are stunted, 50.5 million are wasted and 38.3 million are overweight; while 20 million babies are born underweight each year, it says.
- The impact of malnutrition on global economy is close to US$3.5 trillion per year, with obesity alone costing US$500 billion per year.
- A major section of the study looks at the quality, nutrient content and type of food consumed across the globe. The results suggest a disparity between developed and emerging markets, says the report.
- The report says that regardless of wealth, school-age children, adolescents and adults are consuming too many refined grains, sugary foods and drinks, and not enough fruits, vegetables and whole grains.

Where India stands?
- India holds almost a third (31%) of the global burden for stunting, the prevalence of which differs from state to state. As per the UNICEF, stunting, or low height for age, is caused by long-term insufficient nutrient intake and frequent infections.
- Stunting varies greatly from district to district (12.4% to 65.1%), with 239 of 604 districts accounting for stunting levels above 40%. The differences between districts were a result of multiple factors, including gender, education, economic status, health, hygiene, and other demographic factors.
- India is the country with the largest number of children who are stunted at 46.6 million, followed by Nigeria (13.9 million) and Pakistan (10.7 million). The urban prevalence of stunting on average 19.2% compared with 26.8% in rural areas.
- While wasting, or low weight for height, affects a greater proportion of rural children than urban. India again tops the list with the most number of wasted children at 25.5 million, followed by Nigeria (3.4 million) and Indonesia (3.3 million).
- India is also among the countries with more than a million children who are overweight. As part of the report, a case study in Rajasthan found that key areas of infant and young child feeding and micronutrient supplementation were underfunded.

Way ahead- need of the hour- suggestions by the report:
- Break down silos between malnutrition in all its forms.
- Prioritise and invest in the data needed and capacity to use it.
- Scale up financing for nutrition – diversify and innovate to build on past progress.
- Galvanise action on healthy diets – engage across countries to address this universal problem.
- Make and deliver better commitments to end malnutrition in all its forms – an ambitious, transformative approach will be required to meet global nutrition targets.

Sources: Down to Earth.

(Q) The progress on sustainable development goal impacting child malnutrition has been tardy across the world including India. Examine and suggest how to tackle this problem ?

5. FIXED DOSE COMBINATIONS (FDCS)

What to study?
- ***For Prelims: Meaning of FDCs and CDSCO- composition, objectives and functions.***
- ***For Mains: FDCs- why are they popular, concerns associated and the need for measures to check their quality and standard.***

Context: According to a study, of the 110 anti-TB (tuberculosis) Fixed Dose Combinations (FDCs) available in India, only 32 (less than 30%) have been approved by the Central Drugs Standard Control Organisation (CDSCO), the country's drug regulator.
- As of April, the CDSCO had approved 1,288 FDCs. This is disproportionately high compared with the availability in a tightly regulated market like USFDA, which has only a few hundred approved FDCs.

What's the main concern now?
- The problem of unapproved FDCs mainly affects those who get treated in the private sector. In the absence of a strong pharmacovigilance mechanism in India, there is no data on adverse events of these unapproved FDCs.

What's ailing the system?
- There are multiple deficiencies in the CDSCO's approval process for FDCs. Main amongst them are institutional problems such as understaffing, lack of skills, and inadequate infrastructure.
- However, the most significant issue is the issuance of manufacturing licenses by the State Licensing Authority without the prior clearance of the Drug Controller General of India DCG(I), the head of CDSCO.

What are FDCs?
- An FDC is a cocktail of two or more active drug ingredients in a fixed ratio of doses.
- According to US healthcare provider IMS Health, almost half the drugs sold in India in 2014 were FDC, making it a world leader in combination drugs.

Why are they popular in India?
- FDCs' popularity in India is due to advantages such as increased efficacy, better compliance, reduced cost and simpler logistics of distribution.
- FDCs have shown to be particularly useful in the treatment of infectious diseases like HIV, malaria and tuberculosis, where giving multiple antimicrobial agents is the norm.
- FDCs are also useful for chronic conditions especially, when multiple disorders co-exist.

About CDSCO:
- The Central Drugs Standard Control Organisation (CDSCO) ***under Directorate General of Health Services***, Ministry of Health & Family Welfare, Government of India is the ***National Regulatory Authority (NRA) of India***.
- ***Under the Drugs and Cosmetics Act***, CDSCO is responsible for approval of New Drugs, Conduct of Clinical Trials, laying down the standards for Drugs, control over the quality of imported Drugs in the country and coordination of the activities of State Drug Control Organizations by providing expert advice with a view of bring about the uniformity in the enforcement of the Drugs and Cosmetics Act.
- Further CDSCO along with state regulators, is ***jointly responsible for grant of licenses of certain specialized categories of critical Drugs*** such as blood and blood products, I. V. Fluids, Vaccine and Sera.

Sources: the hindu.

6. HEALTH MINISTRY NOTIFIES FOUR MORE DEVICES UNDER DRUGS AND COSMETICS ACT

What to study?
- ***For Prelims: Key features of the Drugs and Cosmetics act.***
- ***For Mains: Need for standards and quality check of some medical devices, other measures needed.***

Context: Commonly used medical devices such as nebulizers, blood pressure monitors, digital thermometers and glucometers have been notified as drugs under the Drugs and Cosmetics Act, a step which will enable the government to ensure their quality and performance.

Impact:
- ***The Drug Controller-General of India (DCGI) would regulate*** the import, manufacture and sale of these devices from January 1, 2020.
- ***All these devices will have to be registered under the quality parameters*** prescribed under Medical Devices Rules 2017 and other standards set by the Bureau of Indian Standard (BIS) certification.
- Also, companies which are engaged in the manufacture and import of these equipment, will have ***to seek the necessary permission or license*** from the Drug Controller-General of India.
- Currently, ***only 23 medical devices are monitored for quality by the country's drug regulator***. With four new devices being notified, 27 medical devices now fall under the definition of drugs under the Act. The other medical equipments are sold without any quality checks or clinical trials.

Background:
- The Drug Technical Advisory Body (DTAB), the country's highest drug advisory body, had approved the proposal to include nebulizers, blood pressure monitoring devices, digital thermometers and glucometers under the purview of the Drug Law.

About DTAB:
- Drugs Technical Advisory Board (DTAB) is the highest decision-making body under the Union health ministry on technical matters.
- **Director General of Health Services (DGHS)** is the **ex-officio chairman of this statutory body** which is constituted by the **ministry** under section 5 of the **Drugs and Cosmetics Act**.

Sources: the hindu.

7. CENTRAL DRUGS STANDARD CONTROL ORGANISATION (CDSCO)

What to study?
- ***For Prelims: CDSCO- key facts and about Isotretinoin.***
- ***For Mains: Misuse of various drugs and the need for stringent provisions to prevent their misuse.***

Context: The ***Central Drugs Standard Control Organisation (CDSCO)*** has issued safety guidelines for ***Isotretinoin***.
- CDSCO has directed Drug Controllers of all the States and Union Territories ***to monitor the sale, manufacture and distribution of Isotretinoin***.

Background:
- ***Isotretinoin is an oral drug, which is used in the treatment of severe acne.*** Isotretinoin capsules of 10 mg/20 mg were approved by CDSCO in 2002 for the treatment of cystic and conglobate acne, and severe nodular acne unresponsive to antibiotic therapy.
- ***It was later found that Isotretinoin can cause birth defects in progeny if not taken without proper guidance***.

About CDSCO:
- The Central Drugs Standard Control Organisation (CDSCO) under Directorate General of Health Services, Ministry of Health & Family Welfare, Government of India is ***the National Regulatory Authority (NRA) of India***.
- ***Functions:*** Under the Drugs and Cosmetics Act, CDSCO is responsible for approval of New Drugs, Conduct of Clinical Trials, laying down the standards for Drugs, control over the quality of imported Drugs in the country and coordination of the activities of State Drug Control Organizations by providing expert advice with a view to bring about the uniformity in the enforcement of the Drugs and Cosmetics Act.
- ***CDSCO along with state regulators, is jointly responsible for grant of licenses of certain specialized categories of critical Drugs*** such as blood and blood products, I. V. Fluids, Vaccine and Sera.

Sources: the hindu.

(Q) It is said that India is becoming home to production and trial of substandard drugs in recent years. In your opinion, why such drugs are produced and distributed? How can they be regulated? Critically comment.

8. EKLAVYA MODEL RESIDENTIAL SCHOOLS

- In the context of establishing quality residential schools for the **promotion of education, Eklavya Model Residential Schools (EMRSs) for ST students** are set up in States/UTs with provisioning of funds through **"Grants under Article 275(1) of the Constitution"**.
- The establishing of EMRSs is based on demand of the concerned States/UTs with availability of land as an essential attribute.
- As per the budget 2018-19, every block with more than 50% ST population and at least 20,000 tribal persons will have an Eklavya Model Residential School by 2022.

Background:
What is Eklavya Model Residential School (EMRS)?
- EMRS is a Government of India scheme for model residential school for Indian tribals (Scheduled Tribes, ST) across India.

Objectives of EMRS:
- Comprehensive physical, mental and socially relevant development of all students enrolled in each and every EMRS. Students will be empowered to be change agent, beginning in their school, in their homes, in their village and finally in a larger context.
- Focus differentially on the educational support to be made available to those in Standards XI and XII, and those in standards VI to X, so that their distinctive needs can be met,
- Support the annual running expenses in a manner that offers reasonable remuneration to the staff and upkeep of the facilities.
- Support the construction of infrastructure that provides education, physical, environmental and cultural needs of student life.

Source: PIB

9. IMPRESS SCHEME TO PROMOTE SOCIAL SCIENCE RESEARCH

- The Government has approved **"Revitalizing Infrastructure and Systems in Education by 2022"**, accordingly the scope of institutions to be funded through **Higher Education Financing Agency (HEFA)** has been enlarged to encompass School Education and Medical Education institutions, apart from Higher Education.
- The Government of India, in August 2018, had sanctioned the scheme **"Impactful Policy Research in Social Sciences (IMPRESS)"** at a total cost of Rs. 414 Cr for implementation up to 31.03.2021.

Highlights of the Scheme:
- 1500 research projects will be awarded for 2 years to support the social science research in the higher educational and to enable research to guide policy making.

Implementing Agency:
- Indian Council of Social Science and Research (**ICSSR**)

Objectives of the Scheme:
- To **identify and fund research proposals in social sciences with maximum impact on the governance and society.**
- **To ensure selection of projects through a transparent, competitive process on online mode.**
- To provide opportunity for social science researchers in any institution in the country, including all **Universities (Centre and State)**, private institutions with 12(B) status conferred by UGC.
- **ICSSR funded/recognized research institutes will also be eligible to submit research proposals on the given themes and sub-themes.**

About ICSSR –
- **Indian Council of Social Science Research (ICSSR)** was established in the year of 1969 by the Government of India to promote research in social sciences in the country.

About HEFA –
- **Higher Education Financing Agency (HEFA)** is a joint venture of MHRD Government of India and Canara Bank **with an agreed equity participation in the ratio of 91% and 9% respectively**. It is for financing creation of capital assets in premier educational institutions in India as part of rising 2022. HEFA's scope is greatly expanded to cover school education, educational institutes under Ministry of Health, etc.

- HEFA is registered under Section 8 [Not-for-Profit] under the Companies Act 2013 as a Union Govt company and as Non-deposit taking NBFC (NBFC-ND-Type II) with RBI.

Source: PIB

10. ZIKA WARNING: INDIA REBUTS CDC ZIKA ALERT

What to study?
- *For Prelims: Zika virus related key facts.*
- *For Mains: Global concerns and preventive measures in place.*

Context: India has asked the United States' public health agency, the Centers for Disease Control and Prevention, to "withdraw or modify" an advisory it issued on December 13 warning people against travelling to Rajasthan due to an outbreak of the Zika virus.
- The government took exception to the use of "endemic" in the advisory as Zika outbreaks in India have been contained within small areas.
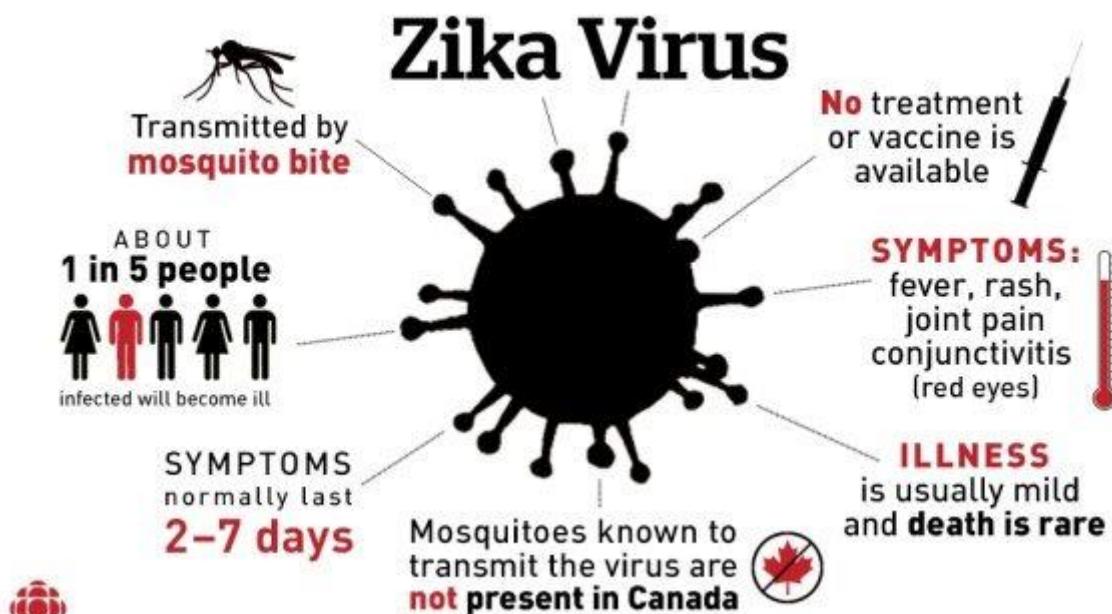
Background:
- The CDC had said the virus was endemic to India and pointed out "there is an unusual increase in the number of Zika cases in Rajasthan and surrounding states".
- It cautioned pregnant women against travelling to such areas. This is because Zika infection during pregnancy can cause serious birth defects.
- The health agency classified its alert under Level 2, which requires "enhanced protection". **Level 1 advises "usual precautions" and Level 3 advises against "non-essential travel"**.

What is Zika Virus?
- Zika virus is similar to dengue fever, yellow fever and West Nile virus. Carried by infected Aedes aegypti mosquitos, Zika is largely transmitted through bites, but can also occur through intrauterine infection.
- It was first identified in 1947 in Zika Forest, Uganda from where it derives its name.
- If a woman is bitten by an infected mosquito and becomes infected, Zika can cross into the placenta and affect the fetus. While anyone can contract Zika, pregnant women are the most at risk due to the potential for fetal microcephaly and other neurologic abnormalities.
- *Symptoms include* fever, headache, red eyes, skin rash, fatigue, muscle pain etc.
- *Treatment and Prevention:* There is no specific treatment or vaccine currently available to treat Zika. The best form of prevention is protection against mosquito bites and clearing stagnant water where mosquitoes breed.

Sources: the hindu.

(Q) Write a note on the Zika virus outbreak, its causes, consequences and the role of international agencies in dealing with this outbreak.

1. SWACHHTA PAKHWADA

- As a part of the Swachhta Pakhwada of Ministry of Civil Aviation (2018), the 15 day cleanliness drive, has successfully been observed in M/o Civil Aviation and all of its organization.

Swachhta Pakhwada:
- Started in **April 2016**.
- **The objective is to bring a fortnight of intense focus on the issues and practices of Swachhta by engaging GOI Ministries/Departments in their jurisdictions.**
- An annual calendar is pre-circulated among the Ministries to help them plan for the Pakhwada activities.
- The Ministries observing Swachhata Pakhwada are monitored closely using online monitoring system of Swachhata Samiksha where action plans, images, videos related to Swachhata activities are uploaded and shared.

Source: PIB

2. MUKHYAMANTRI TIRTH YATRA YOJANA

What to study?
- ***For Prelims: About the scheme- key features.***
- ***For Mains: Significance of the scheme.***

Context: Delhi state government has launched the 'Mukhyamantri Tirth Yatra Yojana' which offers free travel packages for senior citizens from Delhi to five religious circuits.

Highlights of the scheme:
Who can avail this offer?
- 1,100 senior citizens from every constituency of Delhi will be able to avail this facility at one go.
- Under this free pilgrimage scheme, a Delhi resident above 60 years will be eligible to take free pilgrimage along with his or her spouse.
- There is no income criterion but preference will be given to those from economically weaker sections on first-come-first-serve basis.
- Employees of central, state and local government or autonomous bodies are not eligible for the scheme.

Benefits:
- The applicant can also take along an attendant above the age of 20 years, if he or his spouse is above 70 years. The expenditure of the attendant will also be borne by the Delhi government.
- Those selected for pilgrimage will be covered with an insurance of Rs 1 lakh each.
- The applicant will have to give a self-certificate that all information being given by them is correct and they have not availed the scheme in the past.

Selection of pilgrims:
- The selection of pilgrims will be done through draw of lots and respective area MLAs will certify whether the intended beneficiaries belong to Delhi or not.

Sources: the hindu.

3. PRADHAN MANTRI AWAS YOJANA – URBAN

What to study?
- ***For Prelims: PMAY- Urban- key features.***
- ***For Mains: Significance of the scheme, challenges ahead and measures needed to achieve the target.***

Context: According to the findings by ratings agency Crisil, the central government has to mobilise Rs 1 lakh crore in the next three years for achieving its target of building 1 crore houses under the ***Pradhan Mantri Awas***

Yojana – Urban (PMAY-U), being implemented by the ministry of housing and urban affairs under the mission '**Housing for All by 2022'** since June 2015.

Challenges ahead:
- This is going to be a tall task given the current fiscal arithmetic. The scheme also faces headwinds such as unavailability of land in prime areas, low participation of private developers on account of brand dilution, bidding mechanism, stringent cost and time schedules resulting in low yields, increasing construction costs due to absence of bulk sourcing of materials, and lack of new technology that impacts productivity, cost efficiency and quality.

Significance of the scheme:
- PMAY-U does offer a huge opportunity for several sectors by setting off a virtuous cycle.
- One crore houses would mean an opportunity for over Rs 2 lakh crore of home loans, and incremental consumption of 80-100 million tonne of cement and 10-15 million tonne of steel.
- The construction opportunity is of about four billion square feet over the life of PMAY-U. And all that would translate into 9-10 crore incremental jobs over the execution period.

About PMAY- Urban:
- The Pradhan Mantri Awas Yojana (Urban) Programme launched by the Ministry of Housing and Urban Poverty Alleviation (MoHUPA), in Mission mode envisions provision of Housing for All by 2022, when the Nation completes 75 years of its Independence.

The Mission seeks to address the housing requirement of urban poor including slum dwellers through following programme verticals:
- Slum rehabilitation of Slum Dwellers with participation of private developers using land as a resource.
- Promotion of Affordable Housing for weaker section through credit linked subsidy.
- Affordable Housing in Partnership with Public & Private sectors.
- Subsidy for beneficiary-led individual house construction /enhancement.

Key facts:
- The ***beneficiaries*** are poor and people living under EWS and LIG categories in the country.
- ***The scheme is divided into three phases***. In the first phase, a total of 100 cities will be covered from April 2015 to March 2017. In phase two, 200 cities will be covered from April 2017 to March 2019. In the third phase, the leftover cities will be covered from April 2019 to March 2022.
- The government is providing ***an interest subsidy*** of 6.5% on housing loans which can be availed by beneficiaries for 15 years from start of loan date.
- The government will grant Rs 1 lakh to all the beneficiaries of the scheme. In addition, Rs 1.5 lakh will be given to all eligible urban poor who want to construct their houses in urban areas or plan to go for renovation in their existing houses. One can also avail loans under this scheme to build toilets in existing houses.

Sources: the hindu.

(Q) Infrastructure development has witnessed significant impetus in India in the recent years. Discuss.

4. 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: The government has approved a slew of measures under the National Pension Scheme (NPS).

Changes approved in the National Pension System:
- ***Mandatory contribution by the Central Government enhanced*** by 4 percent from the existing 10 percent to 14 percent for employees covered under NPS Tier-I
- Central government employees will be provided with ***freedom of choice for selection of Pension Funds and pattern of investment***.
- ***Payment of compensation for non-deposit or delayed deposit*** of NPS contributions during 2004-2012
- Contribution by Government employees under Tier-II of NPS will now be covered under Section 80 C for deduction up to Rs 1.50 lakh for the purpose of income tax at par with schemes such as General (PF), Contributory PF, Employees PF and Public PF, with lock-in period of 3 years.

- ***The entire withdrawal will now be exempt from income tax*** as the tax exemption limit for lump sum withdrawal on exit has been enhanced to 60 percent.

Implications:
- The move is set to benefit around 36 lakh subscribers, including approximately 18 lakh Central government employees covered under NPS.
- It will cost the exchequer Rs 2,840 crore in the current financial year.

What is National Pension System (NPS)?
- National Pension System (NPS) 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?
- Any Indian citizen between **18 and 60 years** can join NPS. The only condition is that the person must comply with know your customer (KYC) norms.

Can a Non Resident Indian (NRI) join NPS?
- Yes, an NRI can join NPS. However, the account will be closed if there is a change in the citizenship status of the NRI.

Sources: the hindu.

5. FAME-INDIA SCHEME

- **To promote manufacturing of electric and hybrid vehicle technology** and to ensure sustainable growth of the same, **Department of Heavy Industry** is implementing **FAME-India Scheme Phase – I** [Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India] from 1st April 2015.
- The scheme was initially up to 31st April 2017, has been extended up to 31st March 2019 or till Notification of FAME-II, whichever is earlier.

FAME-India Scheme Phase – II:
- The scheme proposes to give a push to **electric vehicles (EVs)** in public transport and
- It seeks to encourage adoption of EVs by way of **market creation** and **demand aggregation**.

Automobile Sector:
- **100% FDI by automatic route is permitted in the automobile sector.**
- Further, the sector is deregulated, both **private sector and public sector are free to carry out investment** in the automobile sector, including for manufacturing of **Electric Vehicles and E-Buses**.

Background:
- **FAME India is a part of the National Electric Mobility Mission Plan**. Main thrust of FAME is to encourage electric vehicles by providing subsidies.
- Vehicles in most segments – two wheelers, three wheelers, electric and hybrid cars and electric buses obtained the subsidy benefit of the scheme.
- FAME focuses on 4 areas i.e. Technology development, Demand Creation, Pilot Projects and Charging Infrastructure.

Source: PIB

6. SOCIALLY ORIENTED INSURANCE SCHEMES

- The socially oriented insurance schemes are currently being operated or partially sponsored by the Central Government targeted at vulnerable sections of the society.

Pradhan Mantri Jeevan Jyoti Bima Yojana (PMJJBY) and **Pradhan Mantri Suraksha Bima Yojana (PMSBY):**
- Launched on 9th May, 2015.
- These schemes are offered/administered through both public and private sector insurance companies, in tie up with scheduled commercial banks, regional rural banks and cooperative banks.

PMJJBY:

- It offers a renewable one-year term life cover of Rupees Two Lakh to all account holders in the age group of 18 to 50 years, covering death due to any reason, for a premium of Rs. 330/- per annum per subscriber, to be auto debited from subscriber's bank account.

PMSBY:

- It offers a renewable one-year accidental death cum disability cover to all subscribing bank account holders in the age group of 18 to 70 years for a premium of Rs. 12/- per annum per subscriber to be auto debited from subscriber's bank account.
- It provides a cover of Rs. Two Lakh for accidental death or total permanent disability and Rs One Lakh in case of permanent partial disability.
- **The above schemes are on self-subscription basis and involves no Government contribution.**

Pradhan Mantri Fasal Bima Yojana (PMFBY):

- **Ministry of Agriculture** implements PMFBY and **Restructured Weather Based Crop Insurance Scheme (RWBCIS).**
- It provides **comprehensive crop insurance cover against non-preventable natural risks** at an affordable rate to farmers.
- It is **compulsory** for loanee **farmers** availing **crop loans** for **notified crops in notified areas** and **voluntary for non-**loanee **farmers**.
- Uniform maximum premium of only 2%, 1.5% and 5% of the sum insured to be paid by farmers for all **Kharif crops, Rabi crops and commercial/horticultural crops**.
- The difference between premium and the rate of insurance charges payable by farmers is provided as subsidy and shared equally by the Centre and State.

Pradhan Mantri Jan Arogya Yojana (PMJAY) – Ayushman Bharat:

- A **centrally sponsored scheme.**
- An **entitlement-based scheme.** It covers poor and vulnerable families based on deprivation and occupational criteria as per SECC data.
- It provides health coverage up to Rs. 5 lakh per family, per year for secondary and tertiary hospitalization to over 10.74 crore poor and vulnerable families.
- It provides **cashless and paperless services** for the beneficiary at the point of service in any (public and private) empaneled hospitals across India.
- The ratio of premium under PMJAY is 60:40 between Centre and State except North Eastern States and **3 Himalayan States where the ratio is 90:10** with an upper limit for Centre.
- **In the case of Union Territories, the Central contribution of premium is 100% for UTs without legislature, while it is 60:40 for those with legislature.**

Source: PIB

7. DRAFT NATIONAL CHILD PROTECTION POLICY

What to study?

- *For Prelims: Highlights of the policy.*
- *For Mains: Significance and the need for policy on child protection.*

Context: Women and child development ministry has drafted *a policy dedicated to the protection of children*. Until now, *protection of children was only a part of the broader National child policy 2013*.

Background:

- The Supreme Court had asked the centre to consider framing the national policy on protection of children.

Key provisions and highlights of the draft policy:

- *Application of the policy:* The policy will apply to all Institutions and organisations including corporate and media houses government or private sector.
- As per the policy all organisations must have *a code of conduct* based on zero tolerance of child abuse and exploitation.
- The policy requires organisations *to lay down that employees don't use language or behaviour* that is inappropriate, harassing, abusive, sexually provocative, demeaning or culturally inappropriate.

- Institutions should also designate *a staff member* to ensure that procedures are in place to ensure the protection of children as well as to report any abuse.
- Any individual who suspects physical, sexual or emotional abuse must report it to the helpline number 1098 or police or a child welfare committee.

What is missing?
- Unlike the national child policy 2013, the latest draft doesn't talk about *children who may need additional Special Protection measures*.
- *Left out:* It also doesn't include provisions for protecting those affected by migration, communal or sectarian violence or children forced into begging or who are in conflict with the law and those infected with HIV/AIDS.
- The draft talks about organisations laying a code of conduct, but *it doesn't explain what is acceptable behavior* such as conduct of teachers in schools.

What else is needed?
- The Policy should address *four aspects- creating awareness, prevention, reporting and responding*. The draft needs to go into all these aspects, especially reporting structure involving various nodal bodies and monitoring mechanism for implementation of the guidelines.
- The policy makers should take the opportunity to *go beyond the role of Institutions and look at the role of individuals*.
- The norms should be designed in such a way that *organisations can customise the policies according to the nature of their work*.

Sources: the hindu.

8. DEENDAYAL UPADHYAYA GRAMEEN KAUSHALYA YOJANA (DDU-GKY)

- **Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY)** is the flagship placement linked skill-training programme under the **Ministry of Rural Development (MoRD)**.
- There are several challenges that are preventing India's rural poor from competing such as the lack of formal education and employability skills. DDU-GKY bridges this gap by funding training projects with an emphasis on placement, retention, career progression and foreign placement.
- The mission of the flagship scheme of MoRD is to ensure rural poor youth are skilled in market relevant trades and job-relevant competencies.

Champion Employers policy:
- The **Champion Employers are the industry leaders who have the potential to provide training and captive employment to the DDU-GKY candidates.**
- The policy seeks a strategic alignment of objectives of DDU-GKY with the HR strategy of organizations, which have a large potential to absorb trained manpower.

Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY):
- The **Ministry of Rural Development (MoRD)** announced the Deen Dayal Upadhyaya Grameen Kaushalya Yojana (DDU-GKY) Antyodaya Diwas, on **25th September 2014**.
- **DDU-GKY is a part of the National Rural Livelihood Mission (NRLM)**, tasked with the dual objectives of adding diversity to the incomes of rural poor families and cater to the career aspirations of rural youth.
- DDU-GKY is uniquely focused on rural youth between the ages of 15 and 35 years from poor families. As a part of the Skill India campaign, it plays an instrumental role in supporting the social and economic programs of the government like the Make in India, Digital India, Smart Cities and Start-Up India, Stand-Up India campaigns.

Source: PIB

1. MINISTRY OF NEW AND RENEWABLE ENERGY CONFERRED SKOCH AWARD FOR NATIONAL SIGNIFICANCE.

- **Ministry of New and Renewable Energy** has been conferred the **Skoch Award for National Significance**.
- The award has been conferred considering its purpose and critical role played in installing about 73 GW renewable energy capacity in the country.
- With **21 per cent of total installed capacity, within the year renewable energy grossed one billion units of electricity** in the country.
- **India's ranking:**
  - India ranks **fourth in the world in wind energy capacity**, and
  - India ranks **fifth in solar & total energy capacity installed** in the world.
- India had played a critical role in setting up of international solar alliance.

Background:
Skoch Group
- It is a **think tank dealing with socio-economic issues with a focus on inclusive growth since 1997**.
- It has **instituted India's highest independent civilian honours in the field of governance, finance, technology, economics and social sector.**

Skoch Award 2018
- **Who can nominate?**
  - Central government
  - State government
  - Local body
  - Municipality
  - City/District administration
  - State Owned Enterprises/Undertakings
- **SKOCH Award celebrates excellence of governance delivery by domain departments.** This includes having sufficient familiarity, capacity and knowledge about the functionality of their systems, processes and outcomes.

Source: PIB

2. NATIONAL MISSION FOR CLEAN GANGA (NMCG)

- **National Mission for Clean Ganga (NMCG) made its effort to reduce pollution in river Ganga** when PM inaugurated projects in Prayagraj including **175 KM of sewerage network**.
- The project will now carry 7.8 Cr litres sewage water per day to **existing STPs (Sewage Treatment Plants) at Salori, Kodra & Ponghat** for treatment earlier ended up in Ganga.

National Mission for Clean Ganga (NMCG):
- It was registered as a society on 12th August 2011 under the **Societies Registration Act 1860.**
- It acted as implementation arm of **National Ganga River Basin Authority (NGRBA)**, constituted under the provisions of the **Environment (Protection) Act (EPA), 1986**.
- The Act envisages five-tier structure at national, state and district level to take measures for prevention, control and abatement of environmental pollution in river Ganga and to ensure continuous adequate flow of water so as to rejuvenate the river Ganga as below:
  1. **National Ganga Council under the chairmanship of Hon'ble Prime Minister of India.**
  2. **Empowered Task Force (ETF) on river Ganga under chairmanship of Hon'ble Union Minister of Water Resources, River Development and Ganga Rejuvenation.**
  3. **National Mission for Clean Ganga (NMCG).**
  4. **State Ganga Committees, and**
  5. **District Ganga Committees in every specified district abutting river Ganga and its tributaries in the states.**

(Q) To hear the call of the Ganga, both political will and ethical responsibility are required. Analyse in the context of recent developments with respect to Ganga River.

3. NITI AAYOG RELEASES SECOND DELTA RANKING OF ASPIRATIONAL DISTRICTS

What to study?
- ***For Prelims: About Aspirational Districts Programme, key performers.***
- ***For Mains: Significance and the need for such programmes.***

Context: NITI Aayog has released the Second Delta Ranking of the Aspirational Districts Programme. The ranking details the incremental progress achieved by the districts during June to October this year across six key development sectors.

How are districts ranked?
- The districts have been ranked in a transparent basis *on parameters across various performance indicators like Health and Nutrition, Education, Skill Development and Basic Infrastructure among others*.
- The rankings are based on the data that is publicly available through the Champions of Change Dashboard, which includes data entered on a real-time basis at the district level.

Performances of various districts:
- ***Top performers:*** Virudhunagar district in Tamil Nadu has shown the most improvement overall, followed by Nuapada district in Odisha, Siddarthnagar in Uttar Pradesh, Bihar's Aurangabad and Koraput in Odisha. These districts have championed the development narrative in fundamental parameters of social progress.
- ***Least performers:*** Meanwhile, Nagaland's Kiphire district, Jharkhand's Giridih, Chatra in Jharkhand, Hailakandi in Assam, and Pakur in Jharkhand have shown least improvement.

About Aspirational Districts Programme:
- Launched in January this year, the **'Transformation of Aspirational Districts' programme** aims to quickly and effectively transform some of the most underdeveloped districts of the country.
- The broad contours of the programme are Convergence (of Central & State Schemes), Collaboration (of Central, State level 'Prabhari' Officers & District Collectors), and Competition among districts driven by a Mass Movement or a Jan Andolan.
- With States as the main drivers, this program will focus on the strength of each district, identify low-hanging fruits for immediate improvement, measure progress, and rank districts.

Focus of the programme:
- To enable optimum utilization of their potential, this program focuses closely on improving people's ability to participate fully in the burgeoning economy.
- Health & Nutrition, Education, Agriculture & Water Resources, Financial Inclusion & Skill Development, and Basic Infrastructure are this programme's core areas of focus.

Significance of the scheme:
- If these districts are transformed, there would be tremendous improvement in the internal security environment of the country.
- If Prabhari officers can bring convergence in the development efforts of different Ministries and state Governments and the schemes specially launched by Home Ministry in these districts, it would serve as a great opportunity to ensure rapid development in the country.

Sources: the hindu.

(Q) Aspirational District Programme (ADP) is a marked shift in India's governance model that embodies cooperative as well as competitive federalism and efficiency in resource utilization, as its key determinants. Critically analyse.

4. DIPP SWACHCH BHARAT GRAND CHALLENGE AWARDS

- As part of the **Swachhta Pakhwada** held from 1st to 15th November, 2018, **Department of Industrial Policy and Promotion (DIPP) organized a Swachch Bharat Grand Challenge.**

Four Areas selected for the grand challenge:
- Sanitation
- Waste Management
- Water and Wastewater management
- Air Management

Objective of the award:
- This was organized to **reward innovative solutions by DIPP recognized Start-ups** in the country.
- Unique solutions were received from start-ups who had also filed for intellectual property rights.

Background:
About Swachhata Pakhwada –
- It was **started in April 2016** with the objective of **bringing a fortnight of intense focus on the issues and practices of Swachhata by engaging GOI Ministries/Departments in their jurisdictions.**
- An annual calendar is pre-circulated among the Ministries to help them plan for the Pakhwada activities.
- They are monitored closely using online monitoring system of Swachhata Samiksha where action plans, images, videos related to Swachhata activities are uploaded and shared.
- After the observation, Ministries/Departments announce their achievements through a press conference and other communication tools.
- **For the Pakhwada fortnight, observing ministries are considered as Swachhata Ministries and are expected to bring qualitative Swachhata improvements in their jurisdictions.**

Source: PIB

5. GUIDELINES ISSUED TO ENSURE TRANSPARENCY IN SELECTION OF SPORTSPERSONS

- The development and promotion of various disciplines of sports including selection of players for various national and international sports competitions is the responsibility of the concerned **National Sports Federations (NSFs)**.
- The NSFs work in an autonomous environment and the Government is not directly involved in their functioning, including selection of sports persons.
- **To ensure transparency in selection process Government has issued guidelines according to which selection of sportspersons for major international events is to be done by a Selection Committee.**

Implementing Various Sports Promotional Schemes:
- **Ministry of Youth Affairs and Sports (MYAS)** through **Sports Authority of India (SAI)** has been implementing various sports promotional schemes to tap sports talent across the country irrespective of their financial status.
- Under the Schemes – **SAI Training Centers (STC)**, **Special Area Games (SAG)**, sports talents belong to rural, tribal, coastal, hilly and backward areas of the country are selected.
- The selected trainees are provided financial support in the form of expert coaches, sports equipment, boarding and lodging, sports kit, competition exposure, educational expenses, medical/insurance and stipend as per the approved scheme norms.
- Under the Scheme of Assistance to National Sports Federations, the **Government supports the identified sportspersons, including those from weaker sections of society/teams for intensive coaching through national coaching camps, foreign exposures/competitions etc.**

Customized Training:
- Under **Target Olympic Podium Scheme (TOPS)**, customized training is being provided to identify sportspersons at the state-of-the-art sports institutes/academies within the country and abroad.

Background:

National Sports Federations –
- **National Sports Federations (NSFs)** are autonomous bodies registered under the **Societies Registration Act 1860**.

Sports Authority of India (SAI) –
- Apex national sports body of India
- It is established in **1984** by the **Ministry of Youth Affairs and Sports for the development of sports in India.**

Topic: Important aspects of governance, transparency & accountability and institutional and other measures.

