



INSIGHTS IAS

SIMPLIFYING IAS EXAM PREPARATION

- I A S S E L F S T U D Y G U I D E -

CURRENT AFFAIRS

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GS PAPER - I

Paper 1 Topic: Indian culture will cover the salient aspects of Art Forms, Literature and Architecture from ancient to modern times.

1. Kuthiyottam ritual

Context:

- The Kerala State Commission for the Protection of Child Rights has registered a suo motu case in connection with the Kuthiyottam ritual.
- The commission said it would examine if the ritual, reportedly involving piercing children's sides with a hook, violated child rights in any manner.



What is Kuthiyottam ritual?

- The Kuthiyottam ritual is usually performed every year during the Pongala festival at the Attukal Bhagavathy Temple in Thiruvananthapuram, Kerala.
- The Attukal Pongala festival is the largest congregation of women for a festival in the world. Pongala, which means 'to boil over', is a ritual in which women prepare a pudding made from rice, jaggery, coconut and plantains cooked together, and offer it to the goddess. The ritual can only be performed by women.

What's the controversy now?

- Nearly 1,000 young boys undertake a seven-day penance before Pongala day.
- These boys are said to represent the wounded soldiers of the goddess.
- The boys have to observe strict discipline and stay inside the temple for seven days. The rigours include sleeping on the floor, strict diet restrictions, and bathing three times a day.
- They also have to prostrate 1,008 times before the deity.
- The ritual also reportedly involves piercing the child's side with a small hook and knotting a thread through it to symbolise their bond with the Goddess.

What's important?

- **For Prelims:** Attukal Pongala Festival, Kuthiyottam ritual.
- **For Mains:** Protection of vulnerable groups, balance between rights and customs.

Sources: the hindu.

2. 6th Editon of India by the Nile festival

Context: Sixth edition of the India by the Nile (IBN) festival 2018 is being held in Cairo, Egypt.

About India by the Nile festival:

- The annual festival showcases a range of Indian cultural output, including contemporary and classical music, dance, puppet theatre, visual arts, food and yoga.
- It is the biggest foreign festival in Egypt and encourages artistic collaborations between the two countries.
- This year, the festival will also bring two new events, a fashion show and screening of the Indian movies.
- The festival is organised by the Embassy of India in Egypt and the Maulana Azad Centre for Indian Culture in collaboration with entertainment company Teamwork Arts.

What's important?

- **For Prelims:** India by the Nile festival.
- **For Mains:** Cultural linkages between India and Egypt.

Sources: the hindu.

3. Nabakalebar festival

Context:

- Commemorative coins in denominations of ₹10 and ₹1000 have been released on Lord Jagannath's Nabakalebar festival.



About Nabakalebar festival:

- The Nabakalebara is ***an ancient ritual associated with most of the Jagannath Temples*** when the Idols of Lord Jagannath, Balabhadra, Subhadra and Sudarshan are replaced by a new set of Idols.
- A year with an extra Ashadha masa/month as per Hindu Calendar is considered auspicious for conducting the ceremony. This usually occurs every twelve to nineteen years.
- The Deities are made from a special type of Neem wood known as ***Daru Bramha***.
- The most recent ceremony was in 2015, following the 1996 ceremony.
- This festival is celebrated at the Jagannath Temple in Puri, Orissa.

What's important?

- **For Prelims:** Nabakalebar festival, Daru Bramha.

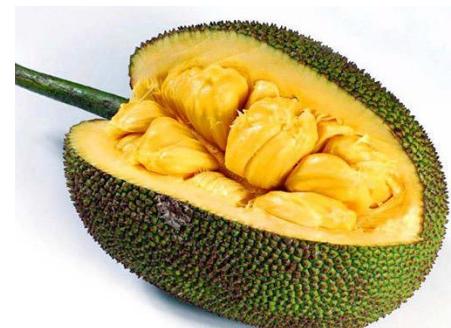
Sources: the hindu.

4. Hindu New Year

- Hindu New Year was welcomed in different parts of the country with traditional festivities and celebrations.
- The Chaitra Sukladi, Ugadi, Gudi Padava, Navareh, Navroz and Chetti Chand are the same festivals in different names, marking the occasion.
 - Andhra Pradesh and Telangana: **Ugadi**.
 - Karnataka: **Yugadi /Ugadi**.
 - Maharashtra: **Gudi Padwa**.
 - Sindhis: **Cheti Chand**.
 - Manipuris: **Sajibu Cheiraoba**.
 - Hindus of Bali and Indonesia also celebrate their new year on the same day as **Nyepi**.

5. Jackfruit to be Kerala's state fruit

- **Context:** Jackfruit is set to be declared as the official fruit of Kerala. The core objective of the government was to give a fillip to the production and sale of jackfruit and its value-added products.
- **Facts:** Elephant is the state animal of Kerala, while 'great hornbill' is the state bird and 'kanikkonna', the official flower. The state had also recently declared pearl spot, popularly known as 'karimeen', as its official fish.



6. 'Adopt a Heritage Project'

Context:

- Letter of Intent has been issued to 24 agencies for the Submission of Vision Bids for 75 sites under the Adopt a Heritage Project.
 - The private players will undertake gap analysis of the actual requirement of the basic and advanced amenities, within the permissible guidelines of Archaeological Survey of India (ASI) and prepare a Vision Bid Proposal accordingly for the site opted by them.
 - Once vision bid is accepted, MoU will be signed with the related party for upkeep of the Monument for overall enhanced tourist experience.

Adopt a Heritage Project:

- **What is it?** The 'Adopt a Heritage Scheme' 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.
- **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.

What's important?

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

Sources: pib.

ADOPT A HERITAGE**7. Karnataka govt clears minority status for Lingayats****Context:**

- The Karnataka government has decided to declare Lingayats as a religious minority and include the Veerashaivas who follow Basavanna as a group within the community.
- The state government will, now, recommend to the Centre that the community be granted religious minority status.

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 Veerashaivas to be Hindus.
- **Karnataka State Minorities Commission had formed a seven-member committee, headed by retired high court Judge HN Nagamohan Das** on the issue. The Nagamohan committee has recommended minority status for only the Lingayats and has kept Veerashaivas out.

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.

What's important?

- **For Prelims:** Minority status.
- **For Mains:** Need for minority status- issues and challenges.

Sources: the hindu.

8. National Cultural Audiovisual Archives (NCAA)

Context:

- **National Cultural Audiovisual Archives (NCAA)** project of the **Ministry of Culture**, Government of India, implemented by Indira Gandhi National Centre for the Arts (IGNCA) has been certified as the **world's first Trusted Digital Repository as per ISO 16363:2012 standard, granted by Primary Trustworthy Digital Repository Authorisation Body Ltd. (PTAB), United Kingdom**.

ISO 16363:

- ISO 16363 for the Audit and Certification of Trustworthy Digital Repositories grew out of the Trusted Digital Repositories and Audit Checklist (TRAC) and is supported by ISO 16919 (Requirements for Bodies providing Audit and Certification) and managed by the Primary Trustworthy Digital Repository Authorisation Body (ISO-PTAB).
- PTAB has been accredited by the National Accreditation Board for Certification Bodies of India (NABC) to conduct ISO 16363 audits worldwide utilizing ISO standard 17021, as extended by ISO 16919.

About National Cultural Audiovisual Archives (NCAA):

- **IGNCA is implementing the National Cultural Audiovisual Archives project.** The primary objective of the NCAA is to identify and preserve the cultural heritage of India available in audiovisual form through a process of digitization and making it accessible to the people.
 - At present, NCAA has a total of twenty-one (21) Partnering Institutions from across the country, covering 11 governmental and 10 non-governmental cultural organisations. The digitization and metadata standards followed by the Project are in parity with international standards within the overall framework of the OAIS model.
 - The digitization standards are in concordance with those prescribed by **the International Association of Sound & Audiovisual Archives (IASA)** and the metadata schema is extended Dublin Core, followed by galleries, libraries, archives and museums worldwide.

What's important?

- **For Prelims and Mains:** NCAA and the need for digitization.

Sources: pib.

9. MADHAVPUR MELA

Context:

- Ministry of Culture is organizing the **Madhavpur Mela in Madhavpur Ghed, District Porbandar in Gujarat** in a grand way.

About Madhavpur Mela:

- The purpose of this integration is to bring various parts of the country especially the North-East, close to each other under the banner of **Ek Bharat Shrestha Bharat** announced by the Prime Minister.
- **The Madhavpur Mela of Gujarat shares its connect to the Mishmi Tribe of Arunachal Pradesh.** The Mishmi Tribe traces its ancestry to the legendary King Bhishmak and through him to his daughter Rukmini and Lord Krishna.

About Ek Bharat Shreshtha Bharat:**What is it?**

- “Ek Bharat Shreshtha Bharat” was announced by Hon’ble Prime Minister on 31st October, 2015 on the occasion of the 140th birth anniversary of Sardar Vallabhbhai Patel. Subsequently, the Finance Minister announced the initiative in his Budget Speech for 2016-17.

**What is it for?**

- Through this innovative measure, the knowledge of the culture, traditions and practices of different States & UTs will lead to an enhanced understanding and bonding between the States, thereby strengthening the unity and integrity of India.

Implementation:

- All States and UTs will be covered under the programme. There will be pairing of States/UTs at national level and these pairings will be in effect for one year, or till the next round of pairings.
- The State/UT level pairings would be utilized for state level activities. District level pairings would be independent of the State level pairings.

Significance:

- The activity will be very useful to link various States and Districts in annual programmes that will connect people through exchanges in areas of culture, tourism, language, education trade etc. and citizens will be able to experience the cultural diversity of a much larger number of States/UTs while realising that India is one.

What's important?

- For Prelims and Mains:** Madhavpur Mela and Ek Bharat Shreshtha Bharat.

Sources: pib.

10. MP's black chicken Kadaknath wins GI tag

Context:

- Madhya Pradesh has won the Geographical Indication (GI) tag for Kadaknath, a black-feathered chicken known for its flavourful meat.
- The GI tag will ensure that no one else can use the name Kadaknath while selling any other black chicken and will also translate into higher prices for producers.

**Key facts:**

- It is found mainly in the tribal district of Jhabua.
- Kadaknath is in demand not only because of its taste but also due to its low cholesterol and high protein content.

Paper 1 Topic: Role of women and women's organization, population and associated issues, poverty and developmental issues.

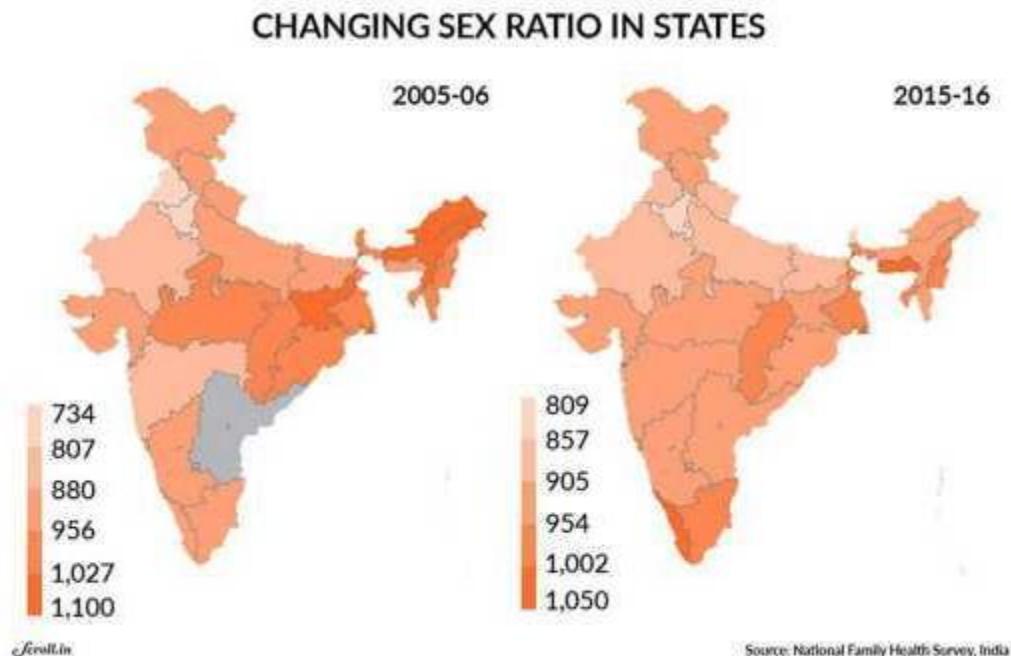
1. India's falling sex ratio

Sex Ratio at Birth (SRB): The SRB is the number of girls born for every 1,000 boys.

What's the concern now?

- A recent report from the NITI Aayog said sex ratio at birth (SRB) nationwide had dropped from 906 in 2012-2014 to 900 in 2013-2015. In all, 17 of 21 large Indian States saw a drop in the SRB, with Gujarat performing the worst, declining 53 points.

- Also, newer data from India's Sample Registration System show the SRB fell even further in 2014-2016, from 900 to 898.



Why is this a unique case for India?

- The number of girls born is naturally lower than the number of boys, and demographers speculate that this may be nature's way of offsetting the higher risk that men have of dying — male babies are biologically weaker than females, and men have historically seen higher mortality rates owing to risk-taking behaviour and participation in wars.
- This evens out the sex ratio of a population as it grows older. But India is a special case. Its SRB is far lower than 952 because of the preference for the male child. This means we are killing girl children in the womb.
- As on today, around 63 million girls are estimated to be 'missing' in India because of such actions.

Why does it matter?

- Low SRBs starting from the Seventies have led to large numbers of "surplus men" today in countries like India and China. There are concerns that skewed sex ratios lead to more violence against both men and women, as well as human-trafficking.
- In India, some villages in Haryana and Punjab have such poor sex ratios that men "import" brides from other States. This is often accompanied by the exploitation of these brides.

Performance of PC-PNDT:

- From female infanticide till 1970s to the emergence of sex selection technologies in 1980s, people have always found ways to have male child.
- A thriving market for sex selection sprung up with doctors openly advertising their services.
- In 1994, the government took notice and introduced the Prenatal Diagnostics Techniques Act which punishes healthcare professionals for telling expectant parents the sex of a child with imprisonment and hefty fines.
- In 2003, when technologies that allowed gender-selection even before conception became available, the act was amended to become the Prenatal Conception and Prenatal Determination Act (PC-PNDT).
- By any token, this Act has been a failure. In November 2016, a report from the Asian Centre for Human Rights noted that between 1994 and 2014, 2,266 cases of infanticide were registered in India, against 2,021 cases of abortion under the PC-PNDT, even though abortions outnumber infanticides today. In all, 17 out of 29 States had either not registered any case, or had zero convictions.
- The PHFI report in 2010 found major gaps in the training of personnel implementing PC-PNDT. Poor training meant that they were unable to prepare strong cases against violators to secure convictions.

Way ahead:

- Now, India must implement the PC-PNDT more stringently, but must also dedicate more resources to fighting the preference for boys.

What's important?

- **For Prelims:** SRB, PC- PNDT.
- **For Mains:** Falling SRB- concerns, challenges and solutions.

Sources: pib.

2. #YesIBleed Campaign

Context: The government has launched the #YesIBleed menstrual hygiene campaign.

**What is it?**

- "#Yes I Bleed" aims to create a holistic approach to the issue of menstruation, which is an experience that transcends culture, class, and caste. The campaign has been initiated formally across all multi-media platforms, including Facebook and YouTube to spread awareness about the issue.

Background:

- The United Nations has recognised menstrual hygiene as a global public health and a human rights issue yet across the globe. "Period poverty" as some call it, is a reality for millions of women and girls.

Concerns:

- Today, in India, approximately 35 crore women menstruate and it is estimated that only 12% use proper menstrual hygiene practices and menstrual products. The remaining 88% having no access whatever. They find sanitary pads unaffordable.
- In India's rural areas, with the lack of resources, education and awareness about personal hygiene, not just lack of information about hygiene products, the women don't even have any conversation around menstruation.
- For the less privileged, periods are the few 'cursed' days of the month. A woman on her periods cannot enter the temple, kitchen or take part in any auspicious occasion – because she is 'impure'.
- The 88% who do not have access to sanitary pads use unsanitised cloth, husk sand, tree leaves and even ash. These can cause severe reproductive health problems and infections, and can also lead to cervical cancer.
- Also, there is the issue of school dropouts and poor attendance because of inadequate menstrual hygiene management. This also is one of the causes for loss of wages for women labourers.
- Equally important is the safe disposal of used sanitary pads, which actually are an environmental disaster. In villages, the used pads often end up in village ponds, exposing every human being and animal to the risk of infection.

Way ahead:

- Menstruation is still a taboo subject in our country and a topic that even women are uncomfortable discussing in public. This was a much-needed awareness campaign, and added that the subject of menstrual hygiene is “more about a change of mindset than simply about the use of proper menstrual products”. Mindset change is happening, but much more needs to be done.
- It is high time people dispel the misconceptions that surround the normal physiological process of menstruation and discard the restrictions imposed on women during “the time of the month”.

What's important?

- For Prelims:** “YesIbleed” campaign.
- For Mains:** Women empowerment and associated issues.

Sources: the hindu.

3. International Women's Day 2018

Context:

- International Women's Day is being celebrated on March 8 across the world. It is an annual marker that aims to bring attention to women's accomplishments and obstacles.

Theme:

- The theme for International Women's Day 2018 is 'Time is Now: Rural and urban activists transforming women's lives'. The theme aims to encourage women to raise voice for their rights and promote growing global movement to support gender parity.

How it all began?

- The first Women's Day was celebrated on February 28, 1909, in New York by the Socialist Party of America. The day was dedicated to the 15,000 women who marched through New York in 1908 as part of the garment strike.
- In 1910, a German activist Clara Zetkin proposed the idea of celebrating Women's Day in March at the 1910 International Conference of Working Women in Copenhagen.
- On March 19, 1911, Women's Day was celebrated in Austria, Denmark, Germany, and Switzerland.
- In 1975, the United Nations declared March 8 as the official date to celebrate Women's Day.

Sources: the hindu.

4. Women Entrepreneurship Platform

Context:

- NITI Aayog has launched the Women Entrepreneurship Platform (WEP), on the occasion of International Women's Day.

About the Women Entrepreneurship Platform:

- Aim:** The initiative is aimed at building an ecosystem for women across India to realize their entrepreneurial aspirations, scale-up innovative initiatives and chalk-out sustainable, long-term strategies for their businesses. This will be done through an enabling network of industry collaborations, partnerships, mentors and peer-to-peer connect.
- What it does?** From providing unique services such as credit evaluation of women-led startups by CRISIL and potential equity investments through an INR 10 crore fund established by DICE Districts, the WEP opens up avenues of growth and opportunity for women entrepreneurs.

Background:

- According to Mastercard Index of Women Entrepreneurs, India scored an overall 41.7 points, ranking 49 among 54 economies globally with comparatively low in Women Business Ownership percentages.

Need for economic empowerment of women:

- Economically empowered women are major catalysts for development. There is greater recognition of the positive relationship between increased economic activity by women and improved social outcomes.
- Women often tend to reinvest their income in their children's education, health and nutrition. This has a positive impact on the potential for economic growth.

Challenges:

- India presents lower opportunities for women to assume leadership roles, participation in the workforce or engagement in entrepreneurial activities.
- Lack of education, technological know-how and cultural bias coupled with stringent business and government regulations are some key impediments that happen to undermine women's ability to rise to positions of leadership and take advantage of entrepreneurial opportunities in India.

Way ahead:

- Women entrepreneurs have been carving out a niche for them across the globe, including India especially in niche and unconventional businesses.
- However, there is significant potential to harness the untapped potential of women's entrepreneurship in India.

What's important?

- **For Prelims:** Women Entrepreneurship Platform.
- **For Mains:** Women entrepreneurs- need, significance, challenges and solutions.

Sources: pib.

5. LaQshya programme

Context:

- The Union Health Ministry has announced the launch of LaQshya, a programme ***aimed at improving quality of care in labour room and maternity operation theatre.***

About the Programme:

- **What is it?** It is an initiative to improve the quality of care in the labour rooms, operation theatres and other mother and child areas in public health facilities across the country.
- **Aim:** The programme aims at implementing 'fast-track' interventions for achieving tangible results within 18 months.
- **Strategy:** Under the initiative, a multipronged strategy has been adopted, including improving infrastructure upgradation, ensuring availability of essential equipment, providing adequate human resources, capacity building of healthcare workers and improving quality processes in the labour room.
- **Guidelines include:** Ensuring privacy for mothers-to-be, providing a comfortable position during delivery, no-tolerance policy towards verbal or physical abuse on women and no demand of gratuitous payment by the staff.
- **LaQshya certification:** A healthcare facility achieving 70% score on NQAS will be declared 'LaQshya' certified. Facilities scoring over 90, 80 and 70% will get platinum, gold and silver badges respectively.
- **Incentives:** Facilities achieving NQAS certification and having 80% satisfied beneficiaries will be given monetary incentive with medical college hospitals getting Rs 6 lakh and Rs 3 lakh for district hospitals.

Background:

- India has improved maternal survival as Maternal Mortality Ratio (MMR) reduced from 301 maternal deaths in 2001-03 to 167 in 2011-13, an impressive decline of 45% in a decade.

Concerns:

- There has been a substantial increase in the number of the institutional deliveries in the last decade of implementation of the National Health Mission (NHM).

- However, this increase in the numbers has not translated into commensurate improvements in the key maternal and new-born indicators such as maternal mortality and morbidity, still birth rates and early initiation of breastfeeding.

Significance of the scheme:

- The available evidence shows that the first day of birth is the day of greatest risk for mothers and newborns.
- The programme will improve the quality of care for pregnant women in labour rooms, maternity operation theatres, and obstetrics Intensive Care Units and High Dependency Units.



Ministry of Information & Broadcasting
Government of India

Labour Room Quality Improvement Initiative

LaQshya

Objective

To reduce preventable maternal and newborn mortality, morbidity and stillbirths.

Goal

To improve quality of care provided to Pregnant Mother in Labour Room and Maternity Operation Theatres

Target Areas

Government Medical Colleges, District Hospitals and important Sub District Hospitals and Community Health Centers

What's important?

- **For Prelims:** LaQshya programme.
- **For Mains:** Maternal mortality- challenges and solutions.

Sources: pib.

6. 'WomenInTech' forum

Context:

- RBS India in association with prominent technology corporates, Academia and government participation has setup an exclusive 'By Invite Only' platform '**Women In Tech**' with the agenda of working towards encouraging more women to take up careers in Science, Technology, Engineering and Math (STEM) as a key career choice.

About the forum:

- WomenInTech has been conceived in association with a number of technology corporates, academia and NGOs.
- The forum has been designed "to help accelerate the national agenda of Beti Bachao, Beti Padhao and further to work in alignment with the UN's focus area this year – 'Turning promises into action'.
- It would "address the need for policy making collectively as an industry to ensure that workplaces prod more girls to take up careers in STEM on one end and on the other hand are conducive for working women to aspire for senior level roles".
- One of its initiatives is to build an independent corpus of funds, in collaboration with education NGOs, to sponsor the tertiary education of at least three young women to begin with from economically weak backgrounds in the field of engineering to top universities in the United States and United Kingdom.

Concerns:

- According to the World Bank, women make up 40% of the world's workforce. Yet, the tech field is notoriously male-dominated at all levels and fares considerably worse than non-technology industries. Tech industry has merely 10 – 15% female workforce.

- While studies continuously corroborate a strong business case for inclusion of more women in tech for enhanced profitability and innovativeness, the percent continues to be low and the pipeline often inconsistent and unavailable.
- Lack of mentoring and lack of female role models are two of the most quoted barriers that women in technology workspace identify.

What's important?

- For Prelims:** Women In Tech forum.
- For Mains:** Women in tech sector- need, significance, challenges and solutions.

Sources: ie.

7. Anandibai Gopalrao Joshi

- Who is Anandibai Gopalrao Joshi?** She was India's first female doctor and first woman to obtain a degree in western medicine.
- Why in news?** Google Doodle celebrated her 153rd Birthday on March 31st. Anandi Joshi was born on 31st March 1865 in Maharashtra.



Paper 1 Topic: Urbanization, their problems and their remedies.

Annual Survey of India's City-Systems (ASICS)

Context:

- The fifth edition of the **Annual Survey of India's City-Systems (ASICS)** by Janaagraha Centre for Citizenship and Democracy has been released.

About the survey:

The objective of the survey was to measure the preparedness of cities to deliver high quality infrastructure and services in the long term by evaluating "city systems".

- The survey spans 23 Indian cities and factors in answers to 89 questions. The cities were scored based on the quality of laws, policies, institutions and institutional processes that together help govern them.
- ASICS groups questions into four categories:** urban planning & design; urban capacities & resources; transparency, accountability & participation; and empowered & legitimate political representation.

ASICS SCORES 2017

Rank	City	Score	Score Change over 2016
1	Pune	5.1	0.9
2	Kolkata	4.6	0.5
3	Thiruvananthapuram	4.6	0.2
4	Bhubaneswar	4.6	1.1
5	Surat	4.5	1.3



London
Score: 8.8



New York
Score: 8.8



Johannesburg
Score: 7.6

Performance of various cities:

- Pune, Kolkata and Thiruvananthapuram top the country in terms of urban governance.
- Delhi and Mumbai figure in the sixth and ninth positions respectively.
- Among the medium cities (with a population of up to one million), Ranchi has broken into the top 10 with a score of 4.1. Bengaluru and Chandigarh (perceived as a planned city) figured at the bottom of the list.
- On a scale of 10, the 23 cities – many of which are part of the government’s flagship smart cities mission – scored between 3 and 5.1 on four key components of governance.

Concerns and challenges:

- A majority of its cities “grossly underprepared” to deliver a high quality of life in the long term. And many surveyed cities are far behind cities such as London, New York and Johannesburg, which topped global benchmarks with 8.8, 8.8 and 7.6 points respectively.
- The cities assessed in the study are found to be generating only 39% of the funds they spend on an average, with Patna raising just 17% on its own. Only Mumbai, Delhi, Hyderabad and Pune generate over 50% of the amount they spend from their own revenue.
- The study found that in several cities, their own revenues did not even cover staff salaries. “Lack of adequate revenue sources of their own severely constrains the ability of our cities to invest in infrastructure and service delivery.
- The pace of reforms in India has been painfully slow. Recurring floods, garbage crises, air pollution, fire accidents, building collapses and dengue outbreaks are symptoms of this deeper governance crisis in our cities.
- The survey also found urban capacities across cities suffering from rampant staff vacancies, inadequate domain experience of senior municipal officers, and powerless mayors and councils. Commissioners were found to have only have 2.7 years of experience in urban management on an average. Average staff vacancy stood at 35%, with Guwahati bottoming out at 60%.
- The mayor and councils in our cities are toothless. They don’t have full decision-making authority over critical functions such as planning, housing, water, environment, fire and emergency services.
- No city in India has effective policies to deter plan violations, a deficiency that leads to the mushrooming of slums and unauthorised colonies. While all its 23 cities scored zero on this parameter, London, New York and Johannesburg notched a perfect 10 out of 10.
- Moreover, most of the country’s town and country planning acts date back to the previous century. It has one planner per four lakh citizens (as opposed to 48 in the United States and 148 in the United Kingdom).

Way ahead:

- Lack of legislative imagination and political will has resulted in state governments not fixing city governance. The need now is to fix city governance on a war footing. There will be no change unless the state government empowers municipalities.

What's important?

- **For Prelims:** ASICS Survey and performance of various cities.
- **For Mains:** Urbanization- challenges, issues and solutions, need for elected mayor, need for autonomy.

Sources: the hindu.

Paper 1 Topic: Important Geophysical phenomena.**1. 'Bomb Cyclone'****Context:**

- A winter storm – also known as a “bomb cyclone” – has slammed into the northeast United States. The storm has roughly 80 million people along its path, with 22 million of those affected by a coastal flood warning.

**What is a Bomb cyclone?**

- The term is used by meteorologists to indicate a mid-latitude cyclone that intensifies rapidly.

- A bomb cyclone happens when atmospheric **pressure in the middle of the storm drops** at least 24 millibars over 24 hours, quickly increasing in intensity. The **lower the pressure, the stronger the storm**.

How it works?

- Deep drops in barometric pressure occur when a region of warm air meets one of cold air. The air starts to move and the rotation of the earth creates a cyclonic effect.
- The direction is counterclockwise in the Northern hemisphere leading to winds that come out of the northeast.

What's the difference between hurricanes, cyclones and typhoons?

- Hurricanes, cyclones and typhoons are all tropical storms.
- They are all the same thing but are given different names depending on where they appear. When they reach populated areas they usually bring very strong wind and rain which can cause a lot of damage.
- Hurricanes are tropical storms that form over the North Atlantic Ocean and Northeast Pacific. Cyclones are formed over the South Pacific and Indian Ocean. Typhoons are formed over the Northwest Pacific Ocean.

What's important?

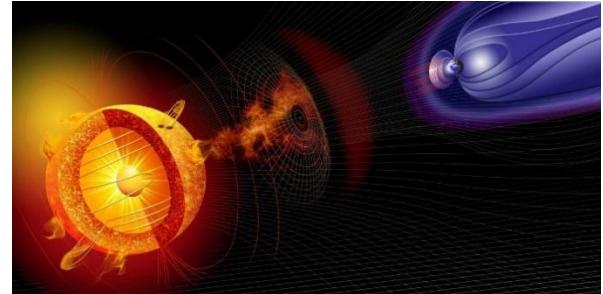
- **For Prelims:** Bomb cyclones, difference between hurricanes, cyclones and typhoons.
- **For Mains:** disaster management.

Sources: the hindu.

2. Geomagnetic storm

Context:

- There were reports that Earth will be hit by a massive magnetic storm on March 18. However, National Oceanic and Atmospheric Administration (NOAA) has found that there was no basis for recent reports saying Earth would be hit by a massive geomagnetic storm.



What are Geomagnetic Storms?

- Geomagnetic storms are caused when events such as solar flares can send higher than normal levels of radiation towards Earth. This radiation interacts with the Earth's magnetic field causing a geomagnetic storm.

Effects of Geomagnetic storms:

- Effects from the geomagnetic storm can range from the appearance of auroras or the northern and southern lights to disruptions in communications systems due to high radiation.
- This would make it difficult to communicate with others on Earth.

Classification of Geomagnetic storms:

- Geomagnetic storms are classified according to a scale that measures the effect that storms will have.
 - At its safest level, a G1 storm affects power grids by causing weak fluctuations, minor impacts on satellite operations, and causes the northern and southern lights to occur.
 - At its most extreme, G5, there would be voltage control problems with some grid system collapses or blackouts, radio waves wouldn't be able to travel for one to two days, low-frequency radio would be out for hours, and the auroras would be able to be seen at lower latitudes than usual.

What's important?

- **For Prelims and Mains:** Geomagnetic storms- causes, effects and classification.

Sources: toi.

GS PAPER - II

Topic: Comparison of the Indian constitutional scheme with that of other countries.

Russian Presidential Elections

Context: Vladimir Putin has won another term as Russia's president.

President of Russia:

- This is the highest office in the country, with **the holder being the head of state and the Supreme Commander-in-Chief of the Armed Forces.**
- **Two key powers which allow the President a far-reaching political influence are their right to determine the country's foreign policy stance and their right to nominate candidates for most official state positions**, such as for the Constitutional Court, the Supreme Court, and the Federation Council – the upper house of the Parliament.



Who can contest?

- According to the Constitution, any Russian citizen who is more than 35, has permanently resided in Russia for the 10 years leading up to the election, and has committed no serious crime can run for Presidency.
 - However, individuals running as independents or with the backing of a political party which is not represented in the State Duma, the lower house of the Parliament, face an additional obstacle.
 - Those with the backing of a political party have to collect 100.000 signatures in support of their candidacy, while for independents that number goes up to 300.000. Moreover, there is a ban on more than two consecutive terms in office, although Presidents are free to run again for a further third and fourth time after sitting out once full electoral term.

Electoral System:

- **Russian Presidential elections take place every six years in a two-round electoral system.** During the first round, an absolute majority is required to win. If no candidate gets 50%+1 of the votes, a second round is held exactly three weeks later between the two candidates with the most votes.

Sources: the hindu.

Paper 2 Topic: Separation of powers between various organs dispute redressal mechanisms and institutions.

Mahanadi Water Disputes Tribunal

Context:

- The Ministry of Water Resources, River Development and Ganga Rejuvenation has issued a notification constituting the Mahanadi Water Disputes Tribunal. The Tribunal will have its headquarters at Delhi.

The Tribunal will comprise of:

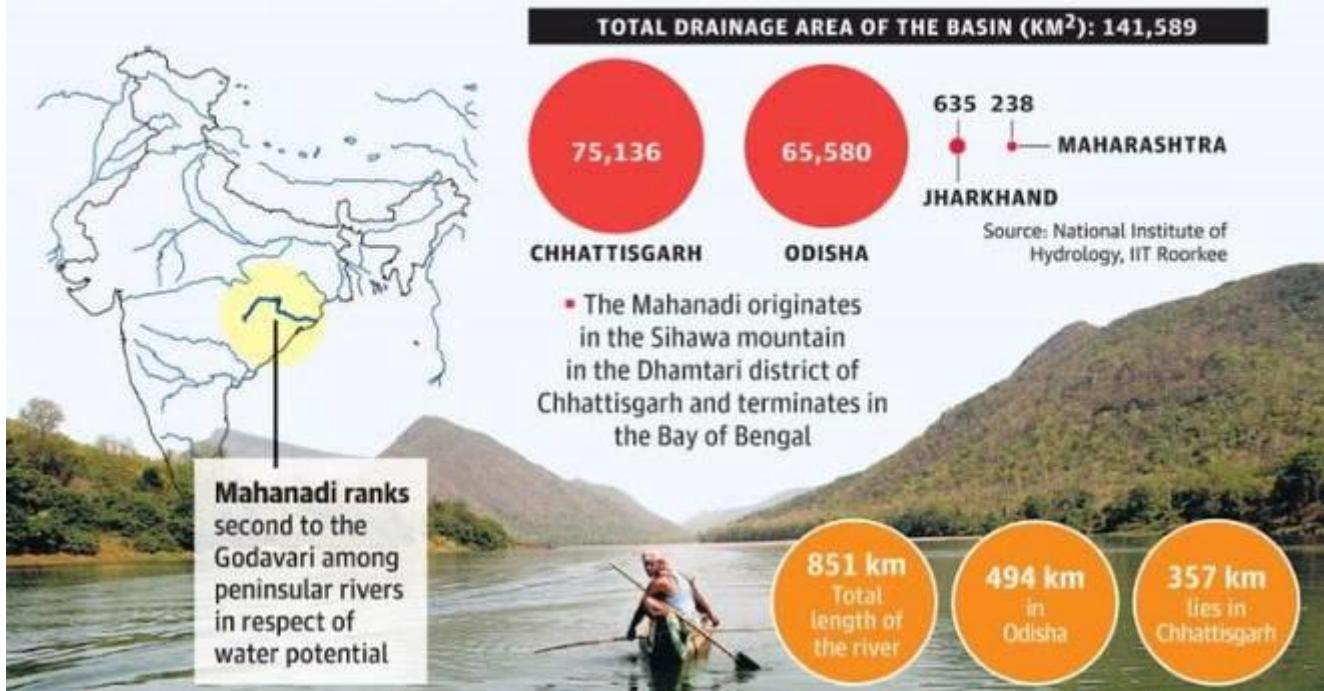
- Justice A.M. Khanwilkar, Supreme Court Judge (Chairman).
- Justice Ravi Ranjan, Patna High Court Judge.
- Justice Indermeet Kaur Kochhar, Delhi High Court Judge.

Background:

- **The Tribunal has been constituted following orders of the Supreme Court.** The Government of Odisha had sought to refer the water dispute regarding the inter-state river Mahanadi and its river valley to a Tribunal for adjudication under the Inter-State River Water Disputes Act, 1956.

A lifeline for two States

The Odisha government had moved the SC in December, 2016, for an order asking Chhattisgarh to stop construction of barrages upstream of Mahanadi. A look at the drainage area of the Mahanadi



Legal provisions in this regard:

- The tribunal will be formed according to the provisions of the **Inter-State River Water Disputes (ISRWD), 1956**.
- It will have a chairperson and two other members nominated by the Chief Justice of India** from among the judges of the apex court or high courts.
- As per provisions of the ISRWD Act, 1956 the Tribunal is required to submit its report and decision within a period of 3 years which can be extended to a further period not exceeding 2 years due to unavoidable reasons.

What's the dispute?

- Odisha and Chhattisgarh are locked in a dispute over the Mahanadi waters since the mid-80s. Odisha claimed that Chhattisgarh government has been constructing dams in the upper reaches of the Mahanadi, depriving its farmers who are heavily dependent on the river's waters.
- Chhattisgarh has been against the setting up of a tribunal, and argued that the water sharing agreement was with the erstwhile Madhya Pradesh government, before the state was carved out in 2000.

What else is needed?

- To chalk out the future course of action in view of the disputes regarding the use of Mahanadi river water, a well-rounded strategy that includes both the people and policymakers is needed.
- The strategy must allow for dialogue by rebuilding trust and should look at arbitration and negotiation as methods of conflict resolution.
- It is necessary to evolve a strategy that optimises the rational usage of Mahanadi water to benefit people from both Chhattisgarh and Odisha, coupled with the implementation of a multi-stakeholder forum that finds peaceful solutions and minimises areas of contention in a negotiable and consensual manner.

What's important?

- For Prelims:** Composition of tribunal, Mahanadi river.
- For Mains:** Dispute resolution- challenges, issues and solutions.

Sources: pib.

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

1. Karnataka govt. unveils State flag

Context:

- Karnataka government has unveiled the State flag for Karnataka. If approved by the Centre, Karnataka will be the second State to have a flag after Jammu and Kashmir.
- The proposal will be now sent to the Union Home Ministry for approval since a State has no powers to announce its own flag.



The flag:

- The red-white-yellow flag has the State emblem at the centre. The State flag will fly below the national flag as prescribed.
- In the tri-colour Stage flag, white symbolises peace with State emblem. While yellow symbolises the auspiciousness and well-being of Kannadigas, the red colour symbolises courage.

Are states permitted to have their own flags?

- In **S.R. Bommai v/s Union of India** (Supreme Court 1994) case, the Supreme Court has declared that federalism is a basic feature of the Constitution and States are supreme in their sphere.
- This being the Constitutional position, there is no prohibition in the Constitution for the State to have its own flag. However, the manner in which the State flag is hoisted should not dishonour the national flag.
- It has to be always below the national flag. The national flag code specifically authorises use of other flags subject to the regulation by the court. So, State flag is not unauthorised.

What's important?

- **For Prelims:** State flag of Karnataka.
- **For Mains:** State flags- need, issues and challenges, are states permitted to have their own flags.

Sources: the hindu.

2. No confidence motion

Context:

- The YSR Congress has proposed a no-confidence motion against the NDA government on the issue of granting special category status to Andhra Pradesh.
- The motion will be the first such move during the tenure of this NDA government.

What is a no-confidence motion?

- A no-confidence motion is a parliamentary motion which is moved in the Lok Sabha against the entire council of ministers, stating that they are no longer deemed fit to hold positions of responsibility due to their inadequacy in some respect or their failure to carry out their obligations.
- No prior reason needs to be stated for its adoption in the Lok Sabha.

How it works?

- At least 50 MPs would need to stand up and support the move. If there are 50 MPs in favour, the motion is admitted and the speaker allots a date for discussion on the motion.
- The prime minister or ministers reply to the charges made.
- The mover has the right to reply. After the debate, the speaker puts question to the house and ascertains the decision of the house by voice vote or a division.

Grounds:

- A Motion of No-confidence need not set out any grounds on which it is based. Even when grounds are mentioned in the notice and read out in the House, they do not form part of the no-confidence Motion.

Implications:

- The government is expected to **resign** if it loses a trust vote. In case its refuses to do so, the President has the power to remove the prime minister. In the history of Indian Parliament, no Prime Minister has been forcibly removed so far. After a government loses a trust vote and resigns, it continues to function, but as a caretaker government with almost the same powers as it had before the voting.
- However, a caretaker government wouldn't have the power to take any major policy decisions since Parliament remains dissolved. A new government gets elected after the general elections.

Censure Motion vs No Confidence Motion

CENSURE MOTION

- It should state the reasons for its adoption in the Lok Sabha.
- It can be moved against an individual minister or a group of ministers or the entire council of ministers.

NO-CONFIDENCE MOTION

- It need not state the reasons for its adoption in the Lok Sabha.
- It can be moved against the entire council of ministers only.

Key facts for Prelims:

- **The Rajya Sabha does not have a procedure for moving of an adjournment motion, censure motion or no-confidence motion against the Government.**
- **Rule 198 of the Rules of Procedure and Conduct of Business in Lok Sabha** lays down the procedure for moving a Motion of No-Confidence in the Council of Ministers.
- There is **no mention of a no-confidence motion in the constitution.**

Sources: the hindu.

3. Rajya Sabha elections

Context: Elections for 25 Rajya Sabha seats were held recently.

What is the strength of the House?

- The Strength of Rajya Sabha is maximum 250 out of which 238 are state and UT representative and 12 are nominated by the President.
- At Present, Rajya Sabha has 245 member out of which 229 are representative and rest nominated

What is the qualification of an RS member?

- He must be a citizen of India and must not be less than 30 years of age. He must possess qualifications as may be prescribed under any law made by Parliament.

Who can vote to elect Rajya Sabha member?

- Elected representatives of state legislatures vote in elections to the Upper House.

Rajya Sabha election process:

- Members of state assemblies elect Rajya Sabha members by a process of indirect voting in what is called proportional representation with a single transferable vote. Each voter ranks his preference, and if the first candidate on the list has enough votes to win or no chance of winning, the vote is transferred to the next choice and so on.

Tenure of Rajya Sabha members:

- Rajya Sabha members are elected for a six-year term. One-third of the members of the Upper House of parliament retire after every two years.

What's important?

- **For Prelims:** Rajya Sabha election procedure.

Sources: the hindu.

4. Office-of-profit

Context:

- The Delhi High Court has quashed a notification issued by President Ram Nath Kovind disqualifying 20 AAP MLAs for holding offices of profit as Parliamentary Secretaries.
- The court has reinstated all 20 MLAs, holding that the opinion of the Election Commission of India to the President to disqualify the legislators was “vitiated and bad in law for failure to comply with the principles of natural justice”.

What is an ‘office of profit’?

- If an MLA or an MP holds a government office and receives benefits from it, then that office is termed as an “office of profit”.
- A person will be disqualified if he holds an office of profit under the central or state government, other than an office declared not to disqualify its holder by a law passed by Parliament or state legislature.

Why was the notification quashed by the court?

- The High Court noted that the Election Commission failed to give oral hearing and opportunity to address arguments on merits to the AAP MLAs before arriving at its opinion that they held ‘office of profit’.

What next?

- The court has asked the Election Commission to first decide the “all important and seminal issue; what is meant by the expression ‘office of profit held under the government’.”
- Then, “re-examine the factual matrix to decide whether the petitioners (MLAs) had incurred disqualification on appointment as Parliamentary Secretaries, without being influenced by the earlier order or observations on the said aspect in this order”.

What's the issue?

- The Delhi government, led by Chief Minister Arvind Kejriwal, appointed the parliamentary secretaries attached to government ministries after coming to power in March 2015.
- The Election Commission had recommended that 20 MLAs of the Aam Aadmi Party in Delhi be disqualified as they held offices of profit while being legislators.

What is the underlying principle for including ‘office of profit’ as criterion for disqualification?

- Makers of the Constitution wanted that legislators should not feel obligated to the Executive in any way, which could influence them while discharging legislative functions.
- In other words, an MP or MLA should be free to carry out her duties without any kind of governmental pressure.

What's important?

- For Prelims:** What is office of profit and provisions concerned.

Sources: the hindu.

Paper 2 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.

1. Special Status To Andhra Pradesh

Context:

- Andhra Pradesh government has asked the Centre to expedite resolution of all provisions in the AP Reorganisation Act, 2014, including according special category status to the state.

Background:

- Andhra Pradesh has been demanding a Special Category State (SCS) status from Centre ever since it was decided to carve out Telangana along with capital city Hyderabad.

- Following the bifurcation of A.P., Andhra lost a large volume of its revenue due to Hyderabad remaining the capital of Telangana.

What is SCS?

- The Constitution does not include any provision for categorisation of any State in India as a Special Category Status (SCS) State.
- But, recognising that some regions in the country were historically disadvantaged in contrast to others, Central plan assistance to SCS States has been granted in the past by the erstwhile Planning Commission body, National Development Council (NDC).
- The NDC granted this status based on a number of features of the States which included: hilly and difficult terrain, low population density or the presence of sizeable tribal population, strategic location along international borders, economic and infrastructural backwardness and non-viable nature of State finances.



What kind of assistance do SCS States receive?

- The SCS States used to receive block grants based on the Gadgil-Mukherjee formula, which effectively allowed for nearly 30 per cent of the Total Central Assistance to be transferred to SCS States as late as 2009-10.
- Following the constitution of the NITI Aayog (after the dissolution of the Planning Commission) and the recommendations of the Fourteenth Finance Commission (FFC), Central plan assistance to SCS States has been subsumed in an increased devolution of the divisible pool to all States (from 32% in the 13th FC recommendations to 42%) and do not appear in plan expenditure.
- The FFC also recommended variables such as “forest cover” to be included in devolution, with a weightage of 7.5 in the criteria and which could benefit north-eastern States that were previously given SCS assistance. Besides, assistance to Centrally Sponsored Schemes for SCS States was given with 90% Central share and 10% State share.

What's important?

- For Prelims:** Special Category Status.
- For Mains:** SCS- need, issues, challenges and solutions.

Sources: the hindu.

2. Cooperative Election Authority

Context:

- The Haryana government has announced that a Cooperative Election Authority would be set up in the State for supervising the election process in cooperative bodies.

Constitution 97th Amendment Act:

- The Constitution (Ninety Seventh Amendment) Act 2011 relating to the co-operatives is aimed to encourage economic activities of cooperatives which in turn help progress of rural India. It is expected to not only ensure autonomous and democratic functioning of cooperatives, but also the accountability of the management to the members and other stakeholders. As per the amendment the changes done to constitution are:
 - In Part III of the constitution, after words “or unions” the words “Cooperative Societies” was added.
 - In Part IV a new Article 43B was inserted, which says: The state shall endeavour to promote voluntary formation, autonomous functioning, democratic control and professional management of the co-operative societies”.
 - After Part IXA of the constitution, a Part IXB was inserted to accommodate state vs centre roles.

What's important?

- **For Prelims:** Cooperative bodies- constitutional provisions, cooperative election authority.
- **For Mains:** Cooperative bodies- significance and their need, 97th

Sources: the hindu.

Paper 2 Topic: Statutory, regulatory and various quasi-judicial bodies.**1. Income Tax Appellate Tribunal****Context:**

- A recent decision of the Income Tax Appellate Tribunal's Pune bench allowing pharmaceutical companies to account for their spending on doctors as a deductible expenditure has sparked off a fresh debate on ethics.

What's the concern now?

- Since the companies are out of the purview of the Medical Council of India (MCI), money spent on promotions, which in some cases could be gifts, travel, hospitality and so on for doctors, besides medical conferences and samples, can be claimed as deductible expenditure.
- Doctors accepting such promotions may be violating the code of ethics of the MCI.

**How can ITAT's performance be enhanced?**

- Commonly suggested remedies include increasing the number of judges or the number of benches to deal with increased caseload.
- Additionally, solutions to delays in ITAT lie in prioritizing and scheduling the workload properly. Although ITAT is a specialized court, there are variations in the complexity and urgency of the cases that come before it. Therefore, it may be useful to frame rules on how different types of cases would be prioritized.
- Qualitative aspects of rulings, factors influencing them and most frequently litigated subject-matters will also be useful in deciding the policy strategy for improving India's tax environment.

About ITAI:

- ITAT is a quasi judicial institution set up in January, 1941 and specializes in dealing with appeals under the Direct Taxes Acts.
 - It was set up by virtue of section 5A of the Income Tax Act, 1922.
 - The orders passed by the ITAT are final, an appeal lies to the High Court only if a substantial question of law arises for determination.
 - It functions under the Department of Legal Affairs in the Ministry of Law and Justice.

Way ahead:

- Indian tax administration and adjudication needs urgent reforms. For this, a comprehensive performance analysis of ITAI is necessary.
- Also, more studies should be conducted to identify the exact institutional weaknesses in tax administration, improving which could help improve India's abysmally low ranking on the "Paying Taxes" parameter in the Ease of Doing Business Index, and ensuring that citizens have access to an independent and impartial appeals mechanism.

What's important?

- **For Prelims:** ITAI- functions and composition.
- **For Mains:** Need for reforms.

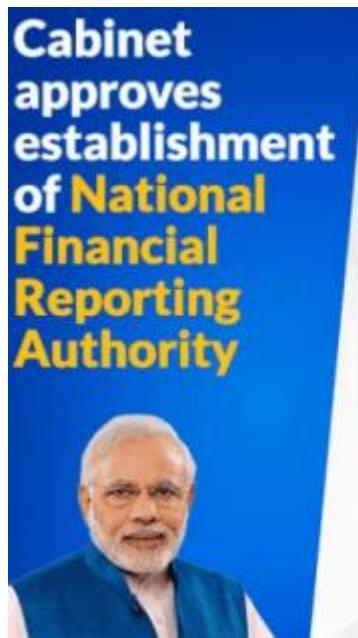
2. National Financial Reporting Authority

Context:

- The Union Cabinet has approved the proposal for establishment of National Financial Reporting Authority (NFRA). The decision aims at establishment of NFRA as an independent regulator for the auditing profession which is one of the key changes brought in by the Companies Act, 2013.

About NFRA:

- What is it?** National Financial Reporting Authority (NFRA) is a body proposed in Companies Act 2013 for the establishment and enforcement of accounting and auditing standards and oversight of the work of auditors.
- Functions:** It would be an overarching watchdog for auditing profession and once set up, the current powers of the ICAI to act against erring chartered accountants will be vested with the new regulator. The NFRA will have powers to debar an erring auditor or auditing firm for up to ten years besides slapping heavy penalties.
- Jurisdiction:** The jurisdiction of the NFRA will extend to all listed companies as well as large unlisted public companies. Besides, the government can refer other entities for investigation by the NFRA where public interest would be involved.
- Composition:** The regulator will have 15 members, including a chairperson and three full-time members. Besides, there would be a secretary.



- The need for establishing NFRA has arisen in the wake of accounting scams, to establish independent regulators.
- This will help enforcement of auditing standards & quality of audits to strengthen the independence of audit firms & quality of audits.
- This will enhance investor and public confidence in financial disclosures of companies.

What necessitated this move?

- The need for establishing NFRA has arisen on account of the need felt across various jurisdictions in the world, in the wake of accounting scams, to establish independent regulators, independent from those it regulates, for enforcement of auditing standards and ensuring the quality of audits to strengthen the independence of audit firms, quality of audits and, therefore, enhance investor and public confidence in financial disclosures of companies.

Impact:

- The decision is expected to result in improved foreign/domestic investments, enhancement of economic growth, supporting the globalisation of business by meeting international practices, and assist in further development of audit profession.

What's important?

- For Prelims:** NFRA.
- For Mains:** NFRA- need, objectives and impact.

Sources: pib.

4. National Biodiversity Authority

Context:

- Expressing concern over the increase in the import of ornamental fishes to the country, which is posing a threat to India's native fish populations, the National Biodiversity Authority (NBA) has urged the government to come up with quarantine facilities at major seaports and airports.

What's the concern?

- The government of India has only approved the import of 92 species of ornamental fish but the number of ornamental fish species being imported and in trade is somewhere between 200-300. The huge market for Invasive Alien Species (IAS) is turning out to be major threat to India's aquatic biodiversity. Several studies have disclosed the occurrence of exotic ornamental fish in many inland aquatic systems, including biodiversity-sensitive areas such as the Western Ghats.

What is national biodiversity authority?

- The NBA is Autonomous body and that performs facilitative, regulatory and advisory function for Government of India on issue of
 - Conservation**
 - sustainable use of biological resource and**
 - fair equitable sharing of benefits of use.**

**Facts for Prelims:**

- CEBPOL is a bilateral collaboration between the Indian and Norwegian governments, and focuses on biodiversity policies and laws.

Way ahead:

- While the number of publications on IAS has increased over the past few years, there has been no coordinated effort for the management of IAS.
- Statisticians and biologists need to come together for distribution mapping and the application of statistical approaches in the management of IAS.
- Besides legislative measures, there is the need for educating and creating awareness among Customs officials at airports and seaports. Most of the fish are imported from Southeast Asian countries.

National list of Invasive Alien Species (IAS):

- Under the Centre for Biodiversity and Policy and Law (CEBPOL), the NBA is trying to bring out a national list of IAS. So far, no attempt has been made by any scientific organisation to have a national IAS list across different categories. The list will be put made available on a public platform and will be communicated to different Ministries and stakeholders.
- The announcement by NBA assumes significance as scientists and experts in the country are still divided over the number of IAS and their economic and ecological impact.

About NBA:

- The National Biodiversity Authority (NBA) was established by the Central Government in 2003 to implement India's Biological Diversity Act (2002).
- The NBA is a Statutory Body and it performs facilitative, regulatory and advisory functions for the Government of India on issues of conservation, sustainable use of biological resources and fair and equitable sharing of benefits arising out of the use of biological resources.

What's important?

- For Prelims:** CEBPOL, NBA.
- For Mains:** Invasive species- threats and regulation.

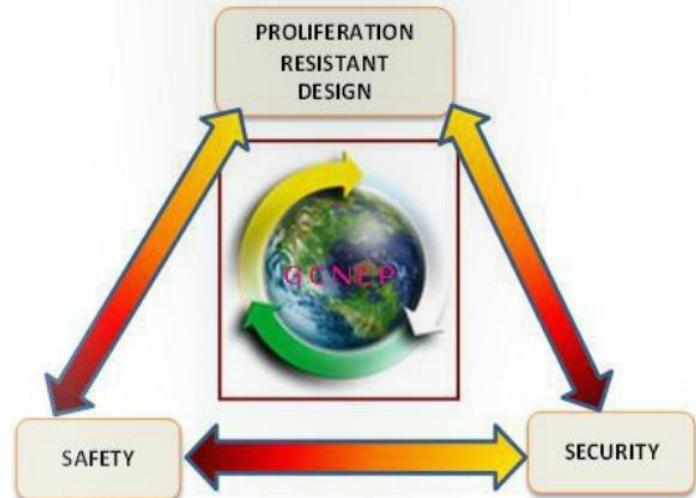
Sources: the hindu.

5. Global Centre for Nuclear Energy Partnership (GCNEP)**Context:**

- India and Vietnam have signed an MoU on Cooperation between the Global Centre for Nuclear Energy Partnership (GCNEP) and the Vietnam Atomic Energy Institute (VINATOM).
- The two countries had signed a civil nuclear cooperation agreement in 2016 and the MoU will enhance training and research collaboration possibilities.

About GCNEP:

- Global Centre for Nuclear Energy Partnership (GCNEP) is located near Bahadurgarh in Haryana. GCNEP is the sixth R&D unit under the aegis of Department of Atomic Energy (DAE).
- GCNEP will help in capacity building, in association with the interested countries and the IAEA, involving technology, human resource development, education & training and giving a momentum to R&D in enlisted areas.

Global Centre for Nuclear Energy Partnership (GCNEP)**The main objectives of the centre include:**

- Mark Development of enhanced nuclear safeguards to effectively and efficiently monitor nuclear materials and facilities.
- Mark Promoting the development of advanced, more proliferation resistant nuclear power reactors.
- Mark Training manpower in the field of Nuclear Security and Radiological Safety.
- Mark Educating in the field of Advanced Nuclear Energy Systems, Isotopes and Radiation Technologies, nuclear forensic.
- Mark Establishing accreditation facilities for radiation monitoring.

What's important?

- **For Prelims:** GCNEP.
- **For Mains:** Nuclear energy partnerships.

Sources: the hindu.

6. Animal Welfare Board of India

Context:

- The headquarters of the Animal Welfare Board of India (AWBI) has been shifted from Chennai to Haryana's Ballabhgarh for "better coordination" between the environment ministry and the board.
- **Rule 3 of the Animal Welfare Board (Administrative) Rules, 1962** reads as — 'The Headquarter of the Board shall be at New Delhi or at such other place as the central government'.

**About Animal Welfare Board of India:**

- Established in 1962 under Section 4 of The Prevention of Cruelty to Animals Act, 1960, the Animal Welfare Board of India is a statutory advisory body advising the Government of India on animal welfare laws, and promotes animal welfare in the country of India.
- Animal Welfare Board of India was started under the stewardship of Late Smt. Rukmini Devi Arundale, well known humanitarian.
 - The Board was initially within the jurisdiction of the Government of India's Ministry of Food and Agriculture. In 1990, the subject of Prevention of Cruelty to Animals was transferred to the Ministry of Environment and Forests, where it now resides.
 - The Board consists of 28 Members, who serve for a period of 3 years.
 - It works to ensure that animal welfare laws in the country are followed and provides grants to Animal Welfare Organisations. The Board oversees Animal Welfare Organisations (AWOs) by granting recognition to them if they meet its guidelines.

What's important?

- **For Prelims and Mains:** Key features of AWBI and Prevention of Cruelty to Animals Act.

Sources: the hindu.

7. GM soybean

Context:

- The Union environment ministry has asked the Directorate General of Foreign Trade (DGFT) to stop imports of genetically modified (GM) soybean for food or feed without the approval of the regulator for transgenic products.
- GEAC, which is the regulatory body for Genetically Modified Organisms (GMOs) and products thereof, has not authorized or approved GM soybean or any other products derived from GM soybean seeds for import or cultivation in India.

GM foods in India:

- The issue of GM foods has been controversial in India, with cotton being the only transgenic crop which is allowed to be cultivated.
- The environment ministry is yet to take a final call on allowing the commercial cultivation of GM mustard.

GM Soybean:

- GM soybean is one of the most widely planted genetically modified plants in the world today. The GM soybean, otherwise called as the Roundup Ready (RR) soybean, was developed by the biotech giant Monsanto and made it commercially available to farmers in 1996. It was developed to make the plant survive being sprayed on with the non-selective herbicide, Roundup, which can kill conventional soybean plants.
- GM Soybean was developed by introducing a copy of a gene from the Agrobacterium sp. strain CP4. Conventional soybean has a similar gene in its DNA but is sensitive to glyphosate, the active ingredient of the herbicide Roundup. With the insertion of the CP4 version of the gene, the GM soybean was able to develop resistance to the Roundup herbicide.

What's important?

- For Prelims:** GM foods, GEAC and Environment Protection Act.
- For Mains:** GM crops- Need, concerns, benefits and challenges.

Sources: the hindu.

8. Indian Renewable Energy Development Agency (IREDA)

Context:

- European Investment Bank (EIB) and Indian Renewable Energy Development Agency (IREDA) Ltd. have signed a loan agreement for a second line of credit (LoC) of Euro 150 million on non-sovereign basis.
- The line of credit is for tenure of 15 years including a grace period of 3 years, and it will be used for financing Renewable Energy and Energy Efficiency projects in India. More than 1.1 million households are expected to benefit from clean energy produced with these funds.

Indian Renewable Energy Development Agency Ltd:

- Indian Renewable Energy Development Agency Limited (IREDA) is a **Mini Ratna** (Category – I) Government of India Enterprise under the **Ministry of New and Renewable Energy (MNRE)**.
- IREDA is a Public Limited Government Company established as a **Non-Banking Financial Institution** in 1987 engaged in promoting, developing and extending financial assistance for setting up projects relating to new and renewable sources of energy and energy efficiency/conservation with the motto: “**ENERGY FOR EVER**”.



The main objectives of IREDA are:

- To give financial support to specific projects and schemes for generating electricity and / or energy through new and renewable sources and conserving energy through energy efficiency.
- To maintain its position as a leading organization to provide efficient and effective financing in renewable energy and energy efficiency / conservation projects.
- To increase IREDA's share in the renewable energy sector by way of innovative financing.
- Improvement in the efficiency of services provided to customers through continual improvement of systems, processes and resources.
- To strive to be competitive institution through customer satisfaction.

What's important?

- **For Prelims:** IREDA.
- **For Mains:** Renewable energy- potential, significance, challenges and solutions.

Sources: pib.

9. National Crime Records Bureau (NCRB)

Context: National Crime Records Bureau (NCRB) celebrated its 33rd Inception Day, on March 11, 2018.

About NCRB:

- NCRB is the **Nodal Agency for authentic source of Data on crime, accidents, suicides, and prisons for policy matters and research**. It was set-up in 1986 to function as a repository of information on crime and criminals so as to assist the investigators in linking crime to the perpetrators.
- It was set up based on **the recommendations of the National Police Commission (1977-1981) and the MHA's Task force (1985)**.
- It was set up by **merging the Directorate of Coordination and Police Computer (DCPC), Inter State Criminals Data Branch of CBI, Central Finger Print Bureau of CBI, and Statistical Branch of BPR&D**.

**Important functions:**

- Bureau is implementing & monitoring agency for implementation of Crime & Criminal Tracking Network System (CCTNS), a Mission Mode Project under the National e-Governance Plan of Government of India. The project aims at creating a comprehensive and integrated system for enhancing the efficiency and effectiveness of policing in the country.
- NCRB also imparts training in Information Technology (IT) and Finger Print Science for Indian Police Officers as well Foreign Police officers.
- Central finger print bureau is under the administrative control of NCRB.

Important publications:

- NCRB publishes 4 annual publications on Crime, Accidental Deaths & Suicides, Prison Statistics and Finger Prints.
- These publications serve as principal reference points on crime statistics not only police officers but also for criminologists, researchers, media and policy makers not only in India but abroad well.

What's important?

- **For Prelims and Mains:** All about NCRB.

Sources: pib.

10. Central Council for Research in Ayurvedic Sciences (CCRAS)

AYUSH -56 AN AYURVEDIC ANTI-EPILEPTIC DRUG		AYUSH-82 FOR DIABETES MELLITUS	
DRUG	DRUG	FINDINGS	FINDINGS
: AYUSH -56 [Nardostachys jatamansi & Marsilaminuta] (N=273)	: AYUSH-82 [Mangifera indica, Syzygium cumini, Gymnema sylvestris, Momordia charantia]		
Adult 2 tablets of 50mg. TDS for 6 months Children – 1 tablet TDS (<11 years)			
FINDINGS : SIGNIFICANT DECREASE IN FREQUENCY OF ATTACKS & DURATION OF SIEZURE . • Post seizure symptoms like headache, confusion, excitement, sleeplessness, excessive sleep, anorexia, lethargy, amnesia, irritability and mood changes etc. also decreased considerably in epileptics after treatment with Ayush -56.			
+No Drug interaction or toxic effects were observed even after prolonged used up to 10 years.			
Ref:CCRAS Research An Over View, Central Council for Research in Ayurveda and Siddha, Janakpuri, New Delhi-2002			Ref:CCRAS Research An Over View, Central Council for Research in Ayurveda and Siddha, Janakpuri, New Delhi-2002
			(open study)

Context: CCRAS has developed and commercialized the following two drugs:

1. AYUSH 82 An Anti Diabetic Ayurvedic Formulation.
2. AYUSH SG An Anti-Rheumatoid Arthritis preparation.

Background:

- CCRAS is actively involved in scientific process of drug development adopting prevalent guidelines such as Good Clinical Practices Guidelines for ASU drugs (GCP-ASU), Ministry of AYUSH and National ethical guidelines for Bio-Medical Research (ICMR), WHO guidelines for traditional medicines etc. as per requirement and as feasible through its peripheral institutes.

About CCRAS:

- The Central Council for Research in Ayurvedic Sciences (CCRAS) is an **autonomous body of the Ministry of AYUSH** (Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homeopathy), Government of India.
 - It is an apex body in India for the formulation, coordination, development and promotion of research on scientific lines in Ayurveda and Sowa-Rigpa system of medicine.
 - Research activities of the Council include Medicinal Plant Research (Medico-Ethno Botanical Survey, Pharmacognosy and Tissue Culture), Drug Standardization, Pharmacological Research, Clinical Research, Literary Research & Documentation and Tribal Health Care Research Programme.

What's important?

- For Prelims: CCRAS.
- For Mains: Significance of AYUSH.

Sources: pib.

11. National Building Construction Corporation (NBCC)

Context:

- The government is considering handing the task of maintaining, managing and earning revenue from immovable properties attached in money laundering cases to the National Building Construction Corporation (NBCC).
- What's the proposal?** The proposal is to manage the seized land, which can often measure several thousand acres, as well as numerous factories, flats, buildings and shops taken over by the ED.

What necessitated this move?

- The proposal to mandate NBCC to do the job was at the behest of the ED and mooted by the finance ministry about six months ago. It was felt that lack of proper maintenance led to decay of the properties and the agency had to continuously spend on their upkeep.
- As of now, the ED manages the properties confiscated by it but does not have experience in how to do so and there is no provision under PMLA for rental to earn revenue.

About NBCC:

- NBCC (India) Limited, formerly known as National Buildings Construction Corporation Ltd., is a **blue-chip Government of India Navratna Enterprise under the Ministry of Urban Development.**
- It engages in the Real Estate Development & Construction business and also provides Project Management Consultancy. It is the sole land authorised agency for central undertakings.
- The Company has been notified as a **Public Works Organization (PWO)** explicitly, a construction agency, as per which Government Department(s)/ PSUs and Autonomous Bodies can award the works to NBCC on nomination basis.
- NBCC is also designated as the implementing agency for executing projects under Jawaharlal Nehru National Urban Renewal Mission (JNNURM), Pradhan Mantri Gram Sadak Yojna (PMGSY), Solid Waste Management (SWM) and developmental work in North Eastern Region.

Sources: the hindu.

12. National Commission for Protection of Child Rights (NCPCR)

Context:

- The exercise of conducting social audit of Child Care Institutions has been initiated by the National Commission for Protection of Child Rights (**NCPCR**).
- This is in pursuance of the directions of the Hon'ble Supreme Court of India in the matter of Exploitation of Children in Orphanages in State of Tamil Nadu vs. UOI & Ors.

National Commission for Protection of Child Rights

Government of India

**Child care institutions:**

- The Government has enacted the Juvenile Justice (Care and Protection of Children) Act, 2015 in order to further improve and strengthen the condition of rehabilitation homes.
 - Under the JJ Act, 2015 several provisions have been included to improve the condition of Child Care Institutions (CCIs) including those housing children in conflict with law by providing for inspections of these CCIs by Juvenile Justice Board; prescribing various rehabilitation and reintegration services including skill development, recreational facilities, mental health interventions, etc.

Definition:

- A child care institution as defined under the JJ Act, 2015, means Children Home, Open Shelter, Observation Home, Special Home, Place of Safety, Specialised Adoption Agency and a Fit Facility recognized under the Act for providing care and protection to children, who are in need of such services.
- Children in conflict with law are provided residential care and protection in Observation Homes, Special Homes and Places of Safety.

About NCPCR:

- The National Commission for Protection of Child Rights (NCPCR) is a **statutory body established under the Commission for Protection of Child Rights Act** in December 2005.
- The **commission works under the aegis of Min. of Women and Child development.**
- Its Mandate is "to ensure that all Laws, Policies, Programmes, and Administrative Mechanisms are in consonance with the Child Rights perspective as enshrined in the Constitution of India and the UN Convention on the Rights of the Child.
- **Definition of a child:** As defined by the commission, child includes those up to the age of 18 years.

What's important?

- **For Prelims and Mains:** NCPCR.

Sources: pib.

13. India Infrastructure Finance Company Limited (IIFCL)

Context:

- India Infrastructure Finance Company Limited (IIFCL) has made contribution of Rs 10.00 Crore to the National Sports Development Fund (NSDF).
- The IIFCL contribution is being utilized for promotion of sports in the disciplines Badminton, Archery and Para Sports by way of support to sportspersons in these disciplines for their customized training and other services and setting up of Academies/Support to Academies in these disciplines.



About the India Infrastructure Finance Company Limited (IIFCL):

- IIFCL is a **wholly-owned Government of India company set up in 2006 to provide long-term financial assistance to viable infrastructure projects** through the Scheme for Financing Viable Infrastructure Projects through a Special Purpose Vehicle called **India Infrastructure Finance Company Ltd (IIFCL)**, broadly referred to as SIFTI.
 - Eligible sectors:** The sectors eligible for financial assistance from IIFCL are as per the Harmonized list of Infrastructure Sub-Sectors as approved by the Government and as amended from time to time. These broadly include transportation, energy, water, sanitation, communication, social and commercial infrastructure.
 - IIFCL has been registered as a NBFC-ND-IFC with RBI** since September 2013.

About the National Sports Development Fund:

- The National Sports Development Fund (NSDF) was established in 1998, **under Charitable Endowments Act 1890**, vide Government of India Notification dated 12th November 1998.
- Functions:** The NSDF supports sportspersons to excel in the field by providing opportunities to train under coaches of international repute with technical, scientific and psychological support and also in getting exposure to international competitions. Financial assistance is also provided to specific projects for promotion of sports and games sponsored by reputed Organizations/Institutes, provided the facilities so created are made available to a sizeable population of the area/region.
- The Council:** The Fund is managed by a Council constituted by the Central Government. Union Minister for Youth Affairs and Sports is the Chairperson of the council. The Members of the Council include senior officers in the Department of Sports/Sports Authority of India. The representatives of the Apex industry organizations namely, FICCI, CII and ASSOCHAM have been included in the Council as members. The representatives of Sports Promotion Boards of reputed organizations are also members of the Council. Joint Secretary to the Government of India in the Ministry of Youth Affairs & Sports is the ex-officio Member Secretary of the Council.

What's important?

- For Prelims:** NSDF and IIFCL.

Sources: pib.

14. Biotechnology Industry Research Assistance Council (BIRAC)

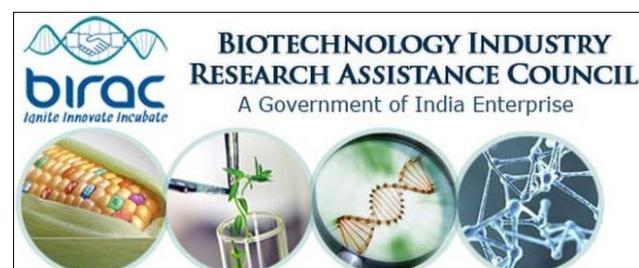
Context:

- The Biotechnology Industry Research Assistance Council (BIRAC) celebrated its 6th Foundation Day on 20th March, 2018.

Theme: 'Sustaining Innovation – A Market Driven Pathway'.

SoCH awards:

- The event saw the announcement of the preliminary winners of the SoCH (Solutions for Community Health) awards.



What is it?

- This award is an innovation challenge award which was launched on the MyGov portal in September 2017.
- This challenge has two themes, platform technologies for reducing disease burden (communicable and non-communicable diseases) and sanitation and waste recycling.
- The winners will now have 6 months and rupees 15 lakhs to develop a minimal viable prototype and will then compete for the larger rupees 50 lakh award within their categories.

What's important?

- **For Prelims:** BIRAC and SoCH awards.
- **For Mains:** Significance of Biotechnology.

Sources: pib.

About BIRAC:

- Biotechnology Industry Research Assistance Council (BIRAC) is a **not-for-profit Public Sector Enterprise, set up by Department of Biotechnology (DBT)**, Ministry of Science and Technology Government of India, to empower the emerging biotech industry to undertake strategic research and innovation.
- BIRAC is a new industry academia interface and implements its mandate through a wide range of impact initiatives, be it providing access to risk capital through targeted funding, technology transfer, IP management and handholding schemes that help bring innovation excellence to Indian biotech firms and make them globally competitive.

15. "E-Tribes India"**Context:**

- The government has launched "E- Tribes", TRIFED's websites. It includes www.tribesindia.com, www.trifed.in and Retail Inventory Software and M-commerce app.

Significance of this move:

- Going Digital will lead to expansion of tribal commerce and the availability of tribal products over large area, reaping greater benefits for tribal artisans. Retail Trade of tribal products would expand all over the country and the world.

About TRIFED:

- TRIFED is an apex organisation at National Level and **functioning under the administrative control of Ministry of Tribal Affairs**.

What it does?

- TRIFED is serving the interests of Tribals, who are engaged in collection of NTFP and making of Tribal Art & Handicraft Products for their livelihood so as to ensure better remunerative price for their products as well as for the socio-economic betterment through Self Help Groups, Empanelled NGOs, State level Tribal Development Corporations, Forest Development Corporations for undertaking marketing development of the tribal products.
- It also organizes exhibitions like **National Tribal Craft Expo called "Aadi Mahotsav"** etc. in which it promotes and markets tribal products.

What's important?

- **For Prelims:** E- Tribes India and TRIFED.
- **For Mains:** Tribal development- challenges, need and solutions.

Sources: pib.



16. National Skill Development Fund (NSDF) and National Skill Development Corporation (NSDC)

Context:

- The Union Cabinet has given its approval for restructuring of National Skill Development Fund (NSDF) and National Skill Development Corporation (NSDC) to strengthen governance, implementation and monitoring framework.
- The approval would lead to restructuring of composition of Board of NSDF and the NSDC to strengthen governance, implementation and monitoring framework.



About NSDC:

- National Skill Development Corporation India (NSDC), established in 2009, is **a not-for-profit company** set up by the Ministry of Finance.
- The present equity base of NSDC is Rs.10 crore, of which the Government of India through Ministry of Skill Development & Entrepreneurship (MSDE) holds 49%, while the private sector has the balance 51%.

Functions:

- NSDC aims to promote skill development by catalyzing creation of large, quality and for-profit vocational institutions.
- It also provides funding to build scalable and profitable vocational training initiatives.
- Its mandate is also to enable support system which focuses on quality assurance, information systems and train the trainer academies either directly or through partnerships.
- It also develops appropriate models to enhance, support and coordinate private sector initiatives.

About National Skill Development Fund:

- The National Skill Development Fund was set up in 2009 by the Government of India for raising funds both **from Government and Non Government sectors** for skill development in the country.
 - A public Trust set up by the Government of India is the custodian of the Fund.** The Trust accepts donation, contribution in cash or kind from the Contributors for furtherance of objectives of the Fund.
 - The Fund meets its objectives through National Skill Development Corporation (NSDC).**

What's important?