1. FAKE NEWS AFFECTS VOTING BEHAVIOUR

What to study?
- *Static Part: Meaning of Fake news, Beyond Fake News project.*
- *Dynamic and Current: Why is the spread of fake news on rise these days, how to contain it, legislative measures necessary, challenges and need for multi- stakeholder approach, how it affects voting behaviour?*

Context: Outgoing Chief Election Commissioner O.P. Rawat has said that *fake news affects voting behaviour in a big way.*

Need of the hour:
- Right now the only mechanism is Section 126 and EC instructions on paid news. We have to *bring in a robust mechanism for conduct on social media platforms*.

What is fake news?
- Fake news is *a type of yellow journalism that consists of deliberate misinformation or hoaxes spread via the traditional print, broadcasting news media, or via Internet-based social media*. Fake news is written and published with the intent to mislead in order to gain financially or politically, often with sensationalist, exaggerated, or patently false headlines that grab attention.

The main driving force behind fake news remains:
- Getting easy viewership through sensational news-e.g. dubbing foreign prisoners as spies or terrorists without any proof
- Directed towards a particular organization or person with an intention to either glorify it or to bring malice.eg. a news channel was established to defend the accused in Jessica Lal murder case.

Dangers of fake news:
- *Political:* Swaying or polarising public opinion. Example Recent American election, UP elections where certain facts are quoted out of context/partially. Significant impact on the nature of polity.
- *Religious:* Promoting religious ideologies. Glorifying one religion while despising others Ex. Right wing violence meted out by Gau rakshaks leads to religious polarisation and communal unrests.
- *Criminal:* Sensationalising crimes by blowing them out of proportion. Misleads people rather than making them aware. Instils irrational fears.
- *Fake news has also been used to dupe gullible people financially*. The reach of news has given chit fund schemes an altogether new arena as well as has introduced the concept of online fraud through spam mails.
- *It hampers spirit of common brotherhood and raises intolerance*. Eg. 2012 mass exodus of North-Eastern people from Bangalore on false online threats.
- *Over the time it shapes the thinking of society at large*. Portrayal of India as an unsafe destination for women by international media has created a false image of a nation.

What is needed?
- *Independent, trusted and effective press regulation*.
- *Mainstream media must use social media tools* intensively in order to defend the truth, present the correct information and balance opinions.

- **Curb media ownership**. We need an open debate on the impact of media concentration on our democracy and wider culture. There should be clear limits on media ownership so that powerful proprietors with vested interests are not allowed to dominate the news agenda.
- **Define fake news legally**. Heavy punitive measures for whosoever violates the said definition.
- **There should be grievance redressal mechanisms** and arbitration spaces to resolve issues.
- **Digital media literacy** among people to increase scrutiny and feedbacks of the content.
- **Technical solutions** that assess the credibility of information circulating online are also needed.

Beyond Fake News Project:
- **What is it?** The British Broadcasting Corporation (BBC) has devised a new campaign that is aimed at fighting back against disinformation and fake news. It lays a major focus on global media literacy, including workshops and debates in countries like India.

(Q) With the advent of new age digital and social media, fake news has pervaded all spheres of life, political, economic and social – with negative implications. What measures need to be taken by various stakeholders to combat fake news menace? Discuss.

2. RIGHT TO KNOW

What to study?
- **Static Part: Key features of the RTI Act.**
- **Dynamic and Current: Significance of the Act, challenges and institutional measures necessary, need to widen the ambit of the act.**

Context: The Maharashtra government has issued a government resolution allowing citizens to inspect records in district-level offices and local bodies across the state under the Right To Information (RTI) for two hours every Monday.

Aim:
- To smoothen access to information.
- To help curb the rising number of pending appeals with the Maharashtra State Information Commission.
- To oversee denying or withholding information.

About the RTI Act:
- The basic object of the Right to Information Act is to empower the citizens, promote transparency and accountability in the working of the Government, contain corruption, and make our democracy work for the people in real sense.
- Under the provisions of the Act, any citizen of India may request information from a "public authority" (a body of Government or "instrumentality of State") which is required to reply expeditiously or within thirty days.
- The Act also requires every public authority to computerise their records for wide dissemination so that the citizens need minimum recourse to request for information formally.
- **Information disclosure in India is restricted by the Official Secrets Act 1923 and various other special laws**.

Sources: the hindu.

Topic: India and its neighbourhood- relations.

1. ROHINGYA REFUGEES

What to study?
- **For Prelims: Who are Rohingyas?**
- **For Mains: Displacement of Rohingya community, controversy associated and the need for international cooperation to address the issue.**

Context: India has handed over to Myanmar the first 50 houses built by the country for the displaced minority Rohingya Muslims in the restive Rakhine province.

Background:
- India signed a development programme for Rakhine State in Myanmar late last year which was designed to assist the Myanmar government in Rakhine State to build housing infrastructure for displaced persons.
- More than 700,000 minority Rohingya Muslims fled from Myanmar's Rakhine state to neighbouring Bangladesh since August 2017 after a military crackdown, triggering a massive refugee crisis.

Who are Rohingyas?
- They are *an Ethnic group, mostly Muslims*. They were not granted full citizenship by Myanmar. They were classified as *"resident foreigners or associate citizens"*.
- They speak a dialect of Bengali and not Burmese. Ethnically they are much closer to Indo-Aryan people of India and Bangladesh than to the Sino-Tibetans of the Country.

What's the issue?
- Few years ago, religious and ethnic tensions between the Rohingya Muslims and the Rakhine Buddhists (who make up the majority of the population in Myanmar) escalated into widespread, deadly rioting. Hundreds of thousands were forced to flee. Since then, ongoing violent attacks have forced even more people to leave their homes.
- The Myanmar Government says that Rohingya people are not Burmese citizens – but the Rohingya have been living in Myanmar for generations. Today, they are a people with no home or citizenship.
- Rohingya people are being widely abused and exploited. They are one of the most persecuted minorities in the world.

Sources: the hindu.

2. INDIA-NEPAL-BHUTAN PLAN JOINT TASK FORCE TO PROTECT WILDLIFE

What to study?
- *For Prelims: Overview of India, Nepal and Bhutan borders and states located there.*
- *For Mains: Need for Joint task force, significance and challenges.*

Context: The governments of India, Nepal and Bhutan are actively considering having a joint task force for allowing free movement of wildlife across political boundaries and checking smuggling of wildlife across the Kanchenjunga Landscape, a trans-boundary region spread across Nepal, India and Bhutan.

Background:
- The developments comes up after forest officials and representatives of non-government organisation of the three countries visited parts of the landscape and later held a meeting at Siliguri in north Bengal earlier this month.

Need for a joint task force:
- Setting up of a joint task force is a key requirement in the road map on achieving the objectives of free movement of wildlife and checking smuggling of wildlife.
- According to the International Centre for Integrated Mountain Development (ICIMOD), a regional knowledge development and learning centre, 1,118 sq km of riverine grassland and tree cover were lost in the landscape between 2000 and 2010. 74 % of the area was converted into rangeland and 26% to agricultural land.
- Other than seven million people, the Kanchenjunga Landscape is also home to 169 species of mammals and 713 species of birds. Studies by the ICIMOD suggest that between 1986 and 2015, as many as 425 people were killed by elephants and 144 elephants were killed between 1958 and 2013.

Sources: the hindu.

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

1. WHAT ARE BRITAIN'S 'GOLDEN VISAS'?

What to study?
- *For Prelims and Mains: What are Golden Visas, who can avail them and why they have become controversial?*

Context: The UK government has put on hold plans to suspend "golden visa" category in reference to its use by super-rich foreign nationals, including Indians, to acquire fast-track settlement rights in Britain.

What are Golden Visas or Tier 1 Visas?

- They provide a faster route for wealthy investors coming from outside the European Union and Switzerland to settle in Britain. The program was introduced in 2008 to attract wealthy foreign nationals willing to invest large amounts of capital in Britain.

Criteria:

- To qualify, foreign nationals must put down *a minimum of 2 million pounds (around $2.5 million) as an investment in Britain*. Such an investment in United Kingdom bonds, share capital or companies allows investors to apply for permanent residency within five years.
  - For a £5 million investment, they can apply for *permanent residency* after three years.
  - An investment of £10 million can open the door to permanent residency after two years. After that, the nationals theoretically could apply for citizenship.

Criticisms:

- Billions of pounds have poured into London over the past decade, following an influx of global elites who have benefited from the program. The visa program has always had its critics, with anticorruption campaigners railing against Britain's openness to ill-gotten riches from overseas and the foreigners who invest them.
- A survey found that the scheme brought limited economic benefits because most of the investors had bought fixed-interest loan securities known as gilts, meaning that they were effectively loaning the government money instead of investing in the country.

Sources: the hindu.

2. TRANS REGIONAL MARITIME NETWORK (T-RMN)

What to study?

- *For Prelims and Mains: Key features and significance of T- RMN.*

Context: India has signed the ascension agreement to the Trans Regional Maritime Network (T-RMN). The multilateral construct comprises of 30 countries and is steered by Italy.

- India already has bilateral White Shipping Agreements with 36 countries.

About the Trans Regional Maritime Network (T-RMN):

- The network *facilitates information exchange on the movement of commercial traffic on the high seas.*
- The information is available primarily through the Automatic Identification System (AIS) fitted on merchant ships with more than 300 gross registered tonnage as mandated by the International Maritime Organisation.
- The AIS information comprises name, MMSI number, position, course, speed, last port visited, destination and so on. This information can be picked up through various AIS sensors including coastal AIS chains and satellite based receivers.

Significance:

- Such multilateral agreements are necessitated due to the large traffic in the Indian Ocean which cannot be entirely monitored by any one nation.
- This is a significant move as it will help the Indian Navy keep a watch over the vast Indian Ocean and boost maritime security of the country.
- India is part of several such agreements, which help the nations to coordinate and share information to keep tabs on suspicious activities and illegal trade across the oceans.

Sources: the hindu.

1. ORGANIZATION OF THE PETROLEUM EXPORTING COUNTRIES (OPEC)

What to study?
- ***Static Part: About OPEC, Why Qatar is leaving?***
- ***Dynamic and Current: Implications, challenges on Qatar's exit, What's the way out?***

Context: Qatar has announced that it would leave OPEC on January 1, 2019. The decision comes just days before OPEC and its allies are scheduled to hold a meeting in Vienna, Austria. Qatar said it is leaving OPEC in order to focus on gas production.

What's the issue?
- The decision to pull out after more than five decades comes at a turbulent time in Gulf politics, with Doha under a boycott by former neighbouring allies including Saudi Arabia for 18 months.
- Since June 2017, OPEC kingpin Saudi Arabia — along with three other Arab states — has cut trade and transport ties with Qatar, accusing the country of supporting terrorism and its regional rival Iran. Qatar denies the claims, saying the boycott hampers its national sovereignty.

Background:
- Qatar's oil production is around 600,000 barrels per day, making it the world's 17th largest producer of crude. It also only holds around two percent of the world's global oil reserves.

About OPEC:
- The Organization of the Petroleum Exporting Countries (OPEC) is a group of oil-producing nations that was first established in Baghdad, Iraq, in 1961.
- OPEC is one of the most powerful international organizations in the world and was a major player in the shift towards state control over natural resources.

Membership:
- The OPEC Statute distinguishes between the ***Founder Members and Full Members*** – those countries whose applications for membership have been accepted by the Conference.
- The Statute stipulates that "any country with a substantial net export of crude petroleum, which has fundamentally similar interests to those of Member Countries, may become a Full Member of the Organization, if accepted by a majority of three-fourths of Full Members, including the concurring votes of all Founder Members."
- The Statute further provides for ***Associate Members*** which are those countries that do not qualify for full membership, but are nevertheless admitted under such special conditions as may be prescribed by the Conference.
- Currently, the Organization has a total of 15 Member Countries. The current OPEC members are the following: Algeria, Angola, Ecuador, Equatorial Guinea,
- Gabon, Iran, Iraq, Kuwait, Libya, Nigeria, Qatar, the Republic of the Congo, Saudi Arabia, United Arab Emirates, and Venezuela.
- Indonesia is a former member, and Qatar will no longer be the member of OPEC starting on 1 January 2019.

Sources: the hindu.

2. AUSTRALIA RECOGNIZES WEST JERUSALEM AS CAPITAL OF ISRAEL

What to study?
- ***For Prelims: Where is Jerusalem located?***
- ***For Mains: What is the Controversy all about, India's stand and the need for viable solution.***

Context: Australia has recognized West Jerusalem as the capital of Israel. With this, Australia has become one of the few countries that officially recognize West Jerusalem as Israel's capital.

Background:
- Both Israel and the Palestinians claim Jerusalem as their Capital and this despite is not resolved yet.
- United States President Donald Trump's administration had also announced recognition of Jerusalem as Israel's capital on December 6, 2017.

- *The UN General Assembly passed a resolution in opposition to declare the US President Donald Trump's declaration of Jerusalem as Israel's capital "null and void"*. India also supported the resolution, which was approved with a majority of 127-9 at the UN General Assembly calling for the US to withdraw its decision.

Sources: the hindu.

3. 7ᵀᴴ ROUND OF INDIA – SOUTH KOREA NEGOTIATIONS HELD

- The **7ᵗʰ round of India – South Korea Comprehensive Economic Partnership Agreement (CEPA)** negotiations were held in South Korea from 11ᵗʰ to 13ᵗʰ December, 2018.

Highlights of the Meeting:
- The **discussions were positive**, and subject to Indian sugar industry **meeting the quality standards and specifications prescribed by the South Korean Government.**

Background:
- South Korea imports around 15 lac tones of raw sugar annually and the Indian sugar industry is making efforts to export raw sugar from India during 2018-19 sugar seasons.
- India and South Korea will reduce duties on 11 tariff lines in a bid to expand bilateral trade by updating their existing free-trade agreement, called the **Comprehensive Economic Partnership Agreement (CEPA)**.
- In 2017-18, India exported goods worth $4.4 billion to South Korea while imports from the latter were worth $16.3 billion.

Difference between CECA and CEPA –
- CECA – Comprehensive Economic Cooperation Agreement
- CEPA – Comprehensive Economic Partnership Agreement
- The major **"technical"** difference between a CECA and CEPA is that CECA involve only **"tariff reduction/elimination in a phased manner on listed/all items except the negative list and tariff rate quota (TRQ) items. CEPA also covers the trade in services and investment and other areas of economic partnership".**
- So CEPA is a wider term that CECA and has the widest coverage.
- Usually CECA is signed first with a country and after that negotiations may start for a CEPA.

Source: PIB

4. NEW PEACE AGREEMENT ON YEMEN

What to study?

- *For Prelims and Mains: Yemen issues, peace agreement, features and its significance.*

Context: Yemen's warring parties have agreed to *an immediate ceasefire in the Red Sea port of Hodeidah* in a potential breakthrough at the end of a week of peace talks in Sweden.

- The agreement includes the future deployment of UN-supervised neutral forces and the establishment of humanitarian corridors.
- Troops from both sides will withdraw from the entire Hodeidah area within a maximum of 21 days in a process overseen by a UN-chaired committee.

What next?

- A political framework for Yemen will be discussed in a next round of meetings, scheduled for late January.
- If implemented on the ground, the deal would represent a breakthrough because the port is the gateway for the bulk of humanitarian aid coming into the country, and has been the subject of intense fighting. Ceasefires have also been agreed at two other ports, Salif and Ras Issa.

What triggered the truce?

- The ceasefire between Yemen's Houthi rebels and forces loyal to President Abdrabbuh Mansur Hadi in the port city of Hodeida came into existence on December 18. The agreement was reached in UN-mediated talks held in Stockholm earlier this month. At the time of the negotiations, the city was almost in the hands of the Saudi-led coalition. The coalition had blockaded the port, the main conduit for humanitarian aid to enter Yemen, for months, and the fighters, mostly UAE soldiers, were battling the rebels.
- But Saudi Arabia came under increased global pressure to stop fighting in Yemen after the murder of journalist Jamal Khashoggi inside its consulate in Istanbul triggered a global outcry. The spotlight on Yemen and its deteriorating humanitarian situation has been so strong after the Khashoggi affair that even the U.S., which supports Riyadh in the war, cut down its involvement by ending refuelling of coalition aircraft. With the UN also pushing for talks, the Yemeni government backed by Saudi Arabia gave the green light for talks.

How bad is Yemen's humanitarian situation?

- Since the Saudi intervention in 2015, at least 10,000 people have been killed in Yemen, according to the WHO. The widespread damage caused to infrastructure by the coalition airstrikes and lack of supplies of food and medicines due to the blockade have pushed Yemen into a humanitarian catastrophe.
- About 12 million people are at the risk of starvation if aid doesn't reach them fast. The country has also seen a massive cholera outbreak. A child dies every 10 minutes in Yemen from preventable causes, says UNICEF.

Why is Saudi Arabia in Yemen?

- Saudi Arabia interfered in Yemen after the Shia Houthi rebels captured Sana'a, the capital city, and the internationally recognised government of President Hadi moved to the country's south. The Saudis accuse Iran of bankrolling the Houthis and "destabilising" the Arabian Peninsula.
- The Saudi plan was to expel the Houthis from Sana'a and restore the authority of the government. But almost four years since they launched the attack, the Houthis still control Sana'a and much of the north of Yemen. They also fire short-range missiles across the border into Saudi Arabia, which has become a major security concern for Riyadh.

Sources: the hindu.

5. NABCB ACCREDITATION SECURES RECOGNITION IN ASIA-PACIFIC REGION

- The **National Accreditation Board for Certification Bodies (NABCB),** India's national accreditation body, has secured equivalence for its accreditation programme for **Occupational Health and Safety Management Systems (OHSMS)** Certification Bodies in Asia- Pacific region.
- It has signed the **Multilateral Recognition Arrangement (MLA)** of the **Pacific Accreditation Cooperation (PAC)** on 19 December 2018.

About NABCB:
- NABCB can facilitate export of Indian goods in the global market by attesting that these are certified as per international standards by competent certifying bodies.
- It is a **constituent Board of the Quality Council of India**, is responsible for accreditation of certification/inspection bodies as per applicable international standards under an international system of equivalence.
- It is the **third accreditation body in the Asia-Pacific region** (other two being the accreditation bodies of Hong Kong and Mexico).
- NABCB programme is **based on international standards, ISO/IEC 17021-1 and ISO 45001, applicable for OHSMS.**

Source: PIB

6. CHABAHAR PORT

What to study?
- *For Prelims: Location of Chabahar port.*
- *For Mains: Significance of the port for India, Challenges to its development.*

Context: India has formally taken over operations of Iran's strategic *Chabahar Port*.
- Iran formally handed over the port to India during a first meeting of the follow-up committee for the implementation of the Chabahar Agreement between Iran, Afghanistan, and India held recently in the port city Tehran.

Background:
- The Chabahar Agreement was signed in June 2015 and approved by Iran's Guardian Council in November 2016. Chabahar is being seen as a gateway for trade by India, Iran and Afghanistan with Central Asian countries.

Where is Chabahar port?
- Iran's Chabahar port is located on the *Gulf of Oman* and is the only oceanic port of the country. The port gives access to the energy-rich Persian Gulf nations' southern coast.

Why Chabahar port is crucial for India?
- The first and foremost significance of the Chabahar port is the fact *that India can bypass Pakistan in transporting goods to Afghanistan*. Chabahar port will boost India's access to Iran, the key gateway to the International North-South Transport Corridor that has sea, rail and road routes between India, Russia, Iran, Europe and Central Asia.

- *Chabahar port will be beneficial to India in countering Chinese presence in the Arabian Sea* which China is trying to ensure by helping Pakistan develop the Gwadar port. Gwadar port is less than 400 km from Chabahar by road and 100 km by sea.
- With Chabahar port being developed and operated by India, *Iran also becomes a military ally to India*. Chabahar could be used in case China decides to flex its navy muscles by stationing ships in Gwadar port to reckon its upper hand in the Indian Ocean, Persian Gulf and Middle East.
- With Chabahar port becoming functional, there will be *a significant boost in the import of iron ore, sugar and rice to India*. The import cost of oil to India will also see a considerable decline. India has already increased its crude purchase from Iran since the West imposed ban on Iran was lifted.
- *Chabahar port will ensure in the establishment of a politically sustainable connectivity between India and Afghanistan*. This will in turn, lead to better economic ties between the two countries.
- From a diplomatic perspective, *Chabahar port could be used as a point from where humanitarian operations could be coordinated*.

Sources: the hindu.

(Q) India has formally taken over operations of Iran's strategic *Chabahar Port.* Why is investing in this port so important for India? Examine.

7. CHINA-PAKISTAN ECONOMIC CORRIDOR (CPEC)

What to study?
- *For Prelims: Key features of CPEC.*
- *For Mains: India's concerns, ways to address them and global implications of the project.*

Context: Clarifying about a recent U.S. media report that alleged that China had hatched a secret plan to build fighter jets and other military hardware in Pakistan as part of the CPEC project, Pakistan has said that the China-Pakistan Economic Corridor (CPEC) is a bilateral economic project and has no military dimensions.

About CPEC:
- The CPEC is the flagship project of the *multi-billion dollar Belt and Road Initiative (BRI)*, a pet project of Chinese President Xi Jinping, aimed at enhancing Beijing's influence around the world through China-funded infrastructure projects.
- *The 3,000 km-long China–Pakistan Economic Corridor (CPEC) consisting of highways, railways, and pipelines* is the latest irritant in the India–China relationship.
- *CPEC eventually aims at linking the city of Gwadar in South Western Pakistan to China's North Western region Xinjiang* through a vast network of highways and railways.
- The proposed project will be financed by heavily-subsidised loans, that will be disbursed to the Government of Pakistan by Chinese banking giants such as Exim Bank of China, China Development Bank, and the Industrial and Commercial Bank of China.

But, why is India concerned?
- It passes through PoK. Any Indian participation would inextricably be linked to the *country's legitimate claims on PoK*.
- CPEC rests on a Chinese plan to secure and shorten its supply lines through Gwadar with an enhanced presence in the Indian Ocean. Hence, it is widely believed that upon CPEC's fruition, *an extensive Chinese presence will undermine India's influence in the Indian Ocean*.
- It is also being contended that if CPEC were to successfully transform the Pakistan economy that could be a "red rag" for India which will *remain at the receiving end of a wealthier and stronger Pakistan*.
- Besides, *India shares a great deal of trust deficit with China and Pakistan and has a history of conflict with both*. As a result, even though suggestions to re-approach the project pragmatically have been made, no advocate has overruled the principle strands of contention that continue to mar India's equations with China and Pakistan.

Sources: the hindu.

(Q) How will the China-Pakistan Economic Corridor (CPEC) transform Pakistan? Does CPEC come at a cost to the bonhomie between India and China? Critically examine.

1. KIMBERLEY PROCESS

What to study?

- *Static Part: About the Kimberly process, previous chair, conflict diamonds.*
- *Dynamic and Current: How does the Kimberley Process work?*

Context: India will Chair Kimberley Process Certification Scheme (KPCS) from 1st January 2018. It was handed Chairmanship by the European Union during KPCS Plenary 2018, which was held in Brussels, Belgium.

- *India is founding member of KPCS*.

Who is involved?

- The Kimberley Process (KP) is open to all countries that are willing and able to implement its requirements. The KP has 54 participants, representing 81 countries, with the European Union and its Member States counting as a single participant.
- KP members account for approximately 99.8% of the global production of rough diamonds. In addition, the World Diamond Council, representing the international diamond industry, and civil society organisations, such as Partnership-Africa Canada, participate in the KP and have played a major role since its outset.

> *What is the Kimberley Process?*
>
> - The Kimberley Process is an international certification scheme *that regulates trade in rough diamonds*. It aims to prevent the flow of conflict diamonds, while helping to protect legitimate trade in rough diamonds.
> - The Kimberley Process Certification Scheme (KPCS) outlines the rules that govern the trade in rough diamonds.
> - The KP is not, strictly speaking, an international organisation: it has no permanent offices or permanent staff. It relies on the contributions – under the principle of 'burden-sharing' – of participants, supported by industry and civil society observers. Neither can the KP be considered as an international agreement from a legal perspective, as it is implemented through the national legislations of its participants.
>
> *What are Conflict diamonds?*
>
> - "Conflict Diamonds" means rough diamonds used by rebel movements or their allies to finance conflict aimed at undermining legitimate governments.
> - It is also described in the United Nations Security Council (UNSC) resolutions.

How does the Kimberley Process work?

- The Kimberley Process Certification Scheme (KPCS) imposes extensive requirements on its members to enable them to certify shipments of rough diamonds as 'conflict-free' and prevent conflict diamonds from entering the legitimate trade.
- Under the terms of the KPCS, participating states must put in place national legislation and institutions; export, import and internal controls; and also commit to transparency and the exchange of statistical data.
- Participants can only legally trade with other participants who have also met the minimum requirements of the scheme, and international shipments of rough diamonds must be accompanied by a KP certificate guaranteeing that they are conflict-free.

Sources: the hindu.

2. WORLD CUSTOMS ORGANIZATION

What to study?

- *Static Part: Key facts on WCO.*
- *Dynamic and Current: Role of WCO in global market and emerging challenges.*

Context: 80th Session of the *Policy Commission of the World Customs Organization (WCO)* was held recently in Mumbai. The Session was organized by the WCO and hosted by the Central Board of Indirect Taxes and Customs (CBIC).

WORLD CUSTOMS ORGANIZATION

About WCO:

- The World Customs Organization (WCO), *established in 1952 as the Customs Co-operation Council (CCC) is an independent intergovernmental body* whose mission is to enhance the effectiveness and efficiency of Customs administrations.

- As the global centre of Customs expertise, *the WCO is the only international organization with competence in Customs matters* and can rightly call itself the voice of the international Customs community.
- *The WCO has divided its Membership into six Regions.* Each of the six Regions is represented by a regionally elected Vice-Chairperson to the WCO Council.

Roles and functions:
- As a forum for dialogue and exchange of experiences between national Customs delegates, the WCO offers its Members a range of Conventions and other international instruments, as well as technical assistance and training services.
- Besides the vital role played by the WCO in stimulating the growth of legitimate international trade, its efforts to combat fraudulent activities are also recognized internationally.
- WCO has also been responsible for administering the World Trade Organization's Agreements on Customs Valuation, which provide a system for placing values on imported goods, and the Rules of Origin, which are used to determine the origin of a given commodity.

Sources: the hindu.

3. INDIAN PAVILLION AT COP-24

- The Union Environment Minister Dr. Harsh Vardhan participated in the inauguration of Indian Pavilion at the **24ᵗʰmeeting of Conference of Parties (COP-24)** to the **United Nations Framework Convention on Climate Change (UNFCCC)** held at **Katowice, Poland**.
- **Theme of India Pavilion** – "One World One Sun One Grid".

Minister's Statement:
- The Ministry has launched **a nationwide campaign** in preserving and protecting the environment called the **Green Good Deeds Movement**.
- This campaign was prepared **to inspire, encourage and involve each and every individual** of the society to realize people's participation in accomplishing the goals.
- India's leadership in global climate action has been recognized and **Prime Minister Narendra Modi has been bestowed with "Champion of Earth Award"** this year by the United Nations **in promoting International Solar Alliance** and **resolve to make India plastic free by 2022.**

> **What is the 'Champions of the Earth award'?**
> - **It was launched in 2005.**
> - "Champions of the Earth", the **UN's highest environmental honour**, celebrates outstanding figures from the public and private sectors and from civil society whose actions have had a transformative positive impact on the environment.
> - In **2018**, the award was received by **Prime Minister Narendra Modi and French President Emmanuel Macron for their leadership in promotion of solar energy.**
>
> **What is COP 24?**
> - **COP24** is the informal name for the 24ᵗʰ Conference of the Parties to the **United Nations Framework Convention on Climate Change (UNFCCC)**.
> - The COP takes decisions to **ensure effective implementation of the provisions of the Convention** and regularly **reviews the implementation of these provisions**.

UNFCCC:
- UNFCCC is an international environmental treaty, entered into force on **21 March 1994**. Now, it has near-universal membership. The UNFCCC has 197 parties as of December 2015.

Aim of the UNFCCC:
- To prevent 'dangerous' human interference with the climate system.

Source: PIB

4. WORLD INTELLECTUAL PROPERTY ORGANISATION (WIPO)

What to study?
- *For Prelims and Mains: About WIPO, objectives, composition and significance.*

Context: World Intellectual Property Indicators 2018 report was recently released in Geneva by the World Intellectual Property Organization (WIPO).

- Globally, 1.4 million patents were granted in 2017. China's patent authority led the world in the number of patents granted with 420,144 and was followed by the US with 318,829, according to the WIPO.

Highlights of the report- India related key facts:
- The number of patents granted by India shot up by 50% in 2017, keeping up a trend of steep increases. The patents granted by India increased from 8,248 in 2016 to 12,387 last year.
- Of the patents granted last year, 1,712 went to entities and individuals based in India, and 10,675 to foreigners.
- While India ranked 10th in the number of patents given last year, no Indian company or university figures in last year's global list of the top 50 patent applicants.

About WIPO:
- The World Intellectual Property Organization (WIPO) is *one of the 17 specialized agencies of the United Nations*.
- It was created in 1967 "to encourage creative activity, to promote the protection of intellectual property throughout the world."
- It has currently 188 member states, administers 26 international treaties, and is headquartered in Geneva, Switzerland.
- Non-members are the states of Marshall Islands, Federated States of Micronesia, Nauru, Palau, Solomon Islands, South Sudan and Timor-Leste. Palestine has observer status.
- India is a member of WIPO and party to several treaties administered by WIPO.

Sources: the hindu.

5. ORGANISATION FOR THE PROHIBITION OF CHEMICAL WEAPONS (OPCW)

What to study?
- *For Prelims: All about OPCW.*
- *For Mains: Need for review and a complete ban on chemical weapons.*

Context: India has deeply regretted the failure of the Fourth Special Session of the Conference of the States Parties to Review the Operation of the Chemical Weapons Convention (RevCon) to adopt a report by consensus and reiterated its determination to persist with efforts to bring countries together and bridge differences.

Need for review- challenges ahead:
- There are daunting challenges ahead such as the discovery of new toxic chemicals, advancements in deployment and dissemination techniques.
- There is an increasing threat of use of chemical weapons by non-state actors such as IS and other terror outfits.
- The growing complexity of the global security environment calls for greater vigilance and continued efforts by both OPCW and the member states towards achieving general and complete chemical disarmament.
- Despite best efforts, there has been an increase in allegations and incidents of use of chemical weapons in different parts of the world such as Malaysia, UK and Northern Ireland, the Syrian Arab Republic and Iraq.

About OPCW:
- The OPCW is an independent, autonomous international organisation with a working relationship with the United Nations.
- The Organisation for the Prohibition of Chemical Weapons is *the implementing body of the Chemical Weapons Convention (CWC)*, which entered into force in 1997.
- The organisation was awarded *the 2013 Nobel Peace Prize* "for its extensive efforts to eliminate chemical weapons".
- The OPCW Member States share the collective goal of preventing chemistry from ever again being used for warfare, thereby strengthening international security. To this end, the Convention contains four key provisions:
  o Destroying all existing chemical weapons under international verification by the OPCW.
  o Monitoring chemical industry to prevent new weapons from re-emerging.
  o Providing assistance and protection to States Parties against chemical threats.

o   Fostering international cooperation to strengthen implementation of the Convention and promote the peaceful use of chemistry.

The Chemical Weapons Convention prohibits:
- Developing, producing, acquiring, stockpiling, or retaining chemical weapons.
- The direct or indirect transfer of chemical weapons.
- Chemical weapons use or military preparation for use.
- Assisting, encouraging, or inducing other states to engage in CWC-prohibited activity.
- The use of riot control agents "as a method of warfare."

Way ahead:
- The use of these weapons anywhere, at any time, by anybody, under any circumstances is unjustifiable. The efforts in the OPCW should be aimed at eliminating all the possibilities of any future use of chemical weapons.
- The need of the hour is constructive engagement, dialogue and unity of purpose. This is the only way forward. India remains willing and open for discussions with all States Parties to find ways and means to strengthen the Convention and its effective implementation within the framework of the Convention.

Sources: et.

(Q) Discuss the organizational structure, vision and functioning of the Organisation for the Prohibition of Chemical Weapons (OPCW).

6. UN'S COMMITTEE ON ECONOMIC, SOCIAL AND CULTURAL RIGHTS

What to study?
- ***For Prelims and Mains: About UN's Committee on Economic, Social and Cultural Rights.***

Context: Former Indian diplomat, Preeti Saran has been elected unopposed to an Asia Pacific seat on the United Nation's Committee on Economic, Social and Cultural Rights (CESCR).
- The UN's Economic and Social Council (ECOSOC) elected Saran to the 18-member committee 'CESCR' for a four-year term beginning on January 1, 2019.

About Committee on Economic, Social and Cultural Rights (CESCR):
- The CESCR was set up in 1985 by the Economic and Social Council (ECOSOC) of the United Nations.
- It was constituted with an aim ***to monitor on its behalf the implementation of the International Covenant on Economic, Social and Cultural Rights (ICESR)***, which has been ratified by 169 countries.
- The countries that are parties to the covenant are required to submit reports to the CESCR every five years on how they protect the economic, social and cultural rights.
- The committee examines each report and addresses its concerns and recommendations to the State party in the form of concluding observations.
- The Members of the CESCR serve in their personal capacities as experts and do not represent their countries even though they may be nominated by their own nation.
- The CECSR meets in Geneva and holds two sessions per year, consisting of a three-week plenary and a one-week pre-sessional working group.

Sources: the hindu.

7. UN FRAMEWORK TO COMBAT INTERNATIONAL TERRORISM

What to study?
- ***For Prelims: About the framework.***
- ***For Mains: Significance and the need for framework, challenges ahead and the need for international cooperation.***

Context: The United Nations has launched a new framework titled **'UN Global Counter-Terrorism Coordination Compact'** to combat international terrorism and coordinate efforts across the peace and security, humanitarian, human rights and sustainable development sectors.

About the 'UN Global Counter-Terrorism Coordination Compact':
- The framework is an agreement between the UN chief, 36 organisational entities, the International Criminal Police Organisation (INTERPOL) and the World Customs Organisation to better serve the needs of member states when it comes to tackling the scourge of international terrorism.
- The Coordination Committee of the United Nations will oversee the implementation of the framework and monitor its implementation. The committee will be chaired by UN Under-Secretary-General for counter-terrorism.

Why do we need the framework?
- The policies that limit human rights only end up alienating the very communities they aim to protect, which normally have every interest in fighting extremism and as a result, such policies can effectively drive people into the hands of terrorists and undermine prevention efforts.
- The new framework has been introduced keeping in mind the need to ensure full respect for international human rights standards and rule of law in countering terrorism.

Need for international cooperation:
- Despite recent successes against the ISIS and its affiliates, the threat posed by returning and relocating fighters, as well as from individuals inspired by them, remains high and has a global reach.
- The 2018 Global Terrorism Index released by the Institute for Economic and Peace, indicates that despite a 27% fall in the number of deaths from acts of terrorism worldwide, the impact of terrorism remains widespread, with 67 countries experiencing deadly attacks, which is the second highest recorded number of countries in the past twenty years.
- Emerging technologies such as artificial intelligence, drones and 3D (three-dimensional) printing are also being misused.

Sources: the hindu.

8. 39TH GCC SUMMIT AND RIYADH DECLARATION

What to study?
- *For Prelims: About GCC and Riyadh declaration.*
- *For Mains: Issues with GCC and the need for reorganization.*

Context: The *39th session of the GCC summit was held recently in Riyadh*. At the end of the summit, the council issued the *'Riyadh Declaration'*, which included 72 items covering matters related to the Gulf countries, the region and the world.
- *The 40th session of the GCC summit will be held in the UAE*, according to a communique issued at the end of the 39th summit in Riyadh.

What is GCC?
- The Gulf Cooperation Council (GCC) is a political and economic alliance of six countries in the Arabian Peninsula: Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates.
- Established in 1981, the GCC promotes economic, security, cultural and social cooperation between the six states and holds a summit every year to discuss cooperation and regional affairs.
- All current member states are monarchies, including three constitutional monarchies (Qatar, Kuwait, and Bahrain), two absolute monarchies(Saudi Arabia and Oman), and one federal monarchy (the United Arab Emirates).

Structure:
- The GCC comprises six main branches that carry out various tasks, from the preparation of meetings to the implementation of policies. They are- Supreme Council, Ministerial Council, Secretariat-General, Consultative Commission, Commission for the Settlement of Disputes and the Secretary-General.

Role of GCC today:
- Whether the GCC still has a relevant function and role in the region is questionable. Though it was created for the purpose of solidifying union ranks, the blockade imposed on Qatar by its neighbours has largely annulled these principles.
- The Gulf states have in the past differed in their views on several issues that have unfolded in the region over the past two decades. The role of the GCC has also been diminishing ever since the 2003 US-led invasion of Iraq, with the six states illustrating various approaches to the war and its consequences. This

has been enhanced during the wave of protests that swept the Middle East in 2011, known as the Arab Spring. Saudi Arabia has gained a dominant role within the GCC today.

Sources: the hindu.