- For Prelims:** NSDC, NSDF.
- For Mains:** Need for Skill enhancement and various government initiatives in this regard.

Sources: pib.

17. India Convention Promotion Bureau

Context:

- The government of India has been providing necessary support to India Convention Promotion Bureau to promote India as a venue for International Conferences and Exhibitions.

About ICPB:

- The India Convention Promotion Bureau (ICPB) has been set up **under the patronage of the Ministry of Tourism**.
 - It has been set up **to promote India as a venue for International Conferences and Exhibitions**.
 - It is **a non-profit organization**, with members comprising national airlines, hotels, travel agents, tour operators, tourist transport operators, conference organizers, etc.

INDIA CONVENTION PROMOTION BUREAU(ICPB)

- The India Convention Promotion Bureau (ICPB) is the country's apex body whose mission is to promote India more effectively as a MICE destination.
- It was setup by the travel industry under the patronage of the Ministry of Tourism in 1988.
- New Delhi is headed by the full time marketing director

- It participates in International Meetings, Incentives, Conventions and Exhibitions (MICE) Tourism trade fairs like IMEX in Frankfurt and Las Vegas, EIBTM- Barcelona and AIME- Melbourne along with the Indiatourism overseas offices.

What's important?

- For Prelims: ICPB.

Sources: pib.

Paper 2 Topic: Welfare schemes for vulnerable sections of the population by the Centre and States and the performance of these schemes; mechanisms, laws, institutions and bodies constituted for the protection and betterment of these vulnerable sections.

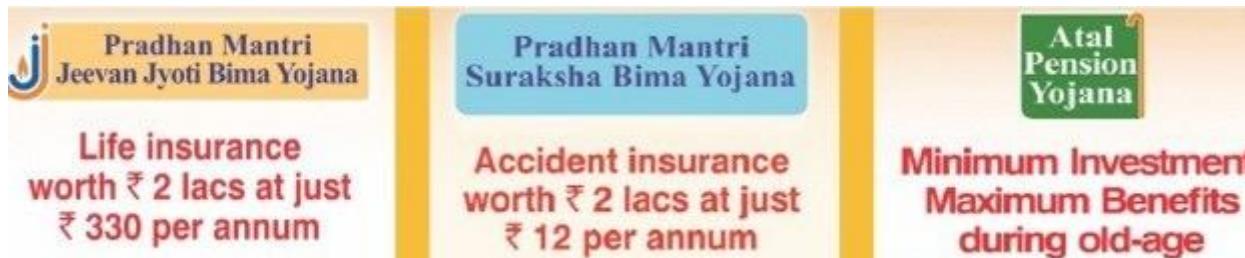
1. Social security scheme

Context:

- The labour ministry has proposed a comprehensive social security system to provide retirement, health, oldage, disability, unemployment and maternity benefits to 50 crore workers in the country.

Implementation of the scheme:

- The scheme will be implemented in three phases over 10 years, after which the government hopes to make it universal. The scheme will be implemented in four tiers with the government wholly financing the cost for people below the poverty line.
- The first phase of the scheme will cost Rs 18,500 crore. The first phase will see all workers getting the bare minimum, which includes health security and retirement benefits. The second phase will see unemployment benefits being added to it while in the third phase, other welfare measures can be added.



Funding:

- The scheme will be largely funded from the Building and Construction Worker Cess and funds allocated to other scattered schemes through the National Stabilisation Fund set up for the purpose.
- Its implementation would be regulated and monitored by an overarching regulatory body called the National Social Security Council to be chaired by the prime minister with finance minister, health minister and chief ministers of all states along with workers and employers as its members.

Classification of workers:

- The 50 crore beneficiaries will be classified into four tiers.
 - The first tier will comprise destitute and people below poverty line who cannot contribute for their security and hence the cost will be entirely borne by the government under tax-based schemes.
 - Workers in the unorganised sector who have some contributory power but are not self-sufficient may be covered under the subsidised schemes in the second tier.
 - The third tier of beneficiaries will include those who either by themselves or jointly with their employers can make adequate contribution to the schemes, so as to be self-sufficient.
 - The fourth tier will comprise comparatively affluent people who can make their own provisions for meeting the contingencies or risks as they rise.

Need for a social security scheme:

- India's total workforce stands at around 500 million. A little over 10% of this is in the organised sector, where workers enjoy social security of some sort under EPFO and ESIC.
- But a major portion of the total workforce is still in the unorganised sector, where workers do not often get even the minimum wage and lack any kind of social security cover.

What's important?

- **For Prelims:** National Social Security Council, National Stabilisation Fund.
- **For Mains:** Need for a comprehensive social security cover.

Sources: the hindu.

2. Beti Bachao Beti Padhao

Context:

- The government has expanded the Beti Bachao Beti Padhao programme from 161 districts to all the 640 districts in India.

Background:

- Initial focus of BBBP had been on the districts which were either below national average or were the worse in their own states in terms of absolute values of CSR.
- However, looking at the magnitude and criticality of the problem and its spread across the country, it was felt that no district can be left out of BBBP ambit to make a real dent on overall child sex ratio.

**Concerns:**

- The low and falling child sex ratio in the country is a matter of policy concern, not only because it violates the human rights of unborn and infant girls but also because it deprives the country of the potential economic and social contribution of these 'missing women'.
- In addition, there may be longer-run adverse impacts from a marriage market squeeze caused by an excess supply of male relative to female youth. Already, states like Haryana and Punjab, where the sex ratio has been extremely distorted for several decades, have been experiencing bride trafficking.

Way ahead:

- Declining sex ratio is a silent emergency. But the crisis is real, and its persistence has profound and frightening implications for society and the future of humankind.
- Clearly, there is a need to go beyond slogans and institute tangible schemes.
- Enforcement of the law that prohibits determination of the sex of the foetus must go hand in hand with massive social investments to protect both immediate and long-term prospects of girls — in the form of cash incentives through registration of births, a continuum of health care, early educational opportunities and social protection.
- Half-measures cannot produce a dramatic reversal of the shameful national record.

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.

What's important?

- **For Prelims:** BBBP.
- **For Mains:** Declining CSR- concerns, challenges and solutions.

Sources: pib.

3. Tribal Diaries

Context: The Ministry of Tribal Affairs has developed an android based mobile application called **Tribal Diaries**.**About the application:**

- It has been developed for internal monitoring and for connecting with officers/officials concerned with implementation of schemes / programmes for tribal development.

- The application is for accredited users. This application provides an opportunity for visual feedback in terms of photographs, videos, uploading reports of official tours / inspections and sharing of best practices etc.
- The application is being extensively used to get an overview of the Ekalavya Model Residential Schools (EMRSs) funded by the Ministry of Tribal Affairs.

Eklavya Model Residential Schools (EMRS):

- Eklavya Model Residential School Scheme was started in 1998 and first school was started in the year 2000 in Maharashtra. EMRSs have been functioning as institutions of excellence for tribal students.
- As per existing EMRS Guidelines of 2010, at least one EMRS is to be set up in each Integrated Tribal Development Agency (ITDA) / Integrated Tribal Development Project (ITDP) having 50% ST population in the area.
- The capital cost for setting up the school complex, including hostels and staff quarters etc. has been earmarked at Rs. 12 crore with a provision to go up to Rs.16 crore in hill areas, deserts and islands. Recurring cost during the first year for these schools would be Rs. 42000/-per child, with a provision of raising it by 10% every second year to compensate for inflation etc.

What's important?

- **For Prelims:** Tribal diaries, Ekalavya Model schools.
- **For Mains:** Need for empowerment of tribals.

Sources: pib.



4. Scheme for construction workers

Context:

- The Supreme Court has directed the Centre to frame a model scheme before September 30 to address the issues of education, health, social security and pension for construction workers, saying they build not just infrastructure, but also the nation.



What has the court said?

- Frame a scheme to ensure workers receive proper education, health, social security, old age, disability pension and other benefits necessary to live a dignified life.
- All state governments and union territories should constitute an expert committee and bring out statutory rules within six months.

Concerns:

- The Centre and states are not addressing the plight of construction workers despite Parliament framing Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act in 1996 for levy and collection of 1% cess on cost of construction.
- Around Rs 37,400 crore have been collected from cess over the years but only about Rs 9,500 crore have been utilised and Rs 28,000 crore remain unutilised.

Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act:

- BOCW Act is a welfare legislation intended and enacted for the benefit of the unorganised sector of building and construction workers.
- It has a strong flavour of social justice and is a serious attempt by Parliament to ensure that building and construction workers are not exploited because of their poverty and their children do not suffer their fate in terms of education, healthy living and whatever it takes to live a life of dignity.

Way ahead:

- It is quite clear that insofar as the rights of construction workers are concerned, that vulnerable section of the society has been badly let down by the governance structure.

- Unless there is effective and full compliance of the provisions, thousands of beneficiaries will be denied what is constitutionally and statutorily due to them.

What's important?

- For Mains:** Protection of vulnerable groups of the society- need, challenges and solutions.

Sources: the hindu.

5. North-East Industrial Development Scheme (NEIDS) 2017

Context:

- The Cabinet has approved the North East Industrial Development Scheme (NEIDS), 2017 with financial outlay of Rs 3,000 crores upto March, 2020.
- The newly introduced scheme shall promote industrialization in the States of the North Eastern Region and will boost employment and income generation.

Highlights of the scheme:

- Central Capital Investment Incentive for Access to Credit (CCIIAC):** 30% of the investment in Plant & Machinery with an upper limit of Rs.5 Crore on the incentive amount per unit.
- Central Interest Incentive (CII):** 3% on working capital credit advanced by eligible Banks/ Financial institutions for first 5 years from the date of commencement of commercial production by the unit.
- Central Comprehensive Insurance Incentive (CCII):** Reimbursement of 100% insurance premium on insurance of building and Plant & Machinery for 5 years from the date of commencement of commercial production by the unit.
- Goods and Service Tax (GST) Reimbursement:** Reimbursement up to the extent of Central Govt. share of CGST and IGST for 5 Years from the date of commencement of commercial production by the unit.
- Income-Tax (IT) Reimbursement:** Reimbursement of Centre's share of income tax for first 5 years including the year of commencement of commercial production by the unit.
- Additionally, transport and employment incentives are also provided under the scheme.

What's important?

- For Prelims:** NEIDS.
- For Mains:** Need for Industrial development in the North- east.

Sources: pib.

6. Integrated Scheme for Development of Silk Industry

Context:

- The Cabinet Committee on Economic Affairs has given its approval for Central Sector Scheme "Integrated Scheme for Development of Silk Industry" for the next three years from 2017-18 to 2019-20.
- The scheme will be implemented through **Central Silk Board (CSB)**.

Highlights of the scheme:

- The scheme aims to achieve self-sufficiency in silk production by 2022. To achieve this, production of high grade silk in India will reach 20,650 MTs by 2022 from the current level of 11,326 MTs thereby reducing imports to Zero.
- The core objective of the scheme is to improve the productivity and quality of silk through R&D intervention.
- The focus of R&D intervention is to promote improved crossbreed silk and the import substitute Bivoltine silk so that Bivoltine silk production in India enhances to such a level that raw silk imports become nil by 2022 thereby making India self-sufficient in silk.
- Use of silkworm by-products (pupa) for poultry feed, sericin for cosmetic applications and product diversification into non-woven fabrics, silk denim, silk knit etc. will be given thrust for added value realisation.
- Under Seed Sector, Seed Production Units will be equipped and strengthened to bring in quality standards in production network, besides increasing the production capacity to cater to the increased silk production target.

- All the beneficiaries under the scheme from silk farmers, seed producers and chawki rearers will be brought on a DBT mode with Aadhaar linkage. A Helpline will be set up for timely redressal of grievances and all outreach programmes.
- Brand Promotion of Indian silk will be encouraged through quality certification by Silk Mark not only in the domestic market but in the Export market as well.

Significance of the scheme:

- The scheme will promote Women Empowerment and livelihood opportunities to SC/ST and other weaker sections of the society.
- The scheme will help to increase productive employment from 85 lakhs to 1 crore persons by 2020.

Sources: pib.

7. 'Transformation of Aspirational Districts' programme

Context:

- The **NITI Aayog** has launched the baseline ranking for the Aspirational Districts based on published data of 49 indicators. All the states — except West Bengal and Kerala — are on board in this ranking initiative.
- From April 1, these 101 districts will start entering data and from May onwards, they will be ranked based on progress made (delta ranking) on a real-time basis.

Performance of various districts:

- As per the baseline ranking, **Vizianagaram** in Andhra Pradesh is ranked highest with score of 48.13% while Mewat in Haryana tails at the end with 26.02%.
- Among others, Asifabad (Telengana), Singrauli (Madhya Pradesh), Kiphire (Nagaland), Shrawasti, Siddartha Nagar and Balrampur (Uttar Pradesh), Namsai (Arunachal Pradesh), Sukma (Chhattisgarh) are ranked at bottom of the list.

About Transformation of Aspirational Districts Programme:

- 'Transformation of Aspirational Districts' was launched in January with an aim to quickly and effectively transform some of the most underdeveloped districts in the country.

Implementation strategy:

- 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.
- This will converge the central and state schemes, collaborate central, state and district collectors to strengthen these districts by identifying the low-hanging fruits for immediate improvement, measure progress and then rank the district by getting the data on a real-time basis.

Significance of the scheme:

- 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.
- Under the programme, identified districts are prodded and encouraged to first catch-up with the best district within their state, and subsequently aspire to become one of the best in the country, by competing with, and learning from others.

Need for the development of backward districts:

- India cannot grow at a high rate on a long run until these districts catch up, whatever high are the GDP numbers, it has no meaning until the benefit of growth percolates down to very basic level.

What's important?

- **For Prelims:** Transformation of Aspirational Districts programme.
- **For Mains:** Cooperative federalism and its significance.

Sources: pib.

Paper 2 Topic: Government policies and interventions for development in various sectors and issues arising out of their design and implementation.

1. Trafficking of Persons Bill, 2018

Context:

- The Union Cabinet has approved the Trafficking of Persons (Prevention, Protection and Rehabilitation) Bill, 2018 for introduction in the Parliament.

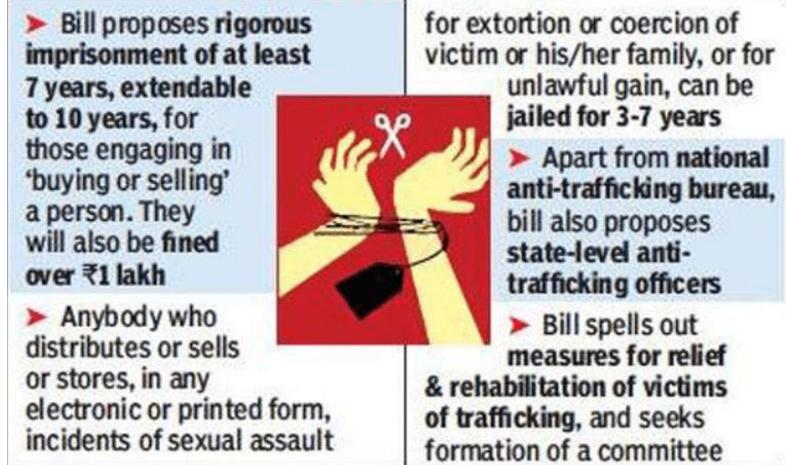
Highlights of the Bill:

- Forms of trafficking:** The Bill identifies various forms of trafficking, including for the purposes of bonded labour and begging. Listing out the 'aggravated forms of trafficking', the bill also speaks of offences such as intimidation, inducement, promise of payment of money, deception or coercion. It mentions trafficking after administering any drug or alcohol or for the purpose of marriage or under the pretext of marriage.
- Punishment:** Whoever commits the offence of aggravated form of trafficking of a person shall be punished with rigorous imprisonment for a term which shall not be less than 10 years, but which may extend to life imprisonment and shall be liable to fine that shall not be less than Rs 1 lakh. For repeat offenders, it suggests imprisonment for life "which shall mean imprisonment for the remainder of that person's natural life", apart from a fine that will not be less than Rs 2 lakh.
- Anti-trafficking bureau:** The bill proposes the establishment of a national anti-trafficking bureau, which shall be entrusted with the gamut of issues aimed at controlling and tackling the menace under various forms. Functions include coordination, monitoring and surveillance of illegal movement of persons and prevention. The bureau will also be entrusted with increasing cooperation with authorities in foreign countries for boosting operational and long-term intelligence for investigation of trafficking cases, and driving in mutual legal assistance.
- State level measures:** The bill also aims at having state-level anti-trafficking officers who shall also provide relief and rehabilitation services through district units and other civil-society organisations.
- Relief and rehabilitation:** The bill also spells out measures towards relief and rehabilitation for the victims of trafficking, and seeks the formation of a committee for this purpose. The committee is proposed to be headed by the women & child development secretary and would have members from the ministries of home; external affairs; labour and employment; social justice and empowerment; panchayati raj; and health and family welfare.

Background:

- As per data released by the National Crime Records Bureau (NCRB), human trafficking numbers rose by almost 20% in 2016 against the previous year. NCRB said there were 8,132 human trafficking cases last year against 6,877 in 2015, with the highest number of cases reported in West Bengal (44% of cases), followed by Rajasthan (17%). Of the 15,379 victims who were caught in trafficking, 10,150 were female and 5,229 males.
- Currently, there is no single law dealing with human trafficking and the crime is covered under different acts administered by at least half-a-dozen ministries, including WCD, home, labour, health, Indian overseas affairs and external affairs. More often than not, this results in lax enforcement.

MINIMUM 7 YEARS IN JAIL



Significance of the Bill:

- Trafficking in human beings is the third largest organized crime violating basic human rights. However, there is no specific law so far to deal with this crime.
- The new Bill addresses one of the most pervasive yet invisible crimes affecting the most vulnerable persons especially women and children.
- The new law will make India a leader among South Asian countries to combat trafficking. Trafficking is a global concern also affecting a number of South Asian nations.

What's important?

- **For Prelims:** Highlights of Anti- trafficking bill.
- **For Mains:** Anti- trafficking- issues, challenges and prevention.

Sources: pib.

2. Know India Programme

Context:

- Forty Indian-origin students from nine countries are in India as part of the 46th edition of Know India Programme (KIP). Madhya Pradesh is the partner state for this edition of the programme.

Know India Programme:***What is it?***

- Know India Programme is a flagship programme of Ministry of External Affairs for engagement with Indian origin youth (between 18-30 years) to enhance their awareness about India, its cultural heritage, art and to familiarise them with various aspects of contemporary India.

Eligibility:

- Minimum qualification required for participating in KIP is graduation from a recognized University /Institute or enrolled for graduation and ability to speak in English. The applicant should not have visited India through any previous Programme of Government of India. Those who have not visited India before will be given preference.

What's important?

- For Prelims: KIP, eligibility.
- For Mains: Indian diaspora and its significance.

Sources: the hindu.

3. Relief measures for telecom sector

Context:

- The Union Cabinet has approved two key measures in telecom sector to facilitate investments, consolidation in the sector and enhancing ease of doing business.

The measures include:

1. **Restructuring of Deferred Payment Liabilities of telecom Service providers for spectrum:**
 - By giving one-time opportunity to opt for higher number of instalment (max. 16 instalment) apart from currently permitted 10 instalments.
 - The increased instalment is based upon the principle that the Net Present Value (NPV) of the Payment Due is protected as per respective notice inviting application for auction of spectrum from 2012.
2. **Revision of limits of cap for spectrum holding:**
 - The overall spectrum cap is revised from the current limit of 25% to 35%.
 - The current intra-band cap is removed. Instead, there is a cap of 50% on the combined spectrum holding in the sub-1 GHz bands (700 MHz, 800 MHz and 900 MHz bands).

- There will be no cap for individual or combined spectrum holding in above 1 GHz band.
- The revised spectrum caps limits may be revisited after Final Acts of World Radiocommunication Conference (WRC) 2019.

Impact:

- With the restructuring of the deferred payment liability, the cash flow for the telecom service providers will increase in the immediate timeframe providing them some relief.
- Revising the limit for the spectrum cap holding will facilitate consolidation of telecom licensees and may encourage the participation in the future auction.

Background:

- The Indian telecom industry, which is locked in an intense tariff war, owes a staggering Rs 4.6 lakh crore to various financial institutions and banks.
- At the same time, large operators have been flagging pressure on revenue and profitability, blaming the rock-bottom data tariffs and free offerings of newcomer Reliance Jio for deteriorating financial health of the sector.

What else is needed?

- While the move to relax spectrum cap will help in consolidation and time extension would ease cash flow issues, but these were like 'short term band-aids'.
- Long-term systematic issues have not been addressed and they need to be addressed quickly before more companies get into financial problems.

What's important?

- **For Prelims:** About the relief measures.
- **For Mains:** Telecom sector- issues, challenges and reforms.

Sources: pib.

4. Rajasthan passes Bill to give death penalty for child rape

Context:

- Rajasthan has passed a Bill providing for death penalty to those convicted of raping girls of 12 years and below.
- The State Assembly passed the Criminal Laws (Rajasthan Amendment) Bill, 2018 seeking to amend the Indian Penal Code with the insertion of new provision by voice vote.

Key facts:

- The Bill is aimed at protecting the girl child by laying down a deterrent punishment, including death sentence, to the offenders.
- The Bill provides for capital punishment or rigorous imprisonment ranging between 14 years and lifelong incarceration.
- It also makes a similar provision for gang-rape of a girl child, while laying down death penalty or imprisonment from 20 years to lifelong incarceration for those convicted of the offence. Each of the persons constituting the gang will be deemed to be guilty of the offence.
- The Bill will become a law after it gets the Presidential assent.

Background:

- According to the National Crime Records Bureau's 2016 report, the cases of crimes against children have seen a steady increase in Rajasthan.
- The State recorded 4,034 such cases in 2016, which was 3.8% of the crimes against children registered across the country. In 2015, the State had registered 3,689 cases of crimes against children.

Facts for Prelims:

- Rajasthan has become the second State, after Madhya Pradesh, to pass a Bill providing for death penalty to those convicted of raping girls of 12 years and below.

Sources: the hindu.

5. 80:20 gold scheme

Context:

- The government has announced that it will review the circumstances under which Premier Trading Houses (PTH) and Star Trading Houses (STH) allegedly earned windfall gains under the 20:80 gold import scheme implemented by the previous government.

What's the issue?

- The previous government had, in May 2014, allowed PTHs and STHs to import gold under the 20:80 scheme, which was earlier restricted only to banks and public sector enterprises.
- This, the government has said, resulted in these PTHs and STHs earning a 'windfall gain'.
- A CAG report published in 2016 found that the 80:20 scheme had resulted in a loss of Rs 1 lakh crore to the exchequer.

About 80:20 gold scheme:

- The scheme was introduced in August 2013 with the aim of curbing gold imports.
- Under the scheme, up to 80% of gold imports could be sold in the country and while at least 20% of imports had to be exported before bringing in new consignments of the yellow metal.***
- Further, the permission to import the next lot given only upon fulfilment of the export mandate. The policy was aimed at tackling the widening fiscal deficit.
- Later, the RBI relaxed the rules with the aim to facilitate gem and jewellery export, which had declined due to the import curbs. Following relaxation of the rules, private firms were allowed to import gold under the scheme. In May 2014, the RBI had allowed certain premier export houses to import the gold subject to some restrictions. Under the earlier scheme, only state-owned entities were allowed to initially import the yellow metal. Later, the scheme was scrapped.

Sources: the hindu.

6. Payment of Gratuity (Amendment) Bill, 2017

Context:

Parliament has passed the Payment of Gratuity (Amendment) Bill, 2017.

Highlights of the Bill:

- The 2017 Bill empowers the central government to (i) notify the period of maternity leave eligible for qualifying as continuous service; and (ii) determine the amount of gratuity available to employees.
- The Bill removes the reference to 12 weeks in the 1972 Act and empowers the central government to notify the maximum maternity leave.
- Under the Act, the maximum amount of gratuity payable to an employee cannot exceed Rs 10 lakh. The Bill removes the existing ceiling and states that the ceiling may be notified by the central government.

The Payment of Gratuity Act, 1972:

- The Payment of Gratuity Act, 1972 applies to establishments employing 10 or more persons.
- The main purpose for enacting this Act is to provide social security to workmen after retirement, whether retirement is a result of the rules of superannuation, or physical disablement or impairment of vital part of the body.
- Therefore, the Payment of Gratuity Act, 1972 is an important social security legislation to wage earning population in industries, factories and establishments.

Who Are Eligible?

- The Payment of Gratuity Act, 1972 allows for the payment of gratuity to employees in any establishment, factory, mine, oil field, plantation, port, railways, company, or shop employing 10 or more workers.

What's important?

- For Prelims:** Details of the Amendment Bill.
- For Mains:** Need for social security and its benefits.

Sources: pib.

7. Draft policy on defence production

Context:

- The defence ministry has come out with a draft policy on defence production. The aim is to make India one of the top five manufacturers of defence platforms with active participation of public and private sectors. At present, India is one of the world's largest importer of military platforms and weapons.

Highlights of the policy:

- It envisages achieving a turnover of Rs 1,70,000 crore in military goods and services by 2025 by promoting the domestic defence industry.
- The policy lists as a major aim achieving export of Rs 35,000 crore in military equipment and services by 2025 by promoting the domestic defence industry.
- According to the policy, the government aims to make India self-reliant in defence production as well as fulfil demand of other friendly countries.
- The policy says the licensing process for defence industries will be liberalised and the list of items requiring licences will be reviewed and pruned.
- The policy says the tax regime will be rationalised to make domestic manufacturing attractive by ensuring that there is no tax inversion. Taxes on import of capital goods and services, inputs and components used in defence production will be rationalised.
- The government identified 12 military platforms and weapons systems for production in India to achieve the aim of "self-reliance". They are fighter aircraft, medium lift and utility helicopters, warships, land combat vehicles, missile systems, gun systems, small arms, ammunition and explosives, surveillance systems, electronic warfare (EW) systems and night fighting enablers, among others.

What's important?

- For Prelims and Mains:** Policy on defence production and the need for indigenization.

Sources: the hindu.

8. New vehicle scrappage policy

Context:

- Government's New Vehicle Scrappage policy was recently cleared by the Prime Minister's Office and is awaiting the approval of the GST Council.



Highlights of the policy:

- The policy targets to take polluting vehicles out of the roads and help the automobile industry register higher sales.
- The policy mentions about vehicles older than 20 years becoming eligible for benefits under the scrappage scheme.
- The scheme would now come in effect from April 1, 2020, coinciding with the implementation of the BS-VI norms.

Concerns:

- The new vehicle scrappage policy of the Centre is unlikely to have any significant impact on the automobile industry in terms of increased demand, according to rating agencies.
- Also, analysts say the benefit offered under the scrappage policy would be 15% of the vehicle's price. But this advantage would be muted as prices of diesel vehicles were expected to rise 10-15% once the new norms (BS-VI) come into force.
- The total population of commercial vehicles that will be older than 20 years in fiscal 2021 would be 50,000 vehicles, much lower than the government's earlier estimate of 2.8 crore vehicles. In any case, 70,000 to 90,000 vehicles are scrapped every year. So, it is believed that the impact of the scrappage policy will be limited.
- Also, the proportion of commercial vehicles above 20 years would be one lakh to two lakh units. Besides, most of these older vehicles are used in rural areas and smaller towns by small fleet operators who operate used

vehicles and have limited financial resources to purchase new vehicles. Thus, the proposed scrappage policy is unlikely to be materially positive for commercial vehicle demand.

What's important?

- For Prelims: The policy on vehicle scrappage.
- For Mains: Significance and need for the policy.

Sources: the hindu.

9. Enemy properties

Context:

- The government has initiated the process of sale of more than 9,400 enemy properties by issuing guidelines and directing the office of the custodian to submit the list of all such movable and immovable assets within three months. The sale of enemy properties is expected to fetch around Rs 1 lakh crore for the government exchequer.
- The move comes after ***the amendment of the Enemy Property (Amendment and Validation) Act 2017 and the Enemy Property (Amendment) Rules, 2018***, which ensured that the heirs of those who migrated to Pakistan and China during partition and afterwards will have no claim over the properties left behind in India.

Background:

- There are 9,280 properties left behind by Pakistani nationals and 126 properties which belonged to Chinese nationals.

What are enemy properties?

- When wars broke out between India and China in 1962, and India and Pakistan in 1965 and 1971, the central government took over properties of citizens of China and Pakistan in India under the Defence of India Acts. These Acts defined an 'enemy' as a country that committed an act of aggression against India, and its citizens.
- ***The properties of enemies in India were classified as enemy property.*** The properties included land, buildings, shares held in companies, gold and jewellery of the citizens of enemy countries. The responsibility of the administration of enemy properties was handed over to the Custodian of Enemy Property, an office under the central government.

Enemy properties Act:

- After the Indo-Pakistan War of 1965, the Enemy Property Act was enacted in 1968, which regulates such properties and lists the custodian's powers.
- The government amended the Act in the wake of a claim laid by the heirs of Raja Mohammad Amir Mohammad Khan, known as Raja of Mahmudabad, on his properties spread across Uttar Pradesh and Uttarakhand.
- ***The government has vested these properties in the Custodian of Enemy Property for India***, an office instituted under the Central government.

What's important?

- **For Prelims and Mains:** What are enemy properties and enemy properties act.

Sources: the hindu.

10. Smart India Hackathon 2018

Context:

- **All India Council for Technical Education (AICTE)** under the aegis of Ministry of Human Resource Development (MHRD) is organizing **Smart India Hackathon 2018**.

Key facts:

- Smart India Hackathon 2018 is a non-stop digital product development competition, where problems are posed to technology students for innovative solutions. It will harnesses creativity & expertise of students and sparks institute-level hackathons.



- It builds funnel for 'Startup India' campaign and crowdsources solutions for improving governance and quality of life. It also provides opportunity to citizens to provide innovative solutions to India's daunting problems
- Smart India Hackathon 2018 would be the second massive scale hackathon initiative in India following Smart India Hackathon 2017.
- Winners stand to get cash prizes and a chance to be part of the NASSCOM's 10,000 Startups program.

11. 'Saubhagya' scheme

Context:

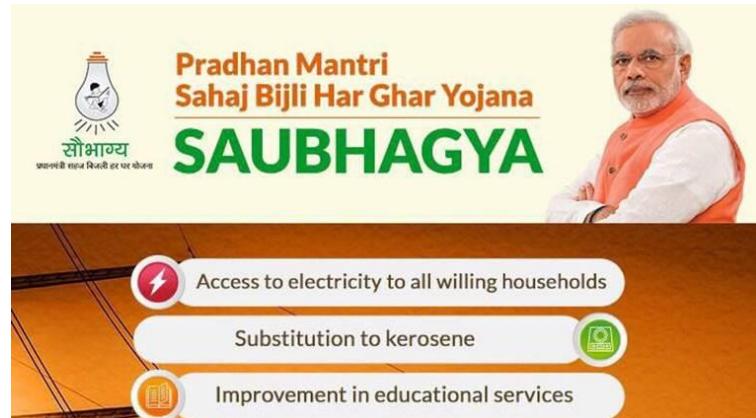
- Aiming to empower and uplift the rural youth and development, Ministry of Skill Development & Entrepreneurship has partnered with the Ministry of Power to ensure access to electricity for every household in the country through an ambitious scheme, Pradhan Mantri Sahaj Bijli Har Ghar Yojna (SAUBHAGYA).

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.
- There are around 4 Crore un-electrified households in the country and they are targeted for providing electricity connections by December 2018.

What's important?

- **For Prelims and Mains:** Saubhagya scheme and its significance.



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 at a cost of Rs 16,320 crore, including Gross Budgetary Support of Rs 12,320 crore from the government.
- 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 DDUGJY.
- 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.

Sources: pib.

12. Atal Innovation Mission

Context:

- NITI Aayog's Atal Innovation Mission (AIM) has announced the signing of a Statement of Intent (SOI) with SAP Global to promote a culture of innovation and entrepreneurship.

Significance of the SOI:

- As part of the SOI, SAP in 2018 will adopt 100 Atal Tinkering Laboratories (ATL) for five years to nurture the science, technology, engineering and mathematics (STEM) learning among secondary school children across India.

- This aims to enable students to learn advanced technology topics relevant to digital transformation and the Internet of Things, e.g. Design Thinking methodology, introduction to programming languages and experiential science learning.

What are tinkering labs?

- **ATLs are innovation play workspaces for students between Class 6 to 12**, stimulating innovations combining science and technology.
 - These open-ended innovation workspaces are equipped with state-of-the art technologies like 3D printers, robotics, sensor technology kits, Internet of Things, miniaturised electronics etc, to enable students to learn and solve local community problems using emerging technologies.
 - The aim of Atal Labs is to promote innovation and entrepreneurship in schools, universities and industry with a vision to “cultivate one million children in India as the innovators of tomorrow”.

About AIM:

- The Atal Innovation Mission (AIM) is Government of India's flagship initiative to promote a culture of innovation and entrepreneurship in the country.
 - AIM is mandated to create an umbrella structure to oversee innovation ecosystem of the country and revolutionizing the innovation eco-system – touching upon the entire innovation life cycle through various programs.
 - Atal Tinkering Laboratories (ATLs) create innovators, Atal Incubation Centre and support to Established Incubation Centre will take the innovations to the market and a network of Incubators shall help create enterprises around these innovations.

Sources: pib.

Paper 2 Topic: Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources.

1. Rare Disease Day

Context: 28 February 2018 was the eleventh international Rare Disease Day coordinated by EURORDIS.

Theme:

- In 2018 the theme is Research. Research is key.
- It brings hope to the millions of people living with a rare disease across the world and their families.

What is Rare Disease Day?

- Rare Disease Day takes place on the last day of February each year. The main objective of Rare Disease Day is to raise awareness amongst the general public and decision-makers about rare diseases and their impact on patients' lives.
- The campaign targets primarily the general public and also seeks to raise awareness amongst policy makers, public authorities, industry representatives, researchers, health professionals and anyone who has a genuine interest in rare diseases.



What is a rare disease?

- A rare disease, also referred to as an orphan disease, is any disease that affects a small percentage of the population.
- Most rare diseases are genetic, and are present throughout a person's entire life, even if symptoms do not immediately appear. In Europe a disease or disorder is defined as rare when it affects less than 1 in 2000 citizens.
- Rare diseases are characterised by a wide diversity of symptoms and signs that vary not only from disease to disease but also from patient to patient suffering from the same disease. Relatively common symptoms can hide underlying rare diseases, leading to misdiagnosis.

Need for awareness:

- Building awareness of rare diseases is so important because 1 in 20 people will live with a rare disease at some point in their life.
- Despite this, there is no cure for the majority of rare diseases and many go undiagnosed.

- Rare Disease Day improves knowledge amongst the general public of rare diseases while encouraging researchers and decision makers to address the needs of those living with rare diseases.

What's important?

- For Prelims:** What are rare diseases?
- For Mains:** Need for awareness, international cooperation in this regard.

Sources: pib.

2. Diabetes has five types, say scientists

Context:

- Scientists have unveiled a revised classification for diabetes. There are five distinct types of diabetes that can occur in adulthood, rather than the two currently recognised.

Currently, the disease is divided into two sub-types:

- With type-1** — generally diagnosed in childhood and accounting for about 10% of cases — the body simply doesn't make insulin, a hormone that helps regulate blood sugar levels.
- For type-2**, the body makes some insulin but not enough, which means glucose stays in the blood. This form of the disease correlates highly with obesity and can, over time, lead to blindness, kidney damage, and heart disease or stroke.

The new clusters are:

- Cluster 1** – severe autoimmune diabetes is broadly the same as the classical type 1 – it hit people when they were young, seemingly healthy and an immune disease left them unable to produce insulin
- Cluster 2** – severe insulin-deficient diabetes patients initially looked very similar to those in cluster 1 – they were young, had a healthy weight and struggled to make insulin, but the immune system was not at fault
- Cluster 3** – severe insulin-resistant diabetes patients were generally overweight and making insulin but their body was no longer responding to it
- Cluster 4** – mild obesity-related diabetes was mainly seen in people who were very overweight but metabolically much closer to normal than those in cluster 3
- Cluster 5** – mild age-related diabetes patients developed symptoms when they were significantly older than in other groups and their disease tended to be milder.

Background:

- People with diabetes have excessively high blood glucose, or blood sugar, which comes from food.
- Some 420 million people around the world today suffer from diabetes, with the number expected to rise to 629 million by 2045, according to the International Diabetes Federation.

India's concern:

- Today, Diabetes has become a major public health concern in India.
- According to the International Diabetes Federation, over 66 million people in India live with this metabolic disease; an almost equal number has pre-diabetes which is an immediate precursor to diabetes.
- It is predicted that by 2030 diabetes mellitus may afflict up to 79.4 million individuals in India.

Way ahead:

- India currently faces an uncertain future in relation to the potential burden that diabetes may impose upon the country.
- If this continues unchecked, an already overloaded and inefficient health system will run out of solutions.
- Many influences affect the prevalence of diabetes throughout a country, and identification of those factors is necessary to facilitate changes in the healthcare system.

Significance of this discovery:

- This is the first step towards personalised treatment of diabetes.
- This discovery could lead to better treatments and help doctors more accurately predict life-threatening complications from the disease.