9. MALDIVES HAS APPLIED TO REJOIN COMMONWEALTH

What to study?
- *For Prelims: About commonwealth.*
- *For Mains: Relevance of Commonwealth today and the need for reorganization.*

Context: Maldives has applied to rejoin the Commonwealth.

Background:
- Two years ago, the country's former leader Yameen withdrew the Maldives from the Commonwealth after it mounted pressure on him to protect human rights and ensure the rule of law amid a ferocious crackdown on dissent.

About Commonwealth of Nations
- The Commonwealth of Nations, at one time known as British Commonwealth, is an organisation of fifty three states that were principally below the colonial rule of British Government. They came into existence with the proclamation of sovereignty of the state from the colonial rule of British Empire and were later given self-governance.
- It proclaims that the Commonwealth nations are "free and equal." The insignia of this Commonwealth Association is Queen Elizabeth II who is considered the Supreme of the Commonwealth nations.
- The member states of the commonwealth are not legally liable or bound to each other. They are rather united by language, history, culture, likeness of the democracy, human rights and the rule of law.
- Their values are listed down within the Commonwealth Charter and the hands of harmony towards the member states are extended by the Commonwealth Games held every four years.
- Former British mandates that did not become members of the Commonwealth are Egypt, Transjordan, Iraq, British Palestine, Sudan, British Somaliland, Oman, Kuwait, Bahrain, Qatar, and the United Arab Emirates.

Key facts:
- *Former name —* British Commonwealth.
- *Composition:* intergovernmental organisation of 53 member states that are mostly former territories of the British Empire.
- *It operates by intergovernmental consensus* of the member states.
- Established in 1949 by the *London Declaration*.
- *Structure:* Head of the Commonwealth — Queen Elizabeth II is the Head of the Commonwealth. The position is symbolic.

Sources: the hindu.

(Q) Despite the historical hesitations, a rejuvenated Commonwealth would lend greater depth to India's global outreach. Analyze.

10. UN PANEL OF AUDITORS

What to study?
- *For Prelims and Mains: UN Panel of Auditors- composition, objectives, functions and significance.*

Context: Comptroller and Auditor General Rajiv Mehrishi has become the Vice-Chair of the UN Panel of Auditors.

About UN Panel of Auditors:
- The United Nations Panel of Auditors consists of External Auditors of the United Nations and its agencies.
- The United Nations General Assembly in 1959 established the Panel of External Auditors, comprising the individual external auditors of the United Nations system, who are also Heads of Supreme Audit Institutions.

- Presently, the panel consists of 11 countries — India, Germany, Chile, Canada, France, Italy, Philippines, Ghana, Indonesia, Switzerland and United Kingdom. Currently, the panel is chaired by the Comptroller and Auditor General of the UK.

Functions of the Panel of External Auditors:
- Panel Members share experiences and methodologies so as to ensure uniformity of external audit practices throughout the United Nations system.
- Panel Members provide independent assurance to Member States and other stakeholders in relation to the proper use of the Organizations' resources as well as their economic, efficient and effective use.
- They also play a significant role in assisting the Organizations to improve their operations and their internal control activities.
- The findings and recommendations of Panel Members are taken seriously, and the status of recommendations is closely monitored to ensure timely and effective implementation.

Sources: the hindu.

11. GLOBAL COMPACT FOR MIGRATION

What to study?
- ***For Prelims: Global compact for migration- highlights.***
- ***For Mains: Need for a global compact and the pattern of migration worldwide.***

Context: The global compact on migration was adopted recently at an intergovernmental conference in Marrakech, Morocco by 164 UN Member States. Alongside, the UN also launched the Migration Network to support the compact's implementation at country level.

About the Marrakech Compact on Migration:
- In ***the New York Declaration for Refugees and Migrants, adopted in September 2016***, the General Assembly decided to develop a global compact for safe, orderly and regular migration.
- ***The Global Compact for Safe, Orderly and Regular Migration (GCM)*** sets out a common, comprehensive approach to international migration.
- ***The GCM is a voluntary, non-binding document*** that introduces no additional obligations to states. It is a global agreement setting out a common framework, shared principles and best practices on international migration.
- ***It aims*** at cooperation between states and promotes measures to strengthen regular migration pathways, to tackle irregular migration, and to protect human rights of migrants among other objectives.
  - ➤ The compact includes 23 objectives and a set of possible actions for each one, from which governments can draw in responding to the issue.
  - ➤ Notably, the Global Compact establishes a ***United Nations mechanism*** allowing Governments and companies to contribute technical, financial and human resources for implementing it.
  - ➤ ***The global compact is framed consistent with target 10.7 of the 2030 Agenda for Sustainable Development*** in which member States committed to cooperate internationally to facilitate safe, orderly and regular migration.

Opposition:
- The US quit negotiations early on, in December 2017, and was followed by Hungary seven months later. Dominican Republic, Australia, Austria, Bulgaria, Israel, Poland, the Czech Republic and Slovakia also refused to sign the document.

Why is it being opposed?
- States with a restrictive migration agenda, such as Hungary, consider the symbolic act of approving the GCM as a sign that they are ***promoting migration***.
- Those that have rejected it ***fear it will turn into common practice***, or even common law. While not legally binding, it should be a politically guiding framework, which sets out ground rules for the long term.
- Some states that have rejected the GCM are especially worried ***about human rights references within the document***. In their view, an emphasis on human rights contradicts what matters for them: securing borders.

Need for a global compact:
- Over 250 million migrants worldwide account for 3% of the world's entire population, but contribute 10% of the global gross domestic production (GDP).
- Migrants remittance is huge contributor to their home countries' development.

Sources: the hindu.

12. SOCIETY FOR WORLDWIDE INTERBANK FINANCIAL TELECOMMUNICATION (SWIFT)

What to study?
- *For Prelims: SWIFT- objectives, features and significance.*
- *For Mains: Significance, need for SWIFT.*

Context: SWIFT India has appointed ex-SBI chief Arundhati Bhattacharya as the new chairman of its board.

Background:
- ***SWIFT India is a joint venture of top Indian public and private sector banks*** and SWIFT (Society for Worldwide Interbank Financial Telecommunication).
- The company was created to deliver high quality domestic financial messaging services to the Indian financial community. Bhattacharya said the venture has a huge potential to contribute significantly to the financial community in many domains.

What is SWIFT?
- The SWIFT is a global member-owned cooperative that is headquartered in Brussels, Belgium. It was founded in 1973 by a group of 239 banks from 15 countries which formed a co-operative utility to develop a secure electronic messaging service and common standards to facilitate cross-border payments.
- It carries an average of approximately 26 million financial messages each day. In order to use its messaging services, customers need to connect to the SWIFT environment.

Functions:
- SWIFT does not facilitate funds transfer: rather, it sends payment orders, which must be settled by correspondent accounts that the institutions have with each other.
- The SWIFT is a secure financial message carrier — in other words, it transports messages from one bank to its intended bank recipient.
- Its core role is to provide a secure transmission channel so that Bank A knows that its message to Bank B goes to Bank B and no one else. Bank B, in turn, knows that Bank A, and no one other than Bank A, sent, read or altered the message en route. Banks, of course, need to have checks in place before actually sending messages.

Significance of SWIFT:
- Messages sent by SWIFT's customers are authenticated using its specialised security and identification technology. Encryption is added as the messages leave the customer environment and enter the SWIFT Environment.
- Messages remain in the protected SWIFT environment, subject to all its confidentiality and integrity commitments, throughout the transmission process while they are transmitted to the operating centres (OPCs) where they are processed — until they are safely delivered to the receiver.

Sources: the hindu.

13. PARTNERS' FORUM

What to study?
- *For Prelims and Mains: Partners' Forum- objectives, composition and significance.*

Context: The fourth Partners' Forum was recently held in New Delhi. It was hosted by the Government of India, in association with the Partnership for Maternal, Newborn and Child Health (PMNCH).
- The previous chapters were held in Johannesburg, South Africa (2014), New Delhi, India (2010) and Dar es Salaam, Tanzania (2007). This is the second time India is hosting the Partners' Forum.

What is Partners' Forum?

- Partners' Forum is *a global health partnership launched in September 2005 to accelerate efforts to reduce child and maternal mortality, improve adolescent, child, newborn and maternal health*.
- *An alliance:* This partnership is an alliance of more than 1,000 plus members, across 10 constituencies in 92 countries: academic, research and teaching institutions; donors and foundations; health care professionals; multilateral agencies; non-governmental organizations; partner countries; global financing mechanisms and the private sector.
- *PMNCH's mission* is to support the global health community to work successfully towards achieving the Sustainable Development Goals (SDGs), particularly the health related SDGs.
- The programme of the Partners' Forum will be framed around the objectives of the Global Strategy of Survive – Thrive – Transform.

Sources: toi.

14. INTERMEDIATE-RANGE NUCLEAR FORCES (INF) TREATY

What to study?

- *For Prelims and Mains: Key features and significance of INF Treaty, Implications of withdrawal by the US.*

Context: Russia has confirmed that the United States of America has decided to cancel the Intermediate-Range Nuclear Forces (INF) Treaty signed between Russian and the USA in 1987. The USA had already announced the withdrawal decision from the INF treaty in October 2018.

What's the issue?

- The United States first alleged in its July 2014 Compliance Report that Russia is in violation of its INF Treaty obligations "not to possess, produce, or flight-test" a ground-launched cruise missile having a range of 500 to 5,500 kilometers or "to possess or produce launchers of such missiles."
- Subsequent State Department assessments in 2015, 2016, and 2017 repeated these allegations. Russia denies that it is in violation of the agreement. On December 8, 2017, the Trump administration released a strategy to counter alleged Russian violations of the Treaty.

About the Intermediate- Range Nuclear Forces (INF) Treaty:

- The 1987 Intermediate-Range Nuclear Forces (INF) Treaty required the United States and the Soviet Union *to eliminate and permanently forswear all of their nuclear and conventional ground-launched ballistic and cruise missiles with ranges of 500 to 5,500 kilometers*.
- The treaty marked the first time the superpowers had agreed to reduce their nuclear arsenals, eliminate an entire category of nuclear weapons, and utilize extensive on-site inspections for verification. As a result of the INF Treaty, the United States and the Soviet Union destroyed a total of 2,692 short-, medium-, and intermediate-range missiles by the treaty's implementation deadline of June 1, 1991.
- Despite its name, the INF Treaty covers all types of ground-launched cruise and ballistic missiles — whether their payload is conventional or nuclear. Moscow and Washington are prohibited from deploying these missiles anywhere in the world, not just in Europe. However, the treaty applies only to ground-launched systems. Both sides are free to deploy air- and sea-launched missiles within the 500-to-5,500-kilometer range.

What are the diplomatic implications of withdrawal?

- Withdrawal is likely to be controversial with U.S. allies in NATO, further splitting the alliance at a difficult time for transatlantic relations. Many Western European NATO states favor retaining the INF, in conjunction with previous U.S. policy designed to push Moscow back into compliance. This raises concerns that divisions within NATO may worsen when the United States officially withdraws from the INF.
- Trump's move is also likely to undermine the 2010 New START treaty governing U.S. and Russian long-range nuclear systems. The INF Treaty's demise will undercut New START by reopening questions on the relationship between intermediate and strategic systems that have been resolved for 30 years by the elimination of ground-based, intermediate-range missiles.

Sources: the hindu.

15. INTERNATIONAL WHALING COMMISSION (IWC)

What to study?

- ***For Prelims: About IWC- composition, functions and significance.***
- ***For Mains: Moratorium on commercial whaling, concerns over Japan's move and the way ahead.***

Context: Japan is considering pulling out of the ***International Whaling Commission (IWC)***.

Implications:

- Such a move would spark international criticism against Japan over whale conservation and deepen the divide between anti- and pro-whaling countries.

Background:

- Tokyo currently observes the moratorium but exploits a loophole to kill hundreds of whales every year for "scientific purposes" as well as to sell the meat.

About IWC:

- It is ***an international body set up under International Convention for the Regulation of Whaling (ICRW)***.
- ICRW governs the commercial, scientific, and aboriginal subsistence whaling practices of fifty-nine member nations. It was signed in Washington, D.C., United States, in 1946.
- ***Headquarters —*** Impington, near Cambridge, England.
- ***In 1986, it adopted a moratorium on commercial whaling***. This ban still continues.

Whale sanctuary:

- In 1994, it created ***the Southern Ocean Whale Sanctuary*** surrounding the continent of Antarctica. Here, the IWC has banned all types of commercial whaling.
- ***Only two such sanctuaries have been designated by IWC till date***. Another is ***Indian Ocean Whale Sanctuary*** by the tiny island nation of the Seychelles.

Objectives:

- To provide for the proper conservation of whale stocks.
- For orderly development of the whaling industry.

Sources: the hindu.

16. INTERNATIONAL RICE RESEARCH INSTITUTE (IRRI)

What to study?

- ***For Prelims: About IRRI, ISARC.***
- ***For Mains: Association of India with IRRI and its significance.***

Context: The Prime Minister dedicated the ***6th International Rice Research Institute (IRRI), South Asia Regional Center (ISARC) to the nation***. The Institute is built ***at the campus of National Seed Research and Training Center (NSRTC) in Varanasi***.

- ***It will serve as a hub for rice research and training in South Asia and SAARC region***. This ***first international Center in the eastern India*** is expected to harness and sustain rice production in the region.

About IRRI:

What is it?

- The International Rice Research Institute (IRRI) is an international agricultural research and training organization known for its work in developing rice varieties that contributed to the Green Revolution in the 1960s.
- ***Aim:*** The Institute, established in 1960 aims to reduce poverty and hunger, improve the health of rice farmers and consumers, and ensure environmental sustainability of rice farming.

CGIAR:

- IRRI is one of 15 agricultural research centers in the world that form the CGIAR Consortium of International Agricultural Research centres, a global partnership of organizations engaged in research on food security. It is also the largest non-profit agricultural research centres in Asia.

India and the IRRI:

- IRRI has successfully collaborated with Indian Council for Agricultural Research (ICAR) to introduce drought- tolerant, flood-tolerant and salt-tolerant varieties of rice in India. The Varanasi Centre would

help increase farmers' income by enhancing and supporting rice productivity, reducing cost of production, value addition, diversification and enhancement of farmers' skills.

Sources: the hindu.

GENERAL STUDIES -III

1. VISION OF A NEW INDIA – USD 5 TRILLION ECONOMY

- The **Ministry of Commerce & Industry** is creating an action-oriented plan which highlights specific sector level interventions to bolster India's march towards becoming a USD 5 trillion economy before 2025.
    - Services sector – USD 3 trillion,
    - Manufacturing sector – USD 1 trillion, and
    - Agriculture sector – USD 1 trillion.

Impact on Services Sector:
- The share of India's services sector in global services exports was 3.3% in 2015 compared to 3.1% in 2014. Based on this initiative, **a goal of 4.2% has been envisaged for 2022.**
- As the Services sector contributes significantly to India's GDP, exports and job creation, increased productivity and competitiveness of the **Champion Services Sectors will further boost exports of various services.**
- Embedded services are substantial part of **'Goods'** as well. Thus, **competitive services sector will add to the competitiveness of the manufacturing sector as well**.

Promotion of Trade:
- Commerce Ministry is closely working with the Finance Ministry to ease credit flow to the export sector, especially small exporters to ensure adequate availability of funds to them.
- The Commerce Minister has identified 15 strategic overseas locations where the **Trade Promotion Organizations (TPOs)** are proposed to be created.

Trade Infrastructure for Export Scheme (TIES):
- **TIES aid with setting up and up-gradation of infrastructure projects with overwhelming export linkages** like the Border Haats, Land customs stations, etc.
- The Central and State Agencies, including Export Promotion Councils, Commodities Boards, SEZ authorities and apex trade bodies recognized under the EXIM policy of Government of India, are eligible for financial support under this scheme.

India Improves Ranking in Ease of Doing Business:
- India had made a leap of 23 ranks in the World Bank's Ease of Doing Business Ranking this year (2018) to be ranked at 77.
- **India now ranks first in Ease of Doing Business Report among South Asian countries compared to 6th in 2014.**

Multi-Modal Logistics Parks Policy (MMLPs):
- MMLPs is to improve the country's logistics sector by lowering over freight costs, reducing vehicular pollution and congestion and cutting warehouse costs with a view to promoting moments of goods for domestic and global trade.

Reasons for Improvement in Ease of Doing Business:
- To support start-ups and lower tax rates for MSMEs quicker environmental clearances from 600 days to 140 days has been implemented,
- **Abolition of inter-state check post after implementation of GST** has been done,
- **Enhanced input tax credit and electronic GST network** has been put in place and the creation of commercial courts to fast track enforcement of contracts and faster security clearances has lent support to the start-ups in the country.
- **Among BRICS countries, India improved its rank from 5th (in 2010) to 3rd (in 2018).**
- Twenty-One regulatory changes have been made for ease of doing business for start-ups.
- To optimize resource utilization and enhance the efficiency of the manufacturing sector, DIPP launched the **Industrial Information System (IIS)**, a GIS-enabled database of industrial areas and clusters across the country in May 2017.

2. GOVT SEEKS ₹41,000 CRORE MORE FOR BANK RECAPITALISATION

What to study?
- *For Prelims: About PCA- meaning, exemptions and norms.*
- *For Mains: Recapitalisation- concerns associated, need and the need for comprehensive solution.*

Context: The government has sought Parliament's approval for *supplementary grants worth ₹41,000 crore to infuse fresh capital into ailing state-run banks in the current fiscal*.

Implications:
- *The additional capital could help as many as five such state-run banks exit the prompt corrective action (PCA) framework* that mandates them to pare lending to companies and cut concentration of loans to certain sectors. Eleven banks were put under the PCA framework by the Reserve Bank of India between February 2014 and January 2018.
- The government had budgeted ₹65,000 crore for infusion into public sector banks (PSBs) through recapitalization bonds this fiscal, of which ₹42,000 crore is still to be allotted. With the additional ₹41,000 crore of capital infusion by 31 March, *the government will be infusing a total ₹83,000 crore into public sector banks this year*.
- *The capital infusion will be utilized to* ensure that the better-performing banks under the PCA framework meet their regulatory capital norms and non-PCA banks do not breach the threshold.

Concerns associated with recapitalization of banks:
- The government as the major owner is free to recapitalise but the issue is, *at what cost, for how long, and whether recapitalisation alone is enough*.
- The government is finding it increasingly difficult to recapitalize public sector banks due to *the compulsion to adhere to the stringent budgetary deficit benchmarks*.
- Bankers become *lackadaisical toward debt recovery and tend to escalate provisions and contingencies* to be adjusted against the fresh capital.
- In different-banks-same-pay situations, employees in the loss-making, but recapitalized, banks become *unenthusiastic while those in profit-making, but not recapitalized are demotivated*.
- *It also implies cross-subsidization:* dividend-paying PSU banks subsidizing the non-dividend paying. Ultimately, systemic efficiency suffers.

Conclusion:
- PSBs are in very real danger of losing not only their market share but also their identity unless the government intervenes with surgical precision and alacrity.
- Hence, policymakers and bankers need to put their heads together and come up with a smart option to resolve an issue that can no longer be put on the backburner.

Sources: the hindu.

(Q) In the wake of the current Indian banking system crisis, discuss what measures should be taken by the government to prevent such incidents in the future.

3. PUBLIC CREDIT REGISTRY

What to study?
- *For Prelims and Mains: PCR- features, need, significance and the recommendations made by Deosthalee committee.*

Context: The Reserve Bank of India has shortlisted six major IT companies, including TCS, Wipro and IBM India, to set up a wide-based digital Public Credit Registry (PCR) to capture details of all borrowers and wilful defaulters. The RBI will soon seek request for proposal from the six vendors.

About Public Credit Registry:

What is it?
- The PCR will be an extensive database of credit information for India that is accessible to all stakeholders. The idea is to capture all relevant information in one large database on the borrower and, in particular, the borrower's entire set of borrowing contracts and outcomes.

- **The proposed PCR will also include** data from entities like market regulator Sebi, the corporate affairs ministry, Goods and Service Tax Network (GSTN) and the Insolvency and Bankruptcy Board of India (IBBI) to enable banks and financial institutions to get a 360-degree profile of the existing as well as prospective borrowers on a real-time basis.

Management of PCR:
- Generally, a PCR is managed by a public authority like the central bank or the banking supervisor, and reporting of loan details to the PCR by lenders and/or borrowers is mandated by law.
- The contractual terms and outcomes covered and the threshold above which the contracts are to be reported vary in different jurisdictions, but the idea is to capture all relevant information in one large database on the borrower, in particular, the borrower's entire set of borrowing contracts and outcomes.

Need for a PCR:
- A central repository, which, for instance, captures and certifies the details of collaterals, **can enable the writing of contracts** that prevent over-pledging of collateral by a borrower. In absence of the repository, the lender may not trust its first right on the collateral and either charge a high cost on the loan or ask for more collateral than necessary to prevent being diluted by other lenders. This leads to, what in economics is termed as, **pecuniary externality** – in this case, a spillover of one loan contract onto outcomes and terms of other loan contracts.
- Furthermore, absent a public credit registry, **the 'good' borrowers are disadvantaged in not being able to distinguish themselves from the rest in opaque credit markets**; they could potentially be subjected to a rent being extracted from their existing lenders who enjoy an information monopoly over them. The lenders may also end up picking up fresh clients who have a history of delinquency that is unknown to all lenders and this way face greater overall credit risk.

Benefits of having a PCR:
- A PCR can **potentially help banks in credit assessment and pricing of credit as well as in making risk-based, dynamic and counter-cyclical provisioning**.
- The PCR can also help **the RBI in understanding if transmission of monetary policy is working, and if not, where are the bottlenecks**.
- Further, **it can help supervisors, regulators and banks in early intervention and effective restructuring of stressed bank credits**.
- A PCR will **also help banks and regulators as credit information is a 'public good' and its utility is to the credit market at large and to society in general**.

Task force on PCR:
- The Reserve Bank of India (RBI) had formed a high-level task force on public credit registry (PCR) for India. **The task force was chaired by Y M Deosthalee**.
- The task force has suggested the registry should capture all loan information and borrowers be able to access their own history. Data is to be made available to stakeholders such as banks, on a need-to-know basis. Data privacy will be protected.

Sources: the hindu.

4. 'ANGEL TAX' CONTROVERSY

What to study?
- *For Prelims: What is Angel Tax and who are angel investors?*
- *For Mains: The controversy surrounding Angel Tax and issues related, need for redressal.*

Context: Over the past few weeks, several startups have reportedly been receiving notices from the I-T department asking them to clear taxes on the angel funding they raised, and in some cases, levying a penalty for not paying **Angel Tax**.
- However, this is not the first time that this issue has come up. Startups have been raising the issue of Angel Tax for years, requesting the government to do away with it.

What is Angel Tax?
- Angel Tax is a 30% tax that is levied on the funding received by startups from an external investor. However, this 30% tax is levied when startups receive angel funding at a valuation higher than its 'fair market value'. It is counted as income to the company and is taxed.

- *The tax, under section 56(2)(viib), was introduced by in 2012 to fight money laundering*. The stated rationale was that bribes and commissions could be disguised as angel investments to escape taxes. But given the possibility of this section being used to harass genuine startups, it was rarely invoked.

Why is Angel tax problematic?
- *There is no definitive or objective way to measure the 'fair market value' of a startup*. Investors pay a premium for the idea and the business potential at the angel funding stage. However, tax officials seem to be assessing the value of the startups based on their net asset value at one point. Several startups say that they find it difficult to justify the higher valuation to tax officials.
- In a notification dated May 24, 2018, the Central Board of Direct Taxes (CBDT) had exempted angel investors from the Angel Tax clause subject to fulfilment of certain terms and conditions, as specified by the Department of Industrial Policy and Promotion (DIPP). However, despite the exemption notification, there are a host of challenges that startups are still faced with, in order to get this exemption.

Sources: the hindu.

5. RBI PANEL ON ECONOMIC CAPITAL FRAMEWORK

What to study?
- *For Prelims: Meaning of Economic Capital Framework, arrangements for sharing of surplus between RBI and the government.*
- *For Mains: Issues over RBI autonomy, need for transfer of surplus and the need for review of existing arrangements.*

Context: RBI has constituted *a panel on economic capital framework*. It will be *headed by Ex-RBI governor Bimal Jalan*.
- The expert panel on RBI's economic capital framework has been *formed to address the issue of RBI reserves*—one of the sticking points between the central bank and the government.

What's the isssue?
- The government has been insisting that the central bank hand over its surplus reserves amid a shortfall in revenue collections. Access to the funds will allow the government to meet deficit targets, infuse capital into weak banks to boost lending and fund welfare programmes.

Terms of reference:
- The panel will decide *whether RBI is holding provisions*, reserves and buffers in surplus of the required levels.
- It would propose *a suitable profits distribution policy* taking into account all the likely situations of the RBI, including the situations of holding more provisions than required and the RBI holding less provisions than required.
- The ECF committee will *also suggest an adequate level of risk provisioning* that the RBI needs to maintain. That apart, any other related matter, including treatment of surplus reserves created out of realized gains, will also come within the ambit of this committee.

What is economic capital framework?
- Economic capital framework refers to the risk capital required by the central bank while taking into account different risks.
- The economic capital framework reflects the capital that an institution requires or needs to hold as a counter against unforeseen risks or events or losses in the future.

Why it needs a fix?
- Existing economic capital framework which governs the RBI's capital requirements and terms for the transfer of its surplus to the government *is based on a conservative assessment of risk by the central bank and that a review of the framework would result in excess capital being freed, which the RBI can then share with the government*.
- The government believes that RBI is sitting on much higher reserves than it actually needs to tide over financial emergencies that India may face. Some central banks around the world (like US and UK) keep 13% to 14% of their assets as a reserve compared to RBI's 27% and some (like Russia) more than that.
- Economists in the past have argued for RBI releasing 'extra' capital that can be put to productive use by the government. *The Malegam Committee* estimated the excess (in 2013) at Rs 1.49 lakh crore.

What is the nature of the arrangement between the government and RBI on the transfer of surplus or profits?
- Although RBI was promoted as a private shareholders' bank in 1935 with a paid up capital of Rs 5 crore, the government nationalised it in January 1949, making the sovereign its "owner".
- What the central bank does, therefore, is transfer the "surplus" — that is, the excess of income over expenditure — to the government, in accordance with Section 47 (Allocation of Surplus Profits) of the Reserve Bank of India Act, 1934.

Does the RBI pay tax on these earnings or profits?
- No. Its statute provides exemption from paying income-tax or any other tax, including wealth tax.

Sources: the Hindu.

(Q) What do you understand by RBI's economic capital framework? Discuss whether RBI's economic capital framework requires a fix?

Topic: *Effects of liberalization on the economy, changes in industrial policy and their effects on industrial growth.*

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1. RIGHT TO FAIR COMPENSATION AND TRANSPARENCY IN LAND ACQUISITION REHABILITATION AND RESETTLEMENT ACT (LAND ACQUISITION ACT), 2013

What to study?
- ***For Prelims: Key features of the Act.***
- ***For Mains: Recent amendments and the issues related.***

Context: The Supreme Court has asked five states to give their response to a petition filed by social activists questioning the state amendments made to the land acquisition law, which the petitioners claim have diluted the safeguards the central law provides for against forcible acquisition.

What's the issue?
- The activists have ***questioned the changes made to the Right to Fair Compensation and Transparency in Land Acquisition Rehabilitation and Resettlement Act (Land Acquisition Act), 2013*** by Gujarat, Andhra Pradesh, Telangana, Jharkhand and Tamil Nadu. The petitioners have contended that the amendments by the states are identical and go against the "basic structure" of the central law.
- According to the petition ***the states amended the act by way of ordinances to exempt broad categories of land projects*** from consent provisions, social impact assessment, objections by affected citizens and participation of local bodies. Projects exempted are linear category projects such as industrial corridors, expressways, highways etc.
- Petitioners have ***challenged the power of the states to introduce such amendments*** that are conflicting with the central law and want them to be declared as illegal.
- Petitioners contend that the amendments made by the states were ***in violation of Article 21***, which guarantees the right to live with dignity and personal liberty.

Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 (LARR Act):

Main features of act:
- ***Clearly defines various types of "public purpose" projects*** for which, Government can acquire private land.
- ***Acquiring land:*** For private project, 80% affected families must agree. For PPP project, 70% affected families must agree. Only then land can be acquired.
- ***Social impact assessment:*** Under Social impact assessment (SIA) even need to obtain consent of the affected artisans, labourers, share-croppers, tenant farmers etc whose (sustainable) livelihood will be affected because of the given project.
- ***Compensation:*** Compensation proportion to market rates. 4 times the market rate in rural area. 2 times in urban area. Affected artisans, small traders, fishermen etc. will be given one-time payment, even if they don't own any land.

- **To ensure food security:** Fertile, irrigated, multi-cropped farmland can be acquired only in last resort. If such fertile land is acquired, then Government will have to develop equal size of wasteland for agriculture purpose.
- **Private entities:** If Government acquires the lands for private company- the said private company will be responsible for relief and rehabilitation of the affected people. Additional rehabilitation package for SC/ST owners.
- **Safeguards:** State Governments have to setup dispute settlement Chairman must be a district judge or lawyer for 7 years.
- **Accountability:** Head of the department will be made responsible, for any offense from Government's side. If project doesn't start in 5 years, land has to be returned to the original owner or the land bank. Establishment of Land Acquisition, Rehabilitation and Resettlement Authority for speedy disposal of disputes.

Limitations:
- The Central Act of 2013 was brought to give effect to pre-existing fundamental right to livelihood of citizens.
- It ensures that livelihood will not be taken away unless(i) it is in public interest and that is seen by social impact assessment (ii) The affected citizens are given rehabilitation.
- The amendments made without considering the above factors will take away fundamental rights of the citizens.

Sources: the hindu.

2. PCS 1X SYSTEM

What to study?
- *For Prelims: Objectives and features of PCS 1x System.*
- *For Mains: Ease of Doing Business in India- Present scenario, potential, challenges and ways to address them.*

Context: *Indian Ports Association (IPA) under the guidance of Ministry of Shipping launched the Port Community System 'PCS1x'.*

Significance:
- The platform has the potential to revolutionize maritime trade in India and bring it at par with global best practices and pave the way to improve the Ease of Doing Business world ranking and Logistics Performance Index (LPI) ranks.

About PCS 1x:
- 'PCS 1x' is a cloud based new generation technology, with user-friendly interface.
- This system seamlessly *integrates stakeholders from the maritime trade on a single platform*.
- *The platform offers value added services* such as notification engine, workflow, mobile application, track and trace, better user interface, better security features, improved inclusion by offering dashboard for those with no IT capability.
- Another major feature is *the deployment of a world class state of the art payment aggregator solution* which removes dependency on bank specific payment eco system.

Other Features:
- It is an initiative that supports **green initiatives by reducing dependency on paper.**
- It has been **developed indigenously** and is a part of the **'Make in India'** and **'Digital India'**

Indian Ports Association (IPA):
- **IPA was constituted in 1966 under Societies Registration Act**, with the idea of fostering growth and development of all Major Ports which are under the supervisory control of **Ministry of Shipping**.

Sources: the hindu.

3. NATIONAL MEDICAL DEVICES PROMOTION COUNCIL

What to study?
- *For Prelims: About NMDPC- Composition, objectives and functions.*
- *For Mains: Significance and the need for the council.*

Context: The government is planning to set up *a National Medical Devices Promotion Council* under the Department of Industrial Policy and Promotion (DIPP) in the Ministry of Commerce and Industry.

- The announcement was made on the occasion of *4th WHO Global Forum on Medical Devices* at Andhra Pradesh Medtech Zone in Vishakhapatnam.

National Medical Devices Promotion Council:

- The Council will be *headed by Secretary of the Department of Industrial Policy and Promotion (DIPP)*.
- Apart from the concerned departments of Government, it will also have *representatives from health care industry and quality control institutions*.
- The Andhra Pradesh MedTech Zone of Visakhapatnam, will provide technical support to the Council.

The Prime objectives of the National Medical Devices Promotion Council are:

- Act as a facilitating, promotional & developmental body for the Indian Medical Devices Industry (MDI).
- Render technical assistance to the agencies and departments concerned to simplify the approval processes for MDI promotion and development.
- Enable entry of emerging interventions and support certifications for manufacturers to reach levels of global trade norms and lead India to an export driven market in the sector.
- Support dissemination and documentation of international norms and standards for medical devices by capturing the best practices in the global market.
- Facilitate domestic manufacturers to rise to international level of understanding of regulatory and non regulatory needs of the industry.
- Drive a robust and dynamic Preferential Market Access (PMA) policy by identifying the strengths of the Indian manufacturers and discouraging unfair trade practices in imports
- Ensure pro-active monitoring of public procurement notices across India to ensure compliance with PMA guidelines of DIPP and DoP.
- Undertake validation of Limited Liability Partnerships (LLPs) and other such entities within MDI sector, which add value to the industry strength in manufacturing to gain foothold for new entrants.
- Make recommendations to government based on industry feedback and global practices on policy and process interventions to strengthen the medical technology sector.

Significance:

- The Medical Devices Industry (MDI) plays a critical role in the healthcare ecosystem and is crucial to achieve the goal of health for all citizens of the country. The manufacturing and trade in MDI is growing steadily in double digits. However, it is largely import-driven with imports accounting for over 65 percent of the domestic market.
- The setting-up of the Council will spur domestic manufacturing in this sector as Indian companies and startups have stated moving towards creating innovative products.

Sources: the hindu.

(Q) There is a need to ensure that medical device policies in our country are aligned for maximal public good. Comment.

4. STATES' START-UP RANKING 2018

What to study?

- *For Prelims: About States' Start- up Ranking 2018- key facts.*
- *For Mains: Significance of the rankings and challenges ahead, significance of the startups, the need for a supportive ecosystem.*

Context: The Department of Industrial Policy and Promotion (DIPP) has announced the results of the first ever *States' Start-up Ranking 2018*.

Background:

- DIPP began the exercise to review the Start-up ecosystem of the states from January 2016.
- *The key objective of the exercise was to* encourage States and Union Territories to take proactive steps towards strengthening the Start-up ecosystems in their states. The entire exercise was conducted for capacity development and to further the spirit of cooperative federalism.
- The methodology behind the exercise was aimed at creating a healthy competition environment wherein States were encouraged further to learn, share and adopt good practices.

- *Best Performer:*
- *Top Performers:* Karnataka, Kerala, Odisha, and Rajasthan.
- *Leaders:* Andhra Pradesh, Bihar, Chhattisgarh, Madhya Pradesh, and Telangana.
- *Aspiring Leaders:* Haryana, Himachal Pradesh, Jharkhand, Uttar Pradesh, and West Bengal.
- *Emerging States:* Assam, Delhi, Goa, Jammu & Kashmir, Maharashtra, Punjab, Tamil Nadu, and Uttarakhand.
- *Beginners:* Chandigarh, Manipur, Mizoram, Nagaland, Puducherry, Sikkim, and Tripura.
- *Champions:* 51 officers from States and Union Territories were identified as "Champions", who have made significant contributions towards developing their State's Start-up ecosystem.

Sources: the hindu.

5. GOVERNING COUNCIL FOR MSME EXPORTS

What to study?
- *For Prelims: Share of MSME in India's GDP, classification of the sector.*
- *For Mains: MSME- significance, issues, challenges and solutions.*

Context: Ministry of Micro, Small and Medium Enterprises (MoMSME) has released its Strategy Action Plan on Unlocking the potential of MSME exports.

Background:
- Despite a reasonable growth story and substantial share in overall exports, MSMEs are often faced with challenges that restrict their entry into the foreign market.
- Not only do these challenges need to be studied in detail but, an eco-system needs to be created in such a way that these enterprises shall be able to participate in the global value chain on its own and generate enough economies of scale.

Highlights of the strategic action plan proposed:
- *Aim*: The strategy action plan prepared by the Ministry aims to create a sustainable ecosystem for entire MSME development.
- *The action plan aims to achieve the objectives of* – Finance; Access to affordable trade finance; Target of USD 100 billion of exports from India by 2020; Evaluate readiness of MSMEs to export their products and services; Recognize areas where improvements are required in order to be able to export effectively and efficiently; Integration of MSMEs into Global Value Chain.
- *Governing Council*: To ensure efficient and effective delivery of all MSME export related interventions, the Strategy Action Plan proposed to formulate a governing council that shall be chaired by Secretary, M/o MSME and Co-chaired by DC, M/o MSME.
- *Composition*: The council shall comprise of senior officials and members from M/o MSME, Commerce, MSME Export Promotion Councils, Export Development Authorities, Commodity Boards, and other bodies.

Problems and challenges faced by the sector:
- Limited information about products & services.
- Working of the foreign markets, and in particular difficulties in accessing export distribution channels and in connecting with overseas customers.
- Lack of awareness on export promotion and assistance programmes offered by the government and unfamiliarity with legal and regulatory frameworks of the exporting and importing countries are another issues identified in the Strategy Action Plan.
- No or zero awareness on IPR issues and various International Trade Agreements (ITAs).
- Access to affordable trade finance; Costly product standards and certification procedures; Logistics cost –airport and shipping costs etc;
- Technology; Lack of innovation, low value addition and poor packaging due to low level of technology adoption are some other problems identified.

Need of the hour:
- The need of the hour is to study challenges in detail and create an eco-system in such a way that these enterprises shall be able to participate in the global value chain on their own and generate enough economies of scale.

(Q) For MSME sector, access to credit is one of the most significant challenge amongst the several challenges that the sector faces. Analyze issues related to credit availability for MSME sector and the role government is playing?

6. ESTABLISHMENT OF NIMZS

- **National Investment & Manufacturing Zones (NIMZs)** are one of the important instruments of National Manufacturing Policy, 2011.
- NIMZs are envisaged as large areas of developed land with the requisite eco-system for promoting world class manufacturing activity.

Objective of Special Economic Zones –

- To promote exports, while NIMZs are based on the principle of industrial growth in partnership with States and focuses on manufacturing growth and employment generation.
- **NIMZs are different from SEZs in terms of size, level of infrastructure planning, governance structures related to regulatory procedures, and exit policies.**
- For the Financial Year 2016 – 2017, Rs. 3.35 crores has been earmarked under the **'Scheme for Implementation of National Manufacturing Policy'** for **'Master Planning of NIMZs'** and **Technology Acquisition and Development Fund (TADF)**.

Source: PIB

7. FDI IN E-COMMERCE

What to study?

- ***For Prelims: Highlights of the FDI policy on e- commerce.***
- ***For Mains: Significance and the need for recent changes, implications and the need for review of these rules.***

Context: The Department of Industrial Policy & Promotion recently issued a clarification to the existing rules pertaining to Foreign Direct Investment in e-commerce companies.

The main features of the clarification include:

- Vendors that have any stake owned by an e-commerce company ***cannot sell their products on that e-commerce company's portal***.
- ***Any vendor who purchases 25% or more of its inventory from an e-commerce group company*** will be considered to be controlled by that e-commerce company, and thereby barred from selling on its portal. This provision aims to ensure that vendors in which marketplaces, such as Amazon, have a stake do not sell the bulk of their items to a third-party vendor who then goes on to sell those items on the e-commerce marketplace.
- In other words, ***the provision seeks to deny control by the marketplace entity over vendors***.
- ***E-commerce firm will not be allowed to influence the price of a product sold on its portal by giving incentives to particular vendors***.

Background:

- E-commerce companies can operate under ***two different models in India***.
- The first is the ***marketplace model*** where the e-commerce firm simply acts as a platform that connects buyers and sellers. ***FDI is allowed in e-commerce companies in this model***.
- The second model is ***inventory-based*** where the inventory of goods sold on the portal is owned or controlled by the e-commerce company. ***FDI is not allowed under this model***.

What is the context for these changes?

- What has been happening is that large e-commerce companies such as Amazon and Flipkart, while not owning inventory themselves, have been providing a platform for their group companies such as CloudTail and WS Retail respectively.
- Some see this as skewing the playing field, especially if these vendors enjoyed special incentives from the e-commerce firm, over others. These controlled or owned vendors may then be able to offer discounts to customers that competitors may not be able to match.

Significance:

- The thrust of the DIPP policy is directed at protecting small vendors on e-commerce websites. It seeks **to ensure small players selling on the portals are not discriminated against in favour of vendors in which e-commerce companies have a stake**.
- The new set up will ensure **a level playing field for all vendors looking to sell on the e-commerce portals**. Smaller marketplaces that do not have stake in any vendors will also be able to now compete with the big daddies.
- The small traders were complaining that deep discounts offered by the likes of Amazon and Flipkart are driving them out of business. **The new norms aim to tackle the anti-competitive behaviour by e-commerce entities and to ensure that there is no wrong subsidization and the marketplace remains neutral to all vendors**.

Who else will be affected?

- The main players to be affected will be group companies and affiliates of the biggest e-commerce platforms, Amazon and Flipkart.
- The provision that bars companies — in which e-commerce firms have a stake — from selling on their portals will hurt start-ups as well, since many of these will be barred from selling due to minor equity stakes being held by the e-commerce companies.
- Small vendors will not be as affected because most of them do not purchase more than 25% of their inventory from a single source and so they will be allowed to sell their items on the e-commerce platforms.

Sources: the hindu.

(Q) Discuss how the recently released e-commerce rules will impact the marketplace and the consumers.

Topic: Inclusive growth and issues arising from it, Sustainable development

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1. NORMS FOR PAYMENT APPS

What to study?

- ***For Prelims and Mains: Need for norms for payment apps- concerns, issues and challenges.***

Context: The Ministry of Electronics and Information Technology (MeitY) has asked the Reserve Bank of India (RBI) to come up with regulations to oversee collection, usage and sharing of data by payment service providers.

Present concerns and the need for norms:

- Recently National Cyber Security Coordinator (NCSC) had raised concerns over collection and storage of ***"sensitive personal data"*** by payment service providers via applications such as Google Tez, WhatsApp and Paytm.
- The NCSC had pointed out that there was ***no agreement between the National Payments Corporation of India (NPCI), the banks and the applications*** that provided payment services. Additionally, there is no liability of NPCI and the payment service providers.
- There is also ***no provision to protect the interest of the consumer*** against the pilferage, leakage and sharing of data, which is of sensitive nature.

Need of the hour- recommendations by NCSC and RBI:

- There is a need to scrutinise all aspects of a relation – legal, technical and financial, between all the stakeholders in the payments ecosystem.
- Payments service providers must comply with legal framework as well as regulations prescribed by the regulator.
- RBI should lay down regulations, that would bind the collection, usage and sharing of data, by participants in the payments arena.

NPCI:

- National Payments Corporation of India (NPCI) is an umbrella organization for all retail payments system in India. It was set up with the guidance and support of the Reserve Bank of India (RBI) and Indian Banks' Association (IBA). NPCI has ten promoter banks.
- Its recent work of developing Unified Payments Interface (UPI) aims to move India to a cashless society with only digital transactions.

- It has successfully completed the development of a domestic card payment network called RuPay, reducing the dependency on international card schemes.

Sources: the hindu.

(Q) 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.

2. GUIDELINES FOR GROUND WATER EXTRACTION

What to study?
- *For Prelims: Overview of the guidelines and water conservation fee.*
- *For Mains: Groundwater usage- extent, concerns, pollution and the need for regulation.*

Context: The Central Ground Water Authority of the Union Ministry of Water Resources, River Development and Ganga Rejuvenation on December 12, 2018 notified revised guidelines for ground water extraction. The revised guidelines, which will be effective from June 1, 2019, aim to ensure a more robust ground water regulatory mechanism in the country.
- The guidelines were revised in the wake of the directions issued by the National Green Tribunal (NGT) to address various shortcomings in the existing guidelines of ground water extraction.

The revised guidelines provide for the:
- Encouraged use of recycled and treated sewage water by industries.
- Provision of action against polluting industries.
- Mandatory requirement of digital flow meters, piezometers and digital water level recorders, with or without telemetry depending upon quantum of extraction.
- Mandatory water audit by industries abstracting ground water 500 m^3/day or more in safe and semi-critical area and 200 m3/day or more in critical and over-exploited assessment units.
- Mandatory roof top rain water harvesting except for specified industries.
- Measures to be adopted to ensure prevention of ground water contamination in premises of polluting industries/ projects.

Exemptions under the revised guidelines:
- The revised guidelines exempt the requirement of NOC for agricultural users, users employing non-energised means to extract water, individual households (using less than 1 inch diameter delivery pipe) and Armed Forces Establishments during operational deployment.
- Other exemptions have been granted to strategic and operational infrastructure projects for Armed Forces, Defence and Paramilitary Forces Establishments and Government water supply agencies.

Water Conservation Fee:
- One of the important features of the revised guidelines is the introduction of the concept of Water Conservation Fee (WCF), the fee charged on extraction of ground water.
- The WCF payable varies with the category of the area, type of industry and the quantum of ground water extraction.

Implications of Water Conservation Fee:
- The high rates of WCF are expected to discourage setting up of new industries in over-exploited and critical areas as well as may limit large scale ground water extraction by industries, especially in over-exploited and critical areas.

Background:
- In India, extracted groundwater is mainly used for irrigation and accounts for about 228 BCM (billion cubic metre) — or about 90% of the annual groundwater extraction. The rest, 25 BCM, is drawn for drinking, domestic and industrial uses.
- India is the largest user of groundwater in the world, and accounts for about 25% of the global water extraction.

Sources: the hindu.

(Q) India's overexploitation of groundwater is leading to the worst water crisis in its history. Examine and suggest measures for improvement.

3. SDG INDIA INDEX 2018

What to study?

- *For Prelims: About SDGs- a brief overview.*
- *For Mains: SDGs- significance, targets and the need for international collaboration to achieve these targets.*

Context: The NITI Aayog has released the *Baseline Report of the Sustainable Development Goals (SDG) India Index 2018*, documenting the progress made by India's States and Union Territories (UTs) towards implementation of the 2030 SDG targets.

Background:

- The SDG India *Index was developed in collaboration with the Ministry of Statistics & Programme Implementation (MoSPI), Global Green Growth Institute and United Nations in India*.
- The *index comprises a composite score for each State and Union Territory* based on their aggregate performance across 13 of the 17 SDGs. The score, ranging between 0 and 100, denotes the average performance of the State/UT towards achieving the 13 SDGs and their respective targets.
- *The aim of the index is to* instil competition among States to improve their performance

MINT GRAPHITI

INDIA's SDG SCORES

India has crossed the halfway mark in achieving the UN's sustainable development goals (SDGs) adopted in 2015 and to be achieved by 2030, according to the SDG India Index released on Friday by think tank NITI Aayog and the UN. Here are the 10 best-performing states and Union territories according to the index.

SDG index score	India	57
Himachal Pradesh		69
Kerala		69
Chandigarh*		68
Tamil Nadu		66
Puducherry*		65
Andhra Pradesh		64
Goa		64
Gujarat		64
Karnataka		64
Maharashtra		64

*Union territories   Source: NITI Aayog and UN

across social indices as the States' progress will determine India's progress towards achieving the set goals by 2030. Using the index, States will be monitored on a real-time basis.

Significance:

- The SDG India Index acts as a bridge between these mandates, aligning the SDGs with the Prime Minister's clarion call of 'Sabka Saath, Sabka Vikas', which embodies the five Ps of the global SDG movement – People, Planet, Prosperity, Partnership and Peace.

Highlights of the report and performance of various states:

- According to the SDG India Index, *the nation as a whole has a score of 58*, showing the country has reached a little beyond the halfway mark in meeting the sustainable development goals adopted by India and 192 other nations in 2015.
- The SDG Index Score for Sustainable Development Goals 2030 ranges between 42 and 69 for States and between 57 and 68 for UTs.
- *Top 3 states* in terms of being on track to achieve the United Nations' Sustainable Development Goals (SDG): Himachal Pradesh, Kerala, and Tamil Nadu.

- **Among the UTs, Chandigarh** is the front runner with a score of 68.
  - Tamil Nadu has a score 66, and is the top scorer on the goals to do with eradicating poverty and also providing clean and affordable energy.
  - Kerala's top rank is attributed to its superior performance in providing good health, reducing hunger, achieving gender equality and providing quality education. Himachal Pradesh ranks high on providing clean water and sanitation, in reducing inequalities and preserving the mountain ecosystem.
  - Among the UTs, Chandigarh takes the lead because of its exemplary performance in providing clean water and sanitation to its people. It has further made good progress towards providing affordable and clean energy, generating decent work and economic growth, and providing quality education.
  - **The toppers in gender equality, Sikkim and Union territories Andaman and Nicobar islands and Chandigarh** have crossed the half way mark in reaching the goals.
  - Jharkhand, Odisha and Nagaland are also among the states that have a lot more ground to cover in the overall rankings.
  - Overall, the average score for the States was the worst when it came to gender equality (36), in creating sustainable cities and communities (39), in enabling industry, innovation, and infrastructure (44), and in eradicating hunger (48).

SDGs:
- Agenda 2030 and the Sustainable Development Goals, adopted by all member states of the United-Nations in 2015, describe a universal agenda that applies to and must be implemented by all countries. Sound metrics and data are critical for turning the SDGs into practical tools for problem solving.

Sources: the hindu.

4. ONE DISTRICT, ONE PRODUCT REGIONAL SUMMIT

What to study?
- ***For Prelims and Mains: Key features of ODOP and its significance.***

Context: The One District, One Product Regional Summit was held recently in Varanasi.

About ODOP:
- ODOP is ***aimed at giving a major push to traditional industries synonymous with the respective districts of the state***.
- The objective of the ODOP is ***to optimise production, productivity and income, preservation and development*** of local crafts, promotion of art, improvement in product quality and skill development.

Background:
- ODOP is basically *a Japanese business development concept*, which gained prominence in 1979. It is aimed at promoting a competitive and staple product from a specific area to push sales and improve the standard of living of the local population.
- Over time, it has been replicated in other Asian countries as well.

The main objectives of the One District One Product Scheme of Uttar Pradesh are as follows:
- Preservation and development of local crafts / skills and promotion of the art.
- Increase in the incomes and local employment (resulting in decline in migration for employment).
- Improvement in product quality and skill development.
- Transforming the products in an artistic way (through packaging, branding).
- To connect the production with tourism (Live demo and sales outlet – gifts and souvenir).
- To resolve the issues of economic difference and regional imbalance.
- To take the concept of ODOP to national and international level after successful implementation at State level.

Facts for Prelims:
- *UP is uniquely famous for product-specific traditional industrial hubs across 75 districts*, including Varanasi (Banarasi silk sari), Bhadohi (carpet), Lucknow (chikan), Kanpur (leather goods), Agra (leather footwear), Aligarh (locks), Moradabad (brassware), Meerut (sports goods) and Saharanpur (wooden products).

Sources: the hindu.

Topic: 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. DISTRIBUTION OF SOIL HEALTH CARDS (SHC) FOR OPTIMAL UTILIZATION OF FERTILIZERS

- **Soil Health Card Scheme** has been taken up for the first time in a comprehensive manner across the country. It is provided to all farmers.

Objective:
- **It is to enable the farmers to apply appropriate recommended dosages of nutrients for crop production and improving soil health and its fertility.**

Unique Features:
- Collecting soil samples at a grid of 2.5 ha in irrigated area and 10 ha in un-irrigated areas.
- Uniform approach in soil testing adopted for 12 parameters **primary nutrients (NPK), secondary nutrient (S); micronutrients (B, Zn, Mn. Fe & Cu); and other (pH, EC & OC)** for comprehensiveness.
- GPS enabled soil sampling to create a systematic database and allow monitoring of changes in the soil health over the years.

Background:
- **National Mission for Sustainable Agriculture (NMSA)** will be implemented during **12th Plan** to make agriculture more productive, sustainable and climate resilient; to conserve natural resources; to adopt comprehensive soil health management practices; to optimize utilization of water resources; etc.
- **Soil Health Management (SHM)** is one of the most significant **interventions under NMSA.**

Aims of SHM:
- To promote **Integrated Nutrient Management (INM)** through judicious use of chemical fertilizers including secondary and micro nutrients in conjunction with organic manures and bio-fertilisers for improving soil health and its productivity;
- To strengthen soil and fertilizer testing facilities to give soil test based recommendations to farmers for improving soil fertility;
- To ensure quality control requirements of fertilizers, bio-fertilizers under **Fertiliser Control Order, 1985**;
- To upgrade skill and knowledge of soil testing laboratory staff, extension staff and farmers through training and demonstrations;
- To **promote organic farming practices**, etc.

2. FOOD AND AGRICULTURE ORGANIZATION (FAO) COUNCIL APPROVES INDIA'S PROPOSAL TO OBSERVE AN INTERNATIONAL YEAR OF MILLETS IN 2023

- Union Minister of Agriculture and Farmers' Welfare has said that the **160th session of the Food and Agriculture Organization (FAO) Council**, currently underway in Rome, **approved India's proposal to observe an International Year of Millets in 2023**.
- In addition, the **FAO Council** also approved India's membership to the **Executive Board of the United Nations World Food Program (WFP) for 2020 and 2021**.

Minister's statement:
- This international endorsement comes in the backdrop of India celebrating 2018 as the **National Year of Millets** for promoting cultivation and consumption of these nutria-cereals.
- This is further supported by increase in **Minimum Support Prices (MSP)** of millets.
- **Millets consists of Jowar, Bajra, Ragi and minor millets together termed as nutria-cereals.**
- Through the **Department of Food and Public Distribution**, State Governments are allowed to procure jowar, bajra, maize and ragi from framers at MSP.

About FAO –
- The **Food and Agriculture Organization (FAO)** is specialized agency of the **United Nations** that leads international efforts to defeat hunger.
- **Headquarters: Rome, Italy**
- **Founded: 16 October 1945**
- **Goal of FAO:** Their goal is to **achieve food security for all** and make sure that people have regular access to enough high-quality food to lead active, healthy lives.

FAO Council –
- **Origin:** Established by the Conference at its Third Session (1947) to replace the original "Executive Committee of FAO" in accordance with a recommendation of the Preparatory Commission on World Food Proposals.
- **Purpose:** The Council, within the limits of the powers, acts as the Conference's executive organ between sessions.
- It exercises functions dealing with the world food and agriculture situation and related matters, current and prospective activities of the Organization, including its Programme of Work and Budget, administrative matters and financial management of the Organization and constitutional matters.

Source: PIB

Topic: 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.

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1. SWAMINATHAN CALLS GM CROPS A FAILURE

What to study?
- *For Prelims: About GM crops, their production and other Genetic engineering related key facts.*
- *For Mains: Concerns raised over the introduction of GM crops, arguments in favour and against.*

Context: Leading agriculture scientist M.S. Swaminathan, in a research paper, has described Bt cotton as a 'failure'.
- The findings were published in paper 'Modern Technologies for Sustainable Food and Nutrition Security'. It is a review of crop development in India and transgenic crops — particularly Bt cotton, the stalled Bt brinjal as well as DMH-11, a transgenic mustard hybrid.

Key observations made:
- The paper notes that GE (genetically engineered) Bt cotton has failed in India. It has failed as a sustainable agriculture technology and has, therefore, also failed to provide livelihood security for cotton farmers who are mainly resource-poor, small and marginal farmers.

- Besides, the precautionary principle (PP) has been done away with and no science-based and rigorous biosafety protocols and evaluation of GM crops are in place.
- The paper also raises questions on the genetic engineering technology itself on the grounds that it raises the cost of sowing. Also, the insertion of foreign genes (in the plant) could lead to "molecular and cellular events not precisely understood."

Way ahead- Prof. Swaminathan's suggestions:
- The government should only use genetic engineering as a last resort. Genetic engineering technology is supplementary and must be need based. Only in very rare circumstance (less than 1%) may there arise a need for the use of this technology.

What is a GM crop?
- A GM or transgenic crop is a plant that has a novel combination of genetic material obtained through the use of modern biotechnology.
- For example, a GM crop can contain a gene(s) that has been artificially inserted instead of the plant acquiring it through pollination. The resulting plant is said to be "genetically modified" although in reality all crops have been "genetically modified" from their original wild state by domestication, selection, and controlled breeding over long periods of time.

Do we need GM crops?
- Yes and why?
  - Higher crop yields.
  - Reduced farm costs.
  - Increased farm profit.
  - Improvement in health and the environment.

No and why?
- *Lack of clarity:* It is clear that the technology of genetic engineering is an evolving one and there is much, especially on its impact on human health and environment that is yet to be understood properly. The scientific community itself seems uncertain about this.
- While there are many in this community who feel that the benefits outweigh the risks, others point to the irreversibility of this technology and uncontrollability of the Genetically Modified Organisms (GMO) once introduced in the ecosystem. Hence, they advocate a precautionary approach towards any open release of GMOs.
- *Threat to domestic crops:* One of the concerns raised strongly by those opposing GM crops in India is that many important crops like rice, brinjal, and mustard, among others, originated here, and introducing genetically modified versions of these crops could be a major threat to the vast number of domestic and wild varieties of these crops.
- In fact, globally, there is a clear view that GM crops must not be introduced in centres of origin and diversity. India also has mega biodiversity hotspots like the Eastern Himalayas and the Western Ghats which are rich in biodiversity yet ecologically very sensitive. Hence it will only be prudent for us to be careful before we jump on to the bandwagon of any technology.
- *There is also a potential for pests to evolve resistance* to the toxins produced by GM crops and the risk of these toxins affecting nontarget organisms. There is also the danger of unintentionally introducing allergens and other anti-nutrition factors in foods.

Sources: the hindu.

(Q) In India some of the factors are forcing farmers to abandon India's first genetically modified (GM) crop, Bt cotton. What are these factors? Discuss impact on farmers and GM companies.

2. ONLINE PORTAL "ENSURE"

- Union Minister of Agriculture and Farmers' Welfare launched a portal **ENSURE – National Livestock Mission-EDEG developed by NABARD** and operated under the **Department of Animal Husbandry, Dairying & Fisheries.**

Entrepreneurship Development and Employment Generation (EDEG):
- Under the Mission's component EDEG, subsidy payment for activities related to poultry, small ruminants, pigs etc., through Direct Benefit Transfer (DBT) goes directly to the beneficiary's account.

- To make it better, simpler and transparent, the NABARD has developed an online portal "ENSURE" which makes the information related to beneficiary and processing of application readily available.

Benefits:
- The **flow of information/funds** will be **quicker and more accountable.**
- The **burden of extra interest due to delay in the disbursal of the subsidy would now be reduced**.
- Accessing the portal will be on real-time basis and list of beneficiaries can be easily prepared.

Source: PIB

3. FARM LOAN WAIVER

What to study?
- *For Prelims: Which states announced farm loan waivers in last one year.*
- *For Mains: Advantages and Disadvantages of farm loan waivers, the need for viable solution to farm distress.*

Context: Former Reserve Bank of India governor Raghuram Rajan has stressed on the need to do away with farm loan waivers citing "enormous" problems for state finances and investment. He also said that farm loan waiver should not form part of poll promises and he has written to Election Commission that such issues should be taken off the table.

Why?
- According to Rajan, *loan waivers not only inhibit investment in the farm sector but put pressure on the fiscal of states which undertake farm loan waiver*.
- In every state election during the last five years, loan waiver promise made by one political party or other.
- The recently concluded assembly election in five states, agriculture loan waiver and increasing minimum support price (MSP) of cereals was again part of manifesto of some of the political parties.
- Also, loan waivers, as the RBI has repeatedly argued, vitiate the *credit culture, and stress the budgets of the waiving state or central government*.

Background:
- According to a 2017 report by the RBI, farm loan waiver amounting to Rs 88,000 crore likely to be released in 2017-18 by seven states, including Uttar Pradesh and Maharashtra, may push inflation on permanent basis by 0.2%.

The ever- rising demand:
- Agriculture currently contributes just about 15% to the national output and about 50% of the population directly or indirectly depends on it for employment.
- Farmer distress is a real and pressing problem, as evidenced by the protests currently taking place in various parts of the country. In the recent past, widespread demands have been heard for farm loan waivers amid continuing agrarian distress.

Drawbacks of loan waivers:
- Firstly, *it covers only a tiny fraction of farmers*. The loan waiver as a concept excludes most of the farm households in dire need of relief and includes some who do not deserve such relief on economic grounds.
- Second, *it provides only a partial relief to the indebted farmers* as about half of the institutional borrowing of a cultivator is for non-farm purposes.
- Third, *in many cases, one household has multiple loans* either from different sources or in the name of different family members, which entitles it to multiple loan waiving.
- Fourth, *loan waiving excludes agricultural labourers* who are even weaker than cultivators in bearing the consequences of economic distress.
- Fifth, *it severely erodes the credit culture*, with dire long-run consequences to the banking business.
- Sixth, *the scheme is prone to serious exclusion and inclusion errors*, as evidenced by the Comptroller and Auditor General's (CAG) findings in the Agricultural Debt Waiver and Debt Relief Scheme, 2008.
- Lastly, schemes have serious *implications for other developmental expenditure*, having a much larger multiplier effect on the economy.

What needs to be done?
- *Proper identification:* For providing immediate relief to the needy farmers, a more inclusive alternative approach is to identify the vulnerable farmers based on certain criteria and give an equal amount as financial relief to the vulnerable and distressed families.
- *Enhance non- farm income:* The sustainable solution to indebtedness and agrarian distress is to raise income from agricultural activities and enhance access to non-farm sources of income. The low scale of farms necessitates that some cultivators move from agriculture to non-farm jobs.
- *Improved technology, expansion of irrigation coverage, and crop diversification* towards high-value crops are appropriate measures for raising productivity and farmers' income. All these require more public funding and support.

Way ahead:
- The magic wand of a waiver can offer temporary relief, but long-term solutions are needed to solve farmer woes. There are many dimensions of the present agrarian crisis in India.
- The search for a solution therefore needs to be comprehensive by taking into consideration all the factors that contribute to the crisis.
- Furthermore, both short- and long-term measures are required to address the numerous problems associated with the agrarian crisis.

Sources: the hindu.

(Q) "Farm loan waiver undermines an honest credit culture, it impacts credit discipline, it blunts incentives for future borrowers to repay, in other words, waivers engender moral hazard." Do you agree critically comment.

4. KRUSHAK ASSISTANCE FOR LIVELIHOOD AND INCOME AUGMENTATION (KALIA) SCHEME

What to study?
- *For Prelims and Mains: Key features and significance of the scheme.*

Context: Odisha cabinet has approved the *Krushak Assistance for Livelihood and Income Augmentation (KALIA) scheme*, worth over Rs. 10,000 crore, for the development of farmers in the state.

Key features of the scheme:
- As per the scheme, an amount of Rs. 10,000 per family at the rate of Rs. 5,000 each for Kharif and Rabi seasons shall be provided as financial assistance for taking up cultivation.
- The assistance will be provided to take care of sustenance of farmers not able to take up cultivation due to old age, disability, disease or other reasons.
- The scheme also has a component for livelihood support for landless households. *The landless households will have the option of selecting any of the units*. The scheme, among others, will particularly benefit scheduled caste and scheduled tribe households.
- Deserving families will be *identified and selected by gram panchayats*. About 10 lakh households will be covered over two years under this scheme at a cost of Rs. 100 crore.
- *The scheme also include life insurance cover* of Rs. 2 lakh and additional personal accident cover of Rs. 2 lakh will be provided to both cultivators and landless agriculture labourers covering about 74 lakh households.

Significance of the scheme:
- The KALIA is historic and it will further accelerate agricultural prosperity in the state and reduce poverty. It is a progressive and inclusive scheme and will make a direct attack on poverty by way of massive investment in this sector and making benefits reach the most needy through Direct Benefit Transfer (DBT) mode.
- Ten lakh landless households will be supported with a unit cost of Rs. 12,500 to take up activities like goat rearing units, mini layer units, duckery units, fishery kits for fishermen and women, mushroom cultivation and bee keeping.

Sources: the hindu.

5. RYTHU BANDHU SCHEME

What to study?
- *For Prelims: Key features of the scheme.*
- *For Mains: Significance of the scheme, can it become an alternative to loan waiver schemes?*

Context: Recently, Chairman of India's largest lender State Bank of India (SBI), Rajnish Kumar, said that loan waivers are not a permanent solution; instead, he argued for an investment scheme to increase the income of farmers on similar lines of *Telangana's Rythu Bandhu*.

What is Rythu Bandhu?
- In August this year, Telangana government launched 'Rythu Bandhu' investment support scheme for farmers.
- The Rythu Bandhu (Agriculture Investment Support Scheme) takes care of *initial investment needs of every farmer*.
- Aimed at relieving farmers of debt burden and cease them from falling into the debt trap again, *the scheme provides a grant of Rs 4,000 per acre per farmer each season for the purchase of inputs* like seeds, fertilizers, pesticides, labour and other investments in the field operations of farmer's choice for the crop season.

A quasi UBI scheme:
- Former Chief Economic Advisor Arvind Subramanian, who floated the idea of Universal Basic Income (UBI) for farmers in the Economic Survey, has said that Rythu Bandhu is a quasi UBI scheme, which had manifold benefits.
- If Rythu Bandhu could be fiscally unsustainable but if it replaces some and all of the schemes such as schemes for bad harvests (monsoon failures), crop insurance and loan waivers, it could be advantageous. However, he also said that a scheme like Rythu Bandhu will take some time for implementation.

Sources: the hindu.

6. MINIMUM SUPPORT PRICES (MSPS)

What to study?
- *For Prelims: MSP- crops covered, how is it decided.*
- *For Mains: MSP- need, significance, concerns and rectifying measures.*

Context: The Union government has declared inclusion of 17 new minor forest produce (MFP) under the government's minimum support price scheme.
- The new MFP under the scheme includes Mahua flowers (dried), Tejpatta (dried) and Kokum (dry).

Background:
- The Pricing Cell, constituted by the Tribal Cooperative Marketing Development Federation of India Ltd (TRIFED), recommended inclusion of new MFPs under the scheme, given their importance to the economy of local communities.

Significance:
- A Planning Commission report had noted that MFP contributes to 20 to 40 per cent of the income of forest-dependent communities, especially the landless with a dominant population of tribals, and "provides critical subsistence during lean seasons."
- The MFP economy, however, is also known to suffer from unorganised and uncertain market demands, affecting economic returns to these communities.

About MSP:
What is it?
- In theory, an MSP is the minimum price set by the Government at which farmers can expect to sell their produce for the season. When market prices fall below the announced MSPs, procurement agencies step in to procure the crop and 'support' the prices.

Who announces?
- The Cabinet Committee of Economic Affairs announces MSP for various crops at the beginning of each sowing season based on the recommendations of the Commission for Agricultural Costs and Prices (CACP).

- The CACP takes into account demand and supply, the cost of production and price trends in the market among other things when fixing MSPs.

Why is it important?
- Price volatility makes life difficult for farmers. Though prices of agri commodities may soar while in short supply, during years of bumper production, prices of the very same commodities plummet.
- MSPs ensure that farmers get a minimum price for their produce in adverse markets. MSPs have also been used as a tool by the Government to incentivise farmers to grow crops that are in short supply.

Sources: Down to Earth.

(Q) Will a rise in the minimum support price (MSP) solve the problem of farm distress? Critically examine.

Topic: *Types of irrigation and irrigation systems storage.*

1. POLAVARAM MULTI-PURPOSE PROJECT

What to study?
- *Static Part: Key facts about the project.*
- *Dynamic and Current: Issues associated and the way ahead.*

Context: The Supreme Court, hearing a petition on the status of Polavaram multi-purpose project, has ordered the Centre to hold a public hearing in the project affected area in Odisha and Chhattisgarh. The Centre replied saying it was ready to appoint an independent agency to conduct the same.

- *The Polavaram project was accorded national status in 2014 in the Andhra Pradesh Bifurcation Act and its design was changed*.
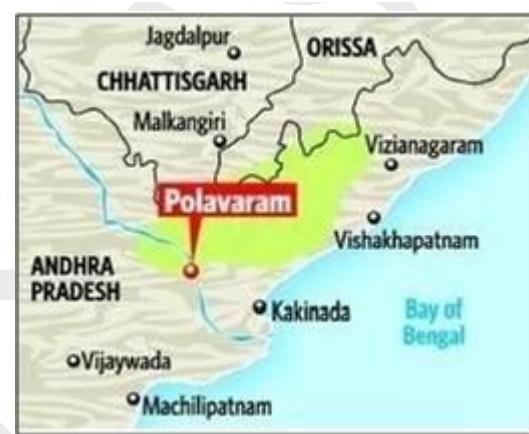
What's the issue?
- The Polavaram project was accorded national status in 2014 in the Andhra Pradesh Bifurcation Act and its design was changed.
- The petitioner had told the court that since the dam design has been changed and new components were added, it'd require a new environmental clearance.

About the Polavaram project:
- Polavaram Project is a multi-purpose irrigation project. The dam across the Godavari River is under construction located in West Godavari District and East Godavari District in Andhra Pradesh state and its reservoir spreads in parts of Chhattisgarh and Orissa States also.
- The project is multipurpose major terminal reservoir project on river Godavari for development of Irrigation, Hydropower and drinking water facilities to East Godavari, Vishakhapatnam, West Godavari and Krishna districts of Andhra Pradesh.
- The project is likely to displace over 1.88 lakh people across 222 villages and so far, 1,730 persons in six villages have been rehabilitated by the government.

Sources: Down to Earth.

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2. MEKEDATU DAM PROJECT

What to Study?
- *Static Part: Key facts and location of Mekedatu dam and about the Cauvery river and its tributaries, about CWC.*
- *Dynamic and Current: Controversy over the project, what's the way out, need for a uniform mechanism to solve river water disputes.*

Context: Tamil Nadu Chief Minister E K Palaniswami recently wrote to the Prime Minister urging him to stop the process of a feasibility study for the Mekedatu dam project in Karnataka. The study has been cleared by the Central Water Commission (CWC), which has also asked for a detailed project report.

About Mekedatu dam project:
- Being set up by the Karnataka government, the project is near Mekedatu, in Ramanagaram district, across the river Cauvery from Tamil Nadu.
- Its primary objective is to supply drinking water to Bengaluru and recharge the groundwater table in the region.

About the conflict:
- Tamil Nadu has moved the Supreme Court. Its main argument is that the project violates the final award of the Cauvery River Water Tribunal, and that the "construction of the two reservoirs would result in impounding of the flows in the intermediate catchment below the Krishnaraja Sagar and Kabini reservoirs, and Billigundulu in the common border of Karnataka and Tamil Nadu".
- Karnataka says, the project will not come in the way of releasing the stipulated quantum of water to Tamil Nadu, nor will it be used for irrigation purposes.

Know about CWC:
- It is a premier Technical Organization of India in the field of Water Resources and is presently functioning *as an attached office of the Ministry of Water Resources, River Development and Ganga Rejuvenation, Government of India*.
- The Commission is entrusted with the general responsibilities of initiating, coordinating and furthering in consultation of the State Governments concerned, schemes for control, conservation and utilization of water resources throughout the country, for purpose of Flood Control, Irrigation, Navigation, Drinking Water Supply and Water Power Development.
- Central Water Commission CWC is headed by a Chairman, with the status of Ex-Officio Secretary to the Government of India.

Sources: Indian express.

Topic: Transport and marketing of agricultural produce and issues and related constraints; e-technology in the aid of farmers.

STATE OF MAHARASHTRA'S AGRIBUSINESS AND RURAL TRANSFORMATION (SMART) PROJECT

What to study?
- *For Prelims: Key features of the project.*
- *For Mains: Significance of the project and challenges ahead.*

Context: Maharashtra Government has launched World Bank assisted *State of Maharashtra's Agribusiness and Rural Transformation (SMART) Project* to transform rural Maharashtra.

Aim: to revamp agricultural value chains, with special focus on marginal farmers across 1,000 villages.

State of Maharashtra's Agribusiness and Rural Transformation (SMART) Project:
- The objective of project is to create and support value chains in post-harvest segments of agriculture, facilitate agribusiness investment, stimulate SMEs within the value chain.
- *Focus:* It will also support resilient agriculture production systems, expand access to new and organised markets for producers and enhance private sector participation in the agribusiness.

Coverage:
- It will cover almost one-fourth of Maharashtra. Its focus is on villages which are reeling under worst agriculture crisis compounded by lack of infrastructure and assured value chains to channelize farm produce.

Significance:
- The project is giant step towards transformation of rural economy and empowerment of farmers and also sustainable agriculture through public-private partnership (PPP) model.
- It seeks to ensure higher production of crops and create robust market mechanism to enable farmers to reap higher remunerations for the yield. It unites agriculture-oriented corporates and farmers by providing them common platform.

Sources: the hindu.

(Q) Critically analyse the potential of agribusiness to address agrarian distress in India.

1. FLOATING SOLAR PLANT

What to study?
- *Static Part: About floating solar plants in India.*
- *Dynamic and Current: Floating solar plants- significance, potential, challenges and solutions.*

Context: A 50MW floating solar plant will be set up in the country's largest reservoir Rihand dam in Sonbhadra district in UP.

Floating solar plants- significance:
- Floating solar plants are considered an alternate option to tackle land availability issues. The concept involves setting up solar panels on floats placed on dams, lakes and similar water bodies.
- Floating solar makes intuitive sense in geographies with high land costs and poor availability. Floating solar is a definite reprieve for states that are a significant market for more renewable energy but with little land to spare, as is the case with Uttar Pradesh.
- The global floating solar market is driven by Asian countries, with China and Japan being home to bulk of the existing operational capacity of 259 MW.

Challenges:
- In India, floating solar is likely to face challenges scaling up to the level of ground-mounted plants.
- *Cost:* Despite being land neutral, the cost of the floating systems including anchoring, installation, maintenance and transmission renders the overall cost of the floating solar systems are much higher than the land based systems at this initial stage of development.
- *Technical issues:* Besides the two major issues of corrosion and instability, other issues like the long term impact of moist environment on modules, cables, safe transmission of power through the floats to the nearest feeder point, the environmental impact on the water body and the marine life etc needs to be addressed and – make the system cost effective.