What is diabetes?

- Diabetes, often referred to by doctors as diabetes mellitus, describes a group of metabolic diseases in which the person has high blood glucose (blood sugar), either because insulin production is inadequate, or because the body's cells do not respond properly to insulin, or both.

What's important?

- **For Prelims:** Types of diabetes.
- **For Mains:** Health concerns, changes required in the healthcare system.

Sources: the hindu.

3. IMPRINT-II**Context:**

- In a major boost for research and innovation in the country, the Central Government has sanctioned a sum of Rs. 1000 crore for the phase two of the Impacting Research Innovation and Technology (IMPRINT) India programme.
 - Under the IMPRINT-II, a fund is being created by the Department of Science and Technology and Ministry of Human Resource Development together, in which participation will come from industry and other interested Ministries. The project will be run as a separate vertical in coordination with the DST.

What's important?

- **For Prelims:** IMPRINT India.
- **For Mains:** Need for research and innovation in the country.

Sources: pib.

4. Passive Euthanasia legalised by Supreme Court**Context:**

- The Supreme Court has delivered a landmark judgment allowing "living will" where, an adult in his conscious mind, is permitted to refuse medical treatment or voluntarily decide not to take medical treatment to embrace death in a natural way.
- In its judgment, the court has laid down a set of guidelines for "living will" and defined passive euthanasia and euthanasia as well.

Guidelines laid down by the court:**What is advance medical directive or living will?**

- It is a medical power of attorney that allows an individual to appoint a trusted person to take health care decisions when the patient is not able to take such decisions.
- The trusted person is allowed to interpret the patient's decisions based on their mutual knowledge and understanding. The trusted person can decide on the patient's behalf how long the medical treatment should continue when the patient is unconscious or in a coma state is not in a position to decide.

Who is allowed to execute or draw up the will?

- According to the Supreme Court rules, it can be executed only by an adult who is of a sound and healthy state of mind and in a position to communicate, relate and comprehend the purpose and consequences of executing the document.
- It must be voluntarily executed and should have characteristics of an informed consent given without any undue influence or constraint.

About IMPRINT India:

- The initiative, 'IMPRINT India', is a pan-IIT and IISc joint collaboration to develop a blueprint for research of immediate relevance to society requiring innovation, direct scientific research into identified areas, ensure higher funding support for research into these areas and measure outcomes of the research efforts with reference to the impact on the standard of living in rural/urban areas.

Passive Euthanasia:

- When doctors don't provide, or remove patients from, lifesustaining treatment.
- Includes: Disconnecting life-support machines, feeding tubes, not carrying out life-saving operations, not providing life-extending drugs, Non-treatment not seen as cause of death; patient understood to have died because of underlying condition.

Right to Die:

- Right to die peacefully is part of Fundamental Right to Life guaranteed under Article 21 of the Constitution.
- Article 21 provides that "no person shall be deprived of his life or personal liberty except according to procedure established by law".

- It shall be stated clearly as to when medical treatment may be withdrawn or no specific medical treatment shall be given which will only have the effect of delaying the process of death that may otherwise cause the patient pain, anguish and suffering and further put him or her in a state of indignity.
- In order to overcome the difficulty faced in case of patients who are unable to express their wishes at the time of taking the decision, the concept of advance medical directives emerged in various countries.

What should the will speak about?

- It should indicate the decision relating to the circumstances in which withholding or withdrawal of medical treatment can be resorted to.
- Be in specific terms and the instructions must be absolutely clear and unambiguous.
- Mention that the executor may revoke the instructions/authority at any time.
- Disclose that the executor has understood the consequences of executing such a document.
- Specify the name of a guardian or close relative who, in the event of the executor becoming incapable of taking decision at the relevant time, will be authorized to give consent to refuse or withdraw medical treatment in a manner consistent with the advance directive.
- In the event that there is more than one valid living will, none of which have been revoked, the most recently signed advance directive will be considered as the last expression of the patient's wishes and will be given effect to.

How should the will be recorded, preserved?

- The document should be signed by the executor in the presence of two attesting witnesses, preferably independent, and counter-signed the jurisdictional Judicial Magistrate of First Class (JMFC) so designated by the concerned district judge.
- The JMFC shall preserve one copy of the document in his office, keep another in digital format, forward one copy of the document to the registry of the jurisdictional district court, inform the immediate family members of the executor.
- A copy be handed over to the competent officer of the local body. A copy of the directive be handed over to the family physician, if any.

When and by whom can it be given effect to?

- In the event the executor becomes terminally ill and is undergoing prolonged medical treatment with no hope of recovery and cure of the ailment, the treating physician, when made aware about the advance directive, shall ascertain the genuineness and authenticity thereof from the jurisdictional JMFC before acting upon the same.
 - The document should be given effect to only after being fully satisfied that the executor is terminally ill and is undergoing prolonged treatment or is surviving on life support and that the illness of the executor is incurable or there is no hope of him/her being cured.
 - The physician or hospital where the executor has been admitted for medical treatment shall constitute a medical board that shall visit the patient and form an opinion whether to certify or not to certify carrying out the instructions of withdrawal or refusal of further medical treatment.
 - The Chairman of the board nominated by the collector, that is, the Chief District Medical Officer, shall convey the decision of the board to the jurisdictional JMFC before giving effect to the decision to withdraw the medical treatment administered to the patient.
 - The JMFC shall visit the patient at the earliest and, after examining all aspects, authorise the implementation of the decision of the board.
 - It will be open to the executor to revoke the document at any stage before it is acted upon and implemented.

What if the board refuses the permission?

- If permission to withdraw medical treatment is refused by the Medical Board, it would be open to the patient or his family members or even the treating doctor or the hospital staff to approach the high court and its chief justice will have to constitute a division bench to decide upon case.

Sources: the hindu.

5. World Happiness Index

Context:

- World Happiness Report for the year 2018 has been released. The World Happiness Report 2018, ranks 156 countries by their happiness levels, and 117 countries by the happiness of their immigrants.

Main focus:

- The main focus of this year's report, in addition to its usual ranking of the levels and changes in happiness around the world, is ***on migration within and between countries***.
- The report includes four chapters on migration, both internal (within-country) and international (cross-country), investigating the happiness of migrants, their families left behind, and others living in the cities and countries receiving migrants.

Performance of various countries:

- Finland has been ranked the most stable, the safest and best governed country in the world. It is also among the least corrupt and the most socially progressive. Its police are the world's most trusted and its banks the soundest. Finland's immigrants are also the happiest immigrant population in the world.
- Top ten in order of overall happiness are Norway, Denmark, Iceland, Switzerland, Netherlands, Canada, New Zealand, Sweden, and Australia.
- The United States came in at 18th, down from 14th place last year. Britain was 19th and the United Arab Emirates 20th.
- Burundi in east Africa, scarred by bouts of ethnic cleansing, civil wars and coup attempts, is the unhappiest place in the world. Strikingly, there are five other nations – Rwanda, Yemen, Tanzania, South Sudan and the Central African Republic – which report happiness levels below that of even Syria.
- All the Nordic countries scored highly on income, healthy life expectancy, social support, freedom, trust and generosity.

TOP 10	COUNTRY
1	Finland
2	Norway
3	Denmark
4	Iceland
5	Switzerland
6	Netherlands
7	Canada
8	New Zealand
9	Sweden
10	Australia

Performance of India and its neighbours:

- India ranked 133rd, far behind terror-ravaged Pakistan and poorest-of-poor Nepal.
- It was placed 122nd last year, which was a drop from 118th rank the preceding year.
- Among the eight Saarc nations, Pakistan was at 75th position, up five spots from last year.
- Nepal stood at 101, Bhutan at 97, Bangladesh at 115 while Sri Lanka was at 116.
- China is far ahead at 86th spot.

Sources: the hindu.

6. Yellow fever

Context:

- The burden of yellow fever in any given area is known to be heavily dependent on climate, particularly rainfall and temperature which can impact both mosquito life cycle and viral replication.
- Now, researchers from Imperial College London and the World Health Organization (WHO) have developed a new model to quantify yellow fever dynamics across Africa using not only annual averages of these climatic measures, but seasonal dynamics.

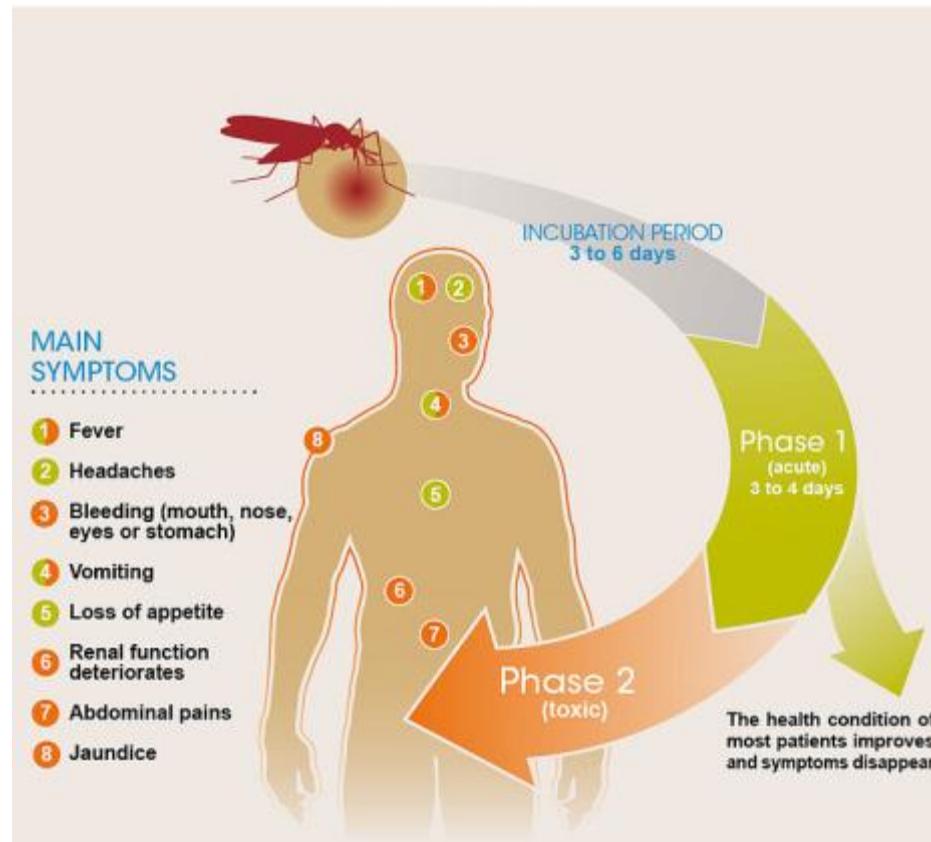
What is yellow fever?

- Yellow fever is an acute viral haemorrhagic disease transmitted by the aedes and Haemagogus mosquitoes.
- It is not always easy to diagnose, especially at the beginning, since its symptoms can often be confused with those of malaria, dengue fever, or other haemorrhagic fever. However, some patients will suffer from a jaundice specific to the disease, which explains why the term "yellow" is used.

About the new model:

- The new model integrated the effects of temperature on mosquito behavior and virus transmission, and looked at monthly variation in temperature rainfall, and vegetation throughout the year across Africa.
- The model confirmed and quantified that, even in areas with high transmission potential for yellow fever, the risk varies throughout the year.

HUMAN YELLOW FEVER SYMPTOMS

**Significance of the new model:**

- This finding, in conjunction with forecasted data, could highlight areas of increased transmission and provide insights into the occurrence of large outbreaks.
- When used in conjunction with forecasted data, the model predictions could be useful for focusing both surveillance efforts, and the pre-positioning of material and equipment in areas and periods of particularly high risk.
- This would allow the facilitation of early interventions in emerging yellow fever outbreaks — which is key to prevent large scale outbreaks.

What can be done against yellow fever?

- To date, there is no treatment against yellow fever. Water and medicines can be given to target the symptoms, such as fever or dehydration. Vaccination is the best option to prevent outbreaks of the disease and to protect people against it.
- Other strategies to combat the disease include mosquito population control, with the large scale use of pesticides and mosquito nets, as well as the treatment of stagnant water sources.

What's important?

- For Prelims and Mains:** All about Yellow fever.

Sources: et.

7. Festival Of Innovation And Entrepreneurship

Context:

- The Festival of Innovation and Entrepreneurship was recently inaugurated by President Ram Nath Kovind.
- It is being organised by **Rashtrapati Bhavan in association with the Department of Science and Technology and the National Innovation Foundation-India.**

About the Festival Of Innovation And Entrepreneurship:

- It is a celebration of country's Innovation potential, particularly those ideas which stem from grassroots level including the citizen at the last mile and also a reflection of power of children's creativity.
- It is an initiative to recognise, respect, showcase, reward innovations and to foster a supportive ecosystem for innovators.

Significance of the Festival:

- FINE would provide an excellent platform to the innovators for building the linkages with potential stakeholders whose support can improve their prospects in coming years for the larger social good.
- It will also help in promoting lateral learning and linkages among the innovators to enrich the ecosystem for new India.
- It would also be a great opportunity to create awareness about the importance of various Ministries of Government of India attaches to their effort and participation in the FINE.

What's important?

- **For Prelims:** FINE.
- **For Mains:** Need for innovation and entrepreneurship in the country.

Sources: pib.

8. 'SATHE' program

Context:

- NITI Aayog has released comprehensive roadmaps and detailed timelines for its initiative 'Sustainable Action for Transforming Human Capital in Education (SATH-E)'.

Key facts:

- **These roadmaps, which operate between 2018 to 2020,** lay out detailed interventions which will be taken by the **three participating States- Jharkhand, Madhya Pradesh and Odisha** – aiming to become 'Role Model States' in school education.
- These roadmaps present the first-of-its-kind, customized, action-oriented programmes, outlining interventions at the individual, district and State level, it said.
- The roadmaps were jointly prepared by NITI Aayog, the three States and the knowledge partners of the SATH Initiatives, the Boston Consulting Group (BCG) and Piramal Foundation For Education Leadership (PFEL).

About SATHE Program:

- **What is it?** SATH-E has been envisaged as a programme which aims to transform elementary and secondary school education across the selected states. SATH-E roadmap refers to a time-bound, goal-driven exercise that will reach its logical culmination by the end of the academic year 2020.
- **Implementation:** The SATH-E initiative is based on formal agreements with the States and will be funded through a cost-sharing mechanism between NITI Aayog and the participating states. The Boston Consulting Group (BCG) and Piramal Foundation for Education Leadership (PFEL) were chosen as knowledge partners for the project facilitating review, data collection and implementation.

Sustainable Action for Transforming Human Capital (SATH)



Program launched for health and education sectors transformation

- **Significance:** SATH-E aims to create role model States for education and mainstream 'islands of excellence' across the country to facilitate qualitative and quantitative transformation of learning outcomes. Marrying technology with need-based, data-driven assessment and a 'giving it what it takes' approach – be it innovation, incubation, external third party funding and Public- Private- Philanthropic Partnership (PPP) experimentation – SATH-E puts the States in the driver's seat to transform education at scale.

What's important?

- **For Prelims and Mains:** SATHE and its significance.

Sources: pib.

9. 60 Higher Educational Institutions granted autonomy

Context:

- In a historic decision, the University Grants Commission has granted autonomy to sixty Higher Educational Institutions which have maintained high academic standards.

Criteria for granting autonomy status:

- Autonomy is granted to institutes based on the parameters of excellence in academic performances, capability of self-governance and enhancement in the quality of education, and it can be seen as a great opportunity to meet the emerging and evolving needs, in sync with the industry.



Implications:

- These universities will remain within the ambit of UGC but will have the freedom to start new courses, off campus centers, skill development courses, research parks and any other new academic programs.
- They will also have the freedom to hire foreign faculty, enroll foreign students, give incentive based emoluments to the faculty, enter into academic collaborations and run open distance learning programmes.
- The eight autonomous collages, granted autonomy, will be free to set their own syllabus, hold examinations, carry out evaluation as well as declare results. In this case, only the degree will be awarded by the respective university.

Why higher educational institutions need greater autonomy?

- Higher education plays a crucial role in the realisation of India's potential for economic and technological growth. Autonomy helps institutionalise quality and accountability, thereby encouraging institutions to incorporate unique pedagogical developments and practices into the curriculum.
- Management education is meant to be contemporary in nature and thus dynamic. Frequent changes are required in pedagogy, curriculum and other aspects. An autonomous status expedites these operations and thus enthuses constant fluidity in the pattern and curriculum, apart from accelerating and improving evaluation.

Significance of autonomy:

- While expanding new horizons for higher education and strengthening the quality and relevance, autonomy can be considered a possible solution to enhance the quality of education and incorporate methods of skilling the students, thus contributing to creating a knowledge-based economy and paving the way to gear up the young workforce for Industry 4.0.

Way ahead:

- It is essential that Indian institutes are given the freedom to work with a greater agility in realising the larger goals of the education space in the country.
- Government impetus for autonomy can propel the global ranking of Indian institutions and push India higher on the world charts for education.
- By bringing this into effect, there are high chances of reducing the brain drain, turning it into a brain gain.

What's important?

- **For Mains:** Autonomy for higher education institutions- need, challenges and significance.

Sources: the hindu.

10. Krishi Vigyan Kendras

Context:

- The ministries of agriculture and skill development have signed a pact to conduct programmes for training in farm and allied sectors at 690 Krishi Vigyan Kendras across the country.

Need for skill upgradation:

- About 40% of the country's workforce is linked to agricultural knowledge activities. The government aims to double farmers' income. However, without skill upgradation, this is not possible.
- There are rapid technological strides in the agriculture sector; therefore, upskilling is needed.

Activities:

- KVks provide several farm support activities like providing technology dissemination to farmers, training, awareness etc.
- To achieve the set objectives KVks undertake following types of activities in the adopted villages: (1) Farm Advisory Service (2) Training programme for different categories of people. (3) Training programme for the extension functionaries. (4) Front Line Demonstration (Fill) (5) On Farm Testing (OFT).

What is Krishi Vigyan Kendra?

- Krsihi Vigyan Kendra (KVK) are agricultural extension centres created by ICAR (Indian Council for Agricultural Research) and its affiliated institutions at district level to provide various types of farm support to the agricultural sector.
- The first KVK was established during 1974 (Pondichery) and has grown as a largest network in the country.

What's important?

- **For Prelims:** KVks.
- **For Mains:** Agricultural reforms.

Sources: the hindu.

11. Rashtriya Uchchatar Shiksha Abhiyan (RUSA)

Context:

- The Cabinet Committee on Economic Affairs has given its approval for continuation of Centrally Sponsored Scheme of Rashtriya Uchchatar Shiksha Abhiyan (RUSA) from April 2017 to March 2020.

Funding:

- The central funding (in the ratio of 60:40 for general category States, 90:10 for special category states and 100% for union territories) would be norm based and outcome dependent.
- The funding would flow from the central ministry through the state governments/union territories to the State Higher Education Councils before reaching the identified institutions.
- The funding to states would be made on the basis of critical appraisal of State Higher Education Plans, which would describe each state's strategy to address issues of equity, access and excellence in higher education.

Components:

- RUSA would create new universities through upgradation of existing autonomous colleges and conversion of colleges in a cluster.

About RUSA:

- Rashtriya Uchchatar Shiksha Abhiyan (RUSA) is a Centrally Sponsored Scheme (CSS), launched in 2013 aims at providing strategic funding to eligible state higher educational institutions.

Objectives:

- The key objectives of RUSA are to improve access, equity and quality in higher education through planned development of higher education at the state level. Objectives include creating new academic institutions, expanding and upgrading the existing ones, developing institutions that are self-reliant in terms of quality education, professionally managed, and characterized by greater inclination towards research and provide students with education that is relevant to them as well the nation as a whole.

- It would create new model degree colleges, new professional colleges and provide infrastructural support to universities and colleges.
- Faculty recruitment support, faculty improvements programmes and leadership development of educational administrators are also an important part of the scheme.
- In order to enhance skill development the existing central scheme of Polytechnics has been subsumed within RUSA. A separate component to synergise vocational education with higher education has also been included in RUSA.
- Besides these, RUSA also supports reforming, restructuring and building capacity of institutions in participating state.

What's important?

- **For Prelims:** RUSA.
- **For Mains:** Reforms in higher education in India.

Sources: pib.

12. Ayushman Bharat – National Health Protection Mission

Context:

- The Union Cabinet has approved the launch of a new Centrally Sponsored Ayushman Bharat -National Health Protection Mission (AB-NHPM) having central sector component under Ayushman Bharat Mission anchored in the MoHFW.
- ***It will subsume the on-going centrally sponsored schemes*** -Rashtriya Swasthya Bima Yojana (RSBY) and the Senior Citizen Health Insurance Scheme (SCHIS).

Highlights of the scheme:

- **Coverage:** The scheme has the benefit cover of Rs. 5 lakh per family per year. To ensure that nobody is left out (especially women, children and elderly) there will be no cap on family size and age in the scheme. The benefit cover will also include pre and post-hospitalisation expenses.
- **Target:** The target beneficiaries of the proposed scheme will be more than 10 crore families belonging to poor and vulnerable population based on SECC database. Benefits of the scheme are portable across the country and a beneficiary covered under the scheme will be allowed to take cashless benefits from any public/private empanelled hospitals across the country.
- **Role of state governments:** State Governments will be allowed to expand AB-NHPM both horizontally and vertically. States will be free to choose the modalities for implementation. They can implement through insurance company or directly through Trust/ Society or a mixed model.
- **Council:** For giving policy directions and fostering coordination between Centre and States, it is proposed to set up Ayushman Bharat National Health Protection Mission Council (AB-NHPCM) at apex level Chaired by Union Health and Family Welfare Minister.

Who is eligible?

- It will be an entitlement based scheme with entitlement decided on the basis of deprivation criteria in the SECC database.
 - The different categories in rural area include families having only one room with kucha walls and kucharoof; families having no adult member between age 16 to 59; female headed households with no adult male member between age 16 to 59; disabled member and no able bodied adult member in the family; SC/ST households; and landless households deriving major part of their income from manual casual labour.
 - Also, automatically included families in rural areas having any one of the following: households without shelter, destitute, living on alms, manual scavenger families, primitive tribal groups, legally released bonded labour. For urban areas, 11 defined occupational categories are entitled under the scheme.

Implementation Strategy:

- At the national level to manage, an Ayushman Bharat National Health Protection Mission Agency (AB-NHPMA) would be put in place. States/ UTs would be advised to implement the scheme by a dedicated entity called State Health Agency (SHA).

- They can either use an existing Trust/ Society/ Not for Profit Company/ State Nodal Agency (SNA) or set up a new entity to implement the scheme. States/ UTs can decide to implement the scheme through an insurance company or directly through the Trust/ Society or use an integrated model.

Benefits of the scheme:

- This will lead to increased access to quality health and medication. In addition, the unmet needs of the population which remained hidden due to lack of financial resources will be catered to.
- This will lead to timely treatments, improvements in health outcomes, patient satisfaction, improvement in productivity and efficiency, job creation thus leading to improvement in quality of life.

Way ahead:

- The scheme, if implemented properly could be a game changer by enhancing access to health care including early detection and treatment services by a large section of society who otherwise could not afford them. The identification of beneficiaries can be done by linking with Aadhar and similarly following up for services received and health outcomes achieved, thereby helping to monitor and evaluate the impact of the programme.
- Ultimately, the scheme could help country move towards universal health coverage and equitable access to healthcare which is one of the UN Sustainable Development Goals or SDGs.

What's important?

- **For Prelims:** Ayushman Bharat- details of the scheme.
- **For Mains:** Need for universal health coverage.

Sources: pib.

13. National Conference on Down Syndrome

Context:

- National Conference on Down Syndrome was recently inaugurated in New Delhi. The objective of this conference was to provide excellent opportunities to the parents to obtain information about latest development in education and skilling and inclusive living of persons with Down Syndrome.

Key facts:

- **The Conference was organized by National Trust** for the welfare of persons with Autism, Cerebral Palsy, Mental Retardation and Multiple Disabilities under M/o SJ&E in collaboration with Muskaan, a registered organisation of the National Trust.
- **On 19th December 2011, the United Nations General Assembly declared to observe 21st March as World Down Syndrome Day (WDSD)** and since then every year, this day is officially observed by UN to create awareness about people with Down Syndrome.

About National Trust:

- **What is it?** The National Trust is a Statutory Body under Department of Empowerment of Persons with Disabilities (Divyangjan), Ministry of Social Justice & Empowerment. The National Trust was envisaged with a core mission of providing opportunities for capacity development of Persons with Disabilities and their families, fulfilling their rights, facilitating and promoting the creation of an enabling environment and an inclusive society.
- **Functions:** The National Trust has been set up to discharge two basic duties – legal and welfare. Legal duties are discharged through Local Level Committee (LLC) set up at district level under the chairmanship of the District Collector / District Magistrate and providing legal guardianship. Welfare duty is discharged through the schemes and activities. The schemes and activities of the National Trust inter-alia include training, awareness and capacity building programmes and shelter, care giving and empowerment.

About Down Syndrome:

- Down Syndrome is a **chromosomal condition associated with intellectual and learning disabilities**.
- **Causes:** Persons with Down Syndrome have 47 chromosomes as compared to 46 in majority of people.
- **Impacts:** This one Extra chromosome causes its own impact and slows down learning process. It impacts neurological functioning causing impairment of intellectual functions e.g. analytical thinking, complex abstractions and judgement etc.
- **Treatment:** Good schooling, loving family, learning and work opportunities make them grow up to be responsible, loving and cheerful persons. Their emotions and needs are like any other person of the same age. Accepting and respecting family/community is a big support to their growth and development.

- **Appointment:** Chairperson and board members will be appointed by the Central Government.

What's important?

- **For Prelims and Mains:** Down syndrome and National Trust.

Sources: pib.

14. E-Cigarettes

Context: WHO has released a report on E- Cigarettes and its effects on health.

Highlights of the report:

- As per the report, Electronic Nicotine Delivery Systems (ENDS) (also known as e-cigarettes) emits nicotine, the addictive component of tobacco products. In addition to dependence, nicotine can have adverse effects on the development of the foetus during pregnancy and may contribute to cardiovascular disease.
- The WHO report further says that although nicotine itself is not a carcinogen, it may function as a “tumour promoter” and seems to be involved in the biology of malignant disease, as well as of neurodegeneration.
- Foetal and adolescent nicotine exposure may have long-term consequences for brain development, potentially leading to learning and anxiety disorders.
- The evidence is sufficient to warn children and adolescents, pregnant women, and women of reproductive age against ENDS use and nicotine.

What are e-cigarettes?

- An electronic cigarette (or e-cig) is a battery-powered vaporizer that mimics tobacco smoking. It works by heating up a nicotine liquid, called “juice.”
 - Nicotine juice (or e-juice) comes in various flavors and nicotine levels. e-liquid is composed of five ingredients: vegetable glycerin (a material used in all types of food and personal care products, like toothpaste) and propylene glycol (a solvent most commonly used in fog machines.) propylene glycol is the ingredient that produces thicker clouds of vapor.
 - Proponents of e-cigs argue that the practice is healthier than traditional cigarettes because users are only inhaling water vapor and nicotine.

Why its hard to regulate them?

- As e-cigarettes contain nicotine and not tobacco, they do not fall within the ambit of the Cigarettes and Other Tobacco Products (Prohibition of Advertisement and Regulation of Trade and Commerce, Production, Supply and Distribution) Act, 2003 (COTPA), which mandates stringent health warnings on the packaging and advertisements of tobacco products.

Need for regulation:

- The current unregulated sale of e-cigarettes is dangerous for a country like India where the number of smokers is on the decline (WHO Global Report, 2015) as it increases the possibility of e-cigarettes becoming a gateway for smoking by inducing nicotine addiction and perpetuating smoking by making it more attractive, thereby encouraging persons to become users of tobacco as well as e-cigarettes.

Way ahead:

- The government should also impose appropriate restrictions on the sale and advertisement, online and otherwise, of e-cigarettes, including proper health warnings, in order to plug the existing regulatory vacuum.
- This should be done with immediate effect, and simultaneously the government should also commission independent scientific research on the benefits and risks posed by these products in the Indian context.

What's important?

- **For Prelims:** E- Cigarettes.
- **For Mains:** E- Cigarette- need for regulation, challenges and the role of government.

Sources: pib.

15. First National Conclave on Psychological Trauma, Child Protection, and Mental Illnesses

Context:

- With an aim to provide a comprehensive synthesis of research, service provision, and clinical practice in addressing psychological trauma and subsequent mental illnesses in Indian children and adolescents, First ever National conclave was recently organized by the Ministry of Women & Child Development.

Significance of the conference:

- The conclave provided a common platform for all stakeholders (Academicians, Clinicians, Government and NGOs) working in this area in the direction of robust evidence based research, better service provision, and capacity building of professionals.

Need for action:

- The cross cultural research in child and adolescent mental health in last 3 decades has reached at a consensus regarding the direct relationship of psychosocial adversities in childhood and resulting psychological trauma, affecting almost all aspects of life and development of the children and adolescents.
- However, childhood adversities and resulting trauma is overlooked, underestimated and underreported due to various reasons in the developing countries, although media and official data indicates the higher prevalence of such adversities in terms of exposure of children to natural and man-made disasters, domestic violence, emotional abuse, trafficking, domestic violence, vehicular accidents, chronic life threatening illness of self or significant family members or sudden death of a parent or sibling.

Challenges:

- Although there is an increasing global agreement on association of childhood trauma with a wide range of mental illnesses including first episode psychosis-a severe mental illness, the research in India is limited to very few descriptive and review studies.
 - The service provision to children witnessing such traumatic life events in institutional care homes suffers from lack of appropriate trained manpower/professionals in handling trauma and trauma focused service provision.
 - There are many gaps in training, research and service provision in India.

Psychological traumatic life event:

- Psychological traumatic life event is a broad term that can encompass a multitude of experiences and situations, such as experiencing trafficking, physical and sexual abuse/assaults, war, torture, natural disasters, kidnapping, sudden death in family, sudden loss of limb, life threatening chronic illness, as well as witnessing murder, domestic violence, accidents, and dead bodies.

What's important?

- For Mains:** Childhood trauma and adversities- need for awareness and mitigation.

Sources: pib.

16. Integrated Scheme for School Education

Context:

- The Cabinet Committee on Economic Affairs has approved the proposal of Department of School Education and Literacy to formulate an Integrated Scheme on School Education.

Key features of the scheme:

- The **new scheme subsumes Sarva Shiksha Abhiyan (SSA), Rashtriya Madhyamik Shiksha Abhiyan (RMSA) and Teacher Education (TE).**
- The vision of the Scheme is to ensure inclusive and equitable quality education from nursery to senior secondary stage in accordance with the Sustainable Development Goal for Education.
- The main emphasis of the Integrated Scheme is on improving quality of school education by focussing on the two T's – Teacher and Technology.

The objectives of the Scheme, across all levels of schooling, are:

- Provision of quality education and enhancing learning outcomes of students.
- Bridging Social and Gender Gaps in School Education.
- Ensuring equity and inclusion at all levels of school education.
- Ensuring minimum standards in schooling provisions.
- Promoting vocationalization of education.
- Support States in implementation of Right of Children to Free and Compulsory Education (RTE) Act, 2009.
- Strengthening and up-gradation of State Councils for Educational Research and Training (SCERTs)/State Institutes of Education and District Institutes for Education and Training (DIET) as nodal agencies for teacher training.

Significance of the scheme:

- The Scheme gives flexibility to the States and UTs to plan and prioritize their interventions within the scheme norms and the overall resource envelope available to them.
- It will help improve the transition rates across the various levels of school education and aid in promoting universal access to children to complete school education.
- The Scheme, by providing quality education, aims to equip the children with varied skills and knowledge essential for their holistic development and prepare them for the world of work or higher education in the future.
- It would lead to an optimal utilization of budgetary allocations and effective use of human resources and institutional structures created for the erstwhile Schemes.

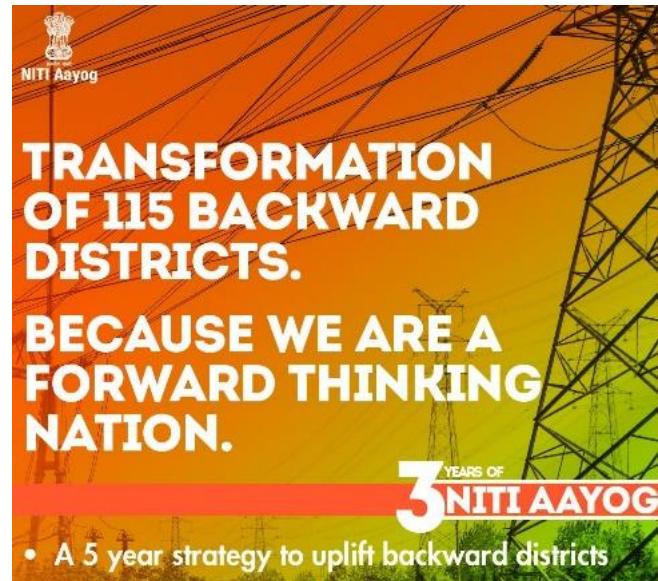
Sources: pib.

Paper 2 Topic: Development processes and the development industry the role of NGOs, SHGs, various groups and associations, donors, charities, institutional and other stakeholders.

1. Transformation of 115 Backward Districts

Context:

- A meeting to review the progress of the transformation of 115 Aspirational Districts was recently held. The meeting was chaired by the cabinet secretary.
- The meeting was attended by the Prabhari Officers, the officer in-charge coordinating the exercise for transformation of 115 Aspirational Districts along with the Secretaries and representatives from 12 Union ministries.



About the scheme:

- The Government, in November 2017, identified 115 backward districts for rapid transformation by 2022. The government's focus is to work with states to bring a transformative change in these backward areas through rapid government-anchored programmes and interventions by 2022, the 75th year of India's independence.
- **Prabhari officers:** For each of the Districts, a senior official in the rank of Additional secretary and Joint secretary has been nominated as Prabhari officer.

Role of Prabhari officers in developing these districts:

- Prabhari officers would take it up as a challenge and succeed in their mission by making a difference in the lives of millions of citizens in these districts. Prabhari officers would form a team with State representatives and bring convergence in their effort.
- Prabhari officers will assist the District administration in sharing the vision for 2022, to ensure the convergence of the efforts of central and state government and to set up a robust mechanism to monitor the improvements in key outcomes in the district.

Funding:

- Funds are not a constraint in this program since large funds are available under different Schemes.
- The officers will explore the availability of funds in District Mineral funds, wherever available for this purpose. In addition, they will also use flexi-fund which are significant in amount and are available under different Schemes of the Government.

Selection of backward districts:

- The 115 districts, including 35 affected by left-wing extremism, were selected on parameters like deprivation (extent of landless households), health & nutrition (institutional delivery, stunting of children and wasting in children), education (elementary dropout rate and adverse pupil-teacher ratio) and infrastructure (un-electrified homes, lack of toilets, villages not connected by road and lack of drinking water).

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.

Way ahead:

- For the program to succeed, third party validation of key performance indicators in the field of education, health and nutrition, basic infrastructure including roads, electricity, household toilets, agriculture and irrigation is necessary.

What's important?

- **For Prelims:** About the scheme for transformation of backward districts.
- **For Mains:** Development of backward districts- need, challenges and efforts.

Sources: the hindu.

Paper 2 Topic: Important aspects of governance, transparency and accountability, e-governance-applications, models, successes, limitations, and potential; citizens charters, transparency & accountability and institutional and other measures.

1. Panel to study issues in Fintech space

Context:

- The Centre has set up a steering committee to go into various issues relating to Fintech space in India. The committee will be headed by Subhash Chandra Garg, Secretary, Department of Economic Affairs.

**Terms of reference:**

- The committee will work with government agencies such as UIDAI to explore creation and use of unique enterprise identification number.
- It will also look into the possibility of international co-operation opportunities in Fintech with countries such as Singapore, the U.K., China and others.
- The committee will consider means of using data with GSTN and data residing with information utilities such as credit information companies (CICs) and others in open domain with a view to developing applications for financing of micro, small and medium enterprises (MSMEs).
- It will also develop regulatory interventions e.g., regulatory sandbox model, that will enhance the role of Fintech in sectors identified for focused interventions. The idea is to facilitate ease of doing business in the Fintech sector.

What is Fintech?

- Fintech Or financial technology is the industry known for championing software and technology in the financial sector. A very broad term, it includes anything from a bank ATM, to software used to help spot manipulation of securities markets.

Why is it important?

- India has a large population of non-city folk, many million small enterprises and any number of small borrowers without any credit history, who today cannot knock at the banks' doors for loans.
- It is therefore said to be just ripe for a Fintech revolution. To help things along, the Government is expediting this by promoting the JAM trinity (Jan Dhan, Aadhar, Mobile).
- The reason why banking bigwigs are watching these developments like hawks is that Fintech has enormous power to disrupt old-world banks.
- They mostly function as online bazaars that simply put borrowers in touch with lenders or entrepreneurs with investors, while they pocket a fee on each transaction.

What's important?

- **For Prelims:** Subhash Chandra Garg panel.
- **For Mains:** FinTech- potential applications.

Sources: et.