What ails floating solar?
- Non-availability of floats in India makes it an expensive option.
- Project costs higher by 30%-50%than ground mounted solar.
- Dependent on European or Chinese suppliers.

Facts for Prelims:
- The largest floating solar plant to date is a 2MW one in Vishakhapatnam. Another is a 500-kWh plant built by the Kerala State Electricity Board at the Banasura Sagar Dam.

Sources: Down to Earth.

2. REGULATORY INDICATORS FOR SUSTAINABLE ENERGY (RISE) 2018

What to study?
- *For Prelims: Who releases the RISE report?, Key facts.*
- *For Mains: Findings of the report, India's performance in Renewable energy category, potential and measures needed to achieve the desired growth in the sector.*

Context: World Bank has released its report — *Regulatory Indicators for Sustainable Energy (RISE) 2018*— charting global progress on sustainable energy policies. The report was released on the sidelines of the 24th Conference of the Parties to the UN Framework Convention on Climate Change(COP24).

Highlights of the report:
- Many of the world's largest energy-consuming countries significantly improved their renewable energy regulations since 2010.
- Progress was even more marked in energy efficiency, with the percentage of countries establishing advanced policy frameworks growing more than 10-fold between 2010 and 2017.

- Among countries with large populations living without electricity, 75 per cent had by 2017 put in place the policies and regulations needed to expand energy access. But there were still significant barriers to global progress on sustainable energy.
- While *countries continue to be focused on clean energy policies for electricity*, policies to decarbonize heating and transportation, which account for 80 per cent of global energy use, continued to be overlooked.
- This momentum was particularly marked in renewable energy. Among the countries covered by RISE, *only 37 per cent had a national renewable energy target in 2010*. By 2017, that had grown to 93 per cent.
- By last year, *84 per cent of countries had a legal framework* in place to support renewable energy deployment, while 95 per cent allowed the private sector to own and operate renewable energy projects.
- *Among the four SDG7 target areas* — renewable energy, energy efficiency, electricity access and access to clean cooking — the last one continued to be the most overlooked and underfunded by policymakers.
- There has been little progress on standard-setting for cookstoves or on consumer and producer incentives to stimulate adoption of clean technologies.

Indian scenario:
- India has gained a great success in renewable energy auctions that delivered record-setting low prices for solar power.
- However, to realize its full potential, the country needs to address critical gaps, such as failing utilities, clean cooking, and the slow progress on decarbonizing heating and transport.

Sources: the hindu.

3. SAUBHAGYA SCHEME

What to study?
- *For Prelims: Key features, objectives and targets of the scheme.*
- *For Mains: Significance of the scheme.*

Context: Nine States have achieved complete household electrification under the Saubhagya scheme. They are Madhya Pradesh, Tripura, Bihar, Jammu and Kashmir, Uttarakhand, Mizoram, Sikkim, Telangana and West Bengal. With this, 16 States in the country now have 100 per cent household electrification.

About SAUBHAGYA Scheme:
- *Pradhan Mantri Sahaj Bijli Har Ghar Yojana – 'Saubhagya'* was launched in September, 2017.
- Under Saubhagya *free electricity connections to all households (both APL and poor families) in rural areas and poor families in urban areas* will be provided.
- *Rural Electrification Corporation (REC) has been designated as nodal agency* for the Saubhagya scheme.
- The scheme aims *to achieve universal household electrification in all parts of the country*.
- All DISCOMs including Private Sector DISCOMs, State Power Departments and RE Cooperative Societies shall be eligible for financial assistance under the scheme in line with *Deen Dayal Upadhyaya Gram Jyoti Yojana*(DDUGJY).
- *Eligibility:* The prospective beneficiary households for free electricity connections under the scheme would be identified using SECC 2011 data. However, un-electrified households not covered under SECC data would also be provided electricity connections under the scheme on payment of Rs. 500 which shall be recovered by DISCOMs in 10 instalments through electricity bill.

Scope of the Scheme:
- Providing last mile connectivity and electricity connections to all un-electrified households in rural areas.
- Providing Solar Photovoltaic (SPV) based standalone system for un-electrified households located in remote and inaccessible villages / habitations, where grid extension is not feasible or cost effective.
- Providing last mile connectivity and electricity connections to all remaining economically poor un-electrified households in urban areas. Non-poor urban households are excluded from this scheme.

Sources: the hindu.

(Q) Electrification, in contemporary times, is a basic human necessity. With reference to the Saubhagya scheme, examine the feasibility of a national universal electrification program.

4. FLIGHT AND MARITIME CONNECTIVITY RULES, 2018

What to study?
- *For Prelims: Overview of the guidelines.*
- *For Mains: Significance and the need for guidelines and the in- flight connectivity.*

Context: The government recently notified *Flight and Maritime Connectivity Rules, 2018* thereby allowing phone calls and internet on flights and ship voyage within India's territory.

The guidelines:
- *Who can provide?* The in-flight and maritime connectivity (IFMC) can be provided by a valid telecom licence holder in India through domestic and foreign satellites having the permission of the Department of Space.
- *In case of using satellite system* for providing IFMC, the telegraph message shall be passed through the satellite gateway earth station located within India and such satellite gateway earth stations shall be interconnected with the NLD (national long distance) or access service or ISP licensee's network for further delivery of service.
- *The IFMC services will be activated once the aircraft attains a minimum height of 3,000 metres in Indian airspace* to avoid interference with terrestrial mobile networks.
- *The IFMC licences* will be granted against an annual fee of Re 1 for a period of 10 years and the permit holder will have to pay licence fees and spectrum charges based on revenue earned from providing services.

Sources: the hindu.

5. BULLET TRAIN PROJECT

What to study?
- *For Prelims: Key features of the Bullet train.*
- *For Mains: Do we need a bullet train?- A critical analysis.*
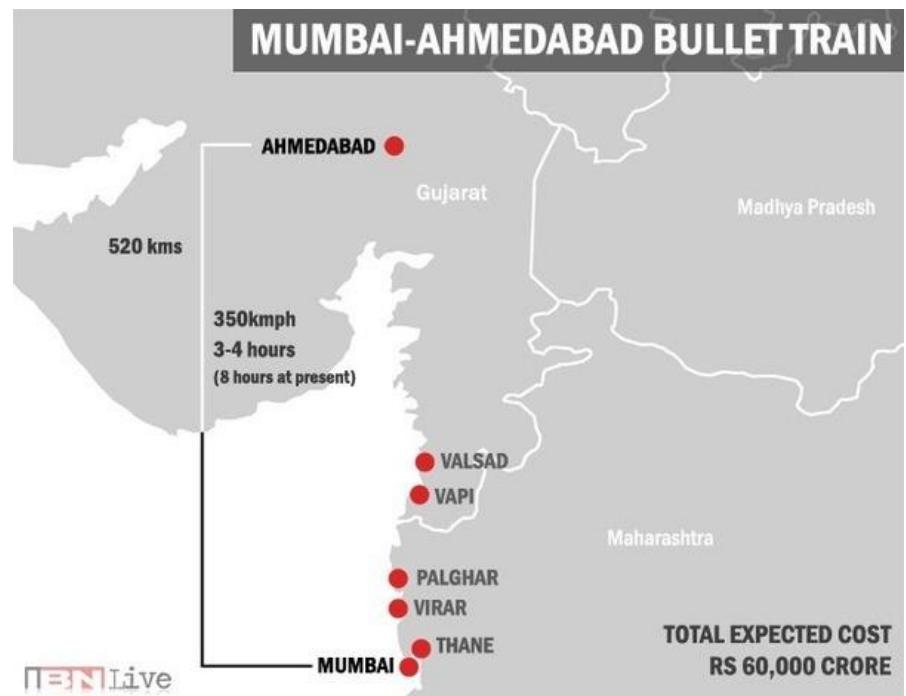
Context: The latest information obtained by an activist under the Right to Information (RTI) has revealed that Mumbai-Ahmedabad bullet train project may turn out to be a loss-making proposition and burden Maharashtra's already dwindling finances.

Concerns over the project:
- Several objections have been raised by various departments over the economic viability of the Shinkansen train, which could result in losses in the form of wasted Floor Space Index (FSI) and delayed loan repayment in the absence of proper frameworks.
- Some part of the FSI at the station proposed at Bandra Kurla Complex (BKC) in Mumbai could "remain unutilised because of the height restrictions, leading to revenue losses".

Criticisms:

- The government is being criticised for clearing a project which has no practical benefit for the State and would add financial stress.
- Moreover, the ministerial committee headed by Chief Minister Devendra Fadnavis has not met to discuss the project since being incorporated in February 2017. The committee was tasked with carrying out an in-depth study of the Japan International Cooperation Agency report and the project's feasibility.

Need of the hour:

- Both Planning and Finance departments have called for a thorough study of bullet train economics in other countries before a decision is taken on its feasibility in India.
- Additionally, the departments said the Centre must clarify the formula for sharing the loan burden if the project remains loss-making for a long period of time.
- Since the State is coping with serious loss in income and further burden of loans, the impact of this project on government finances needs to be considered.

About the project:

- The train, with a capacity of 750 passengers, will travel at speeds between 320 km/hr and 350km/hr and is expected to reduce travel time between Ahmedabad and Mumbai to three-and-a-half hours or less from the present eight. The project is expected to be completed in seven years.

How India benefits from bullet train?

- *High-speed connectivity* – This will facilitate economic growth. Smaller cities along the way can also be connected with high-speed transit facility to these economic Centres through the bullet train network.
- *The bullet train project is expected to create 4,000 direct job opportunities*, along with 20,000 indirect jobs. 20,000 construction workers will also be employed during the set up period of Ahmedabad-Mumbai bullet train.
- *Urban expansion* – New bullet train stations set to come up along the route will attract urban growth. This will again shift the pressure of urbanisation from the existing urban Centres.
- *Open new avenues* – When completed, the Ahmedabad-Mumbai bullet train project will present as a favorable destination for high-speed train technologies, attracting other parties working in the field.

The geostrategic importance of Bullet trains is:

- *The bullet train is symbol of strong trust between the India and Japan* as it involves the technology transfer at the core of this deal.
- *The bullet train will create substantial positive impact on Indian economy* thus building the economic influence of country in Asia and thus all over the world. In longer duration of time, this technology will reduce the dependence of India on Middle East countries for oil and other fuel products.
- *Being the clean technology India will set an example for cleaner methods for mass transportation, especially for other developing countries*. For Japan too, this deal has geostrategic meaning. Earlier Japan has lost with China in export of Bullet trains in Thailand and Indonesia. This deal is diplomatic win for Japan.

Sources: the hindu.

(Q) Investment in infrastructure development has always acted as a catalyst in the economic growth of India. Does huge investments in bullet trains yield dividends to India? Examine.

6. INDIA'S LONGEST RAILROAD BRIDGE

Context: The ***Bogibeel bridge is India's longest railroad bridge***. It was inaugurated recently.
Key facts:
- The bridge is 4.94 km long in length. The double decker rail and road bridge, on the Bramhaputra river, will cut down the train-travel time between Tinsukia in Assam to Naharlagun town of Arunachal Pradesh by more than 10 hours.
- Built by the Indian Railways, the double-decker bridge is strong enough to withstand movement of heavy military tanks.
- The Bogibeel bridge will connect the south bank of the Brahmaputra river in Assam's Dibrugarh district with Silapathar in Dhemaji district, bordering Arunachal Pradesh. The railways have reduced the distance between Dhemaji and Dibrugarh from 500 Kms to 100 kms with the completion of the project.

Significance of the Bogibeel Bridge:
- The bridge spanning the **River Brahmaputra between Dibrugarh and Dhemaji districts of Assam is of immense economic and strategic significance**.
- This bridge is a marvel of engineering and technology.
- This bridge reduces distances between Assam and Arunachal Pradesh.
- This bridge would greatly **enhance "ease of living" in the region**.
- **The bridge is 4.94 km long and is India's longest railroad bridge**.

Since Dibrugarh is an important centre of healthcare, education and commerce in the region, and the people living north of the Brahmaputra, can now access this city, more conveniently.

Background:
- **Construction of the Bogibeel Bridge was agreed by the government as part of a 1985 agreement to end years of deadly agitation by Assamese nationalist groups.**
- The Bogibeel project was a part of the 1985 Assam Accord and was sanctioned in 1997-98.
- The Bogibeel Bridge, which will have a serviceable period of around 120 years, is India's only fully welded bridge for which European welding standards were adhered to for the first time in the country.

Source: PIB

Topic: 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.

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1. DIGITAL SKY PLATFORM

- India to start registration of drones, pilots, and operators registration portal for online permission.
- In August 2018, India had announced the release of its Civil Aviation Regulations (CAR) to enable safe flying of **RPAS (Remotely Piloted Aerial Systems)** in India.
- **Remotely Piloted Aerial Systems (RPAS), also known as drones, are a technology platform with wide-ranging applications.**

Digital Sky Platform:
- New features will be developed to ease the process of flying for users.
- To provide oversight to security agencies.
- It is envisioned that in the future **Digital Sky Service Providers (DSPs)** will be extending the functionality of the platform through **Application Program Interfaces (APIs)**.

Permissions to fly in different zones:
To get permissions, RPAS operators or remote pilots will have to file a flight plan.
- **Green zones** – Flying in the green zones, requires only intimation of the time and location via the portal or the app.
- **Yellow zones** – Permission will be required for flying in yellow zones.
- **Red zones** – Flights will not be allowed to fly.

If an RPAS does not have permission to fly, it will not be allowed to take-off under the policy of **No-Permission-No-Takeoff (NPNT).**

2. NATIONAL MATHEMATICS DAY 2018

What to study?
- ***For Prelims and Mains: National Mathematics Day- facts and significance.***

Context: *National Mathematics Day is celebrated every year on December 22.*
- ***It is observed to honor the birth anniversary of the famous mathematician Srinivasa Ramanujan*** who greatly contributed towards mathematical analysis, number theory, infinite series and continued fractions.

National Mathematics Day:
- In 2011, on the 125th anniversary of his birth, the Indian Government declared that 22 December will be celebrated every year as National Mathematics Day.

Highlights of Srinivasa Ramanujan's life:
- In 1911, Ramanujan published the first of his papers in the Journal of the Indian Mathematical Society.
- Ramanujan traveled to England in 1914, where Hardy tutored him and collaborated with him in some research.
- He worked out the Riemann series, the elliptic integrals, hypergeometric series, the functional equations of the zeta function, and his own theory of divergent series.
- The number 1729 is known as the Hardy-Ramanujan number after a famous visit by Hardy to see Ramanujan at a hospital.
- Hardy observed Ramanujan's work primarily involved fields less known even amongst other pure mathematicians.
- Ramanujan's home state of Tamil Nadu celebrates 22 December as 'State IT Day', memorialising both the man and his achievements, as a native of Tamil Nadu.

Sources: the hindu.

3. AMENDMENTS TO THE INFORMATION TECHNOLOGY (IT) ACT

What to study?
- ***For Prelims: Key features of the IT Act, amendments proposed.***
- ***For Mains: Significance and the need for amendments, concerns associated.***

Context: In its bid to crack down on spread of fake news and rumours circulated on online platforms like WhatsApp, Facebook and other online platforms, the ***central government has proposed stringent changes under the draft of Section 79 of the Information Technology (IT) that govern online content***.

Implications:
- The proposed amendments in the draft of ***the Information Technology [Intermediaries Guidelines (Amendment) Rules] 2018, Rule 3(9)*** is bound to force social media platforms like Whatsapp, Facebook and Twitter to remain vigil and keep users on their toes before posting or sharing anything that is deemed as "unlawful information or content".
- The changes proposed by the central government is ***aimed at curbing fake news or rumours being spread on social media and check mob violence ahead***.

What the new rules propose?
- The changes will require ***online platforms to break end-to-end encryption in order to ascertain the origin of messages***. The social media platforms to "deploy technology based automated tools or appropriate mechanisms, with appropriate controls, for proactively identifying or removing or disabling access to unlawful information or content".
- As per the amendment, ***the social media platforms will need to comply with the central government "within 72 hours" of a query***.
- There should be ***a 'Nodal person of Contact*** for 24X7 coordination with law enforcement agencies and officers to ensure compliance. The social media platforms will be keeping a vigil on "unlawful activity" for a period of "180 days".

What necessitated this?
- With concerns over "rising incidents of violence and lynching in the country due to misuse of social media platforms", there is now need for online platforms to shoulder the "responsibility, accountability

and larger commitment to ensure that its platform is not misused on a large scale to spread incorrect facts projected as news and designed to instigate people to commit crime".

Criticisms:
- The proposed changes have once again given rise to a debate on whether the government is intruding into the privacy of individuals, evoking sharp response from opposition parties.
- Similar apprehensions were raised with the Section 66A of the IT Act that enabled authorities to arrest users for posting content which was termed as offensive.
- However, the Supreme Court on March 24, 2015, struck down the law.

Background:
- India has the second highest number of internet users in the world after China, an estimated 462.12 million. Among them, 258.27 million were likely to be social network users in the country in 2019.

Sources: the hindu.

(Q) Mandating messaging apps to screen messages to curb the problem of fake news is wrong at multiple levels. Discuss

4. ACHIEVEMENTS OF INDIAN SCIENTISTS IN 2018

What to study?
- *For Prelims and Mains: Overview and significance of the Achievements.*

Context: The year 2018 is ending with spectacular success of Indian scientists and technologists in the space and defence sectors, with a series of high impact missions. Several scientific developments, new techniques and promising technologies—in fields ranging from nanotechnology to space weather—made headlines during the year.

Highlights:
- *A gel that can protect farmers from toxic pesticides:* It is a protective gel—*poly-Oxime*—that can be applied on skin and can break down toxic chemicals into safe substances, preventing farmers from going deep into the skin and organs like the brain and the lungs.
- *World's thinnest material with novel technique:* It is a material that is 100,000 times thinner than a sheet of paper. Researchers synthesized a two-dimensional material of just one-nanometre in thickness using Magnesium diboride—a compound of boron. This is said to be the world's thinnest material. It can find a range of applications—from next-generation batteries to ultraviolet absorbing films.
- *Gene editing applied to banana genome:* Using the gene editing technique—CRISPR/Cas9—researchers at the National Agri-Food Biotechnology Institute, Mohali, edited the banana genome. This is the first such work in any fruit crop in India. Banana is the fourth most important food crop after wheat, rice and corn in terms of gross value of production. Gene editing could be deployed to improve nutritional quality, agronomical important traits as well as pathogen resistance in banana.
- *Faster diagnostic tests for tuberculosis:* Scientists have developed highly sensitive and rapid tests for detection of tuberculosis infection in lungs and surrounding membranes. Unlike current tests that use antibodies for detection of bacterial proteins in sputum samples, new tests use Aptamer Linked Immobilized Sorbent Assay (ALISA) and Electrochemical Sensor (ECS) for detection of a bacterial protein in the sputum.
- *New tool developed for autism screening:* In many cases, autism is misdiagnosed as mental retardation and attention deficit hyperactivity disorder (ADHD). Early identification and interventions may help children with autistic disorders. To help this process, scientists have developed an Indian tool for screening children for autism.
- *Hope for Alzheimer's and Huntington's patients:* Scientists at the Indian Institute of Science (IISc), Bengaluru, have figured out the way memory deficit develops in early stages, resulting in Alzheimer's disease. They have found that early breaking down of a protein, fibrillar actin or F-actin, in the brain leads to disruption in communication among nerve cells and consequently memory deficits.
- *Green technique can address plaster of Paris pollution:* A team of scientists at Pune-based National Chemical Laboratory (CSIR-NCL) has developed a technique that helps recycle plaster of Paris waste from hospitals in an eco-friendly and economical way. The new technique disinfects waste and converts

it into useful products like ammonium sulphate and calcium bicarbonate. The technique can also be used to disintegrate PoP waste from idols immersed in water bodies.

- **Stone Age tools, genetic studies throw new light on early civilisation in India:** The Stone Age tools discovered in a village near Chennai suggest that a Middle Palaeolithic culture was present in India around 385,000 years ago—roughly the same time that it is known to have developed in Africa and in Europe. The discovery pushes back the period when populations with a Middle Palaeolithic culture may have inhabited India, and challenges popular theory that the Middle Palaeolithic was brought to India by modern humans dispersing from Africa only around 125,000 years ago or later.
- **Sikkim gets real-time landslide warning system:** A real-time landslide warning system has been set up in the Sikkim-Darjeeling belt of north-eastern Himalayas which is highly vulnerable to landslides. The warning system consists of over 200 sensors that can measure geophysical and hydrological parameters like rainfall, pore pressure and seismic activities. The system is capable of warning about 24 hours in advance. It has been deployed by researchers of Kerala-based Amrita University and Sikkim State Disaster Management Authority.
- **Computing capacity for weather forecasting gets a boost:** During the year, the Indian Institute of Tropical Meteorology (IITM) upgraded its computing capacity for weather forecasting and climate monitoring, taking its total high performance computing (HPC) power to as high as 6.8 Petaflop. With this, India rose to the fourth position, next only to United Kingdom, Japan and USA in terms of dedicated capacity for HPC resources for weather and climate proposes.
- **Scientists use silk polymer to develop artificial vertebral disc:** Scientists at Indian Institute of Technology, Guwahati, developed a silk-based bioartificial disc that may find use in disc replacement therapy in future. The group has developed a fabrication procedure for a silk-based bioartificial disc adopting a "directional freezing technique". The disc mimics internal intricacy of human disc and its mechanical properties too are similar to those of the native ones. The use of a silk biopolymer to fabricate a biocompatible disc can reduce the cost of artificial discs in future.
- **Transgenic rice with reduced arsenic accumulation:** To address the problem of arsenic accumulation in rice grains, researchers at Lucknow- based CSIR-National Botanical Research Institute developed transgenic rice by inserting a novel fungal gene, which results in reduced arsenic accumulation in rice grain. They cloned Arsenic methyltransferase (WaarsM) gene from a soil fungus and inserted it into rice genome.
- **Flowering mustard**: TERI School of Advanced Studies has developed an early flowering transgenic variety of mustard.

Sources: Down to Earth.

(Q) Highlight the Achievements of Indian Scientists in the year 2018 and their significance for the society.

5. CHILDREN'S SCIENCE CONGRESS

What to study?
- **For Prelims: About NCSC, NCSTC.**
- **For Mains: Significance of the platform.**

Context: 26th National Children's Science Congress (NCSC) is being held in Odisha.
- **Theme:** "Science, Technology and Innovation for a Clean, Green and Healthy Nation."

National Children's Science Congress (NCSC):
- National Children's Science Congress (NCSC) is a nationwide Science Communication programme started in the year 1993. It is a programme of National Council for Science and Technology Communication (NCSTC), Department of Science and Technology, New Delhi.
- **It is a forum children of the age-group of 10-17 years**, both from formal school system as well as from out of school, to exhibit their creativity and innovativeness and more particularly their ability to solve a societal problem experienced locally using by method of science.

About National Council for Science and Technology Communication (NCSTC):
- It is mandated to communicate science & technology to masses. The programmes of the Council aim at building capacity for informed decision making in the community.

- NCSTC encourages research in areas of S & T communication, training of communicators, development of books, manuals, posters, exhibitions, films, radio programmes, and television programmes on different facets of science & technology and recognizing outstanding efforts through awards and incentives all over the country.
- It is a registered body guided by a Board of Governors with headquarters at Delhi. It has about eighty members spread in all states and union territories. Volunteers in districts lend it great strength and capability for implementing projects that reach the common man and woman.

Sources: the hindu.

6. 106TH INDIAN SCIENCE CONGRESS (ISC)-2019

- World's largest science meet **'Indian Science Congress (ISC)-2019'** will be held from 3rd to 7th January 2019, in **Jalandhar, Punjab.**
- **Theme of ISC** – **Future India: Science and Technology**
- "Government's aim is to deliver the benefits of Science & Technology to the last man in the society and scientists being a pivot should put their heart and soul into finding new solutions to the problems facing the nation and improve the quality of life of common man".
- It is the only second time for a University of Punjab to organize their herculean science spectacle.

Background:

The Indian Science Congress Association (ISCA) owes its origin to the foresight and initiative of two British Chemists, namely, **Professor J.L. Simonsen and Professor P.S. MacMohan.**

- To advance and promote the cause of science in India.
- To hold an annual congress at a suitable place in India.
- To publish such proceedings, journals, transactions and other publications as may be considered desirable.
- To secure and manage funds and endowments for the promotion of Science.

The first meeting of the Congress was held from January 15-17, 1914 at the premises of the Asiatic Society, Calcutta.

Topic: *Indigenization and development of new technology.*

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1. INDIA'S HEAVIEST SATELLITE GSAT-11

What to study?
- *For Prelims: All about GSAT- 11,*
- *For Mains: India's space odyssey, Significance and applications of GSAT-11, technological achievements.*

Context: India's heaviest and most advanced satellite GSAT-11 was recently launched from the Guiana Space Centre at Kourou in French Guiana.

GSAT- 11- key facts:
- GSAT-11 is *ISRO's heaviest satellite* ever built and weighs about 5854 kilograms.
- It was launched onboard *Ariane-5 launch vehicle from French Guiana*.
- ISRO has revealed that the satellite will be initially placed in the Geosynchronous Transfer Orbit and will be later raised to Geostationary Orbit. It will be using the Liquid Apogee Motor which will be onboard the satellite.
- GSAT-11 is part of ISRO's new family of *high-throughput communication satellite (HTS) fleet* that will drive the country's Internet broadband from space to untouched areas.
- According to ISRO, GSAT-11's multiple spot beam coverage — 32 in Ku band and eight in Ka bands — will deliver an improved service of 16 gbps over the Indian region and nearby islands.
- The satellite will also have VSAT Terminals which basically will ensure that it can handle large capacity platform to support a huge subscriber base.

GSAT 11: How does it work?
- GSAT-11 will use *a 'multi-spot' approach* to maximize its coverage area in the Indian mainland and islands — a far superior communication technology than existing INSATs and GSATs.

- In a first for a satellite built by ISRO, GSAT-11 will carry a next-generation I-6K bus (communication satellite hub) to provide services in two widely-used wavelengths for telecommunications: the Ku- and Ka-bands. This makes GSAT-11 three to six times more powerful than any of ISRO's (and India's) satellite roster today.
- It will provide up to 14 Gigabit/s in both voice and video broadband services anywhere in the Indian mainland or islands over its 15-year lifespan, according to ISRO.
- The satellite has 32 Ku-band transponders and 8 Ka-band hubs on board. The Ku- and Ka-bands are different frequencies of microwaves in the electromagnetic spectrum.

GSAT 11: Why is it important?
- GSAT-11 will bring far greater speeds (16 Gbps of it, no less) and capacity to meet growing demand for mobile and internet in households, businesses, and public organisations.
- Large parts of rural areas still remain untouched by the scope of commercial telecom today — something GSAT-11 is designed to change. Under Digital India's BharatNet project GSAT-11 will boost access to voice and video streaming in most, if not all, of rural India.
- With India moving fast towards implementing 'Smart Villages and Cities', they can be efficiently linked through a large communication satellite.

Sources: the hindu.

(Q) Highlight the achievements of ISRO as a pioneer in space technology?

2. GSAT-7A

What to study?
- ***For Prelims and Mains: Features, objectives, scientific goals and significance of the mission.***

Context: ISRO has launched military communication satellite GSAT-7A. GSAT-7A was succesfully injected into its orbit by GSLV-F11 that was launched from Sriharikota, Andhra Pradesh.

GSLV-F11:
- The GSLV-F11 is ISRO's **fourth generation launch vehicle** with **three stages**. The launch vehicle, which is in its 13th flight, will inject GSAT-7A into a Geosynchronous Transfer Orbit (GTO).

About GSAT-7A:
- GSAT-7A has been placed ***in the geostationary orbit*** and this communication satellite is expected to help the IAF to interlink different ground radar stations, airbases and AWACS (Airborne Warning And Control System) aircraft. The idea is to improve the IAF's network-centric warfare capabilities.
- It is an **advanced communication satellite with a Gregorian Antenna** and many other new technologies.
- It is the **heaviest satellite** being launched by GSLV with an indigenously developed cryogenic stage.
- The GSAT-7A is expected to have the ***Ku-band transponders*** and two deployable solar arrays onboard.
- It is the **39th Indian communication satellite** of ISRO to provide services to the users in Ku-band over the Indian region.
- The GSAT-7A is also expected to be a big push for drone operations as it will help the Navy reduce the reliance on on-ground control stations and take satellite-control of military unmanned aerial vehicles (UAV) which should help boost the range and endurance of the UAVs.
- The satellite, being dubbed as **'angry bird'** by some, is likely to enhance the range of communication and also aid in aircraft to aircraft communication.
- In addition to GSAT-7A, the IAF would also be getting the GSAT-7C in a few years, to boost the network-centric operations.

Background- GSAT 7 series:
- The GSAT 7 series was launched in 2013 as a dedicated communications satellite for the Indian Navy, which made the Navy completely independent of relying on foreign satellites for its blue water capabilities, thanks to GSAT 7 having a 2,000 nautical mile footprint.
- This helps in providing real-time inputs to Indian warships, submarines and maritime aircraft.

GSLV:
- The GSLV is ISRO's fourth generation launch vehicle that has three stages. The four liquid strap-ons and a solid rocket motor at the core constitute the first stage. The second stage is equipped with a high thrust engine that uses liquid fuel.

- The cryogenic upper stage forms the third and final stage of the vehicle. The GSLV-F11 was the seventh flight carrying indigenously developed cryogenic upper stage.

Sources: the hindu.

3. EXSEEDSAT 1, INDIA'S 1ST PRIVATE SATELLITE

What to study?
- ***For Prelims: About ExeedSAT 1, significance of Falcon 9 recent launch.***
- ***For Mains: Applications and significance of ExseedSAT 1, Private participation in India's space program- challenges and potential.***

Context: With the launch of ExseedSAT 1, ***Exseed Space has become the first Indian privately-funded startup to successfully send a satellite into space***.
- ExseedSAT 1 was launched into space by Space X along with 63 other satellites from 17 countries.

About ExseedSAT 1 and its applications:
- The mini communication satellite weighing just a kg with double the size of a Rubik's cube (10 cm x 10 cm x 10 cm) is made up of aluminium alloy.
- The satellite looks to serve the amateur radio community.
- The satellite with a lifespan of five years will allow people to receive signals on 145.9 Mhz frequency with the help of a TV tuner.
- The satellite would provide a big boost to private radio operators and help in coordinating messages among them and help the country in time of disaster.

Significance of recent Falcon 9 launch:
- With this Falcon 9 launch, SpaceX broke ***two records***. ***This was the US private space agency's 19th launch of the year topping its previous annual record of 18***, which was set last year. Second, ***the Falcon 9 rocket managed to deliver 64 satellites into orbit breaking the US record*** (India holds the world record for launching 104 satellites in one go on February 15, 2017).

Sources: the hindu.

4. NAVIC POWERED GADGETS TO TAMILNADU FISHERMEN

What to study?
- ***For Prelims: Navic and its key features.***
- ***For Mains: Significance, applications and potential of Navic.***

Context: The Tamil Nadu government has distributed 200 ***Navic- powered satellite- enabled communication devices*** developed by ISRO to 80 fishing boat groups.

Significance:
- These gadgets will help the Tamilnadu fishermen know about ***cyclones and provide weather updates*** on a real- time basis.
- These gadgets are basically receivers which will produce a beep when alerts are received by the device. ***They are Bluetooth enabled and the alerts received can be read on the Navic app***.

What is NAVIC?
- NAVIC is an independent regional navigation satellite system designed to provide position information in the Indian region and 1500 km around the Indian mainland.

Services provided:
- IRNSS would provide two types of services, namely Standard Positioning Services available to all users and Restricted Services provided to authorised users.

Its applications include:
- Terrestrial, Aerial and Marine Navigation.
- Disaster Management.
- Vehicle tracking and fleet management.
- Integration with mobile phones.
- Precise Timing.
- Mapping and Geodetic data capture.

- Terrestrial navigation aid for hikers and travelers.
- Visual and voice navigation for drivers.

How many satellites does NAVIC consist of?
- It is a regional system and so ***its constellation will consist of seven satellites***. Three of these will be geostationary over the Indian Ocean, i.e., they will appear to be stationary in the sky over the region, and four will be geosynchronous – appearing at the same point in the sky at the same time every day.
- This configuration ensures each satellite is being tracked by at least one of fourteen ground stations at any given point of time, with a high chance of most of them being visible from any point in India.

Why it is necessary to have indigenous global navigation system?
- Having a global navigation system bolsters the ability of a nation to serve as a net security provider, especially through the guarantee of such assurance policies.
- It can also play a significant role in relief efforts post disasters such as the tsunami in the Indian Ocean region in 2004 and the Pakistan-India earthquake in 2005.

Sources: the hindu.

(Q) Write a note on the objectives and significance of NAVIC (Navigation with Indian Constellation).

ADVANCED TOWED ARTILLERY GUN SYSTEM (ATAGS)

What to study?
- ***For Prelims and Mains: ATAGS- key features and significance.***

Context: The Army has begun finalising the Preliminary Specifications Qualitative Requirements (PSQR) of the indigenously-designed heavy artillery gun, the ***Advanced Towed Artillery Gun System (ATAGS)***.

Firing on all cylinders

- Advanced Towed Artillery Gun System (ATAGS) is a 155mm, 52 calibre gun, developed by Defence Research and Development Organisation (DRDO) in a consortium model
- One prototype has been built in partnership with Tata Power (Strategic Engineering Division) and another with Bharat Forge
- Two guns from each company are undergoing trials; two more guns to join trials later
- There is a sanction for production of 10 guns as part of the development process
- The gun currently weighs about 18 tonnes while the ideal weight is 14-15 tonnes

- The defence Ministry has approved purchase of 150 guns at an approximate cost of ₹3,365 crore
- The Army is in the process of finalising the Preliminary Specifications Qualitative Requirements (PSQR) which details the essential parameters, which should be ready by July 2019
- The gun is presently undergoing development trials. User assisted trials will begin from May-June 2019

KEY FEATURES
Electric drive
High mobility
Quick deployability
Auxiliary power mode
Advanced communication system
Automated command
Control system
Six round magazine instead of a standard three round magazine

Sources: the hindu.

5. AGNI-V MISSILE

What to study?

- *For Prelims and Mains: Technical key features and significance of the missile.*

Context: India successfully test-fired nuclear-capable ballistic missile Agni-5, which has a strike range of 5,000 km, from Dr Abdul Kalam island off the Odisha coast recently.

Key features of the missile:

- Agni- 5 is *the intercontinental surface-to-surface nuclear capable ballistic missile*. It is the latest in India's "Agni" family of medium to intercontinental range missiles.
- *Agni-5 has a range of over 5,000 km and can carry about a 1500-kg warhead*. It can target almost all of Asia including Pakistan and China and Europe.
- The 17-metre long Agni-5 Missile weighs about 50 tonnes and is a very agile and modern weapon system.
- The surface-to-surface missile is *a fire-and-forget system* that cannot be easily detected as it follows a ballistic trajectory. India describes the Agni – 5 missile system as a 'weapon of peace'.
- India has already joined an elite club of nations that possess the ICBM launch capability when the maiden test-firing of Agni-V was successfully conducted in April, 2012. Only the five permanent members of the United Nations Security Council – China, France, Russia, the United States and Britain, along with Israel, have so far possessed such long-range missiles.

Sources: the hindu.

Topic: Awareness in space.

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1. NASA'S OSIRIS-REX

What to study?

- *Static Part: About NASA's Osiris- Rex, asteroid Bennu.*
- *Dynamic and Current: Significance and objectives of the project, Why Bennu was chosen.*

Context: NASA's OSIRIS-REx spacecraft has discovered traces of hydrogen and oxygen molecules — part of the recipe for water and thus the potential for life — embedded in the asteroid Bennu's rocky surface, Bennu asteroid – a rock that may predate the solar system – where its primary mission is to hover just above it, grab a sample of rock and dust and bring it back to Earth.

Background:

- The launch of the NASA OSIRIS-REx mission took place on September 8, 2016. Since then, the spacecraft has been two years travelling through space to reach its target, primitive asteroid Bennu, in October, 2018.

About the mission:

- *OSIRIS-Rex stands for Origins, Spectral Interpretation, Resource Identification, Security-Regolith Explorer*.
- *OSIRIS-REx is the third mission in NASA's New Frontiers program*, which previously sent the New Horizons spacecraft zooming by Pluto and the Juno spacecraft into orbit around Jupiter.

Scientific Mission Goals:

- OSIRIS-REx will be conducting a range of scientific experiments in order to better understand the asteroid.
- The aim of the mission is to collect a sample of regolith- the loose, soil-like material which covers the surface of the asteroid.
- In July 2020, the probe will move to within a few metres of Bennu, extending its robotic arm to touch the asteroid's surface. The arm will make contact with the surface for just 5 seconds, during which a blast of nitrogen gas will be used to stir up the regolith, allowing it to be sucked into the sample collector.
- OSIRIS-REx has enough nitrogen on board for 3 sample collection attempts, and NASA are hoping to collect between 60 and 2000g of regolith material to bring back to Earth.