2. World Consumers Day

Context:

- 15 March is World Consumer Rights Day (WCRD), an annual occasion for celebration and solidarity within the international consumer movement. It marks the date in 1962 President John F Kennedy first outlined the definition of Consumer Rights.
- **Significance of the day:** It is an opportunity to promote the basic rights of all consumers, for demanding that those rights are respected and protected, and for protesting the market abuses and social injustices which undermine them.
- **Theme:** 'Making digital marketplaces fairer'.

**Key facts:**

- WCRD was first observed on 15 March 1983, and has since become an important occasion for mobilising citizen action.
- Consumers International (CI), which was founded in 1960 organises WCRD. It is the only independent and authoritative global voice for consumers and has over 220 member organisations in 115 countries around the world.
- Consumer Rights Day — India December 24th
- On this day the Consumer Protection Act, 1986 had received the assent of the President assent

Consumer protection Act:

- India adopted the Consumer Protection Act, later in 1986, thus providing a legal face to the Indian consumers.
- One of the strongest campaigns for addressal and protection of consumer rights in India, is "Jago Grahak Jago" which literally translates into, "wake up consumers"!
- This multimedia campaign from Ministry of Consumer Affairs, Government of India is aimed at creating an aware consumer.

Sources: pib.

3. e-Office programme

Context:

- The government has presented the Certificates of Appreciation to 34 Ministries/departments for implementation of e-office programme in their respective ministries/departments.
- **The awards have been given by the Department of Administrative Reforms & Public Grievances (DARPG), Ministry of Personnel, Public Grievances and Pensions, Government of India.**

The objectives:

- To improve efficiency, consistency and effectiveness of government responses.
- To reduce turnaround time and to meet the demands of the citizens charter.
- To provide for effective resource management to improve the quality of administration.
- To reduce processing delays.
- To establish transparency and accountability.

About e- Office programme:

E-Office is one of the **Mission Mode Projects under Digital India Programme**.

- The e-Office solution enables core operations of the Government at all levels to be performed in a virtual ‘paper-less’ environment. This application is, thus, a major step in realizing the objective of an open and responsive Government.
- The Department of Administrative Reforms and Public Grievances (DAR&PG) is the nodal Department for implementation of e-Office project. National Informatics Centre (NIC) is the technical partner in this project.

Sources: pib.

4. ISA and India sign the Host Country Agreement

Context:

- The International Solar Alliance (ISA) and the Ministry of External Affairs (MEA), have signed the Host Country Agreement.

About the framework agreement:

- The Agreement will give ISA a juridical personality and gives it power to contract, to acquire and dispose off movable and immovable properties, to institute and defend legal proceedings.
- Under this agreement, ISA shall enjoy such privileges, applicable tax concessions and immunities as are necessary for ISA’s Headquarter to independently discharge its function and programmes.
- ISA shall be deriving its status, privileges and immunities as per Article 10 of Framework Agreement.

About ISA:

- **The Paris Declaration establishes ISA as an alliance dedicated to the promotion of solar energy among its member countries.**
- **Objectives:** The ISA’s major objectives include global deployment of over 1,000GW of solar generation capacity and mobilisation of investment of over US\$ 1000 billion into solar energy by 2030.
- **What it does?** As an action-oriented organisation, the ISA brings together countries with rich solar potential to aggregate global demand, thereby reducing prices through bulk purchase, facilitating the deployment of existing solar technologies at scale, and promoting collaborative solar R&D and capacity building.
- **When it entered into force?** When the ISA Framework Agreement entered into force on December 6th, 2017, ISA formally became a de-jure treaty based International Intergovernmental Organization, headquartered at Gurugram, India.

Way ahead:

- The ISA is not only expected to spur innovation in the RE space but also help make India a technological hub with independent manufacturing capabilities of RE equipment like solar panels, rather than being dependent on imports, through initiatives like ‘Make in India’. India’s Ministry of External Affairs is expected to play a role in “marrying Indian tech and finance capabilities with specific projects around the world”.
- India announced a goal of obtaining 40% of its electricity from non-fossil fuels by 2030 at the Paris climate change summit. It is close to achieving 20 GW grid connected solar power generation capacity this fiscal year (2018), in pursuit of achieving its target of 100 GW by 2022.

What's important?

- **For Prelims:** ISA.
- **For Mains:** Renewable energy and its significance, India's leadership in the sector.

Sources: pib.

5. Public Financial Management System (PFMS)

Context:

- A "historic" Rs 71,633 crore was processed and routed through the PFMS portal on a single day.
- This is a Historical Record Breaking Volume of Digital Transactions achieved by PFMS.

Functions:

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

About PFMS:

The Public Financial Management System (PFMS) is an end-to-end solution for processing payments, tracking, monitoring, accounting, reconciliation and reporting.

- It is **administered by the Department of Expenditure**.
- It is **implemented by the Controller General of Accounts**.

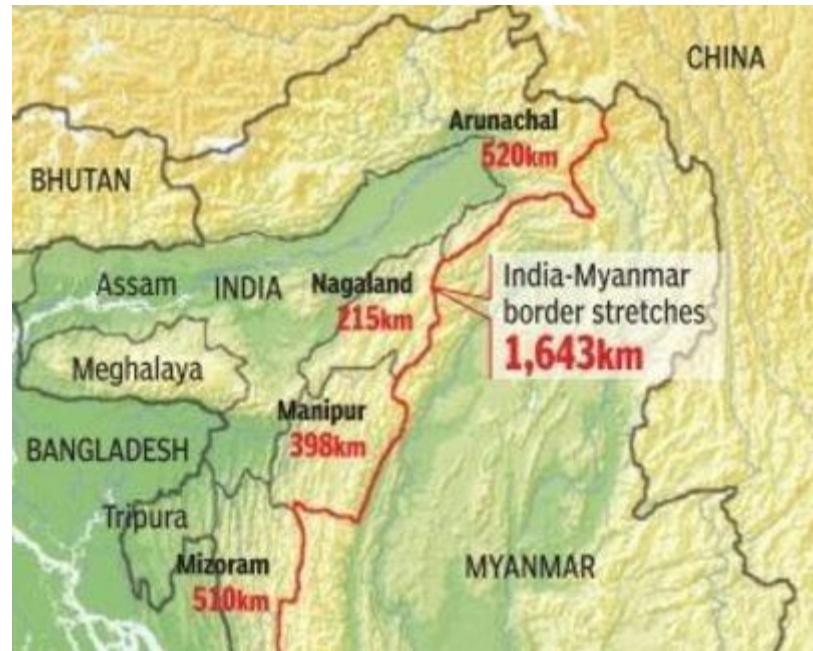
Sources: pib.

Paper 2 Topic: India and its neighbourhood- relations.

1. Border pact between India and Myanmar

Context:

- Citing "domestic compulsions", Myanmar has indefinitely deferred signing an agreement with India to streamline the free movement of people within 16 km along the border.

**Background:**

- On January 3, the Union Cabinet had approved the agreement between India and Myanmar on land border crossing to enhance economic interaction between people of the two countries.
- To give it shape, the Centre had asked four States — Arunachal Pradesh, Nagaland, Manipur and Mizoram — that share the unfenced border with Myanmar to distribute "border pass" to all the residents living within 16 km from the border.
- The Memorandum of Understanding (MoU) has been deferred twice in the past seven months.

Significance of the agreement:

- The agreement aims to enhance economic interaction between people of the two countries.
- The agreement will also facilitate movement of people on the basis of valid passports and visas which will enhance economic and social interaction between the two countries.
- It is expected to provide connectivity and enhance interaction of the people from north-eastern states of India with those of Myanmar.

- The agreement will also safeguard the traditional rights of the largely tribal communities residing along the border which are accustomed to free movement across the land border.

Need for free movement across border:

- There are over 250 villages with over 300,000 people living within 10 km of the border who frequently cross the border through 150 small and large, formal and informal, border crossings.
- Also, both the countries intend to put a system in place after India raised the issue of movement of extremists and smugglers freely across the border.

What's the proposal?

- As per the proposal, there would have been no restrictions on the movement of people across the borders. The domiciles were to be allotted border passes and those going across for agriculture, work or to meet relatives should carry the pass at all times.

Facts for Prelims:

- India and Myanmar share a 1,643 km unfenced border along Arunachal Pradesh (520 km), Nagaland (215 km), Manipur (398 km) and Mizoram (510 km) and permit a 'free movement' regime upto 16 km beyond the border.

What's important?

- For Prelims:** Border pass, India and Myanmar border, border states.
- For Mains:** Need for free movement between the two countries- Challenges and solutions.

Sources: the hindu.

2. Rohingya refugees issue

Context:

- The centre has asked the Supreme Court not to intervene in the deportation of Rohingya Muslims, saying any direction by the top court on the subject would not be in the national interest.

Why should the court not intervene, according to the centre?

- According to the centre, India is already facing serious problems of infiltration because of its porous border with other countries which is the root cause of spread of terrorism in the country and takes "thousands of lives" of citizens and security personnel. And securing the borders of any sovereign nation in accordance with law is an essentially function and hence the court should not issue any direction in this matter.
- Also, since **India is not a signatory to the United Nations convention relating to status of refugees**, it is not mandatory for the court to issue a direction to stop their deportation.

Relief measures by India:

- The centre is providing medical facilities to Rohingyas who have taken refuge in various states. Identity cards are being given to Rohingya refugees.

What's the issue?

- The Rohingya people are a Muslim minority group residing in the Rakhine state, formerly known as Arakan and are considered to be a variation of the Sunni religion.
- The Rohingya people are considered "stateless entities", as the Myanmar government has been refusing to recognise them as one of the ethnic groups of the country.
- For this reason, the Rohingya people lack legal protection from the Government of Myanmar, are regarded as mere refugees from Bangladesh, and face strong hostility in the country.

What needs to be done?

- The Myanmar Government should amend or repeal the 1982 Burma Citizenship Law to provide the Rohingya people with full citizenship in the country.
- Bangladesh and other governments in Southeast Asia must ensure those fleeing violence and seeking protection, are granted access, at least temporarily.

What's important?

- **For Prelims:** UN convention on refugees.
- **For Mains:** All about Rohingya issue.

Sources: the hindu.

3. RITES**Context:**

- Indian Railways recently handed over 18 microprocessor controlled Indian locomotives to Myanma Railways. They are supplied by RITES and manufactured by Diesel Locomotive Works, Varanasi, India.

**About RITES:**

- RITES is a **Public Sector Enterprise under the Ministry of Railways**. It is the export arm of the railways undertaking various projects worldwide.
- RITES has engaged in the supply of Railway rolling stock (locomotives, coaches, wagons, permanent way maintenance vehicles), maintenance of railway infrastructure, technical studies, training of Myanmar Railway officials.

Sources: pib.

4. Permanent Indus Commission**Context:**

- India and Pakistan will hold a meeting of the Permanent Indus Commission to discuss various issues under the Indus Waters Treaty.

Key facts:

- This will be the 114th meeting of the Permanent Indus Commission (PIC), which should meet at least once a year as per the Indus Waters Treaty (IWT).
- The meeting of the PIC is held alternately in India and Pakistan every year.
- The PIC had last met in March 2017 in Islamabad.

About Indus Water Treaty:

- The Indus Waters Treaty is a water-distribution treaty between India and Pakistan, brokered by the World Bank. The treaty was signed in Karachi on September 19, 1960 by Prime Minister of India Jawaharlal Nehru and President of Pakistan Ayub Khan.
 - According to this treaty, waters of the three western rivers (the Jhelum, the Chenab, and the Indus itself) were allocated to Pakistan, and those of the three eastern rivers (the Ravi, the Beas, and the Sutlej) were allocated to India.
 - The Treaty also provides arbitration mechanism to solve disputes amicably. Though Indus originates from Tibet, China has been kept out of the Treaty.

What is PIC?

- Permanent Indus Commission is a bilateral commission of officials from India-Pakistan, created to implement and manage goals of Indus Waters Treaty.
- Under the treaty, it is required that India and Pakistan meet every financial year. The Indus Commission is the first step for conflict resolution.
- If an agreement cannot be reached at the Commission level, the dispute is to be referred to the two governments. If the governments too fail to reach an agreement, the Treaty provides an arbitration mechanism.
- The last meeting of the commission was held in July 2016.

What's important?

- **For Prelims:** IWT, PIC.

- **For Mains:** IWT and its significance, dispute between India and Pakistan over river water sharing.

Sources: the hindu.

5. Diplomatic Tussle between India and Pakistan

Context:

- India and Pakistan have agreed to solve the diplomatic tussle over the allegations of harassment of the diplomats in each other's countries.
- The two countries have mutually decided to resolve matters as per the 1992 code of conduct (COC) ensuring the diplomats and their families are not harassed.

1992 Code of Conduct:

- As per the 1992 code of conduct, the two countries would ensure "smooth and unhindered functioning of their diplomatic and consular officials in conformity with recognised norms of international law and practice."
 - The two governments will also ensure that there is "no violation of the privileges and immunities of their diplomatic and consular officials" and there should be "no offences against their dignity and person".
 - It also states that intrusive and aggressive surveillance and actions such as verbal and physical harassment, disconnecting of telephone lines, threatening telephone calls, pursuit in cars and unauthorised entry into residences shall not be resorted to.

What's the issue?

- The diplomatic ties of India and Pakistan took a hit over the harassment of the diplomats in each other's countries. Both the countries have accused each other of harassing and intimidating their diplomats.

Sources: the hindu.

Paper 2 Topic: Bilateral, regional and global groupings and agreements involving India and/or affecting India's interests.

1. Indo-French Knowledge Summit

Context:

- The first ever Indo-French Knowledge Summit was held recently at New Delhi. The summit coincided with the state visit of French President Emmanuel Macron to India.

Outcomes of the summit:

- The summit ended with a landmark agreement on mutual recognition of educational qualifications between the two countries and a record 15 other MoUs between universities and research institutions on joint initiatives and partnerships.

Significance of mutual recognition of educational qualifications:

- Agreement on mutual recognition of academic qualifications will go a long way in boosting the educational relationship between the two countries and will encourage mobility of students from both the countries by facilitating possibilities for them to continue their studies in the other country and would also promote excellence in higher education through cooperation, university and research exchanges.

Franco-Indian Education Trust:

- A Franco-Indian Education Trust was also unveiled at the closing session of the summit. It will be **funded by the Indian industry and French Companies in India** to offer educational scholarships and merit based financial support to Indian students.

About the summit:

- **The Knowledge Summit is the First Franco-Indian Summit for university, scientific and technology cooperation** with the broader objective to design a roadmap of Franco-India cooperation for the next five years, in collaboration with companies.
 - The objective of the Knowledge Summit is to design a roadmap of Franco-Indian cooperation for the next five years, in collaboration with companies.

- This event offers a common moment for a common goal; increase student mobility, enlarge Research & Development collaborations and link campuses to companies by focusing on employability.
- The summit was organized by the French Embassy in India and co-hosted by the Ministry of Human Resource Development, Government of India.
- More than 350 people from nearly 80 Indian Institutions and 70 French Institutions along with key enterprises participated in the Summit.

What's important?

- **For Prelims and Mains:** Knowledge summit, Franco- Indian education trust.

Sources: pib.

2. Avoidance of Double Taxation

Context:

- The Union Cabinet has approved an Agreement for the Avoidance of Double Taxation and the Prevention of Fiscal Evasion with respect to taxes on income between India and Iran.

Benefits of the agreement:

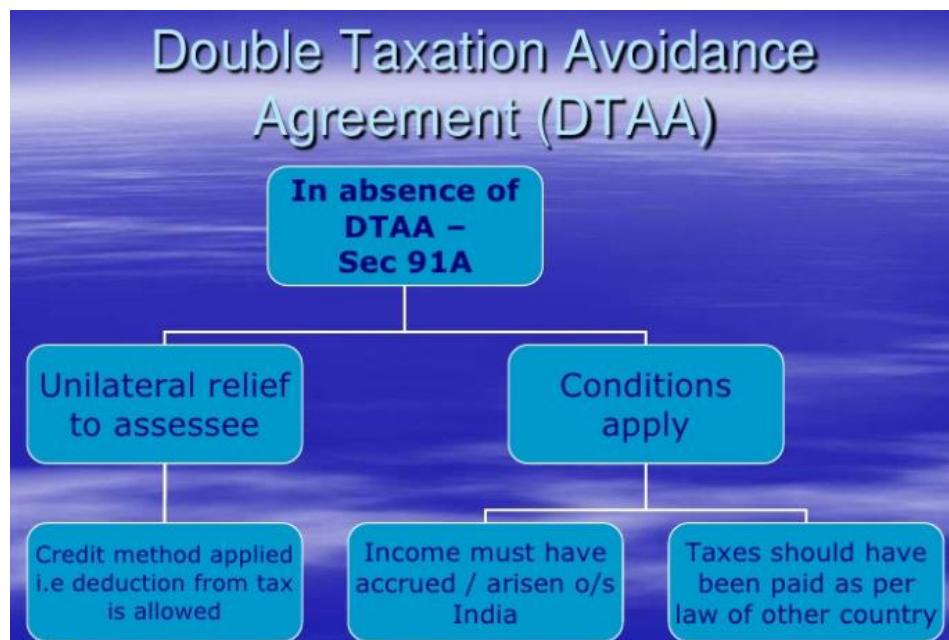
- The Agreement will stimulate flow of investment, technology and personnel from India to Iran & vice versa, and will prevent double taxation.
- The Agreement will provide for exchange of information between the two Contracting Parties as per latest international standards. It will thus improve transparency in tax matters and will help curb tax evasion and tax avoidance.

- The proposed Agreement also meets treaty related minimum standards under **G-20 OECD Base Erosion & Profit Shifting (BEPS) Project**, in which **India** participated on an equal footing.

BEPS: BEPS refers to tax avoidance strategies that exploit gaps and mismatches in tax rules to artificially shift profits to low or no-tax locations.

What is DTAA?

- A DTAA is a tax treaty signed between two or more countries. Its key objective is that tax-payers in these countries can avoid being taxed twice for the same income.
- A DTAA applies in cases where a tax-payer resides in one country and earns income in another.
- India has DTAAs with more than eighty countries, of which comprehensive agreements include those with Australia, Canada, Germany, Mauritius, Singapore, UAE, the UK and US.



Why is it important?

- DTAAs are intended to make a country an attractive investment destination by providing relief on dual taxation. Such relief is provided by exempting income earned abroad from tax in the resident country or providing credit to the extent taxes have already been paid abroad.
- DTAAs also provide for concessional rates of tax in some cases.

Legal provisions in this regard:

- In so far as India is concerned, the Central Government is authorized under Section 90 of the Income Tax Act, 1961 to enter into an Agreement with a foreign country or specified territory for avoidance of double taxation of income, for exchange of information for the prevention of evasion or avoidance of income-tax chargeable under the Income-tax Act, 1961.

What's important?

- **For Prelims and Mains:** BEPS, DTAA- need, challenges and implementation.

Sources: pib.

3. Cool EMS Service

Context: Department of Posts has launched Cool EMS Service between India and Japan.

What is it?

- Cool EMS service is one-way service from Japan to India which allows customers in India to import Japanese **food items** for personal use which is allowed under Indian regulations.
- Initially, Cool EMS Service will be available in Delhi only.

Paper 2 Topic: Effect of policies and politics of developed and developing countries on India's interests, Indian diaspora.

1. H-4 visas

Context:

- The Trump administration has delayed its decision on terminating the work authorisation of H-4 visa users, spouses of H-1B visa holders, till June as it needs time to review the economic impact of such a decision.
- The extension of decision-making process by four months comes as a temporary relief to the spouses of H-1B visa holders, a significantly large number of whom are Indian workers.

What's the issue?

- Since 2015, the spouses of H-1B visa holders waiting for green cards have been eligible to work in the U.S. on H-4 dependent visas, under a rule introduced by the previous Barack Obama administration.
- However, in January 2018, United States Citizenship and Immigration Services (USCIS) reevaluated the rule and determined that significant revisions to the draft proposal were necessary.

What Is an H-4 Visa?

- H-4 visa holders are immediate family members of H-1B visa holders. Most H-4 visa holders are spouses who want to join their partner in a new country.
- They enjoy many of the benefits of living in the United States, but some limitations exist. That's why an H-1B visa is better.

What Are the Rights of an H-4 Visa Holder?

- They can live in the United States on a continuous basis. They can also travel to and from the country as needed.
- H-4 visa holders can either join their spouse immediately or choose to move to America at a later date. They also have the right to attend college in the United States and may even enjoy discounted tuition.

Who Qualifies for an H-4 Visa?

- The only people who qualify are dependents.
- In the United States, those people are spouses and unmarried children under the age of 21.

How Long Does an H-4 Visa Last?

- No official termination date exists for an H-4 visa. Instead, the holder of the primary visa, the H-1B, will determine length of stay.
- When that visa expires, both the H-1B and H-4 holders are no longer eligible for American residency.

What's important?

- **For Prelims:** H 4 Visa, H1- B.
- **For Mains:** Changes in US Visa rules- intent behind this move, impact and solutions.

Sources: the hindu.

2. CP Trans-Pacific Partnership

Context:

- On March 8th trade ministers from 11 countries gathered in Santiago, the capital of Chile, to sign the Comprehensive and Progressive Agreement for Trans-Pacific Partnership, or CPTPP.

**What is CPTPP?**

- The CPTPP, also dubbed the TPP-11, was negotiated by Australia, Brunei, Canada, Chile, Japan, Malaysia, Mexico, New Zealand, Peru, Singapore and Vietnam.
- The revived deal will look to reduce tariffs in economies that together represent 500 million people and account for 13.5 per cent of global gross domestic product (GDP) – equivalent to a total of US\$10 trillion.

How is it different from TPP?

- With the exclusion of the US, the CPTPP is putting on hold 20 provisions even as it incorporates the original TPP text by reference. Out of which, 11 of the suspended clauses are related to intellectual property (IP) originally inserted at the demand of US negotiators.
- The other nine involve areas like investment, financial services, copyright, telecommunication and government procurement.

What next?

- Individual member countries will now begin their respective domestic ratification processes and the CPTPP will enter into force after at least 50% of the signatories complete that.

How does the CPTPP compare with RCEP?

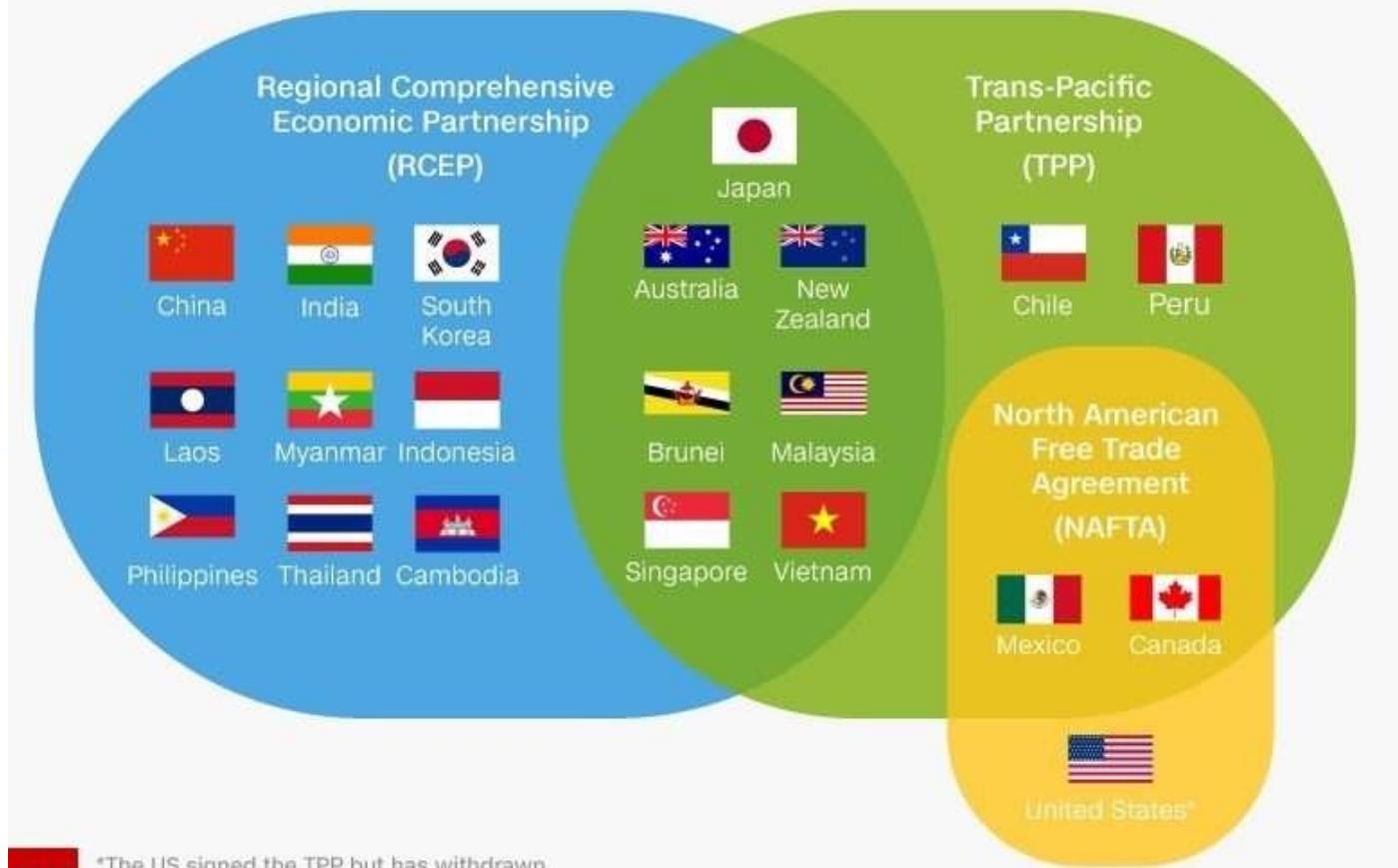
- The 16-nation Regional Comprehensive Economic Partnership (RCEP) covers nearly 3.5 billion people and account for a third of the world's gross domestic product.
- The RCEP was conceived in 2012. If approved, the free trade agreement will be the largest trade bloc in terms of population. The RCEP countries make up 46% of the global population and are worth 24% of global GDP.
- RCEP seeks to bring into its fold China, Japan, India, South Korea, Australia and New Zealand and Asean countries. Seven of them are also CPTPP members, namely Australia, Brunei, Japan, Malaysia, Singapore, New Zealand and Vietnam.

Significance of the deal:

- Even without the US, it's a hugely significant deal and could become a blueprint for future regional free trade agreements. Other nations have the chance to enter at a later time, if they so wish, and there have been suggestions Indonesia and even the United Kingdom may have some interest.

- The TPP also comes at a time when major powers, such as the US, are reverting to protectionist trade policies. The head of policy at the Export Council of Australia, Heath Baker, said its symbolism was significant. It shows that despite the protectionism coming out of the US, there is still momentum to increasing shared prosperity through freer trade.

Who's involved?



*The US signed the TPP but has withdrawn
Source: CNN Research

What's important?

- For Prelims:** CPTPP, RCEP.
- For Mains:** CPTPP- significance, challenges and effects on other countries.

Sources: the hindu.

3. India Development Foundation

Context:

- The Union Cabinet has given its approval for closure of India Development Foundation of Overseas Indians (IDF-OI) to enhance synergies in channelizing Diaspora's contributions to Government of India's various flagship programmes.

What necessitated this move?

- As the Foundation received only Rs. 36.80 Lakhs between December 2008 and March 2015 as donation from overseas Indian community, a comprehensive review of IDF-OI was undertaken in 2015.
- Although, between April 2015 and March 2018, the Trust received Rs.10.16 crore, most of the contribution received were for either projects related to National Mission for Clean Ganga or Swachh Bharat Mission, which are separately administered by their respective Administrative Agencies.
- Therefore, in order to enhance synergies, improve efficiencies and avoid duplication of work, it was decided that the Trust would be closed.

What's important?

- For Prelims:** IDF- OI.

About IDF- OI:

- IDF-OI was set up by Government of India with the approval of Cabinet in 2008 as ***an autonomous not-for-profit Trust***, to facilitate Overseas Indian philanthropy into social and development projects in India.
- Later, promotion of Government of India's Flagship programmes – National Mission for Clean Ganga and Swachh Bharat Mission; and Social and Development projects identified by State Governments – was added to the mandate of IDF-OI.
- IDF-OI receives a Grant-in-Aid from the Government of India for meeting its operational expenses and administrative costs for its activities and outreach. Therefore, ***IDF-OI does not deduct any operational or administrative charges*** from the contributions it receives from Overseas Indians.
- The Trust is exempt from provisions of the Foreign Contributions Regulation Act (FCRA), 2010*** of the Ministry of Home Affairs which enables IDF-OI to receive foreign contributions.
- Chairperson:*** IDF-OI is chaired by External Affairs Minister.

Sources: pib.

Paper 2 Topic: Important International institutions, agencies and fora, their structure, mandate.

1. Global Status Report 2017

Context:

- The 'Global Status Report 2017: Towards a zero-emission, efficient, and resilient buildings and construction sector,' published by the United Nations Environment Programme (UNEP), has listed the Energy Management Centre (EMC), an autonomous institution under the Kerala government campus, as one of the recent achievements in the deployment of key technologies for energy-efficiency in buildings.

Unique features of EMC campus:

- The EMC campus uses daylighting controls, CFC-free heating, ventilation and cooling systems, along with a halogen-free fire-fighting system. Solar reflectance index coating, combined with high-albedo painting and turbo-vents for passive cooling, has been used, and tropical rainforest trees help create cool surroundings.
- Only certified green construction materials, recycled wood boards, low-emitting paints and adhesives, and green-plus certified carpets have been used.
- Built with assistance from the Global Environment Fund, the EMC campus is the only LEED Gold certified building in the government sector in Kerala.

Facts for Prelims:

- EMC is the only one from India to figure in the list, along with five other projects worldwide.
- The other five projects recognised by the UNEP include the Sierra Crest development in Fontana, California, the Association of Nubian Vaults in Sub-Saharan Africa, a construction and demolition waste recycling project in Paris, the Palm Tree eco-development project in Hanoi, Vietnam, and the Higashi-Matsushima Smart ecotown in northern Japan.

Need for energy efficiency in buildings:

- Building-related carbon emissions have been rising by around 1% per year since 2010, and more than four million deaths are attributable to illness from household air pollution.

What's important?

- For Prelims:** GSR 2017, Global Environment Fund, UNEP.
- For Mains:** Need for energy efficient buildings.

Sources: the hindu.

2. Global Agriculture and Food Security Program (GAFSP)

Context:

- The Global Agriculture and Food Security Program (GAFSP) is a multilateral mechanism to assist in the implementation of pledges made by the **G20** in Pittsburgh in September **2009**.

**Objective:**

- The objective is to **improve incomes and food and nutrition security in low-income countries** by boosting agricultural productivity.

Importance of GAFSP:

- Approximately 75% of the poor live in rural areas and most depend on agriculture for their livelihoods.
- Agriculture growth is two to four times more effective at reducing poverty than growth in any other sector.
- Following aid-effectiveness principles, GAFSP addresses the underfunding of country and regional agriculture and food security strategic investment plans that are already being developed by countries in consultation with donors and other stakeholders at the country-level.

Partners of GAFSP:

GAFSP works in partnership with

- African Development Bank (AfDB)
- Asian Development Bank (ADB)
- **Food and Agriculture Organisation (FAO)**
- Inter-American Development Bank
- International Fund for Agricultural Development (IFAD)
- **World Bank (WB)**
- World Food Programme (WFP)

Source: <http://www.gafspfund.org/>

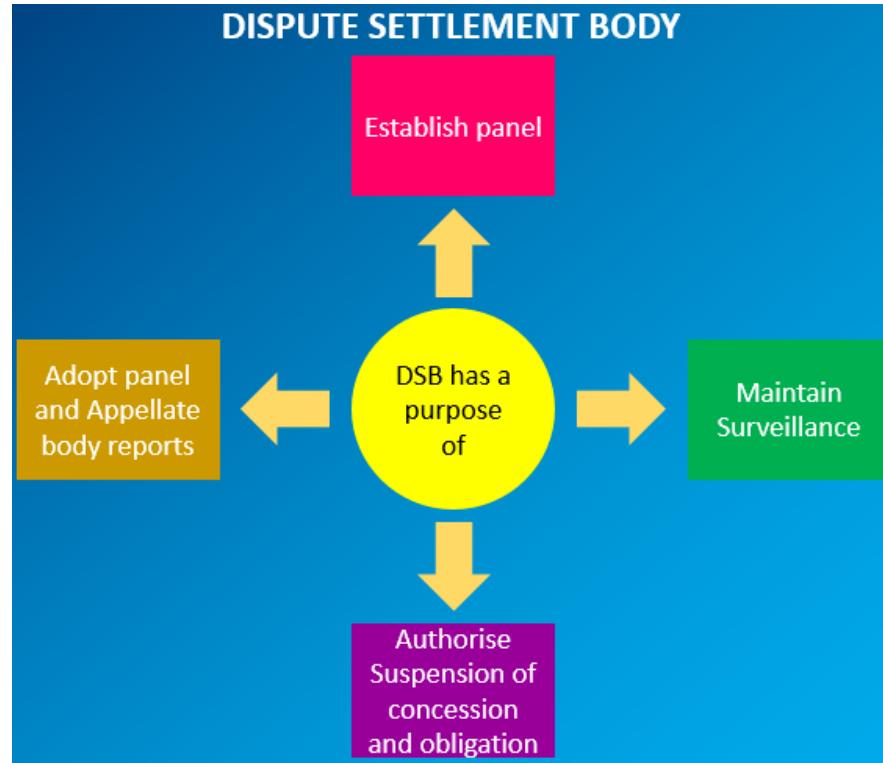
3. Dispute Settlement Body (DSB)

Context:

- The World Trade Organisation's Dispute Settlement Body (DSB) has agreed to India's request for setting up a panel to determine whether the country complied with a previous ruling striking down its domestic content requirements for solar cells and modules.

What's the issue?

- In 2016, New Delhi had lost a case against the US at the WTO after the global trade body stated that power purchase agreements signed by the Indian government with solar firms for its National Solar Mission did not meet international trade norms.
 - The US, which is of the opinion that New Delhi continues to apply the "WTO-inconsistent measures", had in December last year approached the Geneva-based multi-lateral organisation demanding action against India for non-compliance of the WTO ruling.
 - India, however, has been maintaining that it has complied with the WTO's ruling. India had requested the WTO to set up a panel to determine its compliance with the rulings of the dispute.



Dispute Settlement Body:

- The General Council convenes as the Dispute Settlement Body (DSB) to deal with disputes between WTO members. Such disputes may arise with respect to any agreement contained in the Final Act of the Uruguay Round that is subject to the Understanding on Rules and Procedures Governing the Settlement of Disputes (DSU).
- The DSB has authority to establish dispute settlement panels, refer matters to arbitration, adopt panel, Appellate Body and arbitration reports, maintain surveillance over the implementation of recommendations and rulings contained in such reports, and authorize suspension of concessions in the event of non-compliance with those recommendations and rulings.

What's important?

- **For Prelims:** Dispute settlement body, National solar mission.
- **For Mains:** India – US Solar panel dispute.

Sources: the hindu.

4. European Bank of Reconstruction and Development (EBRD)

Context:

- India has got the go-ahead to join the European Bank of Reconstruction and Development (EBRD). Shareholders of EBRD have given their consent in this regard.
- Now, India will become EBRD's 69th member, enabling Indian companies to undertake joint investments in regions in which the EBRD operates.



How will this membership help India?

- Membership of EBRD would enhance India's international profile and promote its economic interests. It will also give access to EBRD's Countries of Operation and sector knowledge.
- India's investment opportunities would get a boost. It would increase the scope of cooperation between India and EBRD through co-financing opportunities in manufacturing, services, Information Technology, and Energy.

- EBRD's core operations pertain to private sector development in their countries of operation. The membership would help India leverage the technical assistance and sectoral knowledge of the bank for the benefit of development of private sector.
- This would contribute to an improved investment climate in the country. The membership of EBRD would enhance the competitive strength of the Indian firms, and provide an enhanced access to international markets in terms of business opportunities, procurement activities, consultancy assignments etc.
- This would open up new vistas for Indian professionals on the one hand, and give a fillip to Indian exports on the other. Increased economic activities would have the employment generating potential. It would also enable Indian nationals to get the employment opportunity in the Bank.

About EBRD:

What is the EBRD?

- The European Bank for Reconstruction and Development (EBRD) is an international financial institution that supports projects in over 30 countries, from eastern Europe to central Asia and the southern and eastern Mediterranean. Investing primarily in private sector clients whose needs cannot be fully met by the market, the EBRD promotes entrepreneurship and fosters transition towards open and democratic market economies.

What is the EBRD's mandate?

- The mandate of the EBRD stipulates that it must only work in countries that are committed to democratic principles. Respect for the environment is part of the strong corporate governance attached to all EBRD investments.

What support does the EBRD provide in the countries where it works?

- The EBRD provides project financing for banks, industries and businesses, both new ventures and investments in existing companies. It also works with publicly owned companies, to support privatisation, restructuring state-owned firms and improving municipal services. It uses close relationship with governments in the region to promote policies that will bolster the business environment.

Who owns the EBRD?

- The EBRD is owned by 65 countries and two intergovernmental institutions: the European Union and the European Investment Bank (EIB).

How is the EBRD governed?

- The powers of the EBRD are vested in the Board of Governors to which each member appoints a governor, generally the minister of finance.
- The Board of Governors delegates most powers to the Board of Directors, which is responsible for the EBRD's strategic direction.
- The President is elected by the Board of Governors and is the legal representative of the EBRD. Under the guidance of the Board of Directors, the President manages the EBRD's work.

What's important?

- **For Prelims:** EBRD.
- **For Mains:** Benefits of EBRD's membership for India.

Sources: the hindu.

5. Digital Single Market Strategy

- Digital Single Market is a policy belonging to the **European Single Market** that covers digital marketing, E-commerce and telecommunication.
- It was announced in May 2015 by the **Juncker Commission**.
- The Digital Single Market is part of the **Digital Agenda for Europe 2020** program of the EU, an initiative of **Europe 2020** proposed strategy.
- It is defined by A **Digital Single Market Strategy** for Europe by the **European Commission**.
The three said "pillars" of the European Commission strategy are:
 - Access to online products and services

- Conditions for digital networks and services to grow and thrive
- Growth of the European digital economy

Objectives of Digital Single Market

- Boosting **e-commerce** in the EU by tackling geoblocking, making cross-border parcel delivery more affordable and efficient
- Modernising the EU **copyright rules** to fit the digital age
- Updating EU **audiovisual rules** and working with platforms to create a fairer environment for everyone, promote European films, protect children and tackle hate speech
- Scaling up Europe's **response to cyber-attacks** by strengthening ENISA, the EU cybersecurity agency, and creating an effective EU cyber deterrence and criminal law response to better protect Europe's citizens, businesses and public institutions
- Unlock the potential of a European **data economy** with a framework for the free flow of non-personal data in the EU
- Ensuring everyone in the EU has the best possible internet connection, so they can fully engage in the digital economy, the so-called "**connectivity for a European gigabit society**"
- Adapting **ePrivacy rules** to the new digital environment
- Helping large and small companies, researchers, citizens and public authorities to make the most of new technologies by ensuring that everyone has the necessary **digital skills**, and by funding EU research in health and high performance computing

6. New World Information and Communication Order

- The New World Information and Communication Order (**NWICO** or NWIO) aka the **MacBride Commission** is a term that was coined in a debate over media representations of the developing world in **UNESCO** in the late 1970s and early 1980s.
- The term was widely used by the MacBride Commission, a UNESCO panel chaired by **Nobel Peace Prize laureate Sean MacBride**, which was charged with creation of a set of recommendations to make **global media representation more equitable**.
- The MacBride Commission produced a report titled "**Many Voices, One World**", which outlined the main philosophical points of the New World Information Communication Order.

7. International Solar Alliance

Context:

- India, a founding member of the International Solar Alliance, has said that membership of the body will be thrown open to all countries that want to join the grouping, with no restrictions on duration of sunlight or geographical location.

Who were eligible so far?

- When the International Solar Alliance was announced in 2015, 121 nations situated between the Tropic of Cancer and the Tropic of Capricorn and receiving 300 days of sunlight were deemed eligible for membership.

PLACE IN THE SUN

International Solar Alliance takes shape

WHAT IS ISA?
120-nations bloc between Tropics of Cancer & Capricorn
Most countries in Africa or South America

HEADQUARTERS
200-acre NISE campus in Gurgaon

WHAT ISA WILL DO

- Promote solar technologies
- Ensure solar light for households by 2022
- Mechanisms to reduce cost of capital
- e-portal to share experiences & practices

About ISA:

- The Paris Declaration establishes ISA as an alliance dedicated to the promotion of solar energy among its member countries.
 - The ISA's major objectives include global deployment of over 1,000GW of solar generation capacity and mobilisation of investment of over US\$ 1000 billion into solar energy by 2030.
 - The alliance is a treaty-based inter-governmental organization.
 - The alliance is also called International Agency for Solar Policy and Application (IASPA).
 - The International Solar Alliance (ISA) is headquartered in India.

Way ahead:

- For ISA, the clock started on December 6, 2017, when the International Solar Alliance Framework Agreement came into force.
- It is now an intergovernmental body registered with the United Nations under Article 102 of the UN Charter.
- The alliance now must focus on delivering on its promise to serve as a facilitator to ensure that large swathes of the un-served and underserved population have access to adequate, predictable, and cheap energy.

What's important?

- **For Prelims:** ISA.
- **For Mains:** Harnessing solar energy- potential, challenges and international collaborations.

Sources: the hindu.

8. International Air Transport Association (IATA)

Context:

- The International Air Transport Association (IATA) has signed a Memorandum of Understanding (MoU) with the Ministry of Civil Aviation and the National Aviation University to enhance human resource availability in India's aviation industry.
- Under the agreement, the signatory institutions would also leverage "the existing infrastructure for training in India to expand the reach of vocational training in aviation disciplines".

Background:

- India is expected to be the third largest aviation market in the world behind China and the US by 2024, and is forecast to grow to a market size of 480 million passengers in 2036.

About IATA:

- **What is it?**

The International Air Transport Association (IATA) is the trade association for the world's airlines, representing some 280 airlines or 83% of total air traffic. Formed in April 1945, it is the successor to the International Air Traffic Association, which was formed in 1919.

- **What it does?**

IATA supports airline activity and helps formulate industry policy and standards. It also provides consulting and training services in many areas crucial to aviation.

- **Headquarters:**

It is headquartered in **Montreal**, Quebec, **Canada** with Executive Offices in Geneva, Switzerland.

What's important?

- **For Prelims and Mains:** IATA and its structure.

Sources: the hindu.

9. Philippines withdraws from ICC

Context:

- The Philippines is pulling out its support from the International Criminal Court (ICC) in protest against the "baseless" and "outrageous" attacks against the administration as well as violations of due process.

- The decision comes after the ICC said it could investigate Philippines President Duterte for alleged crimes against humanity involving extrajudicial killings resulting from his administration's campaign against illegal drugs.

Background:

- The Hague-based ICC announced last month it was launching a "preliminary examination" of Duterte's bloody anti-drug crackdown that has drawn international concern.
- Police say they have killed nearly 4,000 drug suspects as part of the campaign, while rights groups claim the toll is around three times the numbers given by authorities.

About ICC:

- The International Criminal Court (ICC), located in The Hague, is the court of last resort for prosecution of genocide, war crimes, and crimes against humanity.
- It is the first permanent, treaty based, international criminal court*** established to help end impunity for the perpetrators of the most serious crimes of concern to the international community.
- Its founding treaty, the Rome Statute***, entered into force on July 1, 2002.
- Although the Court's expenses are funded primarily by States Parties, it also receives voluntary contributions from governments, international organisations, individuals, corporations and other entities.
- The Court's management oversight and legislative body, the Assembly of States Parties, consists of one representative from each state party.
- Each state party has one vote and "every effort" has to be made to reach decisions by consensus. If consensus cannot be reached, decisions are made by vote. The Assembly is presided over by a president and two vice-presidents, who are elected by the members to three-year terms.

What's important?

- For Prelims and Mains:** ICC and issues related to its functioning.

Sources: the hindu.

10. International Competition Network 2018

Context:

- India is hosting the 17th Annual Conference of International Competition Network 2018 (ICN2018) in New Delhi.

About the 2018 ICN conference:

- The ICN holds an Annual Conference which is hosted by a member competition agency.*** The last such Conference was hosted by Portuguese Competition Authority in 2017 at Porto, Portugal.
- This is the first time India is hosting the ICN2018 Annual Conference*** since it joined International Competition Network (ICN) in 2009.
- The conference will provide an opportunity to exchange ideas and strategies for effective enforcement of competition law and for strengthening cooperation amongst the competition authorities as they strive to promote and sustain competition in rapidly changing markets.



About ICN:

- ICN is an international body comprising 132 members from 120 competition jurisdictions exclusively devoted to international competition enforcement. The ICN's main goal is to improve and advocate for sound competition policy and its enforcement across the global antitrust community.
 - The ICN is a voluntary, consensus-based organisation. The ICN is not a rule-making organisation*** and its work products are not legally binding instruments.
 - ICN provides competition authorities with a specialised yet informal platform for addressing practical competition concerns, sharing experiences and adopting international best practices.
 - Members:*** Its members are national competition authorities and NGA (Non-governmental Advisers) which include reputed law firms, eminent persons, and think tanks of international repute.

Why have the ICN?

- Economic globalisation has resulted in an increasing number of investigations and reviews of mergers, cartels and unilateral conduct that transcend jurisdictional boundaries.
- Agencies need to cooperate with each other on cross-border cases in order to reduce the risk of: (i) sub-optimal enforcement if an agency only has a partial picture of the situation; and (ii) inconsistent outcomes if different jurisdictions reach different conclusions about the same practice.
- The ICN helps facilitate cooperation and convergence, where appropriate. This is good for competition agencies, governments, businesses, and ultimately consumers.

What's important?

- **For Prelims:** ICN, CCI.
- **For Mains:** ICN- need and significance.

Sources: pib.

11. Indo-U.S. Science and Technology Forum (IUSSTF)

Context: The Indo-U.S. Science and Technology Forum (IUSSTF) is celebrating its 18th Foundation Day.

About IUSSTF:

- The Indo-U.S. Science and Technology Forum (IUSSTF) was established in 2000 under an agreement between the Governments of India and United States of America.
- It has a mandate to promote, catalyze and seed bilateral collaboration in science, technology, engineering and biomedical research through substantive interaction amongst government, academia and industry.
- **As an autonomous, not-for-profit society**, IUSSTF has the ability, agility and flexibility to engage and involve industry, private R&D labs; and non governmental entities in its evolving activity manifold.
- This operational uniqueness allows the IUSSTF to receive grants and contributions from independent sources both in India and USA, besides the assured core funding from the two governments.
- **IUSSTF currently implements a portfolio of “four” broad program verticals** – Scientific Networks, Innovation and Entrepreneurship, Research and Development and Visitation Programs.

What's important?

- **For Prelims and Mains:** IUSSTF and its significance.

Sources: pib.

12. African Continental Free Trade Area**Context:**

- The African Continental Free Trade Area (AfCFTA) has been signed by 44 African countries at a summit of the African Union in Kigali, Rwanda. If successful, it will be the biggest trade trade agreement since the formation of the World Trade Organization in 1995.
- **Nigeria, Africa's largest economy and most populous country, as well as a host of others did not sign the agreement.**

Significance of AfCFTA:

- The AfCFTA has the potential to bring over 1.2bn people together into the same market. The bloc of 55 nations would be the largest in the world by member states.
- The AfCFTA could improve trade between African countries, which in 2016 estimates stated accounted for only 10%. By reducing barriers to trade, such as removing import duties and non-tariff barriers, African countries hope to boost intra-continental business.

What is AfCFTA?

- African heads of government agreed to establish a continental free trade area in 2012 and started negotiations in 2015.
- The draft agreement commits countries to removing tariffs on 90% of goods, with 10% of “sensitive items” to be phased in later.
- The agreement will also liberalise services and aims to tackle so-called “non-tariff barriers” which hamper trade between African countries, such as long delays at the border.
- Eventually, free movement of people and even a single currency could become part of the free trade area.

Objectives of the AfCFTA:

- Create a single continental market for goods and services, with free movement of business persons and investments, and thus pave the way for accelerating the establishment of the Continental Customs Union and the African customs union.
- Expand intra African trade through better harmonization and coordination of trade liberalization and facilitation regimes and instruments across RECs and across Africa in general.
- Resolve the challenges of multiple and overlapping memberships and expedite the regional and continental integration processes.
- Enhance competitiveness at the industry and enterprise level through exploiting opportunities for scale production, continental market access and better reallocation of resources.

What's important?

- **For Prelims:** AfCFTA, who has not signed.
- **For Mains:** Need for Single unified market for the development of African region.

Sources: the hindu.

13. KISS to host 'Commonwealth Big Lunch'**Context:**

- *Kalinga Institute of Social Sciences (KISS), Bhubaneswar, in partnership with British Council, India, is hosting the 'Commonwealth Big Lunch'.*
- KISS is the only organisation from Asia to be selected by British Council to host the Commonwealth Big Lunch.

What is it?

- British Council is celebrating 70 years of inception in Commonwealth countries. On this occasion, it has organised a mega lunch. The initiative launched by UK PM Theresa May.
- The motto of the programme is to encourage people to get together to celebrate their Commonwealth connections through food.

The Commonwealth:

- The Commonwealth is a voluntary association of 53 independent and equal sovereign states. It was formally constituted by the London Declaration in 1949, which established the member states as "free and equal".
- The Commonwealth operates by intergovernmental consensus of the member states, organised through the Commonwealth Secretariat and non-governmental organisations, organised through the Commonwealth Foundation.
- The Commonwealth is home to 2.4 billion people and includes both advanced economies and developing countries. Thirty of our members are small states, many of which are island nations.
- Member countries are supported by a network of more than 80 intergovernmental, civil society, cultural and professional organisations.
- The last country to join the Commonwealth was Rwanda in 2009.

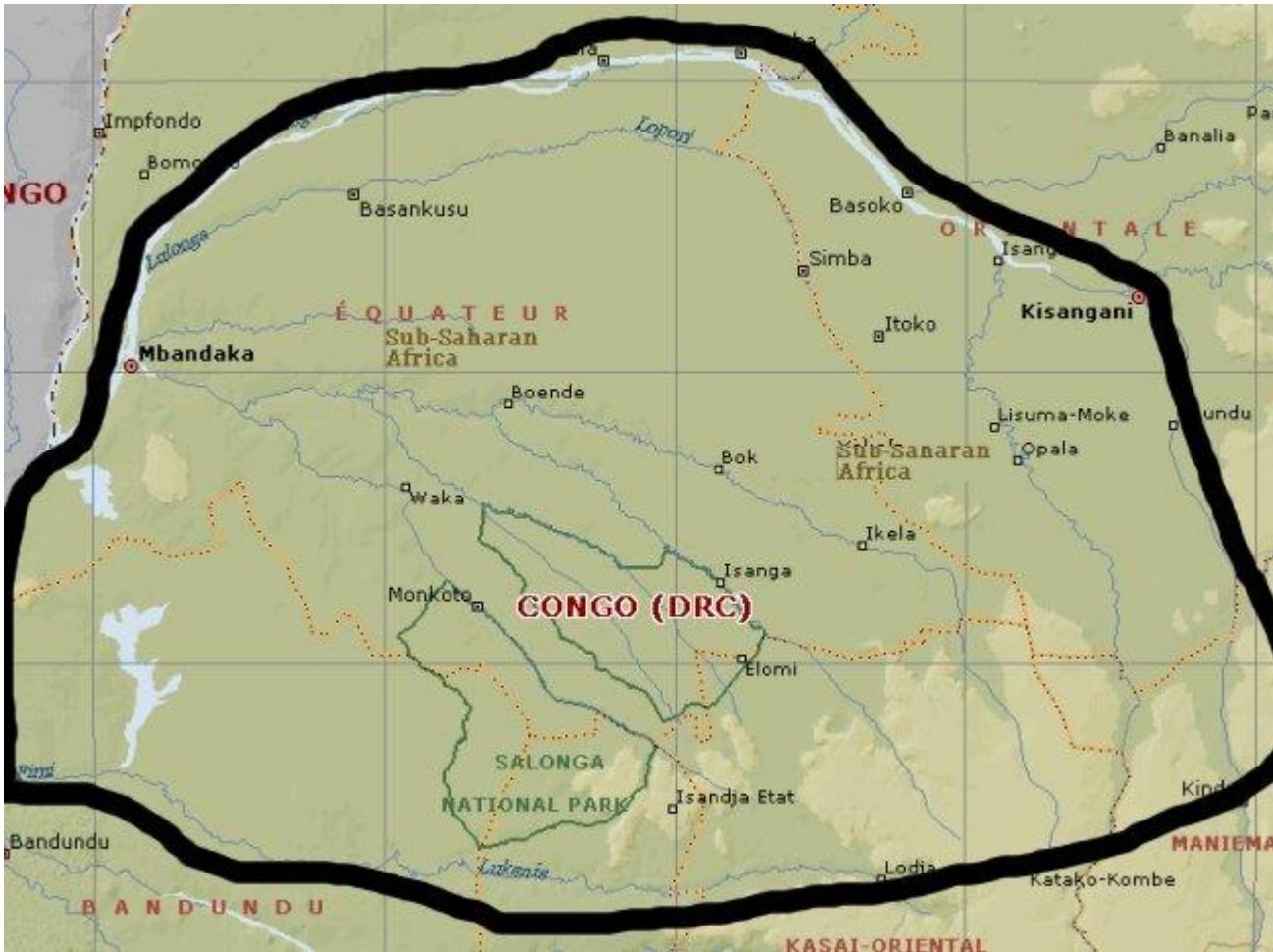
What's important?

- **For Prelims:** The Commonwealth Big Lunch, Commonwealth of nations.
- **For Mains:** Commonwealth and its significance.

Sources: the hindu.

14. Cuvette Centrale region**What is it?** It is *the world's largest tropical peatlands in Congo Basin*.**Why in news?**

- To protect the Cuvette Centrale region in the Congo Basin from unregulated land use and prevent its drainage and degradation, the Democratic Republic of Congo (DRC), the Republic of Congo and Indonesia have jointly signed the Brazzaville declaration that promotes better management and conservation of this globally important carbon store.



Global peatland initiative:

- The declaration was signed on the sidelines of the Third Partners Meeting of the Global Peatlands Initiative, taking place in Brazzaville, Republic of Congo.

What are peatlands?

- Peatlands are wetlands that contain a mixture of decomposed organic material, partially submerged in a layer of water, lacking oxygen.
- The complex biodiversity of the peatlands means they are home to a variety of species, but their high carbon content makes them uniquely vulnerable to incineration if they are drained.

About the Global Peatlands Initiative:

- The Global Peatlands Initiative is an effort by leading experts and institutions to save peatlands as the world's largest terrestrial organic carbon stock and to prevent it being emitted into the atmosphere.

Sources: ET.

15. Executive Board of UNESCO

Context:

- The Government of India has decided to nominate Professor J S Rajput, former Director NCERT, as India's representative to the Executive Board (EXB) of UNESCO.
- Professor J S Rajput is an eminent educationist with rich experience in various fields including UNESCO.

About the Executive Board:

- The EXB has a four-year term of office and 58 seats.
- The executive board is one of the constitutional organs of UNESCO and is elected by the General Conference.
- The executive board examines the work for the organization and the corresponding budget estimates.
- In practice, the executive board is the main organ responsible for all policies and programmes of UNESCO.

Significance of the membership:

- Being a member of the board enables India in principle to play a role in shaping and reviewing UNESCO's policies and programmes corresponding to its five major programs on education, the natural science, the social and human Sciences, Culture and Communication and Information.

General conference:

- The general conference consists of the representatives of the states members of the organisation.
- It meets every two years, and is attended by member states and associate members, together with observers for non-member states, intergovernmental organisations and non-governmental organisations (NGOs).
- Each country has one vote, irrespective of its size or the extent of its contribution to the budget.
- The general conference determines the policies and the main lines of work of the organisation. Its duty is to set the programmes and the budget of the UNESCO. It also elects the members of the executive board and appoints, every four years.

What's important?

- **For Prelims:** UNESCO executive board and general conference.

Sources: pib.

16. 3R Regional Forum in Asia and the Pacific

Context:

- India is getting ready to host the 8th 3R Regional Forum in Asia and the Pacific in its cleanest city, Indore in the month of April, 2018.

Key facts:

- The event is co-organised by the Ministry of Housing and Urban Affairs (MoHUA) Government of India, the Ministry of the Environment, Government of Japan (MOEJ), and the United Nations Centre for Regional Development (UNCRD).
- Theme: "Achieving Clean Water, Clean Land and Clean Air through 3R and Resource Efficiency- A 21st Century Vision for Asia-Pacific Communities".

Participating Countries:

- Afghanistan, Australia, Bangladesh, Bhutan, Brunei Darussalam, Cambodia, Cook Islands, People's Republic of China, Fiji, India, Indonesia, Japan, Kiribati, Republic of Korea, Lao PDR, Malaysia, Maldives, Marshall Islands, Federated States of Micronesia, Mongolia, Myanmar, Nauru, New Zealand, Nepal, Niue, Pakistan, Palau, Papua New Guinea, the Philippines, Samoa, Singapore, Solomon Islands, Sri Lanka, Thailand, Timor-Leste, Tonga, Tuvalu, Vanuatu, and Viet Nam

About the 3R Regional Forum:

The Regional 3R Forum in Asia and the Pacific was launched in 2009 in **Tokyo**, Japan.

- The United Nations Centre for Regional Development (**UNCRD**) has been organizing International Regional Forum on 3Rs since 2009 with the support of Government of Japan.
- It promotes the concept of Reduce, Reuse, Recycle in industry, service and agriculture sector. The overall objective is to establish sound material cycle society by adopting resource conservation, techniques and technologies.
- It provides a strategic platform for addressing the needs and priorities of 3Rs (reduce, reuse and recycle) in Asian countries and sharing best practices from the region, including emerging concerns in waste management.
- In the last seven years, the Forum has been organised in Malaysia, Singapore, Vietnam, Indonesia, Maldives, Japan and Australia and has been instrumental in providing innovative, effective and smart 3R based solutions.

Significance of this event:

- The Forum comes at an opportune time with the Indian government's focus on scientific management of 100% municipal solid waste through its ambitious Swachh Bharat Mission (Urban).
- Through this Forum, India aims to strengthen this focus through its 'Mission Zero Waste' approach thereby encouraging cities, industries and other diverse stakeholders to look at waste as a resource.

Sources: pib.

17. South Asian Cooperative Environment Programme (SACEP)

Context:

- The Union Cabinet has approved signing of a Memorandum of Understanding (MoU) between India and South Asian Cooperative Environment Programme (SACEP) for cooperation on the response to Oil and Chemical Pollution in the South Asian Seas Region.
- The MoU intends to promote closer cooperation between India and other maritime nations comprising the South Asian seas region namely Bangladesh, Maldives, Pakistan and Sri Lanka for protection and preservation of marine environment in the region.

Implementation:

- Indian Coast Guard (ICG) will be the Competent National Authority and national operational contact point for implementation of “Regional Oil Spill Contingency Plan”** under the MoU and shall respond to oil and chemical spills on behalf of Government of India. Further, ICG Maritime Rescue Coordination Centres (MRCCs) will be the national emergency response centre for marine incidents.

Need for special attention:

- South Asia is one of the most diverse regions in the world. Bordered to the north by the Himalayas and to the south by the Indian Ocean, covers a diversity of ecosystems from lush tropical forest to harsh, dry desert. It is also one of the most populous regions, with over 1 billion people living in India alone.
 - Most of the South Asian nations share many similar environmental problems, stemming from poverty and its consequences on natural resources. According to the World Bank, during the past decade, South Asia has been the second fastest economically growing region in the world, and their efforts at increased production have put increasing pressure on natural resources and the environment.
 - Significant natural resource concerns of the region include depletion of water quality and quantity, dwindling forests and coastal resources, and soil degradation resulting from nutrient depletion and salinization.

Facts for Prelims:

- The **Malé Declaration** on control and prevention of air pollution and its likely transboundary effects for South Asia is another significant efforts which encourages intergovernmental cooperation to combat the transboundary air pollution problem.

What's important?

- For Prelims:** SACEP, Male declaration, IMO, Regional Oil Spill Contingency plan.

Sources: pib.

About SACEP:

- In order to promote and support protection, management and enhancement of the environment in the South Asian region, the Governments of Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan and Sri Lanka established the SACEP in 1982 in Sri Lanka.
- The SACEP jointly with the International Maritime Organisation (IMO) developed a “Regional Oil Spill Contingency Plan”** to facilitate international co-operation and mutual assistance in preparing and responding to a major oil pollution incident in the seas around the Maritime States of Bangladesh, India, Maldives, Pakistan and Sri Lanka.

GS PAPER - III

Paper 3 Topic: Indian Economy and issues relating to planning, mobilization of resources, growth, development.

1. Letters of undertaking (LoUs)

Context:

- Rattled by a spate of banking frauds, RBI has initiated special audit of State-owned lenders with focus on trade financing activities, especially relating to issuance of letters of undertaking (LoUs) by them.
- In addition, the RBI has asked all banks for details of the LoUs they had issued, including the amounts outstanding, and whether the banks had pre-approved credit limits or kept enough cash on margin before issuing the guarantees.

What is LoU?

- Technically, Letter of Undertaking is a bank guarantee under which a bank allows its customer to raise money from another Indian bank's foreign branch in the form of short-term credit.
- The loan is used to make payment to the customer's offshore suppliers in foreign currency.
- The overseas bank usually lends to the importer based on the LoU issued by the importer's bank.

Why is it important?

- LoUs are important instruments that allow those in the import trade to transact their business.
- As an importer in India cannot simply buy dollars and send it abroad to make payments to his supplier, various instruments such as LoUs and Letters of Credit are required to carry out the transaction.
- LoUs, which are essentially a form of guarantee, have come to be a far cheaper and convenient way for importer to raise credit.

Sources: the hindu.

2. E-way bill

Context:

- As the country prepares for the nationwide mandatory rollout of the e-way bill system for inter-state movement of goods from April 1 under the goods and services tax (GST) regime, **Karnataka will be an exception having notified the e-way bill for both inter-state as well as intra-state movement of goods.**

Background:

- Karnataka was the first state to operationalise the e-way bill system in September 2017, using the information and communications technology (ICT) infrastructure available with the state.

Are there concerns from industry?

- Trade and industry have raised concerns about the system being a possible route for the re-emergence of supply chain bottlenecks, and discretionary power to tax officials.
- The industry views the e-way bill as a system that will check tax evasion to some extent, but may not be able to stop it completely. Also, it adds another layer of compliances for GST payers and, in case of technical glitches, may result in supply chain bottlenecks.

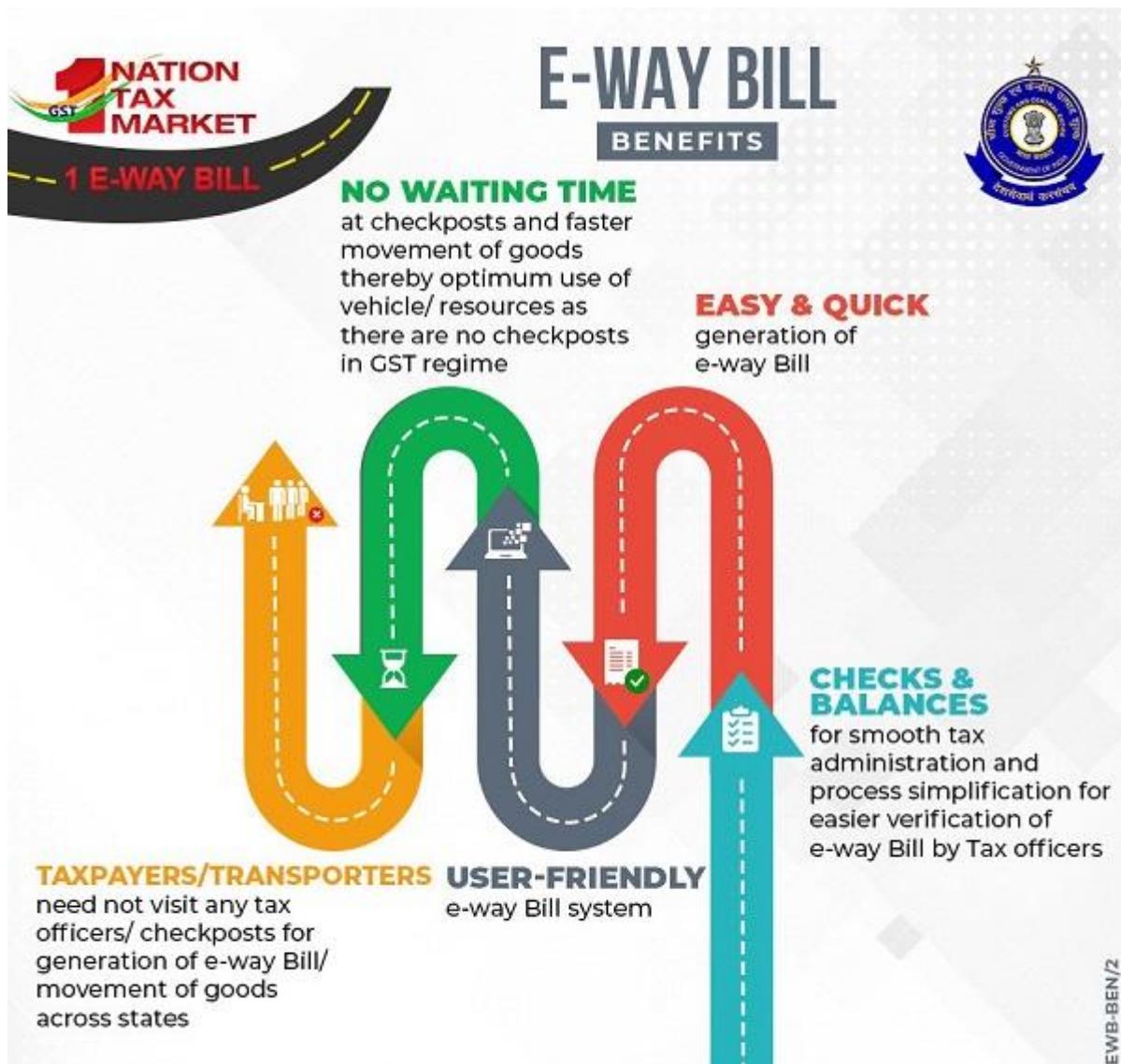
What is e-way bill?

- An e-way bill is required for movement of goods worth more than Rs 50,000. When goods are transported for less than 10 km within a state, the supplier or the transporter need not furnish details on the GST portal.
- The e-way bill mechanism has been introduced in the GST regime to plug tax evasion loopholes. Tax evasion was one of the reasons cited by the government for the fall in revenue collection in October.

GST E-WAY BILL VERSUS ERSTWHILE WAY-BILL

Feature	GST e-way bill	Old way-bill
Reduction in detention time	Facility with transporters to raise complaints, in case vehicle is detained for more than 30 minutes	No such facility was available
Facilitates GSTR-1 filing	Relevant details in Form GSTR-1 gets auto-populated basis the details furnished in the e-way bill generation process	No such facility was available
Prevents double-checking	E-way bill verified once not to be checked again by another tax officer during goods movement	No explicit provision existed for prevention of double-checking by tax officers
Contents of way-bill	Harmonized system of nomenclature (HSN) to be mentioned on e-way bill, resulting in additional compliance. No clarity for small assesses who are not required to mention HSN on invoices	No requirement to mention HSN
Requirement of consignee's acceptance	Recipient's acceptance of the e-way bill required (within 72 hours of generation)	No such requirement existed for old way-bills
Registration requirement for transporters	Mandatory	Optional

Source: PwC (Anita Rastogi, partner-GST, and Prashant Gupta, manager-GST)



Sources: the hindu.

Paper 3 Topic: Employment.**1. PMEGP****Context:**

- The government has approved the continuation of Prime Minister's Employment Generation Programme (PMEGP) beyond the 12th Plan period for three years to 2019-20 with a total outlay of Rs 5,500 crore.
- The scheme will create sustainable estimated employment opportunities for 15 lakh persons in three financial years.

About PMEGP:

- What is it?** PMEGP is a major credit-linked subsidy programme being implemented by the Ministry of MSME since 2008-09. The Scheme is aimed at generating self-employment opportunities through establishment of micro-enterprises in the non-farm sector by helping traditional artisans and unemployed youth in rural as well as urban areas.
- Implementation:** The Khadi and Village Industries Commission (KVIC) is the nodal implementation agency for the PMEGP at the national level. At the state/district level, state offices of KVIC, Khadi and Village Industries Boards (KVIBs) and District Industry Centres (DIC) are the implementing agencies.
- Targets:** The scheme's targets are fixed taking into account the extent of backwardness of state; extent of unemployment; extent of fulfilment of previous year targets; population of state/union territory; and availability of traditional skills and raw material.

What's important?

- For Prelims:** PMEGP, KVIC.
- For Mains:** Employment generation- challenges and solutions.

Sources: the hindu.

2. Action Plan for Champion Sectors in Services**Context:**

- The Union Cabinet has approved the proposal of the Department of Commerce to give focused attention to 12 identified Champion Services Sectors for promoting their development, and realizing their potential.
- The Cabinet has also directed the Ministries/Departments concerned with these sectors to utilize the available draft sectoral plans to finalize and implement the Action Plans for the identified Champion Services Sectors.
- A dedicated fund of Rs. 5000 crores has been proposed to be established to support initiatives for sectoral Action Plans of the Champion Sectors.

Impact:

- This initiative will enhance the competitiveness of India's service sectors through the implementation of focused and monitored Action Plans, thereby promoting GDP growth, creating more jobs and promoting exports to global markets.

Objectives of the Programme

- PMEGP was launched to generate employment opportunities by establishing micro enterprises in urban as well as in rural areas. Here are the objectives of this program:
 - Increase artisans' wage earning capacity and contribute to raise the growth rate of urban and rural employment.
 - Provide sustainable and continuous employment to a huge portion of prospective and traditional artisans as well as urban and rural unemployed youth to help arrest rural youth to urban areas migration.

Champion service sectors:

- Champion service sectors include Information Technology & Information Technology enabled Services (IT & ITeS), Tourism and Hospitality Services, Medical Value Travel, Transport and Logistics Services, Accounting and Finance Services, Audio Visual Services, Legal Services, Communication Services, Construction and Related Engineering Services, Environmental Services, Financial Services and Education Services.

Employment Generation Potential:

- Services sector in India has immense employment potential.
- The proposal will enhance the competitiveness of India's service sectors through the implementation of focused and monitored Action Plans, thereby creating more jobs in India, contributing to a higher GDP and exports of services to global markets.

Benefits:

- 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 from India.
- Embedded services are substantial part of 'Goods' as well.
- Thus, competitive services sector will add to the competitiveness of the manufacturing sector as well.

What's important?

- **For Prelims:** Champion service sectors.
- **For Mains:** Champion service sectors- impact, benefits and challenges.

Sources: pib.

3. Pradhan Mantri Rojgar Protsahan Yojana

Context:

- The Cabinet Committee on Economic Affairs has given its approval for enhancing the scope of Pradhan Mantri Rojgar Protsahan Yojana (PMRPy).
- The Government of India will now contribute the Employer's full admissible contribution for the first three years from the date of registration of the new employee for all the sectors including existing beneficiaries for their remaining period of three years.

• The PRADHAN MANTRI ROJGAR PROTSAHAN YOJANA (PMRPy) plan scheme has been designed to incentivize employers for generation of new employment, where Government of India will be paying the 8.33% EPS contribution of the employer for the new employment for three years. The scheme has a dual benefit, where, on the one hand, the employer is incentivized for increasing the employment base of workers in the establishment and on the other hand, a large number of workers will find jobs in such establishments. A direct benefit is that these workers will have access to social security benefits of the organized sector.

About Pradhan Mantri Rojgar Protsahan Yojana:

- The scheme "Pradhan Mantri Rojgar Protsahan Yojana"(PMRPy) was announced in the Budget for 2016-17.
 - The objective of the scheme is to promote employment generation.
 - The scheme is being **implemented by the Ministry of Labour and Employment**.
 - Under the scheme employers would be provided an incentive for enhancing employment by reimbursement of the 8.33% EPS contribution made by the employer in respect of new employment.
 - The PMRPy scheme is targeted for workers earning wages upto Rs. 15,000/- per month.

Sources: pib.

Paper 3 Topic: Inclusive growth and issues arising from it.

1. Privatisation of PSBs

Context:

- Former NITI Aayog vice chairman Arvind Panagariya has made a strong case for privatisation of public sector banks with the exception of SBI.

Need for Privatisation:

- Mainly, predominance of scandals and NPAs in PSBs highlight the need for privatisation of PSBs. Efficiency and productivity too demand that the government relinquish its control of the large number of banks whose market valuation has dwindled despite the fact that they hold the bulk of the deposits.

- Also, there is a continuous pressure on the government finances on account of the weak performance of the banks. Privatisation would reduce the drain on the exchequer and the money saved could be used for developmental schemes and programmes of the government.

Benefits of private banks:

- Private banks will bring innovations in products, technology and customer servicing and a market-based discipline to lending. Private banks, knowing that they cannot count on government's protection, are unlikely to engage in the sort of risky lending that characterised public bank lending.
- Also, they will not be subject to the same pressure from politicians and others in government that has destroyed the public sector banks.

Way ahead:

- The public-sector banks, which constitute almost 70% of the Indian banking system, are saddled with burgeoning stressed assets. The government has already injected over ₹2.6 lakh crore in the public-sector banks through recapitalisation in the last eleven years, which has had limited impact in improving the health of public sector banks thus far.
- Therefore, recapitalisation of PSBs alone is not a permanent solution and will not be effective unless the inherent issues related to governance, productivity, risk management, talent, customer service, etc. are resolved. The government should shrink unproductive public sector banks and move forward with increasing private sector participation in the banking sector.

Sources: the hindu.

Paper 3 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.

Mega food park

Context:

- Greentech Mega Food Park Private Ltd, first mega food park in Rajasthan,** was recently inaugurated at Roopangarh Village in Ajmer.
- The Park has been set up at a cost of Rs 113.57 crore and will benefit around 25,000 farmers in this as well as neighbouring districts.