Why was Bennu chosen?

- **Proximity to Earth:** In order for OSIRIS-REx to reach its destination in a reasonable timeframe, NASA needed to find an asteroid which had a similar orbit to Earth. Around 7000 asteroids are 'Near-Earth Objects' (NEOs). Out of these, just under 200 have orbits similar to Earth, with Bennu being one of these.
- **Size:** Small asteroids, those less than 200m in diameter, typically spin much faster than larger asteroids, meaning the regolith material can be ejected into space. Bennu is around 500m in diameter, so rotates slowly enough to ensure that the regolith stays on its surface.
- **Composition:** Bennu is a primitive asteroid, meaning it hasn't significantly changed since the beginning of the Solar System (over 4 billion years ago). It is also very carbon-rich, meaning it may contain organic molecules, which could have been precursors to life on Earth.
- Additionally, Bennu is *a Potentially Hazardous Asteroid (PHA)*. Every 6 years, Bennu's orbit brings it within 200,000 miles of the Earth, which means it has a high probability of impacting Earth in the late 22nd Century.

Sources: toi.

(Q) Discuss the significance of NASA's OSIRIS-REx mission.

2. NASA'S KEPLER SPACE TELESCOPE

What to study?
- *For Prelims: About Kepler telescope, TESS.*
- *For Mains: What are exoplanets, significance of their findings.*

Context: Scientists have discovered a cache over 100 new exoplanets using data from NASA's Kepler Space telescope as well as ground-based observatories. The diverse planets are expected to play a large role in developing the research field of exoplanets and life in the Universe.

Background:
- The Kepler Space Telescope has been officially retired by NASA. Its successor space telescope, called TESS, has already started collecting data.

About Kepler Mission:
- Launched in 2009, the Kepler mission is specifically designed to survey our region of the Milky Way galaxy to discover hundreds of Earth-sized and smaller planets in or near the habitable zone and determine the fraction of the hundreds of billions of stars in our galaxy that might have such planets.

About TESS mission:
- The Transiting Exoplanet Survey Satellite (TESS) is a NASA mission that will look for planets orbiting the brightest stars in Earth's sky. It was led by the Massachusetts Institute of Technology with seed funding from Google.
- *Mission:* The mission will monitor at least 200,000 stars for signs of exoplanets, ranging from Earth-sized rocky worlds to huge gas giant planets. TESS, however, will focus on stars that are 30 to 100 times brighter than those Kepler examined. This will help astronomers better understand the structure of solar systems outside of our Earth, and provide insights into how our own solar system formed.
- *Orbit:* TESS will occupy a never-before-used orbit high above Earth. The elliptical orbit, called P/2, is exactly half of the moon's orbital period; this means that TESS will orbit Earth every 13.7 days.
- *How it works?* It will use transit method to detect exoplanets. It watches distant stars for small dips in brightness, which can indicate that planet has passed in front of them. Repeated dips will indicate planet passing in front of its star. This data has to be validated by repeated observations and verified by scientists.

Sources: the hindu.

3. NASA'S VOYAGER 2 SPACECRAFT

What to study?
- *For Prelims and Mains: Key features, objectives and accomplishments of Voyager 1 and 2.*

Context: NASA's Voyager 2 has entered interstellar space, leaving behind the solar system.

Accomplishments so far:
- Voyager 2 is *the only probe ever to study Neptune and Uranus during planetary flybys*.
- It is *the second man-made object to leave our planet*. It is now 11 billion miles from Earth, following behind it's sister spacecraft, Voyager 1, which is 6 years ahead of it. The probe is estimated to be travelling at 34,000 mph.
- *Voyager 2 is the only spacecraft to have visited all four gas giant planets — Jupiter, Saturn, Uranus and Neptune* — and discovered 16 moons, as well as phenomena like Neptune's mysteriously transient Great Dark Spot, the cracks in Europa's ice shell, and ring features at every planet.

What is Interstellar space?
- Scientists use the heliopause to mark where interstellar space begins, although depending on how you define our solar system it can stretch all the way to the Oort Cloud, which begins 1,000 times farther away from the sun than Earth's orbit.

The Heliosphere:
- The heliosphere is a bubble around the sun created by the outward flow of the solar wind from the sun and the opposing inward flow of the interstellar wind.
- That heliosphere is the region influenced by the dynamic properties of the sun that are carried in the solar wind–such as magnetic fields, energetic particles and solar wind plasma.
- The heliopause marks the end of the heliosphere and the beginning of interstellar space.

About Voyager mission:
- The Voyager mission was launched in the 1970's, and the probes sent by NASA were only meant to explore the outer planets – but they just kept on going.
- Voyager 1 departed Earth on 5 September 1977, a few days after Voyager 2 and left our solar system in 2013.
- The mission objective of the Voyager Interstellar Mission (VIM) is to extend the NASA exploration of the solar system beyond the neighborhood of the outer planets to the outer limits of the Sun's sphere of influence, and possibly beyond.
- The Voyager spacecraft are the third and fourth human spacecraft to fly beyond all the planets in our solar system. Pioneers 10 and 11 preceded Voyager in outstripping the gravitational attraction of the Sun but on February 17, 1998, Voyager 1 passed Pioneer 10 to become the most distant human-made object in space.

Sources: the hindu.

4. NASA'S ICESAT-2

What to study?
- *For Prelims and Mains: Features, objectives and significance of ICESat- 2, melting of ice- reasons and concerns.*

Context: NASA's ICESat-2 — launched less than three months ago — has mapped melting ice sheets in Antarctica and the resulting sea level rise across the globe, which could help improve climate forecasts.
- The satellite is measuring the height of sea ice to within an inch, tracing the terrain of previously unmapped Antarctic valleys, surveying remote ice sheets, and peering through forest canopies and shallow coastal waters.
- With each pass of the ICESat-2 satellite, the mission is adding to datasets tracking Earth's rapidly changing ice. Researchers are ready to use the information to study sea level rise resulting from melting ice sheets and glaciers, and to improve sea ice and climate forecasts.

Background:
- As the name suggests, ICESat-2 is a follow-on project. The original spacecraft flew in the 2000s and pioneered the laser measurement of the height of polar glaciers and sea-ice from space. But the mission was plagued by technical problems that limited its observations to just a couple of months in every year.

About ICESat- 2 mission:
- ICESat-2 will measure the average annual elevation change of land ice covering Greenland and Antarctica to within the width of a pencil, capturing 60,000 measurements every second.
- ICESat-2's Advanced Topographic Laser Altimeter System (ATLAS) measures height by timing how long it takes individual light photons to travel from the spacecraft to Earth and back.

Why is this mission important?
- Antarctica and Greenland lose billions of tonnes of ice every year – the result largely of warm water being able to melt land glaciers where they meet the ocean. This wastage is slowly but surely pushing up sea-levels worldwide.

(Q) Discuss the factors that are aggravating melting of ice in the Arctic and other ice regions. In your opinion, what kind of response is needed to deal with climate change consequences?

5. NASA'S 1ST FLIGHT TO MOON, APOLLO 8, MARKS 50TH ANNIVERSARY

What to study?
- *For Prelims and Mains: Apollo 8 Mission and its significance.*

Context: NASA's Apollo 8 mission completes its 50th anniversary this year.

About the Apollo 8 Mission:
- Apollo 8, the second manned spaceflight mission in the United States Apollo space program, was launched on December 21, 1968, and became the first manned spacecraft to leave low Earth orbit, reach the Moon, orbit it, and safely return.
- The three-astronaut crew—Frank Borman, James Lovell, and William Anders—became the first humans to travel beyond low Earth orbit, see Earth as a whole planet, and enter the gravity well of another celestial body. They were also the first humans to orbit another celestial body, see the far side of the Moon, witness and photograph an "Earthrise", escape the gravity of another celestial body (the Moon), and reenter Earth's gravitational well.

Sources: the hindu.

6. NASA CONFIRMS SATURNS RINGS WILL BE GONE IN 100 MILLION YEARS

Context: New NASA research confirms that *Saturn is losing its iconic rings* at the maximum rate estimated from Voyager 1 & 2 observations made decades ago.
- *The rings are being pulled into Saturn by gravity* as a dusty rain of ice particles under the influence of Saturn's magnetic field.

Composition and structure:

- Saturn's rings are *made up of billions of particles ranging from grains of sand to mountain-size chunks*. Composed predominantly of water-ice, the rings also draw in rocky meteoroids as they travel through space.
- Though Saturn appears surrounded by a single, solid ring when viewed by an amateur astronomer, several divisions exist. *The rings are named alphabetically in the order of discovery*. Thus the main rings are, from farthest from the planet to closest, A, B and C. A gap 2,920 miles wide (4,700 kilometers), known as the Cassini Division, separates the A and B rings.
- The rings themselves contain a number of gaps and structures. Some are created by Saturn's many small moons, while others continue to puzzle to astronomers.

Is it only the Saturn to have rings?

- Saturn is not the only planet in the solar system to have rings — Jupiter, Uranus and Neptune also contain faint ring systems — but with its satellites spanning three-quarters of the Earth-moon distance (175,000 miles or 282,000 km), it is by far the largest and most visible.

Sources: et.

7. SEISMIC EXPERIMENT FOR INTERIOR STRUCTURE (SEIS)

What to study?

- ***For Prelims and Mains: SEIS- key objectives, functions and significance of the mission, about InSIght mission.***

Context: The US space agency's unmanned Mars Insight lander, which touched down on the Red Planet last month, has successfully deployed its key, quake-sensing instrument- *Seismic Experiment for Interior Structure*– on the alien world's surface.

- The spacecraft used its robotic arm to place the seismometer on the ground in front of the lander, 5.4 feet (1.64 meters) away.

About InSight Mission:

- InSight is part of NASA's Discovery Program, managed by the agency's Marshall Space Flight Center in Huntsville, Alabama.
- It will be the first mission to peer deep beneath the Martian surface, studying the planet's interior by measuring its heat output and listening for marsquakes, which are seismic events similar to earthquakes on Earth.

> *About Seismic Experiment for Interior Structure:*
>
> - The seismometer, known as the Seismic Experiment for Interior Structure, or SEIS, was made by the French space agency, CNES. The tool aims to help scientists better understand the interior of Earth's neighboring planet by studying ground motion, also known as marsquakes.
> - *Main Job:* To measure the pulse of Mars by studying waves created by marsquakes, thumps of meteorite impacts, and even surface vibrations generated by activity in Mars' atmosphere and by weather phenomena such as dust storms.

- It will use the seismic waves generated by marsquakes to develop a map of the planet's deep interior.

Significance of the mission:

- The findings of Mars' formation will help better understand how other rocky planets, including Earth, were and are created.
- But InSight is more than a Mars mission – it is a terrestrial planet explorer that would address one of the most fundamental issues of planetary and solar system science – understanding the processes that shaped the rocky planets of the inner solar system (including Earth) more than four billion years ago.
- InSight seeks to answer one of science's most fundamental questions: How did the terrestrial planets form?

Why Mars?

- Previous missions to Mars have investigated the surface history of the Red Planet by examining features like canyons, volcanoes, rocks and soil. However, signatures of the planet's formation can only be found by sensing and studying its "vital signs" far below the surface.
- In comparison to the other terrestrial planets, Mars is neither too big nor too small. This means that it preserves the record of its formation and can give us insight into how the terrestrial planets formed. It is the perfect laboratory from which to study the formation and evolution of rocky planets. Scientists know that Mars has low levels of geological activity. But a lander like InSight can also reveal just how active Mars really is.

(Q) Discuss about the NASA'S InSight mission on Mars?

8. ULTIMA THULE

What to study?
- *For Prelims and Mains: Ultima Thule and New Horizons- Key facts.*

Context: NASA's New Horizons spacecraft, the same craft that made humanity's first-ever visit to Pluto in 2015, is approaching its next target, *a Kuiper Belt object a billion miles beyond Pluto, nicknamed Ultima Thule*. It will be another first for New Horizons, the farthest planetary flyby in human history.

Key facts- Ultima Thule:
- *Ultima Thule is located in the Kuiper belt* in the outermost regions of the Solar System, beyond the orbit of Neptune.
- It measures approximately 30 km in diameter, and is irregularly shaped.
- Ultima Thule has a reddish color, probably caused by exposure of hydrocarbons to sunlight over billions of years.
- *Ultima Thule belongs to a class of Kuiper belt objects called the "cold classicals"*, which have nearly circular orbits with low inclinations to the solar plane.

Background:
- New Horizons was launched on 19 January 2006, and has been travelling through space for the past nine years. New Horizon's core science mission is to map the surfaces of Pluto and Charon, to study Pluto's atmosphere and to take temperature readings.

Sources: the hindu.

9. SOYUZ

What to study?
- *Static Part: About Soyuz spacecraft and ISS.*
- *Dynamic and Current: Space challenges and technological progresses.*

Context: A Soyuz rocket carrying Russian, American and Canadian astronauts took off from Kazakhstan and has reached orbit, in the first manned mission since a failed launch in October.

Soyuz- key facts:
- The Soyuz (SAW-yooz) is a Russian spacecraft. Astronauts and cosmonauts travel to the International Space Station on the Soyuz.
- The Soyuz transports crews to the International Space Station and returns them to Earth after their missions.
- The Soyuz is like a lifeboat for the space station. At least one Soyuz is always docked at the space station. If there is an emergency, the station crew can use the Soyuz to return to Earth.
- The Soyuz is the only means of reaching the ISS since the U.S. retired the space shuttle in 2011.

What Is the International Space Station?
- The International Space Station is a large spacecraft in orbit around Earth. It serves as a home where crews of astronauts and cosmonauts live. The space station is also a unique science laboratory. It orbits Earth at an average altitude of approximately 250 miles. It travels at 17,500 mph. This means it orbits Earth every 90 minutes. NASA is using the space station to learn more about living and working in space. These lessons will make it possible to send humans farther into space than ever before.
- The ISS programme is a joint project among five participating space agencies:
- NASA, Roscosmos, JAXA, ESA, and CSA.
- The ownership and use of the space station is established by intergovernmental treaties and agreements. The station is divided into two sections, the Russian Orbital Segment (ROS) and the United States Orbital Segment (USOS), which is shared by many nations.

Sources: the hindu.

10. METHOD TO SIMULATE, PREDICT SOLAR ACTIVITY OVER TEN YEARS DEVELOPED

What to study?

- *For Prelims and Mains: About the findings, sunspots and their effects.*

Context: A team of researchers from IISER Kolkata have developed a way of predicting the intensity of activity in the next solar cycle (approximately from 2020 to 2031) using data spread over the last 100 years.

Background:

- Astronomers have observed sunspots on the surface of the sun for nearly 400 years. It is known that sunspots follow a cyclic pattern of growing in number and disappearing in approximately 11 years, known as the sunspot cycle or the sun's activity cycle. We are currently in the 24th sunspot cycle since the observation began in 1755.

Findings:

- The researchers found that the sun's activity would not dip during the next cycle, but it would be similar to the current cycle, perhaps even stronger. They expect the cycle to peak around 2024.

How was it found?

- The researchers simulated the behaviour of the sun using magnetic field evolution models and observational data. They simulated solar activity, and using inputs from observed data from one cycle, predicted the behaviour of the sun over the next cycle, about ten years in advance.

What are Sunspots?

- Sunspots are temporary phenomena on the Sun's photosphere that appear as spots darker than the surrounding areas. They are regions of reduced surface temperature caused by concentrations of magnetic field flux that inhibit convection. Sunspots usually appear in pairs of opposite magnetic polarity.

Why study sunspots?

- For the understanding of the long-term variations of the sun and its impact on our climate which is one of the science objectives of Aditya mission. The forecast will be also useful for scientific operational planning of the Aditya mission.
- To know the effects on space weather. This refers to the effect of radiation, particle flux and magnetic flux in the region around the sun. During extreme events, space weather can affect electronics-driven satellite controls, communications systems, air traffic over polar routes and even power grids.
- Sunspots are correlated with climate on earth. A lot of the research in this area focuses on predicting the way the next sunspot cycle will shape up – whether the sun will be extremely active and produce many sunspots or not.

'Maunder-like minimum':

- There have been predictions that the next cycle (cycle 25) will show reduced sunspot activity. There have even been speculations that the sun may be heading towards a period of prolonged low activity – what solar physicists describe as a 'Maunder-like minimum'.
- The Maunder minimum refers to a period from 1645 to 1715 where observers reported minimal Sunspot activity — the number of sunspots reduced by a factor of nearly 1,000, over a period of 28 years.
- During this and other such periods of low activity, some parts of Europe and North America experienced lower-than-average temperatures. While the connection between the Maunder minimum and the climate on earth is still debated, it gives another reason to watch the sunspots.

Sources: the hindu.

11. CHANG'E-4 MISSION

What to study?
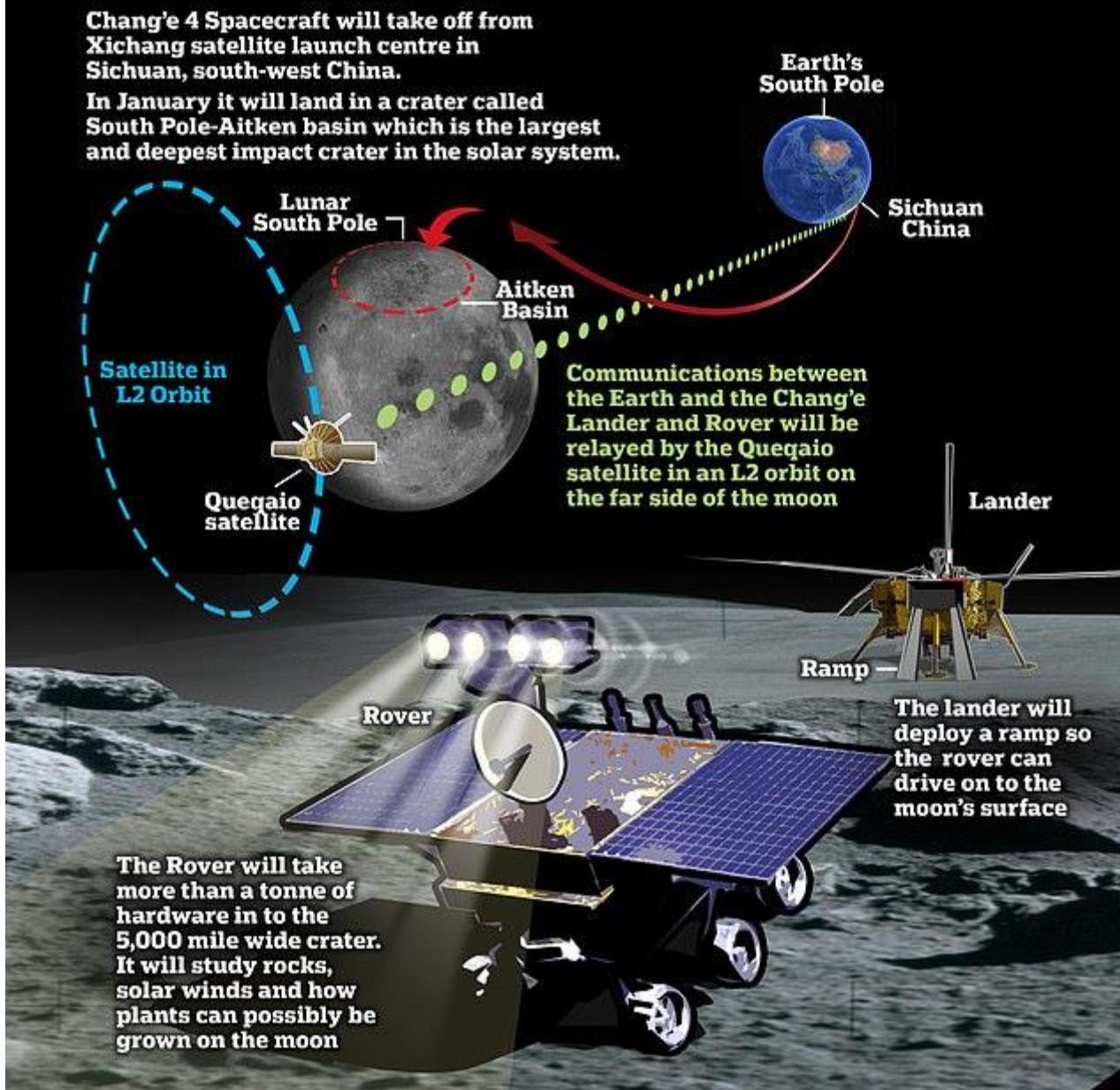
- *For Prelims and Mains: Features, objectives and significance of the mission.*

Context: China has launched Chang'e-4, a first probe ever to explore the dark side of the Moon, marking another milestone in its ambitious space programme. The Chang'e-4, carried by a Long March-3B rocket, has entered a planned orbit "to prepare for the first-ever soft landing on the far side of the moon".

Background:
- The Moon is tidally locked to Earth, rotating at the same rate that it orbits our planet, so the far side is never visible from Earth. The probe, the Chang'e-4, is expected to make the first-ever soft landing on the far side of the Moon. Previous spacecraft have seen the far side of the Moon, but none has landed on it.
- The far side of the moon known as '*South Pole-Aitken Basin'* still remains a mystery among space scientists and by sending a probe there, China will outdo the historical achievements of the US and USSR.

CHINA'S MISSION TO THE MOON

Chang'e 4 Spacecraft will take off from Xichang satellite launch centre in Sichuan, south-west China.

In January it will land in a crater called South Pole-Aitken basin which is the largest and deepest impact crater in the solar system.

Earth's South Pole

Sichuan China

Lunar South Pole

Satellite in L2 Orbit

Aitken Basin

Queqaio satellite

Communications between the Earth and the Chang'e Lander and Rover will be relayed by the Queqaio satellite in an L2 orbit on the far side of the moon

Lander

Ramp

The lander will deploy a ramp so the rover can drive on to the moon's surface

Rover

The Rover will take more than a tonne of hardware in to the 5,000 mile wide crater. It will study rocks, solar winds and how plants can possibly be grown on the moon

About the mission:
- Chang'e 4 is the fourth mission in the country's lunar mission series which is being named after the Chinese moon goddess.
- The tasks of the Chang'e-4 probe include low-frequency radio astronomical observation, surveying the terrain and landforms, detecting the mineral composition, and measuring the neutron radiation and neutral atoms to study the environment on the far side of the moon.

Significance of the mission:
- According to experts, landing on the far side of the moon is undoubtedly one of the most challenging missions ever launched by any of the world's superpowers.

Difficulties:
- Communication difficulties will be the main problem faced by the Chinese team as they try to land on the other side of the moon. China is expected to consider using options like radio telescopes to communicate in the absence of a transmitting medium.

History of China's lunar exploration programmes:
- China began their lunar exploration program in 2007 by launching a simple lunar orbiter named 'Chang'e 1'.
- The second mission in the program named 'Chang'e 2' was launched in 2010, and it was later followed by the third mission 'Chang'e 3'.
- 'Chang'e 3' made headlines all around the world as it marked the first soft moon landing since 1976.

Sources: the hindu.

12 ATACAMA LARGE MILLIMETER ARRAY (ALMA)

What to study?
- *For Prelims and Mains: ALMA- objectives, significance and accomplishments.*

Context: Astronomers have obtained stunning, high-resolution images of 20 nearby protoplanetary disks, depicting the birth of planets, using Chile's Atacama Large Millimeter/submillimeter Array (ALMA).
- The observations are part of a major ALMA initiative known as the Disk Substructures at High Angular Resolution Project, or DSHARP campaign.

Significance of these observations:
- According to the researchers, the most compelling interpretation of these observations is that large planets, likely similar in size and composition to Neptune or Saturn, form quickly, much faster than current theory would allow.
- It may also help explain how smaller rocky planets manage to survive in the chaos of young systems.

About ALMA telescope:
- The Atacama Large Millimeter/submillimeter Array (ALMA) is *an international partnership of the European Southern Observatory (ESO), the U.S. National Science Foundation (NSF) and the National Institutes of Natural Sciences (NINS) of Japan, together with NRC (Canada), NSC and ASIAA (Taiwan), and KASI (Republic of Korea), in cooperation with the Republic of Chile*.
- ALMA is a single telescope of revolutionary design, composed of 66 high precision antennas located on the Chajnantor plateau, 5000 meters altitude in northern Chile.
- ALMA allows scientists to unravel longstanding and important astronomical mysteries, in search of our Cosmic Origins.

Sources: the hindu.

13. HIGH RESOLUTION IMAGING SCIENCE EXPERIMENT (HIRISE)

What to study?
- *For Prelims and Mains: InSight Mission- objectives and significance and about HiRISE camera.*

Context: High Resolution Imaging Science Experiment (HiRISE)- A camera aboard Nasa's Mars Reconnaissance Orbiter (MRO) has captured the image of the InSight lander, which recently touched down on the Red Planet.

High Resolution Imaging Science Experiment (HiRISE):
- The High Resolution Imaging Science Experiment (HiRISE) will photograph hundreds of targeted swaths of Mars' surface in unprecedented detail.
- *HiRISE operates in visible wavelengths*, the same as human eyes, but with a telescopic lens that will produce images at resolutions never before seen in planetary exploration missions.
- HiRISE also makes observations at near-infrared wavelengths to obtain information on the mineral groups present.

- These new, high-resolution images will provide unprecedented views of layered materials, gullies, channels, and other science targets, as well as characterize possible future landing sites.

Sources: toi.

14. 'SUPER-EARTH' IN CONSTELLATION CASSIOPEIA

What to study?
- ***For Prelims and Mains: About Super- Earth and Constellation Cassiopeia.***

Context: Researchers have discovered a new exotic planet outside our solar system in the constellation Cassiopeia. Located 21 light years away from us, this planet, dubbed ***HD219134 b***, has a mass almost five times that of Earth, which is considered a so-called "super-Earth". Unlike the Earth, however, it most likely does not have a massive core of iron, but is rich in calcium and aluminium alongside magnesium and silicon.

What is a Super- Earth?
- A super-Earth is an extrasolar planet with a mass higher than Earth's, but substantially below those of the Solar System's ice giants, Uranus and Neptune, which are 15 and 17 times Earth's, respectively.
- The term "super-Earth" refers only to the mass of the planet, and so does not imply anything about the surface conditions or habitability.

Sources: the hindu.

15. HONGYUN PROJECT

What to study?
- ***For Prelims and Mains: Hongyun project- scientific objectives and significance of the project.***

Context: China has launched ***its first communication satellite to provide broadband internet services worldwide***. The satellite is the first in ***the Hongyun project*** planned by China Aerospace Science and Industry Corp (CASIC).
- The spacecraft is tasked with verifying basic designs of Hongyun satellite and demonstrating low-orbit broadband communications technologies.

About Hongyun project:
- The Hongyun project, started in September 2016, ***aims to build a space-based communications network to provide broadband internet connectivity to users around the world, especially those in the underserved regions***.
- When the Hongyun project is complete, it will cover the whole world and offer round-the-clock communication services to users in polar regions, who now have difficulties accessing telecommunication and internet services, even from on board an aircraft or a ship or in a remote area.
- The Hongyun system will feature lower production and operational costs and fewer occurrences of data transmission delays compared with existing communication satellite networks.

Sources: the hindu.

16. BEIDOU NAVIGATION SATELLITE SYSTEM (BDS)
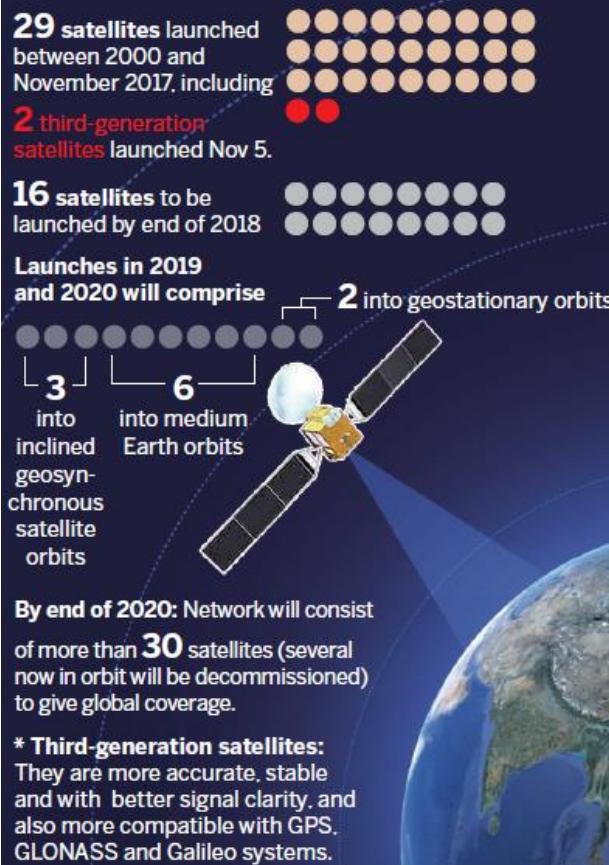
What to study?
- ***For Prelims: About various Navigation satellite systems.***
- ***For Mains: Significance of BDS and the need for regional secured navigation systems.***

Context: China's BeiDou Navigation Satellite System (BDS), touted as a rival to the widely-used American GPS, has started providing global services.
- The positioning accuracy of the system has reached 10 metres globally and five metres in the Asia-Pacific region. Its velocity accuracy is 0.2 metres per second, while its timing accuracy stands at 20 nanoseconds.
- ***Pakistan has become the first country to use the BeiDou system*** ending its reliance on the Global Positioning System (GPS).

Source: China Satellite Navigation Office

CHINA DAILY

Significance:

- It will be ***the fourth global satellite navigation system*** after the US GPS, Russia's GLONASS and the European Union's Galileo.

About BeiDou Satellite System:

- Named after the Chinese term for Big Dipper, the BeiDou system started providing independent services over China in 2000. It is being projected by Beijing as a rival to the American Global Positioning System (GPS).
- The full constellation is scheduled to ***comprise 35 satellites***.
- ***BeiDou has two separate constellations***, BeiDou-1 and BeiDou-2. BeiDou-1 also known as first generation was a constellation of three satellites.
- ***BeiDou-2, also known as COMPASS***, is the second generation of the system. It became operational in the year 2011.

What are the various GNSS systems?

- ***The four global GNSS systems are*** – GPS (US), GLONASS (Russia), Galileo (EU), BeiDou (China). Additionally, there are two regional systems – QZSS (Japan) and IRNSS or NavIC (India).

Sources: the hindu.

Topic: Computers, IT, Robotics, Biotechnology. etc

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1. GRAPHENE

What to study?

- ***For Prelims: About Graphene and its key features.***
- ***For Mains: Significance of the latest discovery by researchers.***

Context: A group of researchers at Nagpur-based Visvesvaraya National Institute of Technology have developed ***a new technique which promises to help produce high value graphene from discarded dry cells batteries***.

- As of now, researchers have achieved 88% yield of graphene from a single graphite rod. It can be scaled up to the industrial level.

Significance:
- Since graphene is made out of graphite, its production is both expensive and has significant environmental impact. The new technique helps both reduce the cost and preserve environment.

About Graphene:
- Graphene has been touted in **the global electronics industry as a "miracle material"** given its strength, electrical conductivity and elasticity, and has been seen as an alternative to lithium-ion batteries since its discovery in 2004. It is a form of carbon that can be used to develop smaller, slimmer batteries but with higher capacity.
- **Graphene is a carbon material that is one atom thick**. Its thin composition and high conductivity means it is used in applications ranging from miniaturised electronics to biomedical devices. These properties also enable thinner wire connections; providing extensive benefits for computers, solar panels, batteries, sensors and other devices.

Applications:
- Graphene is widely used in making solar cells, light-emitting diodes, touch panels and smart windows. Graphene supercapacitors serve as energy storage devices with a capacity for faster charging and longer life span than traditional electrolytic batteries.
- Other potential applications of graphene include water filtration and purification, renewable energy, sensors, personalised healthcare and medicine, to name a few.

Sources: Down to Earth.

2. NATIONAL SUPERCOMPUTING MISSION (NSM)

What to study?
- ***For Prelims and Mains: NSM- objectives, significance and challenges ahead.***

Context: French IT services firm Atos has won a three-year contract to build the first phase of supercomputers under India's Rs 4,500-crore ***National Supercomputing Mission (NSM).***

National Supercomputing Mission (NSM):
- The Mission envisages empowering national academic and R&D institutions spread over the country by installing a vast supercomputing grid comprising of more than 70 high-performance computing facilities.
- These supercomputers will also be networked on the National Supercomputing grid over the National Knowledge Network (NKN).
- The NKN is another programme of the government which connects academic institutions and R&D labs over a high speed network.
- The Mission includes development of highly professional High Performance Computing (HPC) aware human resource for meeting challenges of development of these applications.
- India looks forward to create a cluster of machines for weather forecasting, drug discovery and data mining.

Agencies involved:
- The Mission would be implemented and steered jointly by the Department of Science and Technology (**DST**) and Department of Electronics and Information Technology (**DeitY**) over a period of seven years.
- The tender to build these high performance computers (HPC) had been floated by the Centre for Development of Advanced Computing (**C-DAC**).
- Atos would be deploying its energy efficient Direct Liquid Cooled Bull Sequana supercomputers in India.

Background:
- World-wide supercomputing facilities have enabled countries in their S&T capabilities in areas such as designing vehicles, aeroplanes, massive structures like high rise buildings and bridges, infrastructure, discovery of new life saving drugs, discovery and extraction of new energy sources including oil, natural gas etc.
- Over the years, supercomputers have benefitted mankind in several ways. Weather prediction has reached accuracy of forecast as well as real time tracking of natural phenomenon. Timely warning of cyclones in the recent past have saved many lives and property. The Mission aims to further such capabilities beyond current levels.

3. MOBILE TOWERS ARE HARMLESS: CPCB

What to study?
- *For Prelims: About CPCB and ICNIRP.*
- *For Mains: Radiations from mobile tower- concerns, are they really harmful and findings of various studies.*

Context: A recently-declassified study of the Central Pollution Control Board (CPCB) states that mobile towers do not have any negative effect on human health.

- The study, *'Mobile tower installations in India & its impact on environment'* is one among several done in the previous decade by the CPCB, which had not been declassified since 2010. They have been published recently after the Supreme Court instructed to make public, all reports related to the impact of environmental pollution on health and the economy.

Highlights of the report:
- Based on safety limits prescribed by the *International Commission on Non Ionizing Radiation Protection (ICNIRP)*, the review report had said that there was no substantive or convincing evidence of cell phone radiation's biological effects that could harm a person's health. *The ICNIRP standard uses the limit of 450 µW/cm².*
- However, the report does admit that *the current exposure safety standards are purely based on the thermal effect while ignoring the non-thermal effects of radiation*.
- While stating that there was no impact of radiation from towers, the CPCB has said that *this concern on health hazards needed further research, both national as well international*.
- However, since 2010, India has moved forward. In 2015, the Department of Telecommunications had come up with new norms of radiation from mobile phone towers which came into force in September 2015. And the limits on power density from mobile phone towers were restricted to one-tenth of the existing limit.

Concerns:
- In international standards, *"thermal effect"* of radiation refers to the heat that is generated due to absorption of microwave radiation which causes cellular and physiological changes in living beings. This effect may be responsible for genetic defects, effects on reproduction and development, central nervous system behaviour and many similar serious health consequences.
- *Non-thermal effects of radiation* have been shown to be responsible for fatigue, irritability, headaches, nausea, loss of appetite, sleep disturbance, disruption and other psychological disorders, memory loss and difficulties in concentration.

About International Commission on Non Ionizing Radiation Protection (ICNIRP):
- The International Commission on Non-Ionizing Radiation Protection (ICNIRP) is *an international commission specialized in non-ionizing radiation protection*. The organization's activities include determining exposure limits for electromagnetic fields used by devices such as cellular phones.
- ICNIRP is an independent non-profit scientific organization chartered in Germany. *It was founded in 1992 by the International Radiation Protection Association (IRPA)* to which it maintains close relations.
- The mission of ICNIRP is to screen and evaluate scientific knowledge and recent findings toward providing protection guidance on non-ionizing radiation, i.e. radio, microwave, UV and infrared.

Sources: down to earth.

(Q) Does the radiation from cellphone towers damage human health? Discuss.

Topic: IPR related issues.

KANDHAMAL HALDI

What to study?
- *For Prelims: GI tags and about Kandhmal Haldi.*
- *For Mains: Significance of GI tags.*

Context: Odisha's Kandhamal Haldi (turmeric), famous for its healing properties, is all set to receive GI tag.

Key facts:

- The golden yellow spice, named after the district where it is produced, has been cultivated since time immemorial and is known for its medicinal value.
- Turmeric is the main cash crop of tribal people in Kandhamal. Apart from domestic use, turmeric is also used for cosmetic and medicinal purposes.
- More than 60,000 families (nearly 50% of Kandhamal population) are engaged in growing the variety. The crop is sustainable in adverse climatic conditions.