About Mega Food Parks:

Ministry of Food Processing Industries is implementing Mega Food Park Scheme in the country.

- The Scheme of Mega Food Park aims at providing a mechanism to link agricultural production to the market by bringing together farmers, processors and retailers so as to ensure maximizing value addition, minimizing wastages, increasing farmers' income and creating employment opportunities particularly in rural sector.
- These food parks give a major boost to the food processing sector by adding value and reducing food wastage at each stage of the supply chain with particular focus on perishables.
- A maximum grant of ₹50 crore is given for setting up a MFP, in minimum 50 acres of contiguous land with only 50% contribution to the total project cost.

Mode of operation:

- The Scheme has a **cluster based approach based on a hub and spokes model**. It includes creation of infrastructure for primary processing and storage near the farm in the form of Primary Processing Centres (PPCs) and Collection Centres (CCs) and common facilities and enabling infrastructure at Central Processing Centre (CPC).
- The PPCs are meant for functioning as a link between the producers and processors for supply of raw material to the Central Processing Centres.
- CPC has need based core processing facilities and basic enabling infrastructure to be used by the food processing units setup at the CPC. The minimum area required for a CPC is 50 acres.
- The scheme is demand-driven and would facilitate food processing units to meet environmental, safety and social standards.

Facts for Prelims:

- India's first mega food park 'Sriini Mega Food Park', sprawling 147-acre space, was opened in Chittoor in Andhra Pradesh in 2012.

What's important?

- **For Prelims:** Mega Food Parks scheme.
- **For Mains:** Food security and efforts by government in this regard.

Sources: pib.

Paper 3 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.

1. 1st Mega Food Park in Maharashtra at Satara

Context:

- The first Mega Food Park in the state of Maharashtra M/s Satara Mega Food Park Pvt. Ltd. has been inaugurated at Village Degaon, District Satara.
- This is the 10th Mega Food Park being operationalized in the country and the 8th operationalized during the tenure of present government.

Facts for Prelims:

- India's first mega food park 'Sriini Mega Food Park', sprawling 147-acre space, was opened in **Chittoor** in **Andhra Pradesh** in 2012.

Welcome to Satara Mega Food Park

The Mega Food Park located at Degaon in Satara district, Maharashtra, is one of India's largest integrated food parks.

It provides end-to-end solutions to food processing industries with backward and forward linkage.

As a model 'Mega Food Park' and the first of its kind in India, it provides state-of-the-art food processing infrastructure designed as per global standards and develops a veritable market place with common facilities on the lines of a software park or a textile park.



- The proposed SMFPPL is primarily to boost the growing food industry.
- The technical configuration of the project is targeted to meet international standards of quality and service. With this in view, SMFPPL have proposed to set Integrated Food Park at Degaon in Satara district.

Satara Mega Food Park is spread across on around 64 acres of land. This proposed Food Park will have support infrastructure like:

- Central processing Centre (CPC)
- Primary Processing Centre (PPC)
- Collection Centers (CC)



About Mega Food Park Scheme:

- To give a major boost to the food processing sector by adding value and reducing food wastage at each stage of the supply chain with particular focus on perishables, Ministry of Food Processing Industries is implementing Mega Food Park Scheme in the country.

- Mega Food Parks create modern infrastructure facilities for food processing along the value chain from farm to market with strong forward and backward linkages through a cluster based approach.
- Common facilities and enabling infrastructure is created at Central Processing Centre and facilities for primary processing and storage is created near the farm in the form of Primary Processing Centers (PPCs) and Collection Centers (CCs).
- The Mega Food Park project is implemented by a Special Purpose Vehicle (SPV) which is a Body Corporate registered under the Companies Act. However, State Government, State Government entities and Cooperatives are not required to form a separate SPV for implementation of Mega Food Park project.
- Under the Scheme, Government of India provides financial assistance upto Rs. 50.00 Crore per Mega Food Park project.

Benefits of the scheme:

- The expected outcome is creation of high quality processing infrastructure, reduction in wastage, capacity building of producers and processors and creation of an efficient supply chain along with significant direct and indirect employment generation.

Challenges in the implementation:

- Despite its huge potential, MFPS has failed to gain momentum due to several reasons.
 - One, promoters have faced difficulties in selling the new concept to banks and, as a result, have failed to secure loans to build the parks.
 - Two, acquiring the 50 acres of land, which is mandatory under MFPS, has been another challenge that most developers have failed to address.
 - Three, convincing small enterprises to set up shop at these facilities has not been easy.
 - And four, the overall economic slowdown, globally, and in India, did not help either.

Sources: pib.

2. National Agricultural Cooperative Federation of India Ltd. (NAFED)

Context:

- National Agricultural Cooperative Federation of India Ltd. (NAFED) has signed the Debt Settlement Agreement with its eight lender banks.
- The One Time Settlement with the lender banks has been made at Rs. 478 Crore. In addition, the lenders are entitled to the assignment of auction right of the property of one of the defaulters of its tie-up business conducted in the years 2003-05.



A Farmers' Cooperative

About NAFED:

- National Agricultural Cooperative Marketing Federation of India Ltd. (NAFED), established in 1958, is registered under the Multi State Co-operative Societies Act.
 - Nafed was setup with the object to promote Co-operative marketing of Agricultural Produce to benefit the farmers.
 - ***Agricultural farmers are the main members of Nafed***, who have the authority to say in the form of members of the General Body in the working of Nafed.
 - ***The objectives of the NAFED*** shall be to organize, promote and develop marketing, processing and storage of agricultural, horticultural and forest produce, distribution of agricultural machinery, implements and other inputs, undertake inter-state, import and export trade etc.

Sources: the hindu.

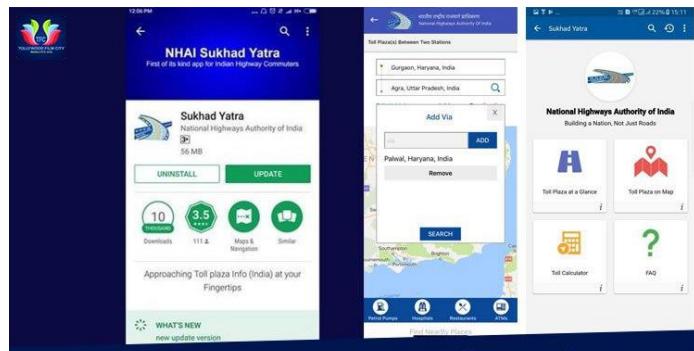
Paper 3 Topic: Infrastructure: Energy, Ports, Roads, Airports, Railways etc.

1. Sukhad Yatra App

Context: The government has launched Sukhad Yatra App.

About Sukhad Yatra App:

- Sukhad Yatra mobile application has been prepared by National Highways Authority of India, NHAI, to empower the Highway user.
- The key feature of the app includes provision for the user to enter road quality-related information or to report any accident or pothole on the highway.
- It also provides users with real-time data related to waiting time expected at Plazas and various facilities like points of interest, highway nest/nest mini, etc., available across the highway.
- The app can also be used by the users to purchase the FASTag tag and further facilitate the highway user experience.



Sukhad Yatra App for Highway Commuters

Sources: pib.

2. National E-Mobility programme

Context: The government has launched the National E-Mobility Programme.

Significance of this move:

- India has embarked on an ambitious e-mobility plan and the government has taken the leadership in enabling e-mobility in India. The National E-Mobility Programme is a step towards ushering in an era of clean, green and future-oriented technologies in the country.

Challenges ahead:

- Mainstreaming electric vehicles will require an overhaul of the country's energy and transport infrastructure. For example, EV charging stations will have to be set up on a war footing, and electricity generation will have to improve significantly even as its piggybacks on the push for solar energy. EV technology (especially the battery) will have to become much cheaper before it can perform well in a price-sensitive market like India.

Way ahead:

- With the onus of being the second-largest populated country in the world, India has a lot of reasons to rejoice over the bright outlook of the adoption of electric vehicles in India. NIT Aayog said in a recent report that can cut its energy demand by 64% and carbon emissions by 37% by making its passenger mobility shared, electric, and connected. The concept not only helps India to fulfil its renewable energy goals but also assists it in other facets like the 'Make in India' vision.
- The Indian automobile industry is the sixth-largest in the world and accounts for a whopping 22% of the country's total manufacturing output. The large-scale adoption of electric vehicles can play an important role in increasing the share of manufacturing in India's GDP from the current 15% to 25% by 2022.

National E- Mobility Programme:

- The Programme aims to provide an impetus to the entire e-mobility ecosystem including vehicle manufacturers, charging infrastructure companies, fleet operators, service providers, etc.
- The Programme will be implemented by Energy Efficiency Services Limited (EESL) which will aggregate demand by procuring electric vehicles in bulk to get economies of scale.
- Energy Efficiency Services Ltd (EESL) will issue a fresh tender for additional 10,000 e-vehicles. These electric vehicles will replace the existing fleet of petrol and diesel vehicles.

About EESL:

- Energy Efficiency Services Limited (EESL) is a joint venture of NTPC Limited, Power Finance Corporation, Rural Electrification Corporation and POWERGRID, Energy Efficiency Services Limited (EESL) was set up under Ministry of Power (India) to facilitate implementation of energy efficiency projects.

What's important?

- **For Prelims:** National E-Mobility programme, EESL.
- **For Mains:** E mobility- significance, issues, challenges and solutions.

Sources: pib.

3. Major Port Authorities Bill

Context:

- With a view to providing more autonomy and flexibility to Major Ports and to professionalize their governance, the Government has introduced the Major Port Authorities Bill in Parliament to replace the existing Major Port Trusts Act, 1963.

Salient features of the Bill:

- **Application:** The Bill will apply to the major ports of Chennai, Cochin, Jawaharlal Nehru Port, Kandla, Kolkata, Mumbai, New Mangalore, Mormugao, Paradip, V.O. Chidambaranar, and Vishakhapatnam. The central government may notify more major ports.
- **Major Port Authorities Board:** Under the 1963 Act, all major ports are managed by the respective Board of Port Trusts that have members appointed by the central government. The Bill provides for the creation of a Board of Major Port Authority for each major port. The Boards will succeed the existing Port Trusts.
- **Composition of Board:** The Board will comprise of a Chairperson and a deputy Chairperson, both of whom will be appointed by the central government on the recommendation of a select committee. Number of Board Members will be 11-13.
- **Powers of the Board:** The Bill allows the Board to use its property, assets and funds as deemed fit for the development of the major port. The Board can also make rules on: (i) declaring availability of port assets for port related activities and services, (ii) developing and providing infrastructure facilities such as setting up new ports, jetties, and (iii) providing exemption or remission from payment of any charges on any goods or vessels.
- **Financial powers of the Board:** Under the 1963 Act, the Board has to seek prior sanction of the central government to raise any loan. Under the Bill, to meet its capital and working expenditure requirements, the Board may raise loans from any (i) Indian scheduled bank or financial institution, or (ii) any financial institution outside India that is compliant with all the laws. However, for loans above 50% of its capital reserves, the Board will require prior sanction of the central government.
- **Adjudicatory Board:** The Bill provides for the central government to create an Adjudicatory Board. The Board will consist of a Presiding Officer and two members, as appointed by the central government on the recommendation of selection committee. Central Government shall have the power to remove the Presiding Officer or any member of the Adjudicatory Board from the office following the prescribed manner.
- **Functions of the Adjudicatory Board will include:** (i) certain functions being carried out by the Tariff Authority for Major Ports, (ii) adjudicating on disputes or claims related to rights and obligations of major ports and PPP concessionaires, (iii) reviewing stressed PPP projects, and (iv) looking into complaints received from port users regarding port services.

Significance of the Bill:

- Reforms have been under way since 1996, when ports were opened to private investment.
- With India's major and non-major ports (over 200 of them) accounting for over 70 per cent of India's international trade by value, it was necessary to address inefficiencies such as high turnaround time of ships by stepping up modernisation and grappling with shoddy management.
- The new Bill marks an effort to promote ease of doing business.

Sources: pib.

4. WEF energy transition index

Context:

- **World Economic Forum (WEF) has released the energy transition index** as part of the report titled Fostering Effective Energy Transition.
- The index ranks 114 countries on how well they are able to balance energy security and access with environmental sustainability and affordability.

Global performance:

- The overall list was topped by Sweden, followed by Norway at the 2nd position and Switzerland at the 3rd rank.
- Other countries on the top 10 include Finland (4th), Denmark (5th), the Netherlands (6th), the UK (7th), Austria (8th), France (9th) and Iceland (10th).
- Among its emerging market peers Brazil stood at the 38th place, Russia at 70th and China at 76th place.

Performance of India:

- India has been ranked at 78th, lower than its emerging market peers like Brazil and China.
- In the Index, India ranks in the third performance quartile and third readiness quartile, making it an emerging country that is approaching the leapfrog category.
- Concerns: Energy needs in the country are primarily met by fossil fuels with implications for environmental sustainability and increasing energy import costs. Furthermore, a considerable share of India's population still lacks access to electricity and clean cooking fuel.
- Challenges: The Indian renewable energy landscape shows promise, with subsequent renewable energy auctions clearing at prices lower than those in long-term thermal power purchase contracts. However, this has also cast uncertainty on the economic viability of thermal power plants, which account for 58% of India's primary energy supply.

Way ahead:

- Worldwide progress towards environmental sustainability has stalled, while energy prices have risen in real terms in more than half of the countries surveyed despite an overall fall in fuel prices.
- India has taken "bold measures" to improve energy access, energy efficiency, and to improve the deployment of renewable sources of energy. However, energy transition in the country will require "large investments, and an enabling environment and robust regulatory frameworks to support the transition".
- "India is at the crossroads in its energy transition journey."

What's important?

- **For Prelims:** About the index.
- **For Mains:** Energy needs of the country- opportunities and challenges.

Sources: the hindu.

5. Toll Operate and Transfer (TOT) model

Context:

- The National Highways Authority of India (NHAI), which invited bids for various highways, hopes to generate more than Rs 6,000 crore by leasing out the roads under the 'toll-operate-transfer' (TOT) model.
- This will provide NHAI funds to build more highways,

About the TOT model:

- Under this newly launched ToT model, ***the right to collect user-fee or toll on selected national highway stretches built through public funding is proposed to be auctioned and assigned to a concessionaire for a period of 30 years*** against an upfront payment of a lump-sum amount to the government.
- ***The concessionaire is also responsible for the operation and maintenance*** of the roads during the tenure.
- The model concession agreement also seeks to address the risks associated with such a long concession contract, with several provisions designed to deal with eventualities like roadway expansion, high toll traffic variation, etc., to ensure that concessionaires are not exposed to undue risks.
- ***The government can also increase the concession period in later stages***, if the concessionaire wants it.

filling in for the private sector that is reluctant to invest in new highways.

Background:

- The Cabinet Committee on Economic Affairs in 2016 had authorised NHAI to monetise 75 publicly funded national highways that are operational and have been generating toll revenues for at least two years.

Significance of the Model:

- India is facing a \$526 billion infrastructure investment gap by 2040. The TOT model, once successful in the highways sector, other sectors such as power transmission, oil and natural gas could replicate the same model, thereby unlocking the huge offbudget funding.

What's important?

- For Prelims and Mains:** ToT Model and its significance.

Sources: pib.

6. Naitwar Mori Hydro Electric Project

Context: Construction works on 60 MW Naitwar Mori Hydro Electric Project have begun.

About the project:

- The Naitwar Mori Project with a generation potential of 60 MW is **located on River Tons, a major tributary of River Yamuna** on the Ganga basin, in Uttarkashi district of Uttarakhand state in North India.
- This run-of-the river project was allocated to SJVN Ltd by the Government of Uttarakhand. **SJVN Ltd is a Mini Ratna PSU under administrative control of the Ministry of Power**, Govt. of India.

Paper 3 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.

1. Silver copper telluride (AgCuTe)

Context:

- Researchers have developed silver copper telluride (AgCuTe), a novel compound that exhibits poor thermal conductivity in the 25-425 degree C range but shows good electrical conductivity.

About AgCuTe:

- The new material made from silver, copper, and tellurium shows high levels of thermoelectric performance that the scientists are hoping could some day be harnessed to extract electricity from waste heat of chemical, thermal, or steel power plants.
- Due to the low thermal conductivity of AgCuTe, one end of the 8 mm-long rod that is contact with waste heat remains hot while the other end maintains cold temperature. The temperature difference is essential for the generation of electrical voltage. At the same time, the material exhibits good electrical conductivity like metal.

What's important?

- For Prelims:** AgCuTe, thermoelectric technology.
- For Mains:** Thermoelectric technology- applications and challenges.

Sources: the hindu.

Potential applications:

- The compound, silver copper telluride (AgCuTe), shows promise as a **thermoelectric material** for converting waste heat into electricity.
- Potential applications of the thermoelectric technology are in automobile industry, chemical, thermal and steel power plants where large quantities of heat are wasted.

2. GBI submarine cable

Context:

- Telecom major Bharti Airtel has acquired India leg of Gulf Bridge International submarine cable which will boost its data carrying capacity.
- Under the agreement, Airtel will acquire the ownership of the India leg of GBI's India-Middle East-Europe submarine cable. Airtel will also pick up a significant capacity on Middle East-Europe leg of GBI's cable system.



About GBI:

- The GBI (Gulf Bridge International) is a private submarine cable system connecting the Gulf countries together and provide onward connectivity to the rest of the world. The GBI Cable System was launched in Feb. 2012, connecting the world to the Gulf.
- The GBI Cable System is designed with a self-healing core ring in the Gulf, with double cable landings at the major terminals of Qatar and Fujairah (UAE) and branched landings in Iran, Iraq, Kuwait, Saudi Arabia and Bahrain, Oman, and onward connectivity to landing in India and Europe as well.
- The GBI Cable System is privately owned by Gulf Bridge International, established in December 2008 with an initial investment of \$445 million.

What's important?

- For Prelims: GBI cable system.
- For Mains: Significance of submarine cable system.

Sources: the hindu.

3. Rare mineral discovered in plants for first time

Context:

- Scientists have found that the mineral vaterite, a form (polymorph) of calcium carbonate, is a dominant component of the protective silvery-white crust that forms on the leaves of a number of alpine plants.



Significance of this discovery:

- Naturally occurring vaterite is rarely found on Earth. Small amounts of vaterite crystals have been found in some sea and freshwater crustaceans, bird eggs, the inner ears of salmon, meteorites and rocks.
- This is the first time that the rare and unstable mineral has been found in such a large quantity and the first time it has been found to be associated with plants.

Potential uses of vaterite:

- Vaterite has special properties that make it a potentially superior carrier for medications due to its high loading capacity, high uptake by cells and its

About Vaterite:

- Vaterite is a mineral, a polymorph of calcium carbonate (CaCO_3). It was named after the German mineralogist Heinrich Vater. It is also known as **mu-calcium carbonate**.
- Vaterite was often associated with outer space and had been detected in planetary objects in the Solar System and meteorites: Vaterite is not very stable in the Earth's humid atmosphere as it often reverts to more common forms of calcium carbonate, such as calcite.

solubility properties that enable it to deliver a sustained and targeted release of therapeutic medicines to patients.

- Other potential uses of vaterite include improving the cements used in orthopaedic surgery and as an industrial application improving the quality of papers for inkjet printing by reducing the lateral spread of ink.

Sources: et.

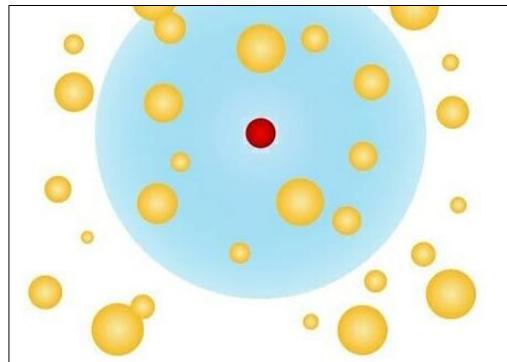
4. Rydberg polarons

Context:

- An international team of physicists have successfully created a “giant atom” and filled it with ordinary atoms, creating a new state of matter termed “**Rydberg polarons**”.
- These atoms are held together by a **weak bond** and is **created at very cold temperatures**.

How was the new polaron created?

- It uses ideas from two different fields: Bose Einstein Condensation and Rydberg atoms.
- A BEC (Bose Einstein Condensate) is a liquid-like state of matter that occurs at very low temperatures. A BEC can be perturbed to create excitations which are akin to ripples on a lake. Here, researchers have used a BEC of strontium atoms.
- Electrons in an atom move in orbits around the nucleus. A ‘Rydberg atom’ is an atom in which an electron has been kicked out to a very large orbit. These have interesting properties and have been studied for a long time.
- In this work, researchers used laser light on a BEC of strontium atoms so that it impinges on one strontium atom at a time. This excites an electron into a large orbit, forming a Rydberg atom. This orbit is large enough to encircle many other strontium atoms inside it.
- As the electron moves around many strontium atoms, it generates ripples of the BEC. The Rydberg atom becomes inextricably mixed with these ripples and forms a new super-atom called a ‘Rydberg polaron’.



Schematic showing a Rydberg Polaron. Strontium atoms (in yellow) fit inside the orbit between the nucleus (in red) and the electron (in blue) of a Rydberg atom.

What will be the use of these Rydberg polarons?

- A particularly interesting implication is for **cosmology**. Our universe is believed to be filled with a mysterious ‘dark matter’ which exerts a gravitational force on other matter.
- Some theories of dark matter postulate that it is a cosmic **Bose Einstein Condensate**, perhaps composed of an as-yet-unknown type of particle. If we are indeed living in an invisible all pervading Bose Einstein Condensate, this experiment can suggest ways to detect it.

Sources: the hindu.

5. HT Cotton

Context:

- Department of Biotechnology in the Ministry of Science and Technology has constituted a Field Inspection and Scientific Evaluation Committee (FISEC) to investigate the matter of illegal cultivation of HT cotton.

What's the issue?

- **The cultivation of BG-III or HT cotton has not been approved by Genetic Engineering Approval Committee (GEAC) of Ministry of Environment.**
- However, there are several media reports and complaints regarding the illegal or unauthorized cultivation of HT cotton in Andhra Pradesh, Telangana, Gujarat and Maharashtra.



Why HT Cotton is gaining popularity?

- In normal cotton, spraying of herbicide is not possible once the plant has emerged out of the soil, as the chemical cannot distinguish between weeds and the crop itself.
- But with cotton that is genetically engineered to ‘tolerate’ herbicide application – through introduction of another alien gene, this time coding for a protein inhibiting the action of that chemical – only the weeds, not the crop, get killed.

Concerns associated:

- As the unapproved cotton variety is claimed to be herbicide tolerant, farmers resort to indiscriminate use of glyphosate, a herbicide, causing health hazards to humans and cattle, apart from affecting the yield of cotton.
- The herbicide-resistant gene could spread through pollen into the biodiversity system leading to transformation of weeds into super weeds on a large-scale. It would not only threaten the growth and yields of all crops in future, but also could increase cultivation costs and lead to health hazards.

Punishment:

- As the herbicide tolerant cotton is not approved by the Genetic Engineering Appraisal Committee (GEAC) for commercial cultivation in India, its sale, cultivation and seed production is also punishable offence under Seeds Act 1966, Seed Rule 1968, Seeds (Control) Order 1983 with regard to Environmental Protection Act 1986 and Environmental Protection Rules, 1989.

What's important?

- **For Prelims:** HT cotton, GEAC.
- **For Mains:** BT crops- issues, concerns and solutions.

Sources: pib.

6. Neutrino project

Context:

- The India-based Neutrino Observatory (INO) project has got a fresh lease of life with the Ministry of Environment and Forests (**MoEF**) taking it up as a special case and granting it environmental clearance to set up the lab in **Bodi West hills**.

Two conditions:

While granting EC, the committee stipulated specific conditions, of which two are key for the project to take off.

- One is the consent to establish and operate to be obtained from the Tamil Nadu Pollution Control Board (TNPCB).
- Also, the INO team has to obtain the necessary forest and National Board for Wild Life clearances as per law. ***The Mathikettan Shola National Park in Idukki district, Kerala, is situated within five km from the project site.***

The project includes:

- Construction of an underground laboratory and associated surface facilities at Pottipuram in Bodi West hills of Theni District of Tamil Nadu.
- Construction of an Iron Calorimeter (ICAL) detector for studying neutrinos.
- Setting up of National Centre for High Energy Physics at Madurai, for the operation and maintenance of the underground laboratory, human resource development and detector R&D along with its applications.

About HT Cotton:

- **BG Cotton – III, also known as Herbicide-Tolerant Cotton, contains Round-up Ready and Round-up Flex (RRF) gene.**
- HT cotton is an innovation in Bt cotton as it takes care of the weeds problem at a much lower cost than the labour farmers have to engage for weeding.

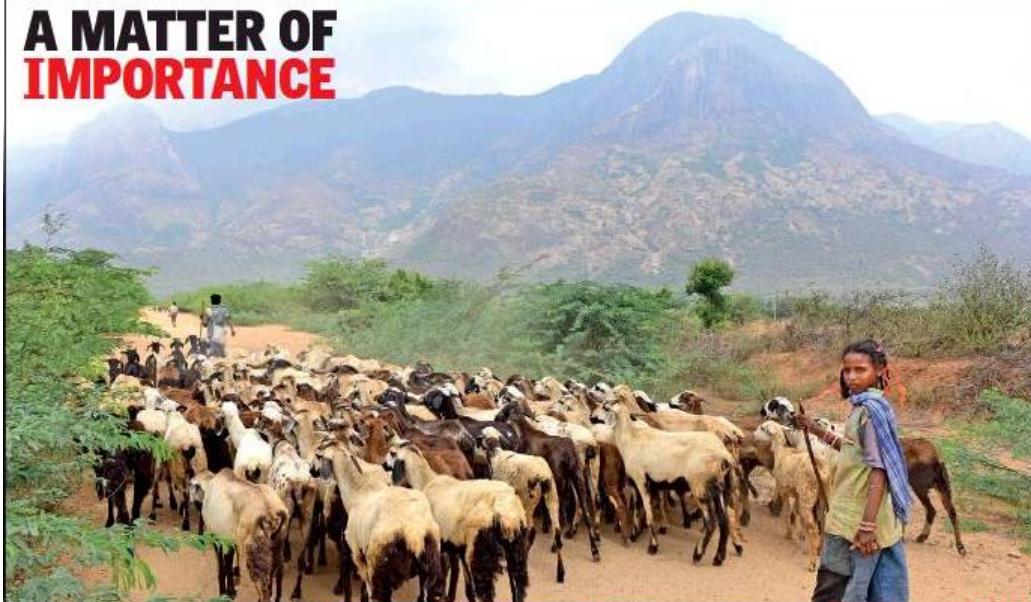
Who developed it?

- Monsanto, a US-based multinational seed giant, has developed herbicide-tolerant trait (BG-III) and commercialised it as ‘Round-up Ready Flex (RRF)’ in USA.

About the project:

- The India-based Neutrino Observatory (INO) Project is a multi-institutional effort aimed at building a world-class underground laboratory with a rock cover of approx.1200 m for non-accelerator based high energy and nuclear physics research in India. The initial goal of INO is to study neutrinos.
- It is a mega-science project under the XII five-year plan of Government of India with an investment of about 1350 crores, ***jointly funded by the Department of Atomic Energy (DAE) and the Department of Science and Technology (DST).***

A MATTER OF IMPORTANCE



WHAT IS INDIA-BASED NEUTRINO OBSERVATORY (INO) PROJECT ABOUT?

► A project that aims to build a world-class underground laboratory with a rock cover of approx. 1200m for non-accelerator based high energy and nuclear physics research in India.



Will consist of:
An underground lab at Pottipuram in Bodhi West Hills, a 50,000 ton Iron Calorimeter (ICAL) detector for studying neutrinos and a National Centre for High Energy Physics at Madurai

OBJECTIVES

- First phase will study natural neutrinos; second phase will study factory-made neutrinos from USA, Europe, Japan and Antarctica
- The ICAL detector will help determine neutrino masses and mixing parameters



LAB FACTS

- As laboratory cavern needs to be more than **1000m** underground (to reduce natural cosmic radiation and filter neutrinos), Bodhi Hills was chosen for the project as it is made of Charnockite rocks, the hardest rock known
- The lab at Pottipuram will be set up by blasting **10L tons** of rocks using explosives

Project will need
3,50,000 litres
water per day

RISING APPREHENSIONS

Locals and activists fear that:

- The project will deteriorate the condition of ecologically fragile Western Ghats
- Blasts during setting up the project will affect dams like Mullaperiyar, Vaigai, Idukki and Megamalai situated in the watershed area of river Vaigai
- Dust generated during tunnelling will settle on the agriculture land, making it barren

Officials answer:

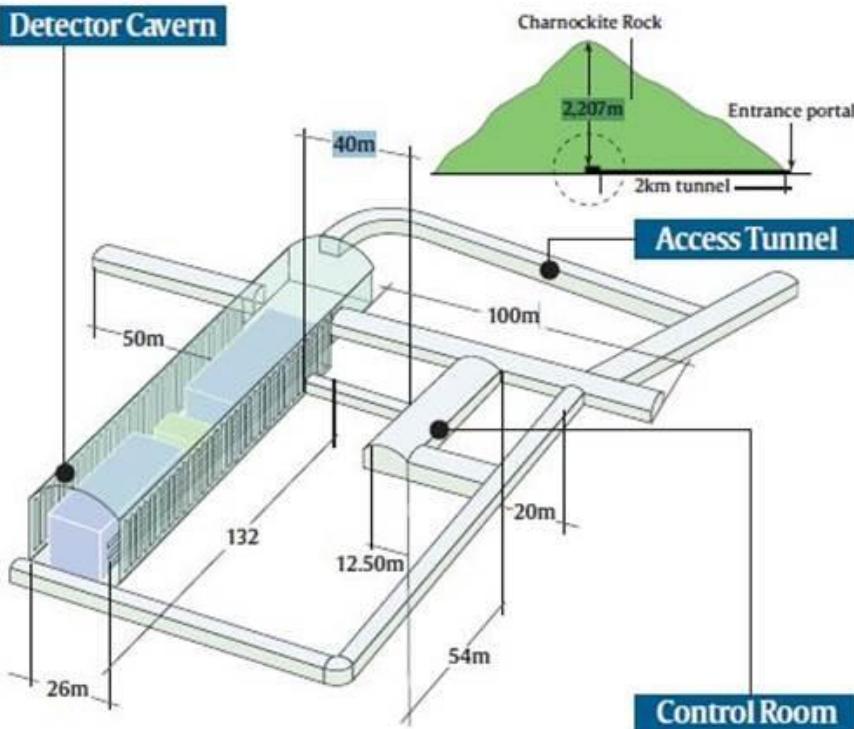
- Idukki and Mullaperiyar dams are too far away to be affected
- Tunnelling is a routine activity common in TN and not akin to blasting in quarries; the controlled blasting (two or three times per day) will last only a few seconds
- Waste generated from tunnelling would be dealt with within the site; no radioactive material will be used at INO lab



NEUTRINOS

ARE THE second most abundant subatomic particles after photons, and one of the several fundamental particles of the universe is built of. They have no charge, but are thought to have a small, as-yet-undetermined, mass. They are everywhere, but are extremely difficult to detect because they interact poorly with other objects, passing through the human body without a trace.

Detector Cavern



INO PROJECT

WILL PLACE a specially built iron calorimeter (ICAL) detector about 1.5 km under the ground, where the chances of detecting neutrinos are higher. The project will aim to determine the mass of neutrinos, and to establish a "mass order" among the three known types of neutrinos – electron, muon and tau.

KEY FACTS

NEUTRINOS ARE thought to have been produced just after the Big Bang that created the universe. The neutrino density of the universe is 330 per cubic centimetre.

100 TRILLION neutrinos are believed to pass through the human body every second.

RS 1,500 CR is the estimated cost of the project. Building the lab is likely to cost Rs 470 cr.

50,000TONNES of magnets will make up the iron calorimeter detector.

22 INSTITUTIONS are part of the project. Involving over 100 engineers and physicists.

WHAT IS A NEUTRINO?

- A sub-atomic particle, like an electron, which has a very small mass
- One of the abundant particles in the universe, neutrinos have little interaction with matter and are thus difficult to detect



- Trillions of neutrinos pass through the earth every second, not affected by its magnetic field

NO HOPE: Villagers who eke out a livelihood from livestock rearing fear they may lose their pastures once the project kick-starts

Why detect them?

- Neutrinos are by far the most numerous of all the particles in the universe (other than photons of light) and so even a tiny mass for the neutrinos can enable them to have an effect on the evolution of the Universe through their gravitational effects.
- There are other recent astrophysical measurements that provide information on the evolution of the Universe and it is crucial to seek complementary information by direct determinations of the masses of neutrinos and their other properties. In a sense, neutrinos hold the key to several important and fundamental questions on the origin of the Universe and the energy production in stars. We have some partial answers but many details are still awaited from future experiments.
- Yet another important possible application of neutrinos is in the area of neutrino tomograph of the earth, that is detailed investigation of the structure of the Earth from core on wards. This is possible with neutrinos since they are the only particles which can probe the deep interiors of the Earth.

What are neutrinos?

- Neutrinos, first proposed by Swiss scientist **Wolfgang Pauli** in 1930, are the second most widely occurring particle in the universe, only second to photons, the particle which makes up light. In fact, neutrinos are so abundant among us that every second, there are more than 100 trillion of them passing right through each of us — we never even notice them.
- Neutrinos occur in three different types, or flavours. These are separated in terms of different masses. From experiments so far, we know that neutrinos have a tiny mass, but the ordering of the neutrino mass states is not known and is one of the key questions that remain unanswered till today. This is a major challenge INO will set to resolve, thus completing our picture of the neutrino.

Why should the laboratory be situated underground?

- Neutrinos are notoriously difficult to detect in a laboratory because of their extremely weak interaction with matter.
- The background from cosmic rays (which interact much more readily than neutrinos) and natural radioactivity will make it almost impossible to detect them on the surface of the Earth. This is the reason most neutrino observatories are located deep inside the Earth's surface.
- The overburden provided by the Earth matter is transparent to neutrinos whereas most background from cosmic rays is substantially reduced depending on the depth at which the detector is located.

What are the benefits to local people from this project?

- The construction contract will specify that local labour should be used, based on the skill levels, to the maximum extent possible.
- Furthermore, gainful employment will be there for a small number of people by way of sourcing of services and daily needs for the INO facility and for the upkeep of buildings and landscapes.
- A major benefit will be for schools and colleges in the region as the students interested in science can benefit from the outreach activities as well as doing projects at the lab.

Sources: the hindu.

7. Indian Science Congress In Manipur

Context:

- **105th Indian Science Congress was recently held in Manipur.** It focussed on translational science for promoting affordable sustainable innovation.
- Indian Science Congress was organized by the Indian Science Congress Association.
- **Theme:** “Reaching the Unreached Through Science & Technology”.

Women Science Congress:

- **7th Women Science Congress was also held at the 105th session of Indian Science Congress** in Imphal. The first Women Science Congress was held in 2012.

About Indian Science Congress Association:

- Indian Science Congress Association (ISCA) is a premier scientific organisation started in the year 1914 in Kolkata. It has a membership of more than 30,000 scientists.

- **Origin:** It owes its origin to the foresight and initiative of two British chemists, namely, Professor J. L. Simonsen and Professor P. S. MacMahon. It occurred to them that scientific research in India might be stimulated if an annual meeting of research workers somewhat on the lines of the British Association for the Advancement of Science could be arranged.

Objectives:

- 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 including the rights of disposing of or selling all or any portion of the properties of the Association.
- To do and perform any or all other acts, matters and things as are conductive to, or incidental to, or necessary for, the above objects.