About GI tag:

- **What is it?** A GI is primarily an agricultural, natural or a manufactured product (handicrafts and industrial goods) originating from a definite geographical territory.
- **Significance of a GI tag:** Typically, such a name conveys an assurance of quality and distinctiveness, which is essentially attributable to the place of its origin.
- **Security:** Once the GI protection is granted, no other producer can misuse the name to market similar products. It also provides comfort to customers about the authenticity of that product.
- **Provisions in this regard:** GI is covered as element of intellectual property rights (IPRs) under Paris Convention for Protection of Industrial Property.
- At international level, GI is governed by WTO's Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS).
- In India, Geographical Indications of Goods (Registration and Protection Act), 1999 governs it.

Sources: the hindu.

(Q) Why does Geographical Indication (GI) tag matter? It is argued that Geographical Indications have potential to be India's growth engine. Examine.

Topic: Conservation, Environment related issues.

1. ACCOUNTING METHODS OF CLIMATE FUND QUESTIONED

What to study?

- *For Prelims: About GCF and its funding.*
- *For Mains: India's observations on funding pattern, need for review and clarity on the issue.*

Context: Indian Finance Ministry has issued a 'discussion paper' that has criticised the accounting methods used by developed countries to report how much money they have given, so far, to developing countries to address climate change.

Background:

- Accounting procedures, regarding the flow of climate finance, has become one of the most controversial issues being debated at Katowice, Poland where countries have gathered to agree upon a 'Rule Book' to implement the Paris Agreement of 2015, that commits countries to ensure the earth doesn't warm 2 degree C beyond pre-industrial levels.
- In 2019, developed countries are expected to make available $100 billion annually to developing countries, according to a 2010 agreement in Cancun.

What's the issue?

- In 2016, developed countries published a road map to $100 billion, which claimed that public climate finance levels had reached $41 billion per year in 2013-14. In 2015, India had disputed this figure arguing it was only $ 2.2 billion. The 2017 numbers also tell a similar story. Only around 12% of total pledges to climate funds have actually materialised into disbursements.

What has India pointed out?

- It argues that the definition of climate finance in the UNFCCC has remained "imprecise and incomplete."
- The total pledges to the Green Climate Fund (GCF), the largest multilateral fund, was a "meagre" $10.3 billion. Further, most of the total climate finance has flowed into mitigation (a reference to preventing carbon dioxide from being emitted).
- The growth in the reported climate specific finance actually slowed down from 24% between 2014 and 2015 to 14% between 2015 and 2016.

About GCF:
- The GCF was *set up in 2010 under the UNFCCC's financial mechanism* to channel funding from developed countries to developing countries to allow them to mitigate climate change and also adapt to disruptions arising from a changing climate.

How it helps?
- The Green Climate Fund will support projects, programmes, policies and other activities in developing country Parties using thematic funding windows.
  - It is intended to be the centrepiece of efforts to raise Climate Finance of $100 billion a year by 2020.
  - The Fund will promote the paradigm shift towards low-emission and climate-resilient development pathways by providing support to developing countries to limit or reduce their greenhouse gas emissions and to adapt to the impacts of climate change, taking into account the needs of those developing countries particularly vulnerable to the adverse effects of climate change.
  - The Fund will strive to maximize the impact of its funding for adaptation and mitigation, and seek a balance between the two, while promoting environmental, social, economic and development co-benefits and taking a gender-sensitive approach.

Who will govern the Fund?
- The Fund is governed and supervised by a Board that will have full responsibility for funding decisions and that receives the guidance of the **Conference of Parties (***COP)*.
- The Fund is accountable to, and functions under the guidance of, the COP.

Background:
- In **2015**, India listed a series of specific actions it would take to fight climate change in the Paris Agreement.
- The major ones are:
  - It would **reduce its emissions intensity (or emissions per unit of GDP) by 33 to 35 per cent** by the year 2030 compared to the 2005 baseline.
  - It would **ensure that at least 40 per cent of its total electricity in the year 2030 would be generated through renewable sources of energy** and that would create between 2.5 to three billion tones of additional carbon sinks through extensive afforestation.

Sources: the hindu.

(Q1) In the wake of the recent scientific reports on Climate change, it is imperative to finalise the rule book by 2018. Comment.

(Q2) In light of the threats from climate change, building a "greener" finance market for India is necessary. Examine.

2. DUAL-FUEL USAGE FOR AGRICULTURAL AND CONSTRUCTION EQUIPMENT VEHICLES

- The Ministry of Road Transport & Highways has notified dual-fuel usage for agricultural and construction equipment vehicles.

Objective:
- It will give a boost to vehicles run on bio-fuel, and help in reducing both cost and pollution.

List of Dual-Fuel Vehicles (diesel as primary and CNG, Bio CNG as secondary):
- **Tractors, power tillers, construction equipment vehicles** and **combine harvesters** which have originally been manufactured as dual-fuel or have been converted as such from in-use diesel vehicles.

Source: PIB

3. WORLD SOIL DAY

What to study?
- *For Prelims: World Soil Day 2018- key facts.*
- *For Mains: Soil pollution- reasons, concerns, challenges and measures.*

Context: World Soil Day is *celebrated every year on 5th of December by Food and Agriculture Organization (FAO)* of United Nations.

- *Aim:* To communicate messages on importance of soil quality for food security, healthy ecosystems and human well-being.
- *Theme for year 2018:* 'Be the Solution to Soil Pollution'.

Historical background of World Soil Day:

- An international day to celebrate Soil was recommended by the **International Union of Soil Sciences (IUSS)** in 2002. Under the leadership of the Kingdom of Thailand and within the framework of the Global Soil Partnership, FAO has supported the formal establishment of WSD as a global awareness raising platform.
- The FAO Conference unanimously endorsed World Soil Day in June 2013 and requested its official adoption at the 68th UN General Assembly. In December 2013 the UN General Assembly responded by designating 5 December 2014 as the first official World Soil Day.

Why December 5 was chosen?

- The date of 5 December for WSD was chosen because it corresponds with the official birthday of H.M. King Bhumibol Adulyadej, the King of Thailand, who officially sanctioned the event.

> *Need for conservation and protection of soil:*
> - Soil holds three times as much carbon as the atmosphere and can help us meet the challenges of a changing climate.
> - 815 million people are food insecure and 2 billion people are nutritionally insecure, but we can mitigate this through soil.
> - 95% of our food comes from soil.
> - 33% of our global soils are already degraded.

Soil pollution- concerns:

- These days pollution is a worry – and soil is also affected. Soil pollution is a hidden danger that lurks beneath our feet.
- 1/3 of our global soils are already degraded. Yet we risk losing more due to this hidden danger. Soil pollution can be invisible and seems far away but everyone, everywhere is affected.
- With a growing population expected to reach 9 billion by 2050, soil pollution is a worldwide problem which degrades our soils, poisons the food we eat, the water we drink and the air we breathe. The entity of the problem is still unknown as not certain data are available on a global scale.
- Soils have a great potential to filter and buffer contaminants, degrading and attenuating the negative effects of pollutants, but this capacity is finite. Most of the pollutants originate from human activities, such as unsustainable farming practices, industrial activities and mining, untreated urban waste and other non-environmental friendly practices.
- As technology evolves, scientists are able to identify previously undetected pollutants, but at the same time these technological improvements lead to new contaminants being released into the environment.

SDGs:

- In the Agenda for Sustainable Development 2030, the Sustainable Development Goals 2, 3, 12, and 15 have targets which commend direct consideration of soil resources, especially soil pollution and degradation in relation to food security.

Way ahead:

- According to the FAO, it is vital to tackle soil pollution to reduce the risk of food security and human health.
- By preventing soil pollution, we can also address soil degradation, adapt to climate change and stem rural migration.

Sources: the hindu.

(Q) Examine why and how soils can serve as a sink for carbon dioxide? Discuss why ability of soils to sequester carbon as a win-win strategy must be recognised by policymakers

4. INDIA WATER IMPACT SUMMIT 2018

Context: India Water Impact Summit 2018 was jointly organized by the National Mission for Clean Ganga (NMCG) and the Centre for Ganga River Basin Management and Studies recently in New Delhi.

- It is an annual event where stakeholders get together to discuss, debate and develop model solutions for some of the biggest water-related problems in the country.
- The discussions this year will be on the rejuvenation of the Ganga River Basin.
- There will be multi-country dialogue on the subject, with showcasing of technological innovations, research, policy frameworks and funding models from India and abroad.
- The efforts may take various forms including (but not limited to): data collection (sensors, LIDAR, modelling etc), hydrology, e-flows, agriculture, wastewater and more.

Ganga Financing Forum:

- The Summit introduced the inaugural ***Ganga Financing Forum*** that will bring a number of institutions to a common knowledge, information and partnership platform.
- The Financing Forum will bring together financial institutions and investors interested in Namami Gange programmes.

Sources: the hindu.

5. GLOBAL CARBON PROJECT (GCP)

What to study?

- ***For Prelims: About Global Carbon Project.***
- ***For Mains: About Carbon cycle, increase in CO2, measures needed to control the pollution.***

Context: Global carbon emissions are set to hit an all-time high of 37.1 billion tonnes of CO2 in 2018, according to researchers at the University of East Anglia (UEA) and the Global Carbon Project.

Highlights of the study:

- India, the third-highest contributor, is projected to see emissions rise by 6.3% from 2017. The 2.7% projected global rise in 2018 has been driven by appreciable growth in coal use for the second year in a row, and sustained growth in oil and gas use.
- The 10 biggest emitters in 2018 are China, U.S., India, Russia, Japan, Germany, Iran, Saudi Arabia, South Korea, and Canada. The EU as a region of countries ranks third. China's emissions accounted for 27% of the global total, having grown an estimated 4.7% in 2018 and reaching a new all-time high.
- Emissions in the U.S., which has withdrawn from its commitment to the Paris Agreement, account for 15% of the global total, and look set to have grown about 2.5% in 2018 after several years of decline.
- Limiting global warming to the 2015 Paris Agreement goal of keeping the global temperature increase this century to well below 2°C, would need carbon dioxide emissions to decline by 50% by 2030 and reach net zero by about 2050.
- Though coal use contributed to the rise in 2018 from last year, it still remains below its historical high in 2013 but may exceed that if current growth continues.

About Global Carbon Project:

- The Global Carbon Project was formed in 2001 to help the international science community to establish a common, mutually agreed knowledge base that supports policy debate and action to slow the rate of increase of greenhouse gases in the atmosphere.
- It is a Global Research Project of Future Earth and a research partner of the World Climate Research Programme. It was formed to work with the international science community to establish a common and mutually agreed knowledge base to support policy debate and action to slow down and ultimately stop the increase of greenhouse gases in the atmosphere.
- The Global Carbon Project works collaboratively with the International Geosphere-Biosphere Programme, the World Climate Programme, the International Human Dimensions Programme on Global Environmental Change and Diversitas, under the Earth System Science Partnership.

Sources: the hindu.

6. BEACH POLLUTION IN INDIA

What to study?

- ***For Prelims: Geographical locations of important beaches, blue flag project.***
- ***For Mains: Beach pollution- concerns, effects, challenges and measures needed.***

Context: The National Centre of Coastal Research (NCCR) has released a report on beach pollution in India.

Highlights of the report:

- The NCCR conducted a qualitative analysis of the litter on six different beaches on the eastern and western coasts. The study notes that beach pollution is on rise in the country.
- ***Tourism and fishing are the biggest culprits***, contributing most of the plastic litter on beaches.
- The study found that plastic litter from tourism alone accounted for 40%-96% of all beach litter.
- At Chennai's Elliot's Beach, for instance, plastics left by tourists accounted for 40% of all the litter, while at Gopalpur in Odisha, it was as high as 96%. As for the other four beaches, plastics formed 66% of the overall litter on Fort Kochi Beach, 60% at Karnataka's Karwar beach, 87% at Visakhapatnam's R.K. Beach, and 81% at Andaman Island's Rangachang beach.
- After tourism, fishing was the next biggest source of litter. While fishing nets were a major contributor, the processing of fish on the beach also produced a lot of litter.
- Also, the proportion of biomedical litter was high in urban areas, such as Elliot's Beach and Fort Kochi Beach.
- Other than the plastic litter dropped by tourists, similar waste from creeks and inlets made its way into the sea in the monsoon.
- Most of the litter consisted of plastic bottles, cutlery, and thermocol.

> *More about 'Blue Flag' project:*
> - ***Launched in December 2017 by the Environment Ministry***, the prime objective of the project is to enhance standards of cleanliness, upkeep and basic amenities at beaches.
> - Under the project, each state or union territory has been asked to nominate a beach which will be funded through the ongoing Integrated Coastal Management Programme.
>
> *Criteria for certification:*
> - To achieve the Blue Flag standards, a beach has to strictly comply with 33 environment and tourism-related conditions.
> - The standards were established by the Copenhagen-based Foundation for Environmental Education (FEE) in 1985.
> - For example- a beach must be plastic-free and equipped with a waste management system. Clean water should be available for tourists, apart from international amenities.
> - The beach should have facilities for studying the environmental impact around the area.

Way ahead- need of the hour:

- India needs *a national marine litter policy* to control and manage waste on land and prevent its entry into the marine environment.
- Experts suggest ***installation of debris booms and fin deflectors upstream*** as measures to reduce the quantity of floating solid waste entering coastal waters.
- ***India also needs to start blue-flagging its beaches***. The 'blue flag' is a globally recognised eco-label awarded to beaches and marinas that adhere to strict environmental and safety norms.

Sources: the hindu.

7. STUDY ON AIR POLLUTION AND ITS EFFECTS

What to study?

- ***For Mains: Air pollution and its effects on health, environment and economy, need of the hour.***

Context: Indian Council of Medical Research has released its first comprehensive estimates of deaths, disease burden, and life expectancy reduction associated with air pollution in each state of India.

Highlights of the study:

- One in every eight deaths in India is attributable to air pollution, which now contributes to more disease burden than smoking. In fact, the average life expectancy in India would have been 1.7 years higher if the air pollution level were less than the minimal level.
- In 2017, air pollution accounted for 12.4 lakh deaths in India, which included 6.7 lakh deaths due to outdoor particulate matter air pollution and 4.8 lakh deaths due to household air pollution. Over half of the deaths due to air pollution were in persons less than 70 years of age. With 18% of the global population, India suffered 26% of premature mortality and health loss attributable to air pollution globally.
- Around 77% of India's population is exposed to outdoor air pollution levels above the National Ambient Air Quality Standards safe limit.

- States in east and north India had some of the highest levels of both ambient particulate matter and household air pollution, especially Bihar, Uttar Pradesh, Rajasthan, and Jharkhand. Delhi, Haryana, and Punjab in north India had some of the highest ambient particulate matter pollution exposure in the country.
- However, the report recognises the increasing public and policy attention to control air pollution in India.
- Air pollution has become a year-round phenomenon particularly in north India which causes health impacts far beyond the seasonal rise of respiratory illnesses. Air pollution is now the leading risk factor for chronic obstructive lung disease in India, and a major contributor to pneumonia and lung cancer.

Concerns:
- The report assumes significance as it follows several such reports by the World Health Organisation which have already detailed the major health risks posed by foul air in the country. A special report released by WHO recently at COP 24 said India can get massive health gains— up to $8 trillion by pursuing global warming limit of 1.5 °C.
- The UN agency had recently also linked air pollution with increasing child mortality. In 2017, India witnessed 1,10,000 premature deaths of children due to air pollution, highest in the world in the category of children under five years of age.

Way ahead:
- It is important to have robust estimates of the health impact of air pollution in every state of India in order to have a reference for improving the situation. Household air pollution is reducing in India, facilitated by the **Pradhan Mantri Ujjwala Yojana**. There is increasing political momentum in India to address air pollution.
- The findings in the study systematically document the variations among states, which would serve as a useful guide for making further progress in reducing the adverse impact of air pollution in the country.
- Systematic and sustained efforts are needed to address the variety of sources contributing to air pollution, which include transport vehicles, construction activity, industry and thermal power emissions, residential and commercial solid fuel use, waste and agriculture burning, diesel generators, and manual road dust sweeping.

Sources: the hindu.

(Q1) Air Pollution in India can no longer be tackled with short term, reactive solutions. Critically analyse.
(Q2) In the light of failure of many solutions to tackle air pollution in Indian cities, suggest new solutions that are innovative and practical

8. BIOPLASTICS NOT AN ECO-FRIENDLY ALTERNATIVE TO PLASTIC- STUDY

What to study?
- *For Prelims: What are bioplastics?*
- *For Mains: Plastics and their effect on climate change, bioplastics- significance, limitations and measures necessary to increase their effectiveness.*

Context: A study was conducted by the University of Bonn in Germany on the use of bioplastics and its effects on the environment.

Main findings of the study?
- Bioplastics — often promoted as a climate-friendly alternative to petroleum-based plastics — may lead to an increase in greenhouse gas emissions.

But, how?
- Bioplastics are in principle climate-neutral since they are based on renewable raw materials such as maize, wheat or sugar cane. These plants get the CO_2 that they need from the air through their leaves. Producing bioplastics therefore consumes CO_2, which compensates for the amount that is later released at end-of-life. Overall, their net greenhouse gas balance is assumed to be zero. Bioplastics are thus often consumed as an environmentally friendly alternative.
- However, at least with the current level of technology, this issue is probably not as clear as often assumed. This is because the production of bioplastics in large amounts would change land use globally. This could potentially lead to an increase in the conversion of forest areas to arable land. However,

forests absorb considerably more CO2 than maize or sugar cane annually, if only because of their larger biomass.

Concerns over the increased use of plastics:
- Plastics are usually made from petroleum, with the associated impacts in terms of fossil fuel depletion but also climate change. The carbon embodied in fossil resources is suddenly released to the atmosphere by degradation or burning, hence contributing to global warming.
- This corresponds to about 400 million metric tonnes of CO2 per year worldwide, almost half of the total greenhouse gases that Germany emitted to the atmosphere in 2017. It is estimated that by 2050, plastics could already be responsible for 15% of the global CO2 emissions.

Main advantages of bioplastics:
- They can reduce our carbon footprint.
- Less consumption of non-renewable raw materials.
- A reduction of non-biodegradable waste, which contaminates the environment.
- Increased energy savings in terms of production.
- Fewer harmful additives such as phthalates or bisphenol A.
- No adverse change to flavour or scent in food stored in bioplastic containers.

Sources: the hindu.

(Q) What are Bioplastics? Briefly explain the different variants of Bioplastics being used and promoted? Critically examine the impact of Bioplastics on the environment?

9. 1ST INTERNATIONAL CONFERENCE ON SUSTAINABLE WATER MANAGEMENT AT MOHALI

- The first International Conference under the aegis of **National Hydrology Project**, Union Ministry of Water Resources, River Development and Ganga Rejuvenation is being organized by **Bhakra Beas Management Board (BBMB)** at **Indian School of Business (ISB)**, Mohali on the **theme 'Sustainable Water Management'**.

Aims of the Conference:
- To foster the participation of and dialogue between various stakeholders, including governments, the scientific and academic communities, so as to **promote sustainable policies for water management**,
- To **create awareness of water-related problems**, motivate commitment at the highest level for their solution and thus **promote better management of water resources at local, regional, national and international levels**.
- The main aim is to **bring advancement in water management system to further reduce flood and draughts all over the Globe**.

Source: PIB

10. ECO-SENSITIVE ZONES

What to study?
- *For Prelims: Eco Sensitive zones- how are they declared and key provisions in this regard.*
- *For Mains: Significance and the need for these zones, and issues related to management of these zones.*

Context: The Supreme Court has directed the Union Environment Ministry to declare 10 km area around 21 national parks and wildlife sanctuaries across the country as 'eco-sensitive zones'.
- The court took the initiative after its amicus curiae informed the court that the State governments have taken no effort to protect the area around these sanctuaries and parks.

What are Eco-sensitive zones?
- The Environment Protection Act, 1986 does not mention the word "Eco-sensitive Zones".
- *The section 3(2)(v) of the Act*, says that Central Government can restrict areas in which any industries, operations or processes shall not be carried out or shall be carried out subject to certain safeguards

- **Besides the section 5 (1)** of this act says that central government can prohibit or restrict the location of industries and carrying on certain operations or processes on the basis of considerations like the biological diversity of an area, maximum allowable limits of concentration of pollutants for an area, environmentally compatible land use, and proximity to protected areas.
- The above two clauses have been effectively used by the government to declare Eco-Sensitive Zones or Ecologically Fragile Areas (EFA). The same criteria have been used by the government to declare No Development Zones.

Criteria:
- The MoEF (Ministry of Environment & Forests) has approved a comprehensive set of guidelines laying down parameters and criteria for declaring ESAs.
- A committee constituted by MoEF put this together. The guidelines lay out the criteria based on which areas can be declared as ESAs.
- These include Species Based (Endemism, Rarity etc), Ecosystem Based (sacred groves, frontier forests etc) and Geomorphologic feature based (uninhabited islands, origins of rivers etc).

Sources: the hindu.

(Q) It is argued that the Eco Sensitive Zones (ESZ) marginalise local interests and would prove detrimental to conservation in the long run. Critically examine

11. UN 'MOMENTUM FOR CHANGE' CLIMATE ACTION AWARD

What to study?
- *For Prelims and Mains: Features, awardees and significance of the award.*

Context: An Indian private project, *HelpUsGreen* is one of 15 ground-breaking projects from around the world that has won this year's UN climate action award.
- The other 14 projects which won the UN 'Momentum for Change' climate action award showcase how ideas, big and small, are successful in tackling climate change.

About HelpUsGreen:
- The project collects flowers from temples and mosques across many cities\towns in Uttar Pradesh and recycles them to produce natural incense, organic fertilizers and biodegradable packaging material.
- The project currently employs 1,260 women in Uttar Pradesh, helps in preventing chemical pesticides from entering into the river through temple waste.
- Developed as the world's first profitable solution to the monumental temple waste problem, the HelpUsGreen's products are handcrafted by women who earlier used to be manual scavengers.
- The HelpUsGreen aims to provide livelihoods to 5,100 women and recycle 51 tonnes of temple waste daily by 2021.
- Under HelpUsGreen, 11,060 metric tonnes of temple-waste has, so far, been recycled. As a result,110 metric tonnes of chemical pesticides that enter the river through temple waste have been offset.

About 'Momentum for Change' initiative:
- Momentum for Change is *an initiative spearheaded by the UN Climate Change secretariat* to shine a light on the enormous groundswell of activities underway across the globe that are moving the world toward a highly resilient, low-carbon future. Momentum for Change recognizes innovative and transformative solutions that address both climate change and wider economic, social and environmental challenges.

Sources: the hindu.

12. ECO NIWAS SAMHITA 2018

- Ministry of Power has launched the ECO Niwas Samhita 2018, an Energy Conservation Building Code for Residential Buildings (ECBC-R).
- The code was launched on **National Energy Conservation Day 2018**.

Aim of ECO Niwas Samhita 2018:
- To benefit the occupants and the environment by promoting energy efficiency in design and construction of homes, apartments and townships.

About the Energy Conservation Building Code:
- It is prepared after extensive consultations with all stakeholders, consisting of architects & experts including building material suppliers and developers.
- The parameters listed have been developed based on large number of parameters using climate and energy related data.
- **The code is expected to assist large number of architects and builders who are involved in design and construction of new residential complexes.**
- It has potential for energy savings to the tune of 125 Billion Units of electricity per year by 2030, equivalent to about 100 million ton of Co2 emission.

National Energy Conservation Awards:
- **Ministry of Power** in association with **Bureau of Energy Efficiency** celebrates the National Energy Conservation Day on every 14th December.
- On this day, 26 industrial units from various sectors were given awards for their excellent performance in energy efficiency.

About Bureau of Energy Efficiency (BEE):
- **A statutory body under Ministry of Power** created in March 2002 under the provisions of the nation's 2001 Energy Conservation Act**.**
- To implement policy and programmes in energy efficiency and conservation.

Objective of BEE –
- To reduce energy intensity in our country by optimizing energy demand and
- To reduce emissions of **greenhouse gases (GHG)**, responsible for global warming and climate change.
- **India has committed to reduction of 33-35% GHG emission by 2030 as part of the document submitted to UNFCCC.**

Source: PIB

13. CAMPAIGN TO SAVE THE GREAT INDIAN BUSTARD FROM EXTINCTION

Context: Wildlife organisations have got together to launch a campaign to save the Great Indian Bustard which in recent years has come under the critically endangered list. With the total global population of the Great Indian Bustard reaching and all time low at fewer than 150 individuals, this campaign is the need of the hour.
- The wildlife organisations that have launched the campaign are The Corbett Foundation in collaboration with Conservation India and Sanctuary Nature Foundation.
- The campaign aims at highlighting the overhead power transmission lines that result in the death of these low flying birds with a limited field of vision. This is the primary threat to the survival of the species especially in the Great Indian Bustard Habitat.

Significant threats to the GIB:
- Reduction in the extent of undisturbed arid **grassland habitat**.
- Degradation and disturbance in existing grassland habitat.
- Lack of importance for natural grassland conservation in policy, law and PA network due to incorrect perception on ecological value vis-a-vis forests.
- Lack of protection for many 'lekking' and nesting sites.
- Lack of cooperation between different departments/stakeholders in GIB habitats.
- Lack of awareness and support from local communities.
- Livestock overgrazing and feral dogs.
- Disturbance by photographers — there is now enough anecdotal evidence to show that photography of the species causes significant disturbance.

About the Great Indian Bustard:
- Great Indian Bustard is listed in *Schedule I of the Indian Wildlife (Protection)Act, 1972, in the CMS Convention and in Appendix I of CITES, as Critically Endangered on the IUCN Red List*.
- It has also been identified as one of *the species for the recovery programme under the Integrated Development of Wildlife Habitats* of the Ministry of Environment and Forests, Government of India.
- *Project Great Indian Bustard — state of Rajasthan* — identifying and fencing off bustard breeding grounds in existing protected areas as well as provide secure breeding enclosures in areas outside protected areas

Protected areas:
- Desert National Park Sanctuary — Rajasthan.
- Rollapadu Wildlife Sanctuary – Andhra Pradesh.
- Karera Wildlife Sanctuary– Madhya Pradesh.

14. NATIONAL TIGER CONSERVATION AUTHORITY (NTCA)

Context: The National Tiger Conservation Authority's (NTCA) has released a report tiger mortality in the country.
- The NTCA maintains the official database of tiger mortality in the country, and compiles figures from reports sent by different States on the basis of recovery of bodies or seizure of body parts.
- According to the records till December 15, 2018, there were 95 cases of tiger deaths in the country. Of this, 41 cases of tiger deaths outside tiger reserves have been reported.
- Of them, 14 occurred in Maharashtra, which accounted for over 34% of all deaths outside tiger reserves in the country. A total of 19 tiger deaths were recorded in Maharashtra in 2018, so deaths outside tiger reserves comprise more than 70% of all tiger deaths in the State.

About NTCA:
- The National Tiger Conservation Authority 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.

The functions of NTCA are as follows:
- Ensuring normative standards in tiger reserve management
- Preparation of reserve specific tiger conservation plan
- Laying down annual/ audit report before Parliament
- Instituting State level Steering Committees under the Chairmanship of Chief Minister and establishment of Tiger Conservation Foundation.
- According approval for declaring new Tiger Reserves.

15. OUTCOMES OF COP24 IN POLAND

What to study?
- *For Prelims: About Paris Climate Deal, COP24 and its outcomes.*
- *For Mains: Outcomes and significance of the recent COP24 and the need for framework to achieve Paris Climate targets.*

What was agreed at COP24?
- Countries settled on most of the tricky elements of the "rulebook" for putting the 2015 Paris agreement into practice.
- This includes how governments will measure, report on and verify their emissions-cutting efforts, a key element because it ensures all countries are held to proper standards and will find it harder to wriggle out of their commitments.
- This global deal is meant for climate actions by all the countries across the globe post-2020.

What it contains?
- *The Katowice package* includes guidelines that will operationalize the transparency framework. It sets out how countries will provide information about their Nationally Determined Contributions (NDCs) that describe their domestic climate actions. This information includes mitigation and adaptation measures as well as details of financial support for climate action in developing countries.
- *Besides transparency framework, the Katowice package also includes guidelines that relate to the process for establishing new targets on finance from 2025 onwards* to follow-on from the current target of mobilizing $100 billion per year from 2020 to support developing countries.
- *It also includes how to conduct the Global Stocktake (GST)* of the effectiveness of climate action in 2023 and how to assess progress on the development and transfer of technology.

Significance of the rulebook:
- The global rules are important to ensure that each tonne of emissions released into the atmosphere is accounted for.
- In this way, progress towards the emission limitation goals of the Paris Agreement can be accurately measured. Currently, climate actions of rich nations for pre-2020 period are being guided by the Kyoto Protocol.

Why did it take so long?
- There was a row over carbon credits, which are awarded to countries for their emissions-cutting efforts and their carbon sinks, such as forests, which absorb carbon. These credits count towards countries' emissions-cutting targets.
- Brazil, which hopes to benefit from its large rainforest cover, insisted on a new form of wording that critics said would allow double counting of credits, undermining the integrity of the system. This issue has been put off until next year.

What wasn't agreed?
- Largely absent from these talks, which had a technical focus, was the key question of how countries will step up their targets on cutting emissions.
- On current targets, the world is set for 3°C of warming from pre-industrial levels, which scientists say would be disastrous, resulting in droughts, floods, sea level rises and the decline of agricultural productivity.

When will that be agreed?
- The key deadline is 2020, when countries must show they have met targets set a decade ago for cutting their emissions, and when they must affirm new, much tougher targets.

What does the science say?
- The Intergovernmental Panel on Climate Change (IPCC), the global body of the world's leading climate scientists, warned two months ago that allowing warming to reach 1.5°C above pre-industrial levels would have grave consequences, including the die-off of coral reefs and devastation of many species.

How long have we got?
- If we extrapolate from the IPCC's findings, the world has little more than a decade to bring emissions under control and halve them, which would help to stabilise the climate.

Are we getting there?
- After years in which the world's carbon emissions appeared to be stabilising, they are on the rise again. Coal use continues and oil is still the engine of much of the world's economy. Clean energy is coming on-stream at a faster rate than many predicted, and the costs of it have come down rapidly, but its adoption needs to be speeded up.
- Infrastructure, such as energy generation plants, transport networks and buildings, is a central issue: infrastructure built now to rely on high-carbon energy effectively locks in high emissions for decades to come. Some people are also saying we need to invest in projects to remove carbon from the atmosphere.

What happens next?
- The UN will meet again next year in Chile to thrash out the final elements of the Paris rulebook and begin work on future emissions targets. But the crunch conference will come in 2020, when countries must meet the deadline for their current emissions commitments and produce new targets for 2030 and beyond that go further towards meeting scientific advice.
- That conference may be held in the UK or Italy, both of which have bid to be hosts. The UK's intention in offering to host is to signal it will retain its role on the world stage after Brexit. The event may also provide a welcome change from wranglings over Brexit and intractable trade deals.

Sources: Et.

(Q) The Rule book agreed to in COP 24, is not ambitious enough to prevent the dangerous effects of global warming. Critically analyze.

16. INDIAN FOREST ACT 1927

What to study?
- *For Prelims: Key features of the Indian Forest Act 1927.*
- *For Mains: Need for review and the expected outcomes.*

Context: The Ministry of Environment, Forest and Climate Change (MoEF&CC) has started the process of "comprehensively amending" the backbone of forest governance in India—the Indian Forest Act, 1927 (IFA).

Expected outcomes:
- The process would involve the examination of all the sections of the Act. The obsolete provisions will be weeded out and provisions fit for the present will be introduced.
- *Currently there is no definition of forest* in any Indian law pertaining to forest or its governance. Therefore, the amendments will also include definitions of terms like forests, pollution, ecological services etc.
- The legal definition of forests will have huge ramifications on the conservation of forests as well as the implementation of the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act, 2006.
- *The amendments will include changes to punishments and fines prescribed in the IFA, incorporate provisions related to carbon sequestering, ecological services etc*.

The current practice:
- According to the 1996 Supreme Court order, *the dictionary definition of the word forest is taken to be the legal definition too*. It covers all statutorily recognised forests, whether designated as reserved, protected or otherwise for the purpose of Section 2(i) of the Forest Conservation Act (1980).
- As per the Court order, *the term forest land, occurring in Section 2, will not only include forest as understood in the dictionary sense, but also any area recorded as forest in the government record irrespective of the ownership*.

Indian Forest Act, 1927:
- The Indian Forest Act, 1927 was largely based on previous Indian Forest Acts implemented under the British. The most famous one was the Indian Forest Act of 1878.
- Both the 1878 act and the 1927 one sought to consolidate and reserve the areas having forest cover, or significant wildlife, to regulate movement and transit of forest produce, and duty leviable on timber and other forest produce.
- It also defines the procedure to be followed for declaring an area to be a Reserved Forest, a Protected Forest or a Village Forest.
- It defines what a forest offence is, what are the acts prohibited inside a Reserved Forest, and penalties leviable on violation of the provisions of the Act.

The need for review:
- Many reports like the MB Shah report of 2010 and the TSR Subramanian report of 2015, have talked about amending the IFA.

Sources: the hindu.

(Q) The recent amendments to the Indian Forest Act, 1927 will create new markets & jobs for poor communities. Critically analyze.

17. INDIA'S SECOND BIENNIAL UPDATE REPORT (BUR) TO UNFCCC

What to study?
- *For Prelims: About UNFCCC, INDCs and Paris Agreement.*
- *For Mains: Significance of INDCs and efforts to contain climate change, need for collaborative efforts.*

Context: The Union Cabinet chaired by Prime Minister Narendra Modi has approved Submission of India's second Biennial Update Report (BUR) to the United Nations Framework Convention on Climate Change (UNFCCC) towards the fulfilment of the reporting obligation under the Convention.

Background:
- *The submission of India's second BUR would fulfil the obligation of India to furnish information regarding implementation of the convention*, being a party. The scope of the BUR is to provide an update to India's first BUR to the UNFCCC.
- *The second biennial update report aims to* provide an update to India's first biennial report to the United Nation's body on climate change. The report contains five major components including national circumstances, national greenhouse gas inventory, mitigation actions, finance, technology and capacity building needs and support received and domestic monitoring, reporting and verification arrangements.

Key findings:
- Out of the total emissions, energy sector accounted for 73%, IPPU 8%, agriculture 16% and waste sector 3%. About 12% of the emissions were offset by the carbon sink action of forestland, cropland and settlements.

INDC- India's proposed targets:
- *Reduce emissions intensity* of its GDP by 33 to 35% by 2030 from 2005 level.
- *Achieve about 40% electric power installed capacity from non-fossil fuel based energy resources* by 2030 with help of transfer of technology and low cost international finance.
- *Create an additional carbon sink* of 2.5 to 3 billion tonnes of CO_2 equivalent through additional forest and tree cover by 2030.

About UNFCCC:
- *The UNFCCC was adopted in 1992 at the Rio Earth Summit*, which marked the beginning of the international community's first concerted effort to confront the problem of climate change.
- *Known also as the Rio Convention*, the UNFCCC established a framework for action to stabilise concentrations of *greenhouse gases in the earth's atmosphere*.
- The UNFCCC entered into force in 1994, and nearly all of the world's nations—a total of 195—have now signed on.

Sources: the hindu.

18. RIVER DOLPHINS GO MISSING IN SUNDERBANS

Context: According to a recently conducted study, rise in salinity in the water system that makes the Indian Sunderbans has resulted in the decrease of population of the Ganges River Dolphins (GRDs) in the region.

Highlights of the study:
- The national aquatic animal is no longer sighted in the central and eastern parts of Sunderbans region. Only in the western part of Sunderbans, where the salinity is lower, could researchers find some evidence of the species.
- The hyper-saline zone in the central part of the Sunderbans, which includes areas such as Raidighi and Patharpratima has lost connectivity with the upstream freshwater flow.

Concerns:
- The study shows that how natural changes including the phenomenon of climate change and human interventions in the Indian Sunderbans are having an adverse impact on the habitat of the species.
- The rise in sea level, triggered by climate change, is one of the reasons for the increase in salinity of waters of rivers and channels. Hydrological modifications like water diversion and commission of large barrages upstream have had a great impact on the salinity profile of the rivers downstream in the Sunderbans.

Need of the hour:
- Because of its unique body shape, it becomes difficult for the dolphin to remain submerged in waters with high salinity. Hence freshwater flow to the Sunderbans is crucial for the subsistence of these species.

About Gangetic River Dolphin:
- Gangetic river dolphins fall under *Schedule I of the Indian Wildlife (Protection) Act. It has been declared an 'endangered' species by the International Union for Conservation of Nature (IUCN)*.
- The Gangetic river species found in India, Bangladesh and Nepal is almost completely blind.
- The Gangetic river dolphin is one of the four freshwater dolphin species in the world. The other three are found in the Yangtze river, the Indus river in Pakistan and the Amazon river.

19. REDD+

What to study?
- ***For Prelims: REDD+ related facts.***
- ***For Mains: Significance and the need for National REDD+ strategy, performance of REDD+.***

Context: A new study by Delhi-based non-profit Centre for Science and Environment (CSE) has revealed that Reducing Emissions from Deforestation and Forest Degradation (REDD+), the programme initiated by the United Nations in 2005 to mitigate climate change through enhanced forest management in developing countries, has largely failed to achieve its objectives.

FAQ: What's the difference between REDD+ and the UN-REDD Programme?

United Nations Framework Convention on Climate Change

REDD+ is a climate change mitigation solution being developed by Parties to the United Nations Framework Convention on Climate Change (UNFCCC).

REDD+ incentivizes developing countries to keep their forests standing by offering results-based payments for actions to reduce or remove forest carbon emissions.

UN-REDD PROGRAMME
Food and Agriculture Organization of the United Nations
UNDP UNEP

The UN-REDD Programme assists countries to develop the capacities needed to meet the UNFCCC's REDD+ requirements, so that they can qualify to receive results-based payments under the Convention.

The UN-REDD Programme supports nationally-led REDD+ processes and promotes the informed and meaningful involvement of all stakeholders, including indigenous peoples and other forest-dependent communities.

Learn more at www.un-redd.org

Highlights of the study:
- Large-scale finance for REDD+ has been a major issue as carbon markets have not materialised and international funding commitments for REDD+ have been much lower than expected.
- "REDD+ implementation costs have been high and benefits for local communities from REDD+ projects have been minimal.
- There is need to rethink the REDD+ mechanism based on these experiences and the findings emerging from new research on the potential of forests to mitigate climate change.

India's REDD+ strategy:
- Complying with the UNFCCC decisions on REDD+, India has prepared its National REDD+ Strategy. The Strategy builds upon existing national circumstances which have been updated in line with India's National Action Plan on Climate Change, Green India Mission and India's Nationally Determined Contribution (NDC) to UNFCCC.
- The strategy report has been prepared by Indian Council of Forestry Research & Education (ICFRE), Dehradun.

Background:
- Since its formalisation in 2006, REDD+ had emerged as the most prominent global mechanism to integrate the role of forests in climate change. It was touted as a win-win situation for biodiversity conservation, carbon sequestration and local livelihoods.

- More than 300 REDD+ initiatives have taken off since 2006. The mechanism has been enshrined in the Paris Agreement of 2015, and its implementation is transitioning from smaller, isolated projects to larger, jurisdictional programmes with support from bilateral and multilateral agencies.

About REDD+:
- In simple terms, REDD+ means "Reducing Emissions from Deforestation and forest Degradation", conservation of forest carbon stocks, sustainable management of forests, and enhancement of forest carbon stocks in developing countries.
- ***REDD+ is a mechanism developed by Parties to the United Nations Framework Convention on Climate Change (UNFCCC).***
- ***It creates a financial value for the carbon stored in forests*** by offering incentives for developing countries to reduce emissions from forested lands and invest in low-carbon paths to sustainable development.
- ***Developing countries would receive results-based payments for results-based actions.*** REDD+ goes beyond simply deforestation and forest degradation and includes the role of conservation, sustainable management of forests and enhancement of forest carbon stocks.

Sources: down to earth.

Topic: Disaster and disaster management.

SUBHASH CHANDRA BOSE AAPDA PRABANDHAN PURASKAAR

What is it? These are annual awards instituted recently by the Centre to recognise the excellent work done by individuals and institutions in the country in the field of disaster management.

Key facts:
- Three eligible institutions and individuals will be given the 'Subhash Chandra Bose Aapda Prabandhan Puraskaar' every year with cash rewards ranging from Rs 5 lakh to Rs 51 lakh.
- If the awardee is an institution, it will be given a certificate and a cash prize of Rs 51 lakh and the prize money will be utilised for disaster management-related activities only.
- If the awardee is an individual, the person shall receive a certificate and a cash prize of Rs 5 lakh.
- An application by an institution does not debar any individual from that institution to apply for the award in his individual capacity.

Eligibility:
- Only Indian nationals and Indian institutions can apply for the award.
- For institutional awards, voluntary organisations, corporate entities, academic, research institutions, response, uniformed forces or any other institution may apply for the award.
- The applicant must have worked in the area of disaster management like prevention, mitigation, preparedness, rescue, response, relief, rehabilitation, research, innovation or early warning related work in India.
- The application must be accompanied by details of the work done in disaster management and must highlight achievements in any one or more of the areas like saving human lives, reduction in impact of disasters on lives, livestock, livelihoods, property, society, economy, or environment.
- Mobilisation and provision of resources for effective response during disasters, immediate relief work in disaster hit areas and communities, effective and innovative use of technology in any field of disaster management and disaster mitigation initiatives in hazard prone areas are some of the other criteria.

Sources: the hindu.

Topic: Various Security forces and agencies and their mandate.

1. PERMANENT CHAIRMAN OF THE CHIEFS OF STAFF COMMITTEE

What to study?
- ***Static Part: About PCCoSC and roles.***
- ***Dynamic and Current: Need, issues and significance.***

Context: The three services are taking steps to improve 'jointmanship' and have agreed on the appointment of a Permanent Chairman of the Chiefs of Staff Committee. This proposal has been forwarded to the Defence Ministry and it is being examined there.

About Permanent Chairman of the Chiefs of Staff Committee and his roles:
- The PCCoSC is envisaged as a single-point military adviser to the government.
- PCCoSC will be a four-star officer, who will be equivalent to chiefs of army, airforce and navy.

PCCoSC is necessary for the following reasons:
- For better coordination and co-operative practices among the three services.
- To provide single point military advice to government.
- Streamline long-term defence planning and procurement purpose.

Roles and functions:
- He would look into joint issues of the services like training of troops, acquisition of weapon systems and joint operations of the services.
- The officer would also be in-charge of the tri-services command at Andaman and Nicobar Islands, the strategic command of nuclear weapons along with the upcoming cyber and space command.

Background:
- A GoM in its report, submitted to the government in February 2001, recommended the creation of such an institution.
- The Naresh Chandra Task Force, formed in May 2011 to review the national security management system, recommended the creation of permanent post of chairman, chiefs of staff committee (CoSC).

Sources: the hindu.

2. SINO-INDIA JOINT EXERCISE HAND-IN-HAND 2018

- Exercise **Hand-in-Hand** is conducted annually as part of **military diplomacy and interaction between armies of India and China**.
- The exercise will involve tactical level operations in an **International Counter Insurgency/Counter Terrorist environment under UN mandate.**
- The conduct of **Joint Military Exercises** is also an important step to uphold the **values of Peace, Prosperity and Stability in the region.**

Aim of the Exercise:
- To **build and promote close relations between armies** of both the countries.
- To enhance ability of joint exercise commander to take military contingents of both nations under command.
- To acquaint both the Armies with each other's operating procedure in the backdrop of counter terrorism environment.

Exercise Hand-in-Hand 2018 will go a long way to further cement relationship between both the nations and will **act as a catalyst in bringing bonhomie at grassroots levels** between the armies of both countries.

Background:
- The last time the two armies had the joint exercise was in 2016, in Pune, but due to tensions between the two sides over **Doklam** due to standoff between the armies for more than 70 days, the **armies skipped the 'Hand-in-Hand' exercise in 2017**.
- **Doklam is a strategically important area which is claimed by Bhutan.**
- Post Doklam, both countries had been working to increase cooperation. In fact, two leaders met four times on the sidelines of the recently concluded G-20 summit in Argentina.

Source: PIB

3. EX AVIAINDRA 2018

- Ex AVIAINDRA, a service specific exercise between **Indian Air Force** and **Russian Federation Aerospace Force (RFSAF)** is planned at **Air Force Station Jodhpur**.

AVIAINDIRA-2018:
- Exercise Aviaindra is an Air Force level exercise between India and the Russian Federation.

- **First Aviaindra was conducted in 2014**, planned as a **bi-annual exercise**.
- **AVIAINDRA-2018 is the second in the series of bilateral joint exercise between IAF-RFSAF** (the exercise is unique, where the foreign participants does not bring its assets).

Aim of the Exercise:
- The aim of the exercise is **focused towards anti-terrorist operations** in a bi-lateral scenario. This further enhances the co-operation and understanding each other's **Concept of Operations**.

Background:
- **Russia has been a major partner of India in the defence sector** and the cooperation has been steadily growing further.
- In **October 2017**, **India and Russia held a 10-day mega war game** involving their armies, navies and air forces for the first time ramp up military ties.
- The exercise **Indra**, which took place in Russia, primarily focused on achieving coordination between forces of the two countries in tri-services integrated theatre command scenario.
- It was the **first time**, **India participated in tri-services exercise with a foreign country** with large scale participation by **the Navy, the Army and the Air Force**.

Source: PIB

Topic: Cybersecurity related issues.

MHA AUTHORISES 10 CENTRAL AGENCIES TO ACCESS ANY COMPUTER RESOURCE

What to study?
- *For Prelims: Agencies allowed to access the information.*
- *For Mains: Concerns over data privacy and the need for access.*

Context: The Ministry of Home Affairs (MHA) has issued an order ***authorising ten security and intelligence agencies of the country to access any information stored in any computer*** for the purpose of monitoring, decrypting and interception.

Who are these agencies?
- ***The 10 agencies include*** Intelligence Bureau, Narcotics Control Bureau, Enforcement Directorate, Central Board of Direct Taxes, Directorate of Revenue Intelligence;, Central Bureau of Investigation, National Investigation Agency Cabinet Secretariat (RAW), Directorate of Signal Intelligence (For service areas of Jammu & Kashmir, North-East and Assam only), and Commissioner of Police, Delhi.

Highlights of the Order:
- The ministry has vested the authority on the agencies ***under Section 69 of the Information Technology Act, 2000 and Rule 4 of the Information Technology Procedure and Safeguards for Interception, Monitoring and Decryption of Information) Rules, 2009***.
- The order ***mandates for a subscriber or service provider or any person in charge of the computer resource to extend technical assistance to the agencies***.
- ***Non-compliance*** will invite seven-year imprisonment and fine.

Concerns raised:
- Only data in motion could be intercepted earlier. But ***now data revived, stored and generated can also be intercepted as powers of seizure have been given***. This means not just calls or emails, but any data found on a computer can be intercepted.
- The agencies will also have powers to seize the devices. ***The sweeping powers given to agencies to snoop phone calls and computers without any checks and balances is extremely worrisome***. This is likely to be misused.

Sources: the hindu.

1. 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 Navy will soon put into operation the *Information Fusion Centre for Indian Ocean Region (IFC-IOR)* to improve maritime security in the region.

About IFC- IOR:
- The IFC-IOR is being 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:
- The IOR has a diverse set of littorals and island nations, each with their unique needs, aspirations, interest and values. Rise in maritime piracy in the region has had its impact worldwide, which shows how important these waters are to the nations and economies the world over.
  - Although concerted efforts by the navies and maritime security agencies over the last few years have significantly reduced this threat, other challenges persist.
  - Establishment of the 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.

The Indian Ocean is important for the following reasons:
- *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.

(Q) Indian Ocean has a great political and economic significance. Comment.

Topics: *Basics of Money Laundering.*

INDIA'S 9-POINT AGENDA AGAINST FUGITIVE ECONOMIC OFFENDERS

What to study?
- *Static Part: About G20, Meaning of fugitive economic offender.*
- *Dynamic and Current: The proposed action plan- need, significance, challenges and the need for international collaboration.*

Context: India has presented a nine-point programme to take action against fugitive economic offenders at the ongoing G20 Summit in Argentina.

The agenda includes:
- ***Strong and active" cooperation among the G-20 nations***. The document highlights the importance of cooperation in legal processes such as "effective freezing of the proceeds of crime; early return of the offenders and efficient repatriation of the proceeds of crime should be enhanced and streamlined".
- ***Joint efforts*** to be made by the G20 nations to form a mechanism that denies entry and safe havens to all fugitive economic offenders.
- There is need for ***the "effective" implementation*** of the principles of the United Nations Convention Against Corruption (UNCAC) and the United Nations Convention Against Transnational Organised Crime (UNOTC).
- The Financial Action Task Force (FATF) should be called upon ***"to assign priority and to focus on establishing international co-operation*** that leads to a timely and comprehensive exchange of information between the competent authorities".
- The FATF should be tasked ***to formulate a standard definition of fugitive economic offenders***.
- The FATF ***should also develop a set of commonly agreed and standardised procedures*** related to identification, extradition and judicial proceedings for dealing with fugitive economic offenders to provide guidance and assistance to G-20 countries, subject to their domestic law".
- There is need for setting up of a ***common platform "for sharing experiences and best practices including successful cases of extradition, gaps in existing systems of extradition and legal assistance***."
- ***The G20 forum*** should consider initiating work on locating properties of economic offenders who have a tax debt in the country of their residence for its recovery.

Background:
- The programme for curbing the menace of fugitive economic offenders comes amid heightened efforts by India to apprehend a number of such offenders, including Vijay Mallya, Nirav Modi and Mehul Choksi.

Sources: the hindu.

Facts for Prelims

1. INDIA TO HOST G20 SUMMIT IN 2022

- *Context:* India will host the G20 Summit In 2022, when the country celebrates its 75th year of Independence. It will be the first meet of the global grouping in India.
- Founded in 1999, the G20 brings together 19 of the world's most industrialised nations and the European Union. Annual meetings of its country's leaders have been taking place since 2008.
- G-20 members comprise Argentina, Australia, Brazil, Canada, China, the European Union, France, Germany, India, Indonesia, Italy, Japan, Mexico, Russia, Saudi Arabia, South Africa, South Korea, Turkey, the UK and the US.

2. 'FAROUT' DWARF PLANET

- *What is it?* It is the most-distant body ever observed in our solar system discovered recently. It is located over 100 times farther than Earth is from the Sun.
- It has been given the provisional designation 2018 VG18. It is at about 120 astronomical units (AU), where 1 AU is defined as the distance between the Earth and the Sun.
- *The discovery images of 2018 VG18 were taken at the Japanese Subaru 8-metre telescope located atop Mauna Kea in Hawaii* on November 10, 2018. 2018 VG18 was seen for the second time in early December at the Magellan telescope at Carnegie's Las Campanas Observatory in Chile.
- *The second-most-distant observed solar system object is Eris, at about 96 AU*. Pluto is currently at about 34 AU, making 2018 VG18 more than three-and-a-half times more distant than the solar system's most-famous dwarf planet.

3. CIMON, THE 1ST ROBOT WITH ARTIFICIAL INTELLIGENCE TO FLY IN SPACE

- CIMON is a small robot endowed with artificial intelligence (AI) launched on a two-day trip to the International Space Station aboard SpaceX's Dragon cargo capsule.

About CIMON:

- CIMON was developed by the European aerospace company Airbus on behalf of the German space agency. The robot's AI is IBM's famous Watson system.
- CIMON is roughly spherical and weighs 11 lbs. (5 kilograms). The robot can converse with people, and it knows whom it's talking to thanks to facial-recognition software.

4. KOROLEV CRATER

- *What is it?* It is an icy- crater on Mars found recently. It was captured by European Space Agency's (ESA) Mars Express mission. The crater floor can reach depths of two kilometers (1.2 miles) below its rim, deeper than Earth's Grand Canyon.
- *Mars Express Mission* was launched back in June 2003 and entered orbit around the red planet in December of the same year. Since then, the probe has been surveying the surface of Mars using a high resolution camera as well as other tools like radars and spectrometers.

5. RAJIV KUMAR COMMITTEE

- *What is it?* The Union Government has constituted a six-member committee to look at selling of 149 small and marginal oil and gas fields of state-owned Oil and Natural Gas Corporation (ONGC) and Oil India Limited (OIL) to private and foreign companies to boost domestic output. The panel is chaired by the NITI Aayog Vice Chairman Rajiv Kumar.

6. TRAIN 18

- *Context*: India's first engine-less train-breached the 180 kmph speed threshold during a test run in the Kota-Sawai Madhopur section, becoming the country's fastest train.

About Train 18:

- Train 18 is a flagship train set; the first prototype has been built by the Integral Coach Factory, Chennai, in a record time of 20 months.
- The train is a 100% 'Make in India' project and is claimed to be built at half the cost of a similar train set that is imported.
- T-18 is a self-propelled engine-less train (similar to the Metro trains) and is energy-efficient as its coaches will be fitted with LED lights. Coaches will have automatic doors and retractable footsteps.
- It will be inter-connected with fully sealed gangways along with a GPS-based Passenger Information System. It is provided with of Bio toilets.

7. INDIA'S TALLEST BRIDGE PIER BUILT IN NONEY, MANIPUR

- *What is it?* The Northeast Frontier Railway Construction Organization has constructed India's tallest pier as part of the project to build a railway bridge at Noney in Manipur. The proposed bridge will be the world's tallest railway bridge.

Key facts:

- The bridge is being constructed across the valley of river Ijai near Noney, with the height of the final pier being 141 metres. The total length of the Noney bridge will be 703 metres.
- On completion, the bridge will surpass the existing world record, held by the 139-metre Mala-Rijeka viaduct in Montenegro.
- The bridge is a part of the 111-km Jiribam-Tupul-Imphal new broad gauge line project, a national project which is set to be completed by 2022. The project also includes 45 tunnels, the longest being 10.28 km, which will be the longest railway tunnel of the northeast.

8. KERALA BECOMES FIRST STATE TO HAVE FOUR INTERNATIONAL AIRPORTS

- With *the inauguration of the Kannur airport*, Kerala has now become the first state in India to have four international airports, with Thiruvananthapuram, Kochi and Kozhikode being the other three.

9. KAIGA POWER STATION-1 CREATES A WORLD RECORD YET AGAIN

- Karnataka's Kaiga has once again made the country proud by creating a world record for the longest uninterrupted operation for 941 days, thereby breaking the earlier record of 940 days by the United Kingdom.
- *Background:* KGS-1 at Kaiga, located 56 km from Karwar has been generating electricity continuously since May 13, 2016. It is an indigenously-built PHWR run by domestic fuel (uranium). It began commercial operations on November 16, 2000, and has produced 500 cr. units of power so far. In June, KGS-1 had set a national record for continuous operation of 766 days.

10. HAND-IN-HAND MILITARY EXERCISE

- The seventh edition Hand-in-Hand Military exercise between India, China is being held in Chengdu, China.
- The main focus is on counter-terrorism operations.
- It will involve tactical level operations in an International Counter Insurgency/ Counter Terrorist environment under UN mandate.

11. CLEAN SEA- 2018

- *What is it?* It is a Regional Level Marine Oil Pollution Response Exercise conducted by Indian Coast Guard (ICG) recently at sea off Port Blair, Andaman & Nicobar (A&B) Islands.
- The objective of exercise was to ascertain preparedness of IGC, resource agencies and other stakeholders in responding to major oil spill in line with provisions of National Oil Spill Disaster Contingency Plan (NOS-DCP).

Key facts:

- Indian Coast Guard (ICG) under Ministry of Defence is responsible for marine environment protection in maritime zones of India and is

coordinating authority for response to oil spills in Indian waters.

- It has drawn up National Oil Spill Disaster Contingency Plan (NOS-DCP) and has established three pollution response centres at Mumbai, Chennai and Port Blair.

12. ADMIRAL CUP SAILING REGATTA 2018

- *Context*: The ninth edition of the Admiral's Cup Sailing Regatta, the biggest military sailing competitive event in the world as far as the number of participating countries are concerned, is being held at Indian Naval Academy (INA), Ezhimala in Kerala. A total of 32 teams, including 30 from foreign countries are taking part in the event.
- *Background*: It was in 2010 that the Indian Navy instituted the 'Admiral's Cup Regatta' as a 'fleet race' in a single crew Olympic class 'Laser Radial' sail boat, with eight foreign Naval Academies participating.
- This year's regatta has the highest ever number of countries participating in the event with first time participation by Bulgaria and Iran.

13. VIJAY DIWAS

- *Context:* India celebrated Vijay Diwas on 16th December 2018 marking the 47th anniversary of its victory over Pakistan in the 1971 war.

Key facts:

- Vijay Diwas, also called as Victory Day, is celebrated on every 16th December in India. It marks the victory of Indian armed forces over Pakistan in the war of Independence of Bangladesh from Pakistan in 1971.
- At the end of the 1971 war, the Pakistani Army unilaterally and unconditionally surrendered resulting in the independence of East Pakistan, which was called as Bangladesh.

14. ANTI-SHIP CRUISE MISSILE BRAHMOS

- The Defence Acquisition Council (DAC) meeting chaired by defence minister Nirmala Sitharaman gave approval for the procurement

of BrahMos Missiles for two of the vessels to be built in Russia.

About BrahMos:

- The BrahMos is the fastest cruise missile of its class in the world.
- BrahMos missile 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.
- The BrahMos 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.

15. SUCCESSFUL FLIGHT TEST OF AGNI – IV

- Agni-IV, the Long Range Surface to Surface Ballistic Missile with a range of 4,000 kms was successfully flight tested recently.
- The missile is developed by the Defence Research and Development Organisation under the Integrated Guided Missile Development Program.
- Agni IV is nuclear capable, with a payload capacity of one tonne of high-explosive warhead.
- The sophisticated surface-to-surface missile is equipped with modern and compact avionics to provide high level of reliability.
- The most accurate Ring Laser Gyro based Inertial Navigation System (RINS) and supported by highly reliable redundant Micro Navigation System (MINGS), ensures the vehicle reaches the target within two digit accuracy.

16. INDIAN NAVY- DEEP SUBMERGENCE RESCUE VEHICLE

- *Context*: The Indian Navy has inducted its first Deep Submergence Rescue Vehicle (DSRV) System at the Naval Dockyard in Mumbai. With this, the Indian Navy joins a select group of naval forces in the world that boasts of this niche capability.
- DSRV is used to rescue crew members stranded in submarines that get disabled. The DSRV can be operated at a depth of 650 meters and can hold around 15 people.

17. INDIA'S FIRST JEAN MONNET COE OPENED AT MAHE

- **Context**: India's first Jean Monnet Centre of Excellence, established by the European Union, was recently inaugurated at the Department of European Studies (DES) in Manipal Academy of Higher Education (MAHE).
- It comes with grant of €1,00,000 to pursue India-EU interdisciplinary studies in culture, literature, education and society.

- **Who is Jean Monnet?** A French political economist and diplomat, Jean Monnet was influential supporter of European unity and is considered as one of founding fathers of European Union. He also has been called "The Father of Europe" by those who see his innovative and pioneering efforts in the 1950s as the key to establishing the European Coal and Steel Community, the predecessor of today's European Union.

18. UNIVERSAL HEALTH COVERAGE DAY- DECEMBER 12

- **Context**: International Universal Health Coverage Day (UHC Day) on 12 December aims to mobilize diverse stakeholders to call for stronger, more equitable health systems to achieve universal health coverage, leaving no one behind.
- **The theme of World Health Day is:** Universal health coverage: everyone, everywhere.

What is Universal Health Coverage?

- Universal health coverage (UHC) ensures all people, everywhere, can access the quality health services they need without suffering financial hardship. It is a fundamentally political goal rooted in the human right to health. It is also one of the smartest investments any country can make.

19. INTERNATIONAL DAY OF PERSONS WITH DISABILITIES

- **Context**: The International Day of Persons with Disabilities is observed every year on December 3 to promote the rights and well-being of persons with disabilities in all spheres of society and development.
- **2018 theme**- "Empowering persons with disabilities and ensuring inclusiveness and equality".

About the Day:

- The International Day of Persons with Disabilities was instituted by United Nations General Assembly (UNGA) in 1992.
- It aims to promote an understanding of disability issues and mobilize support for the dignity, rights and well-being of persons with disabilities.
- It also seeks to increase awareness of situation of persons with disabilities in every aspect of political, social, economic and cultural life.

20. WORLD'S FIRST FLOATING NUCLEAR PLANT IN RUSSIA

- **Akademik Lomonosov is the world's first "floating" nuclear power plant (FNPP)**. It is coming up in Russia.

- **Key facts:** An FNPP is basically a mobile, low-capacity reactor unit operable in remote areas isolated from the main power distribution system, or in places hard to access by land. They are designed to maintain both uninterruptible power and plentiful desalinated water supply in remote areas.

21. JNANPITH AWARD

- **Context**: Renowned English fiction writer Amitav Ghosh has been selected for Jnanpith award, 2018.

About:

- The Jnanpith Award is one of the prestigious literary honours in the country. The award was instituted in 1961.
- Eligibility: Any Indian citizen who writes in any of the official languages of India is eligible for the honour.

22. SHRAM AWARDS

- **Context:** The Union Government has announced to confer the Prime Minister's Shram Awards 2017 to 40 workers across country.

About Shram Awards:

- The Prime Minister's Shram Awards were **instituted in 1985 by the Government of India**.
- This national award **is conferred on workers for outstanding contributions that improve productivity, innovation, and indigenization, resulting in saving foreign exchange**. The award is **also given for long-term exceptional dedicated work**.
- The objective of the Prime Ministers Shram Awards is to recognize the outstanding contributions made by workmen as defined in **the Industrial Dispute Act, 1947** in organizations both in public and private sector and who have distinguished record of performance, devotion to duty of a high order, specific contribution in the field of productivity and proven innovative abilities among others.

There are four types of awards:

- **Shram Ratna:** Two lakhs and recognition of their contribution to their field (a Sanad).
- **Shram Bhushan:** 100000 and a Sanad.
- **Shram Vir / Shram Veerangana:** 60000 and a Sanad.
- **Shram Devi / Shram Shree:** 40000 and a Sanad.

23. NATIONAL UNITY AWARD

- **Context:** Prime Minister Narendra Modi has announced the institution of a new national honour for National Unity on the pattern of Padma Awards. The annual award would be given to any Indian who has contributed to national unity in any manner.

24. SAHITYA AKADEMI AWARD

- **Context:** India's national academy of letters Sahitya Academy has announced names of 24 poets and authors who will be conferred the prestigious 2018 Sahitya Akademi Award in 24 different Indian languages.

About Sahitya Akademi Award:

- It is literary honour that is conferred annually on Indian writers for their outstanding works of literary merit.
- It was established in 1954.
- It is conferred annually on writers of outstanding works in one of the twenty-four major Indian languages (22 Scheduled Languages+ English and Rajasthani).
- The award consists of a casket containing an engraved copper-plaque (designed by film-maker Satyajit Ray), a shawl and cheque of Rs.1 Lakh.

25. GEORGIA'S FIRST FEMALE PRESIDENT SWORN IN

- **Context:** Salome Zurabishvili is Georgia's first female president. With this, the country has transformed itself into a parliamentary republic with a largely ceremonial president.

About Georgia:

- It is a country in the Caucasus region of Eurasia. Located at the crossroads of Western Asia and Eastern Europe, it is bounded to the west by the Black Sea, to the north by Russia, to the south by Turkey and Armenia, and to the southeast by Azerbaijan.

26. AVANGARD SYSTEM

- **Context**: Starting from next year, in 2019, a new intercontinental strategic system Avangard will enter service in the Russian army and the first regiment in the Strategic Missile Troops will be deployed.

About Avangard system:

- Avangard, also known as "**Objekt 4202**," is **a hypersonic boost-glide missile system** that is supposed to combine a high-performance ballistic missile with an unmanned glider vehicle for significant improvements in maneuverability and sustained top speed.

27. UAE TO DOUBLE WOMEN'S REPRESENTATION IN FEDERAL NATIONAL COUNCIL TO 50 PER CENT

- The United Arab Emirates (UAE) has decided *to increase the representation of Emirati women in the Federal National Council from 22.5 per cent to 50 per cent from the coming Parliamentary term*.

28. SHIKSHA SETU

- *What is it?* Shiksha Setu is a mobile application launched by Haryana Government.
- *Aim:* To bring in Transparency in the education department and in the administration of colleges and to increase the connectivity between students, parents, teachers and administration.

Key features of the app:
- The app contains all the information related to attendance, fee online admission and scholarships in all the Haryana Government colleges.
- The details of lecturers of Government colleges and offices of the directorate can be accessed through the mobile app.
- App will provide the students with instant information about assignments and updates of important notices circulars and other programs.
- The app also provides facility of online fee payment.

29. NATIONAL CANCER INSTITUTE

- *Context:* National Cancer institute has been opened at Jhajjar in Haryana. The institute has been established under a project of Delhi's All India Institute of Medical Sciences (AIIMS).

30. INDIA'S FIRST RAILWAY UNIVERSITY

- *Context: India's first railway university has been opened in Vadodara*– It is named as the *National Rail and Transportation Institution (NRTI)*.

Key facts:
- The Railway University will be first of its kind institution in the nation and the third in the world after Russia and China.
- It will be a deemed university which will offer professional courses in technology and management of transportation networks.

31. CELL-BY-CELL DNA SCIENCE IS 'BREAKTHROUGH OF 2018'

- *Context*: The US journal Science has coined as "Breakthrough of the Year" for 2018 new technologies that reveal how DNA cues individual cells to grow through time.

Significance:
- A combination of technologies is revealing when genes in individual cells switch on, cueing the cells to play their specialized parts. These methods will transform science over the coming decades, allowing an ever clearer picture of the processes behind aging, healing, and disease.

32. MOUNT ANAK KRAKATAU

- *Context:* Both sides of Indonesia's Sunda Strait – Java on the east and Sumatra on the west – have been hit by a tsunami. The tsunami is believed to have been caused by undersea landslides from volcanic activity.

What might have triggered the tsunami?
- Indonesia's climatology agency (BMKG) said undersea landslides triggered by an eruption of the Mount Anak Krakatau volcano, located about 50km offshore in the Sunda Strait between the islands of Java and Sumatra, may have triggered the tsunami.

33. JAGANNATHA ASHRAMS

- *Context:* Haryana has renamed child care institutes being run in the state as Jagannath Ashrams.
- *Why?* Since all child care institutions have a similar goal of all-round development of children, it would be appropriate to give a single name.

34. KOCHI-MUZIRIS BIENNALE

- *Context*: Fourth edition of Kochi-Muziris biennale is being held in Fort Kochi, Kerala. The Biennale was curated by Anita Dube and

become the first Biennale in world in which participation of women accounts for half of the participating artists.

- **Theme of the Biennale is –** "Possibilities for a Non- Alienated Life".
- **The Kochi-Muziris Biennale** is an international exhibition of contemporary art held in Kochi, Kerala. It is the largest art exhibition in India and the biggest contemporary art festival in Asia. The Kochi-Muziris Biennale is an initiative of the Kochi Biennale Foundation with support from the Government of Kerala.

35. INDIA'S FIRST MUSIC MUSEUM TO BE SET UP IN THIRUVAIYARU

- **Context:** The country's first music museum will be set up with assistance from the Central government in Thiruvaiyaru, Tamilnadu, the birth place of Saint Tyagaraja, one of the Trinities of Carnatic music. The other two of the Trinity are Muthuswami Dikshitar and Syama Sastri.
- **Carnatic music**, is a system of music commonly associated with South India, including the modern Indian states of Andhra Pardesh, Telangana, Karnataka, Kerala, and Tamil nadu as well as Sri Lanka . The main emphasis in Carnatic music is on vocal music; most compositions are written to be sung, and even when played on instruments, they are meant to be performed in gyaki (singing) style.

36. BAHUDA ROOKERY

- **Context:** The Odisha forest department is all set to add another olive ridley mass nesting site to its wildlife map- at **Bahuda rookery**. Around 3-km stretch of the beach from Sunapur to Anantpur at Bahuda rookery is being developed as a possible olive ridley mass nesting site.
- **Location:** The Bahuda rookery is located around 20 km to the south of Rushikulya rookery coast, a major mass nesting site of olive ridleys on the Indian coastline.

Key facts:

- Also known as **the Pacific ridley sea turtle**, Olive turtles are a medium-sized species of sea turtle found in warm and tropical waters, primarily in the Pacific and Indian Oceans.
- They are best known for their behavior of synchronized nesting in **mass numbers**.
- The **Convention on Migratory Species and the Inter-American Convention for the Protection**

and Conservation of Sea Turtles have also provided olive ridleys with protection, leading to increased conservation and management for this marine turtle.

- It is included **in Vulnerable category by the IUCN Red list**.

37. MOUNT ETNA

- **Context:** Italy's Mount Etna volcano has erupted again resulting in more than 130 earthquakes of up to 4.3 in magnitude.

About Mt. Etna:

- Mount Etna is **the largest active volcano in Europe and one of the world's most frequently erupting volcanoes**. It is also the volcano with the **longest record of continuous eruption**.
- Located near the east coast of the island of Sicily **in Italy**, Mount Etna is 10,900 feet tall.
- The mountain's largest feature is **the Valle del Bove** (Valley of the Ox), a large horseshoe-shaped caldera on the eastern slope.
- Etna sits on **the active fault between the African plate and the Ionian microplate**, which are both being subducted together beneath the Eurasian plate.
- In June 2013, **it was added to the list of UNESCO World Heritage Sites**.
- Due to its history of recent activity and nearby population, Mount Etna has been designated **a Decade Volcano by the United Nations**.

38. DWIJING FESTIVAL

- **Context:** Dwijing Festival, an annual river festival, has begun on the bank of River Aie in Assam.
- **About Dwijing Festival:** Dwijing Festival is an annual river festival celebrated in the Bodoland Territorial Area Districts (BTAD) region of Assam. The festival provides a platform of earning for the people in the region by putting in to focus the business activities for the better economy generation through rural tourism. The festival also aims to provide help to the flood victim families through charity generation and distribution.
- **About River Aie:** River Aie originates from the Himalayan Mountains of Bhutan and flows through the Chirang and Bongaigaon districts of Assam before joining the river Brahmaputra.

39. DAL LAKE

- *Context:* The famous dal lake in Srinagar is frozen. The city recently witnessed the lowest temperature ever in 11 years at minus 7.6 degree.

About Dal:

- *Also known as the summer capital of Jammu and Kashmir*, dal lake, which is the second largest in the state, is integral to tourism and recreation in Kashmir and is named the "Jewel in the crown of Kashmir" or "Srinagar's Jewel". The lake is also an important source for commercial operations in fishing and water plant harvesting.
- The lake is part of a natural wetland, including its floating gardens. The floating gardens, known as "Rad" in Kashmiri, blossom with lotus flowers during July and August.
- The lake is located in the *Zabarwan mountain valley*, in the foothills of the Shankracharya hills, which surrounds it on three sides.
- The lake has four *main interconnected basins namely, Hazratbal, Bod dal, Gagribal and Nagin*.

40. MADHYA PRADESH TO GET 'SPIRITUAL DEPARTMENT'

- *Context:* Madhya Pradesh Government is going to create an *Adhyatmik Vibhag (spiritual department)* by merging several existing departments.
- The proposed Adhyatmik Vibhag (Spiritual Department) going to be formed by merging Dharmik Nyas Evam Dharmasv Department (Religious Trust and Endowment Department), Anand Vibhag (Happiness Department) in addition to the Directorate of Religious Trust and Endowment, Madhya Pradesh Teerth Evam Mela Pradhikaran and Rajya Anand Sansthan.

41. POSTAL STAMP DEDICATED TO NABIN CHANDRA DAS, INVENTOR OF ROSOGOLLA LAUNCHED IN WEST BENGAL

- *Context:* A postal stamp dedicated to *Nabin Chandra Das*, inventor of Rosogolla was launched recently on Bagbazar-O-Rosogolla Utsob marking the *150th year of its invention*.

Bagbazar-O-Rasogolla Utsob:

- Bagbazar O Rosogolla Utsob, a three-day Rosogolla Utsav is being held at Bagbazar, Kolkata as a tribute to Nabin Chandra Das,

inventor of Rosogolla. The statue of Nabin Chandra Das was also unveiled during the inaugural programme.

42. 3 ANDAMAN & NICOBAR ISLANDS RENAMED AS TRIBUTE TO NETAJI

- *Context:* Prime Minister Narendra Modi, on December 30th, announced renaming of three islands of Andaman and Nicobar archipelago as a tribute to Netaji Subhas Chandra Bose.
- The Ross Island was renamed as Netaji Subhas Chandra Bose Dweep, the Neil Island as Shaheed Dweep and the Havelock Island as Swaraj Dweep.
- *Significance of December 30th:* On this day in 1943, Bose had suggested that Andaman and Nicobar Islands be renamed as Shahid and Swaraj Dweep respectively. During the World War II, the Japanese had captured the Andaman and Nicobar Islands, and Netaji came here as the Azad Hind Fauz led by him was an ally of the Japanese force. This year marks 75 years of the event.

43. PUBLIC ENTERPRISES SURVEY 2017-18

- *Context:* Public Enterprises Survey 2017-18 has been tabled in the Parliament. The survey mapped the performance of central public sector units.

Highlights:

- Indian Oil Corporation, ONGC and NTPC emerged as the top three most profitable PSUs in 2017-18, while BSNL, Air India and MTNL incurred the highest losses for the second consecutive year.