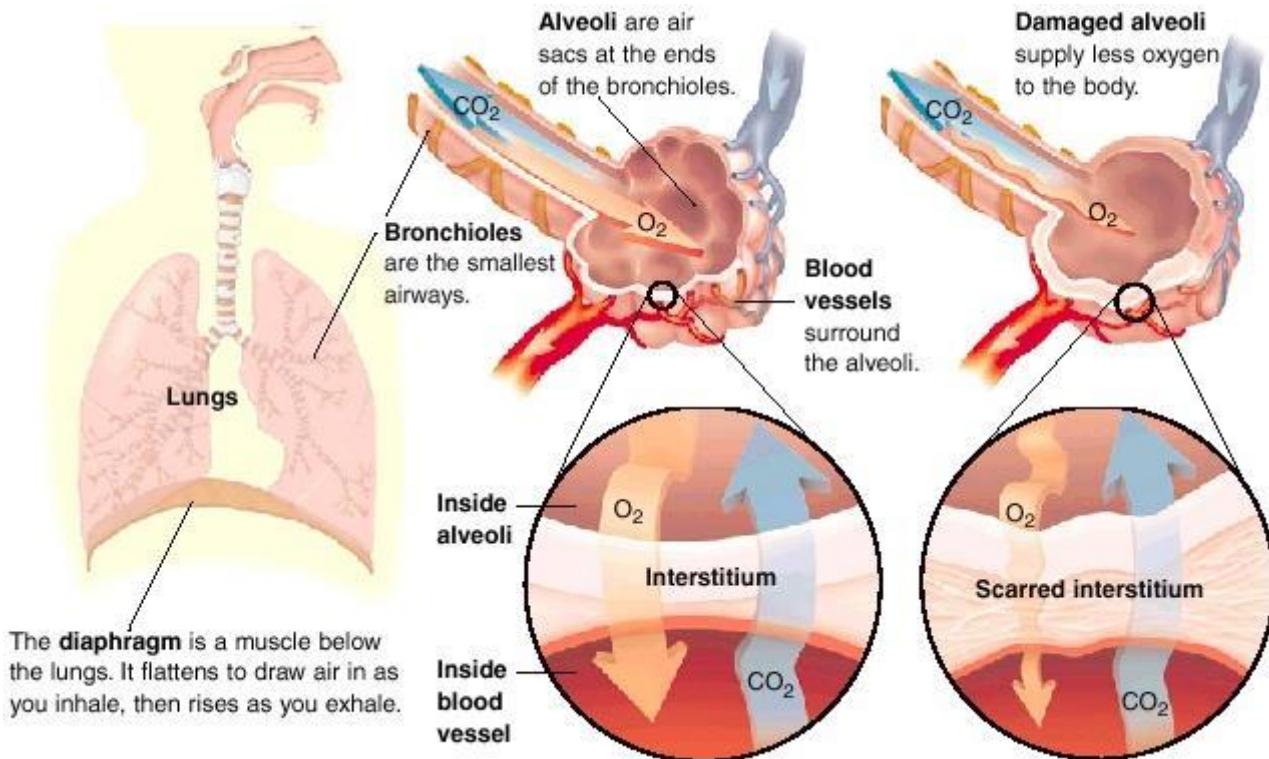
Sources: pib.

8. Interstitium: The latest organ discovered in human body

Context: Scientists have discovered a new organ in the human body which they have dubbed the ‘interstitium’.

About Interstitium:

- The new organ is known as the Interstitium and it is found everywhere in our bodies, acting as a shock absorber in all places where tissues are moved or subjected to force.
- It lies beneath the top layer of skin, but is also in tissue layers lining the gut, lungs, blood vessels, and muscles. The organ is a network of interconnected, fluid-filled spaces all over the body.
- Scientists say, it may even be one of the largest organs in the body. The organ acts like a shock absorber in all places where tissues are moved or subjected to force.



WHAT IS THE ORGAN MADE OF?

- The organ is a network of interconnected, fluid-filled spaces all over the body and is made up of both strong (collagen) and flexible (elastin) connective tissue proteins, with interstitial fluid moving throughout.

Functions of the organ:

- Interstitial spaces are organized by a collagen “mesh”, can shrink, expand, and “may thus serve as shock absorbers.”

- These “dynamically compressible and distensible sinuses” act as thoroughfares to transport critical fluids within organs and around the body.
- The Interstitium plays an important role in carrying lymph, the clear fluid that also travels through lymphatic vessels and supports immunity.

Significance of the discovery:

- The discovery of the fluid ‘highway’ could help to explain how cancer spreads in the body, and pave the way for new ways to detect and treat the disease.

Sources: [toi](#).

Paper 3 Topic: Awareness in the fields of IT, Space, Computers, robotics, nano-technology, bio-technology and issues relating to intellectual property rights.

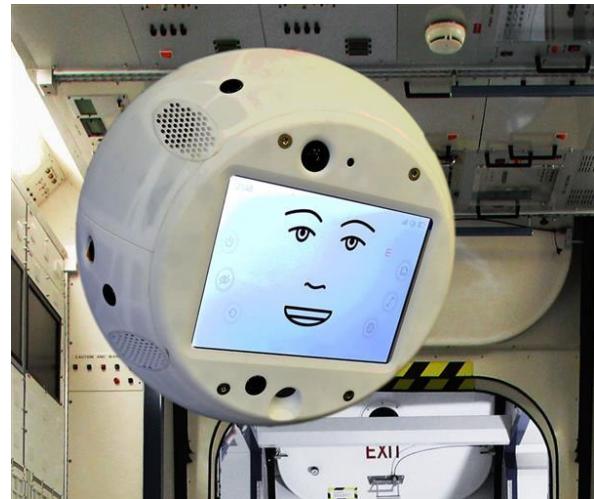
1. CIMON (Crew Interactive MOBILE CompanioN)

What is it?

- Airbus, an aeronautics company based in Netherlands, is developing CIMON (Crew Interactive MOBILE CompanioN), an AI-based space assistant for Germany’s DLR Space Administration.

Context:

- Described by its creators as a “flying brain”, this 3D-printed artificial intelligence system will soon join the crew aboard the International Space Station (ISS) to assist astronauts. It will be tested during the European Space Agency’s Horizons mission between June and October this year.



About CIMON:

- CIMON will be the first AI-based mission and flight assistance system. The entire structure of CIMON is made up of plastic and metal, created using 3D printing.
- CIMON has a brain-like AI network and is designed to support astronauts in performing routine work, for example by displaying procedures or offering solutions to problems. With its face, voice and artificial intelligence, becomes a genuine ‘colleague’ on board.
- Applications: With CIMON, crew members can do more than just work through a schematic view of prescribed checklists and procedures; they can also engage with their assistant. CIMON makes work easier for the astronauts when carrying out every day routine tasks, helps to increase efficiency, facilitates mission success and improves security, as it can also serve as an early warning system for technical problems.

What's important?

- **For Prelims:** CIMON.
- **For Mains:** AI- applications in various fields.

Sources: [the hindu](#).

2. Marshall Islands to launch world-first digital legal tender

Context:

- The Marshall Islands will launch the world’s first legal tender cryptocurrency. A law in this regard has been passed by the parliament.

Key facts:

- The Marshall Islands has partnered with Israeli company Neema to issue 24 million units of the Sovereign (SOV) digital currency.

- The SOV will require users to identify themselves, thus avoiding the anonymity that has kept bitcoin and other cryptocurrencies from gaining support from governments.

How is it different from 'Petro' cryptocurrency?

- Venezuela had launched the Petro cryptocurrency in February. Unlike the Petro, the Sovereign (SOV) will be recognized in law as legal tender, holding equal status as the US dollar, which is the Pacific island nation's current currency.

Background:

- Plans for possible sovereign cryptocurrencies have gained momentum in recent months, as digital tokens launched by private companies have jumped in value. Several governments, including China, Estonia, and Iran, have discussed plans for their own digital currency.

How are cryptocurrencies used?

- Cryptocurrency is fundamentally a decentralised digital currency transferred directly between peers and the transactions are confirmed in a public ledger, accessible to all the users.
- The process of maintaining this ledger and validating the transactions, better known as mining, is carried out in a decentralised manner.
- The underlying principle of the authenticity of the present to historical transactions is cryptographic proof, instead of trust; different from how it happens in the case of traditional banking systems.

Concerns associated:

- Cryptocurrencies are being denounced in many countries because of their use in grey and black markets. There are two sets of interconnected risks; one being to the growth and expansion of these platforms in the uncertain policy environment, and the other being the risks these platforms pose to the users and the security of the state. They also have the potential use for Illicit Trade and Criminal Activities and can be used for Terror Financing.

Way ahead:

- The future and further success of cryptocurrencies depends upon the way regulatory frameworks are devised. Different countries have approached this innovation in different ways, and therefore the regulatory environment remains uncertain. The governments will have to take considered steps, given the risks from possible use of cryptocurrencies in terror financing, money laundering and tax evasion.

What's important?

- For Prelims:** SOV, Petro.
- For Mains:** Cryptocurrencies- their usage, challenges, management and challenges.

Sources: the hindu.

3. Parker solar probe

Context:

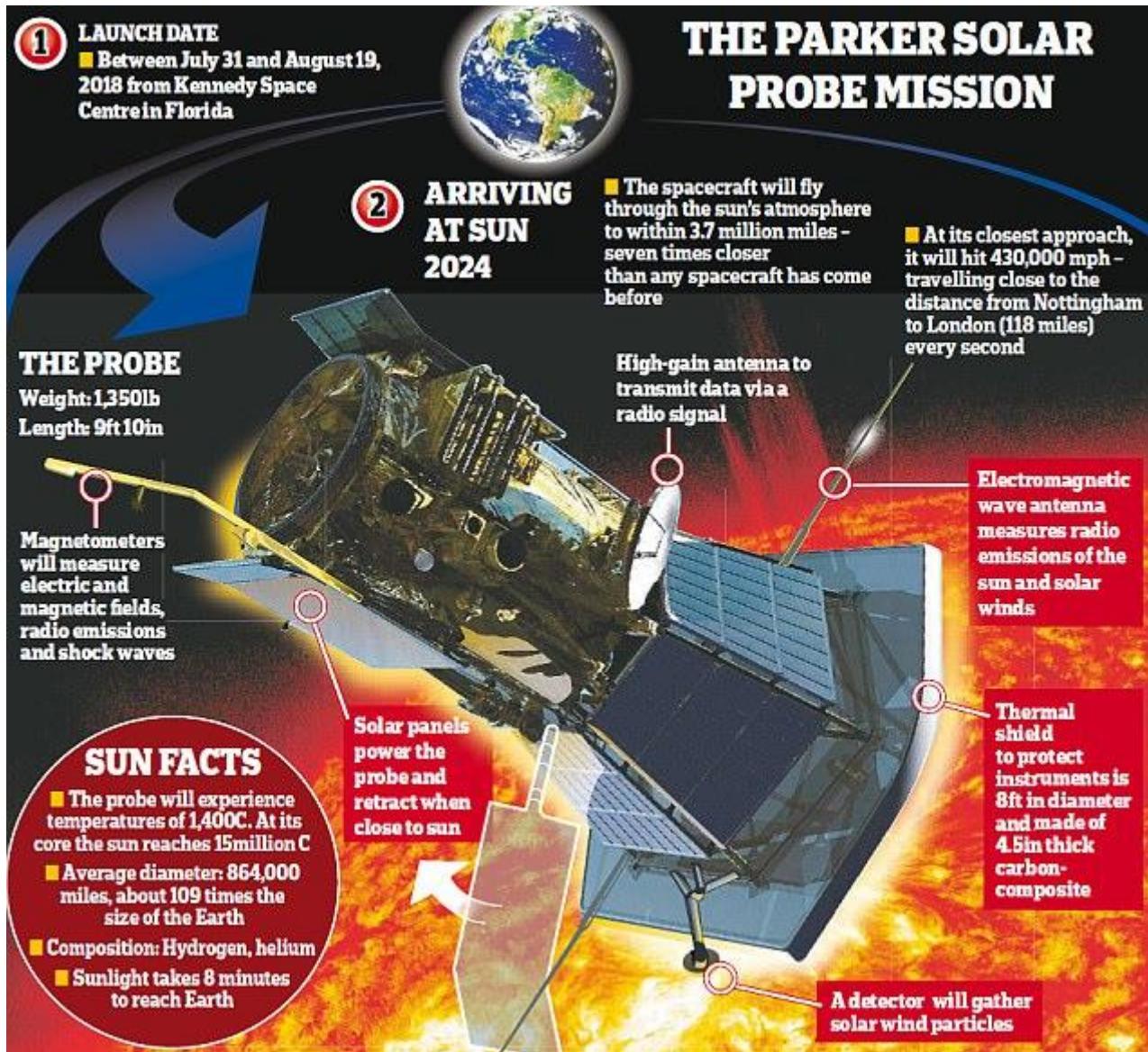
- NASA is inviting people around the world to submit their names online to be placed on a microchip aboard NASA's historic Parker Solar Probe mission launching in summer 2018.
- Parker Solar Probe is part of NASA's Living with a Star Program, or LWS, to explore aspects of the Sun-Earth system that directly affect life and society.

Parker Solar Probe has three detailed science objectives:

- Trace the flow of energy that heats and accelerates the solar corona and solar wind.
- Determine the structure and dynamics of the plasma and magnetic fields at the sources of the solar wind.
- Explore mechanisms that accelerate and transport energetic particles.

The mission:

- Parker Solar Probe will swoop to within 4 million miles of the sun's surface, facing heat and radiation like no spacecraft before it. Launching in 2018, Parker Solar Probe will provide new data on solar activity and make critical contributions to our ability to forecast major space-weather events that impact life on Earth.
- The primary science goals for the mission are to trace the flow of energy and understand the heating of the solar corona and to explore what accelerates the solar wind. Parker Solar Probe provides a statistical survey of the outer corona.

**Background:**

- Understanding the Sun has always been a top priority for space scientists. Studying how the Sun affects space and the space environment of planets is the field known as heliophysics. The field is not only vital to understanding Earth's most important and life-sustaining star, it supports exploration in the solar system and beyond.

What's important?

- For Prelims:** Parker solar probe, living with a star program.
- For Mains:** Study of sun- significance and how it helps in better understanding of earth.

Sources: et.

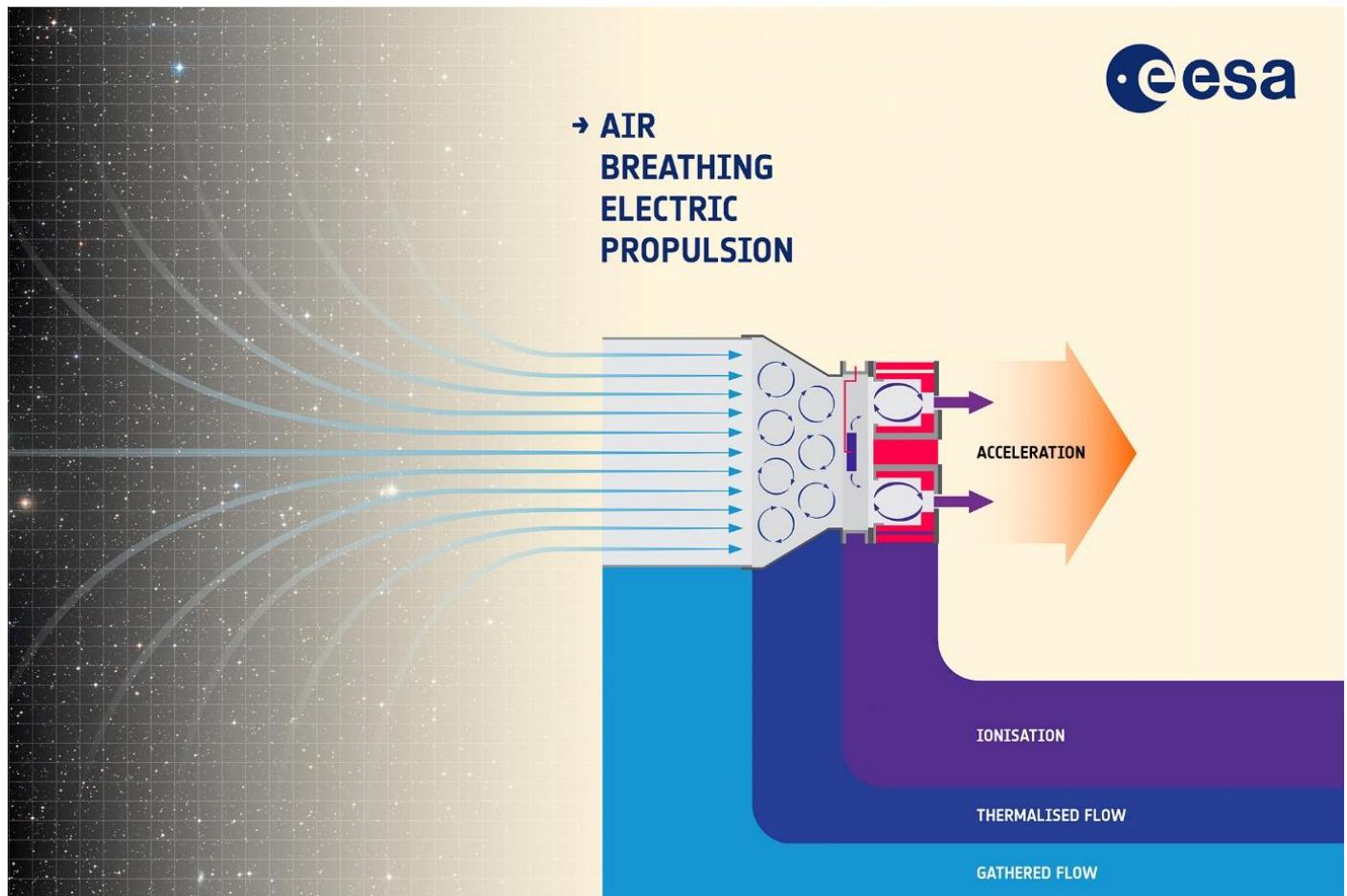
4. Air-Breathing Electric Thruster (ABET)

Context:

- The European Space Agency (ESA) is building Air-Breathing Electric Thruster (ABET) that can possibly extend the working life of satellites by years and even help with interplanetary travel using just the air around it as a propellant.

About Air-Breathing Electric Thruster (ABET):

- How it works?** An air-breathing engine works by collecting the sparse air at the edge of the atmosphere and compresses it to a point that it becomes thermalised ionised plasma. It then fires out the plasma using an electric charge to achieve thrust. An air breathing thruster could keep a satellite operational for extended periods of time if it only uses the air around it for fuel instead of propellants.
- This Air-Breathing Electric Thruster (ABET) does not operate in complete vacuum, but works in low Earth orbit (LEO) – altitude of 2,000 km or less—notes the ESA. At LEO, the air is scarce, but not entirely absent. In fact, there is enough air to cause a drag on spaceships and satellites. This is why there are on-board engines installed on satellites to correct course every time it moves out of position.



Sources: the hindu.

5. Cell for IPR Promotion and Management (CIPAM)

Context:

- The Cell for IPR Promotion and Management (CIPAM) is organizing a National Conference on Counterfeiting and Role of Enforcement Agencies in New Delhi, in collaboration with European Union (EU).
- The conference intends to bring together national and international experts on the same platform to have a dialogue and exchange best practices for the benefit of enforcement agencies, attorneys and industry representatives and provide fresh ideas for further strengthening the IPR protection ecosystem.

Concerns:

- Counterfeiting has grown considerably to a point where it has become a widespread phenomenon with a global impact.
- Counterfeiting, other than causing an erosion on the brand value, reputation and goodwill of the manufacturers and owners of IP, leads to social and economic consequences resulting in huge economic losses in terms of lost taxes and revenues.
- It leads to diversion of funds earned therefrom to other illegal activities; counterfeit products put a threat to consumers' health and safety as well.

**Way ahead:**

- Enforcement agencies like police, customs, as also the prosecution wing, have a major role to play in effective enforcement of Intellectual Property Rights (IPR) in the country. Creating awareness about IPRs and the menace of counterfeiting amongst officials of these agencies will strengthen the enforcement regime, as also assist them in handling cases relating to counterfeit products in their day to day activities.

What's important?

- **For Prelims:** CIPAM.
- **For Mains:** IPR related issues.

About CIPAM:

- Cell for IPR Promotion and Management (CIPAM) has been created as a professional body under ***the aegis of DIPP*** to take forward the implementation of the National IPR Policy that was approved by the Government in May 2016, with the slogan – "Creative India; Innovative India".
- **Functions:** CIPAM is working towards creating public awareness about IPRs in the country, promoting the filing of IPRs through facilitation, providing inventors with a platform to commercialize their IP assets and coordinating the implementation of the National IPR Policy in collaboration with Government Ministries/Departments and other stakeholders.

Sources: pib.

6. Ice-VII

Context:

- Scientists have found the first ever samples of naturally occurring ice-VII on Earth. The samples were found in a diamond.

Unique features of Ice-VII:

- Ice-VII, with its cubic crystals, is unique in that it remains stable even as pressure increases dramatically. It's 1.5 times more dense than ice-I as well.
- There's (almost) nowhere on Earth for ice-VII to form, because it requires both low temperatures and high pressure exceeding 30,000 atmospheres (3 gigapascals). The only place you can reach that pressure is deep in the Earth's mantle, but it's too hot for ice to form there.
- The formation of ice-VII doesn't require freezing temperatures — as long as the pressure is high enough, ice-VII can form at room temperature.

How Ice-VII is formed in diamond?

- Diamonds often pick up molecules during their formation deep in the Earth. These so-called inclusions can affect the quality or color of the diamond, but sometimes the inclusion is just water.
- One interesting property of diamonds is the internal structures don't relax when they leave the high-pressure mantle. So, the water inside a diamond remains compressed, even though it's technically in a liquid state.

Various forms of ice:

- Commonly used is called as ice-I. When water freezes, the oxygen atoms move into a hexagonal arrangement. That's why ice expands and has lower density than water.
- Compressing ice can change the shape of the crystals, turning ice-I into ice-II (rhombus-shaped crystals), ice-III (tetragonal crystals), and so on.



Significance of this discovery:

- Scientists believe that ice-VII might be present deep in the ice sheets on moons like Enceladus and Europa, or as part of the ocean floor under Titan's hydrocarbon seas.
- Having naturally occurring samples of ice-VII on Earth for study could help us understand the environments on those moons.

Sources: et.

7. Gallium joins graphene in the second dimension

Context:

- Researchers have isolated a 2D form of the soft metal gallium, dubbed "gallenene," which could make for efficient, thin metal contacts in electronic devices.

Gallium:

- Gallium is a metal with **a low melting point**. It has a low melting point of just below 30° C (86° F). That makes it a great candidate for applications that need liquid metals at roughly room temperature.
- Unlike graphene and many other 2-D structures, it cannot yet be grown with vapor phase deposition methods.
- It also has a tendency to oxidize quickly.

Gallenene:

- Gallenene comes in zigzag and hexagonal structures, and has the unusual ability to change the properties of its solid support material, making it promising as a contact material in 2D devices.
- Gallenene strongly interacts with its solid support and even converts semiconducting molybdenum disulfide into a fully conducting metal. This could make it useful as electrical connector in ultra-flat electronics.

Significance of Gallenene:

- Near 2D metals are difficult to extract, since these are mostly high-strength, nonlayered structures, so gallenene is an exception that could bridge the need for metals in the 2D world.

Potential applications:

- Since gallenene binds well to semiconductors and can now be created using a relatively simple technique, it could be used as an efficient metal contact in nanoscale electronics, a field which currently doesn't have many 2D metal options for these kinds of applications.

Sources: et.

8. Carbonaceous chondrites

Context:

- A study of two meteorites which fell in Assam and Rajasthan over a span of 13 hours in 2017, by the Geological Survey of India (GSI), has concluded that they may contain "significant clues to the origins of life."

Key facts:

- Two meteorites fell in 2017, one on June 6 in Assam one in Mukundpura village in Rajasthan.
- After studies, experts have found that the Mukundpura meteorite is a carbonaceous meteorite, one of the most primitive types. The meteorite belongs to a very rare and primitive group of meteorites called CM group of carbonaceous chondrites.
- The meteorite that fell in Natun Balijan in the flood plains of Lohit River, has been classified as an "ordinary chondrite."

Significance of this discovery:

- Meteorites mostly originate from the asteroid belt between Mars and Jupiter. Carbonaceous meteorite may contain clues to the formation of early life. This is a rare type, since carbonaceous meteorites constitute only 3%-5% of all meteorite falls.

- Also, this meteorite could be carrying some of the most pristine primordial matter recovered from space as it is made up of materials which were formed during the early stages of the formation of the solar system. A detailed analysis could provide clues about the origin of life and the formation and evolution of the solar system.

About carbonaceous chondrites:

- Carbonaceous chondrite meteorites, unlike other meteorites, contain very primitive traces of carbon. And carbon forms the backbone of all life on earth.
- They represent some of the most pristine matter known, and their chemical compositions match the chemistry of the Sun more closely than any other class of chondrites.
- They are formed in oxygen-rich regions of the early solar system so that most of the metal is not found in its free form but as silicates, oxides, or sulfides.
- Most of them contain water or minerals that have been altered in the presence of water, and some of them contain larger amounts of carbon as well as organic compounds. This is especially true for the carbonaceous chondrites that have been relatively unaltered by heating during their history.

Sources: the hindu.

9. Antibiotic resistance

Context:

- A study has found that, Escherichia coli, a pathogen seen in over 90% of Egyptian vultures that migrate to northwest India to spend the winter, tend to show significant difference in resistance to antibiotics within a single season.
- This is due to the environment that the vultures were exposed to — carcasses, garbage, and domestic animals.

Concerns:

- The vultures that use human-dominated landscapes as part of their life cycle were likely to act as “reservoirs and melting pots of bacterial resistance.

What is E.coli?

- Escherichia coli (E. coli) is a bacteria that is surprisingly an important aspect of human intestinal tract health. Most E.coli are harmless bacteria and assist in everyday health.
- However the E.coli that generally make the headlines are pathogenic, which cause illnesses such as diarrhea, or even things outside the intestinal functions.

How is it transferred?

- Usually, the E. coli that causes diarrhea is transferred through food, water, or contact with animals/people who already have E.coli. The infection usually occurs if you swallow minuscule amounts of human or animal feces (this amount is often invisible to the naked eye).

CAUSES OF ANTIBIOTIC RESISTANCE

Antibiotic resistance happens when bacteria change and become resistant to the antibiotics used to treat the infections they cause.

- Over-prescribing of antibiotics
- Patients not finishing their treatment
- Over-use of antibiotics in livestock and fish farming
- Poor infection control in hospitals and clinics
- Lack of hygiene and poor sanitation
- Lack of new antibiotics being developed

www.who.int/drugresistance
#AntibioticResistance

World Health Organization

What is antibiotic resistance?

- Antibiotics are medicine used to treat infections caused by bacteria. Antibiotic Resistance refers to resistance developed by bacteria against antibiotics or the ability of bacteria to mutate or change so as to resist the effects of antibiotics.
- The more we use them, and the more we abuse them, the less effective they become.

- These tiny traces of feces usually comes from contaminated food such as, raw produce, raw milk, soft cheese, unpasteurized apple cider, or even dealing with a dirty diaper or an employee not thoroughly washing their hands when preparing food.

Way ahead:

- Antibiotic resistance is a crisis on the level of climate change. It's already killing tens, perhaps hundreds of thousands a year.
- The world needs to be looking more closely at drugmakers and the governments that choose to protect them.
- Also, the global community needs to urgently address the indiscriminate use of antibiotics in an actionable manner and fast-track research on the next generation of drugs.

What's important?

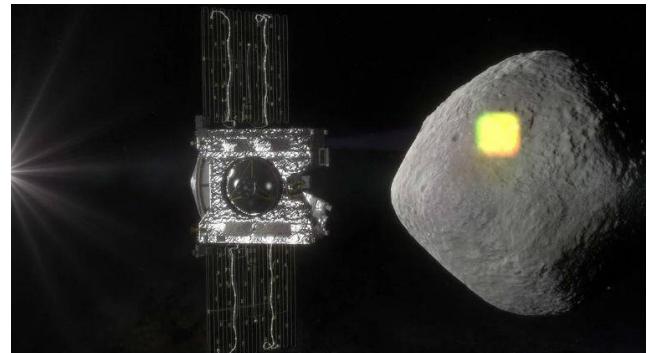
- **For Prelims:** E. Coli.
- **For Mains:** All about Antibiotic resistance.

Sources: the hindu.

10. Hammer spacecraft

Context:

- Preparing itself to deal with a potential asteroid impact, NASA has drawn up plans to build a huge nuclear spacecraft, named Hammer spacecraft, that is capable of shunting or blowing up dangerous space rocks and safeguarding life on Earth.



About the Hammer spacecraft:

- The spacecraft named Hammer (Hypervelocity Asteroid Mitigation Mission for Emergency Response) is an eight tonne spaceship which could deflect a giant space rock, if it happens to hit Earth.
- It was devised by top experts, including Nasa, the National Nuclear Security Administration (NNSA), and two Energy Department weapons labs.

How it works?

- The spacecraft has two ways of dispatching an asteroid collision threat. The first involves hitting the asteroid, and then steering it off-course so it doesn't end up hitting Earth.
- The second – and more dangerous – would see the HAMMER detonating its on-board nuclear warhead to change the asteroid's course.

Background:

- Earth is hit by asteroids with surprising regularity but most are too small to do much damage or fall in unpopulated areas. NASA's Centre for Near-Earth Object Studies now lists 73 asteroids which have a one in 1,600 chance of hitting the Earth.

Potential application of Hammer spacecraft:

- The new spacecraft could be useful in 2035, when scientists say there is a 1 in 2,700 chance the Bennu asteroid will hit us. The space boulder is currently circling the sun at 63,000mph, and has a very slim chance of plummeting into Earth. Bennu is around 500m in diameter.
- 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.
- ***Although there is little risk it could hit the Earth, it is still considered as an NEO, or Near Earth Object,*** which would hit the planet with 1,450 megatons of TNT. Bennu's impact would release three times more energy than all nuclear weapons detonated throughout history.

What's important?

- **For Prelims and Mains:** Bennu, Hammer spacecraft and OSIRIS-Rex.

Sources: the hindu.

11. 'HISAR GOURAV'

Context:

- Scientists at the ICAR-Central Institute for Research on Buffaloes (CIRB) have produced cloned calf 'HISAR GOURAV'.

Key facts:

- This cloned buffalo calf is distinct from the earlier clones produced in India, as this is produced from cells of ventral side of tail of superior buffalo bull, this part is least exposed to sunlight and may have less mutation rate, and can be good choice for isolation of donor cells to produce healthy clones.
- With this achievement CIRB becomes world's third and India's second institute to produce cloned buffalo.** This achievement has been made under the project entitled, Cloning for conservation and multiplication of superior buffalo germplasm.
- The first successful cloning was achieved by the National Dairy Research Institute, Karnal in 2010. Samrupa is the world's first Murrah buffalo calf cloned** using a simple "Hand guided cloning technique".

Background:

- India has 58% of the world's buffaloes and 35% of India's cattle are buffaloes. Buffalo milk is 70% of the total milk yield in India, with its national Gross Domestic Product (GDP) share being larger than wheat and rice combined. Buffalo meat makes up 86% of India's total meat exports.

About CIRB:

- Central Institute for Research on Buffaloes is a publicly funded institute for water buffalo research. It is located at Hisar in the north Indian state of Haryana.
- It has a mandate to conserve superior animals of all buffalo breeds.
- It is the world's largest buffalo research institute** with the widest range of breeds under study.
- It has created the world's first online Buffalopedia** in several languages.

What's important?

- For Prelims:** CIRB, HISAR GOURAV and SAMRUPA.
- For Mains:** Cloning and issues associated.

Sources: the hindu.

12. Cold fusion

Context:

- India is taking tentative steps towards restarting research into Cold fusion, some 25 years after it was shut down at the Bhabha Atomic Research Centre (BARC) following global criticism heaped on the idea. Three research groups have taken up the theme.

How it works?

- When hydrogen, the main element of water, is introduced to a small piece of the metal nickel or palladium, a reaction occurs that can create excess heat and transmutation products.
- Excess heat means more heat comes out of the system than went in to the system. The excess heat can make hot water and useful steam to turn a turbine and produce electricity.

Advantages of cold fusion:

- No radioactive materials are used in cold fusion. It occurs as the tiny protons, neutrons and electrons of hydrogen interact, releasing energy slowly, through heat and photons, without the dangerous radiation associated with conventional nuclear reactions, and cold fusion makes no radioactive waste.

What is cold fusion?

Cold fusion describes a form of energy generated when hydrogen interacts with various metals like nickel and palladium.

- Cold fusion is a field of condensed matter nuclear science CMNS**, and is also called low-energy nuclear reactions LENR, lattice-assisted nuclear reactions LANR, low energy nanoscale reactions LENR, among others.
- Cold fusion is also referred to as the Anomalous Heat Effect AHE, reflecting the fact that there is no definitive theory of the elusive reaction.

Criticism:

- Cold fusion seeks to produce nuclear energy without harmful radiation, complex equipment and the application of very high temperatures and pressures. But it has no conclusive theory explaining it and flies in the face of a well-established physics law that goes against easy fusion of nuclei.
- There is no guarantee that every time a cold fusion or LENR experiment is done, energy will be produced, say critics.

Way ahead:

- Research is underway in the U.S., Japan, China, Russia, Italy, France and Ukraine too.
- Given the challenge posed by the science behind LENR and its potential payoffs, the Indian government should fund academic institutions that are willing to enter the fray.

What's important?

- **For Prelims:** Cold fusion.
- **For Mains:** All about cold fusion and criticisms.

Sources: the hindu.

13. GI tag

Context:

- The Geographical Indication (GI) Registry has issued a notice to the West Bengal State Food Processing and Horticulture Development Corporation, asking why the GI recognition given to 'Banglar Rosogolla' not be withdrawn.



Background:

- A petition was recently filed objecting to the GI status procured by West Bengal for 'Banglar Rosogolla' four months ago. The petitioner questioned the data and documents provided by West Bengal for getting GI tag for this famous sweet.
- He had also pointed out that Odisha was not given a chance to explain its stance when the West Bengal State Food Processing & Horticulture Development Corporation applied for GI status.

Evidences on the origin:

- According to one of the documents submitted by West Bengal citing historical evidence, Rasogollas invented in the Nadia district of West Bengal are 60 years old (lower end time frame).
- Haradhan, a confectioner of village Phulia is named as the inventor. West Bengal has given half-a-dozen historical evidences to back its claim.
- While Odisha says the famous sweet was part of the offering in Sri Jagannath Temple of Puri at least five centuries ago.

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.

Sources: the hindu.

14. Copernicus programme

Context:

- India has joined Europe's mega global arrangement of sharing data from Earth observation satellites, called Copernicus.

**The agreement:**

- Under this arrangement, the European Commission intends to provide India with free, full and open access to the data from the Copernicus Sentinel family of satellites using high bandwidth connections.
- Reciprocally the DoS will provide the Copernicus programme and its participating states with a free, full and open access to the data from ISRO's earth observation satellites, including historical data sets.
- It is intended that ISRO's satellite data would be made available for distribution on the European 'Copernicus hub'.
- This comprises land, ocean and atmospheric series of ISRO's civilian satellites (Oceansat-2, Megha-Tropiques, Scatsat-1, SARAL, INSAT-3D, INSAT-3DR) with the exception of commercial high-resolution satellites data.

About Copernicus programme:

- Copernicus is the most ambitious Earth observation programme to date. It will provide accurate, timely and easily accessible information to improve the management of the environment, understand and mitigate the effects of climate change and ensure civil security.
 - **Copernicus is the new name for the Global Monitoring for Environment and Security programme, previously known as GMES.**
 - **This initiative is headed by the European Commission (EC) in partnership with the European Space Agency (ESA).**
 - ESA coordinates the delivery of data from upwards of 30 satellites. The EC, acting on behalf of the European Union, is responsible for the overall initiative, setting requirements and managing the services.
 - **Services provided by Copernicus:** land management, the marine environment, atmosphere, emergency response, security and climate change.
 - **Sentinel:** ESA is developing a new family of satellites, called Sentinels, specifically for the operational needs of the Copernicus programme. The Sentinels will provide a unique set of observations, starting with the all-weather, day and night radar images.

Sources: the hindu.

15. TCIL to set up US arm for Google project

Context:

- The Cabinet has approved setting up of a US subsidiary of the state-run telecom consultancy company TCIL for providing techno-commercial and logistic support for three Google projects for America.

Background:

- TCIL is one of the few companies, which have been roped in to execute "**Google Fiber**", Google's "Fiber-to-the-Premises Project" in the US for providing high capacity broadband internet and cable television to all the cities.

About TCIL:

- Telecommunications Consultants India Ltd.(TCIL) is a leading IS/ISO 9001:2008 and ISO 14001:2004 certified Govt. of India Undertaking incorporated in 1978 **under the Administrative control of Department of Telecommunications, Ministry of Communications**, Govt. of India.
- It is a Miniratna company.** It was set up to give consultations in fields of Telecommunications to developing countries around the world.

Functions:

- TCIL has been undertaking various projects in all fields of telecommunications and information technology and also continuously deploying new technologies in the field of Telecom Software, Switching and Transmission Systems, Cellular Services, Rural Telecommunications, Optical Fiber based Backbone Transmission Systems etc.
- TCIL has diversified its operation and has been executing turnkey projects of Power Transmission, Rural Roads and Civil Construction.

Google Fiber:

- Google Fiber is part of the Access division of Alphabet Inc.** It provides fiber-to-the-premises service in the United States, providing broadband Internet and IPTV to a small and slowly increasing number of locations.
- Services:** Google Fiber offers five options, depending on location: a free Internet option, a 100 Mbit/s option, a 1 Gbit/s Internet option, and an option including television service (in addition to the 1 Gbit/s Internet) and an option for home phone.
- The service was **first introduced to the Kansas City metropolitan area**.

What's important?

- For Prelims and Mains:** TCIL and Google Fiber.

Sources: pib.

16. Chandrayaan-2

Context:

- A recent report has confirmed that the launch of Chandrayaan-2, India's second mission to the moon will be in October this year.

About Chandrayaan-2:

- Chandrayaan-2 includes soft-landing on Moon and moving a rover on its surface. It is an advanced version of the previous Chandrayaan-1 mission. It consists of an orbiter, lander and rover configuration.
- The Orbiter spacecraft when launched from Sriharikota will travel to the Moon and release the Lander, which will in turn deploy a tiny Rover to roam the lunar surface — all three sending data and pictures to Earth.
- It is planned to be launched as a composite stack into the earth parking orbit (EPO) of 170 X 18,500 km by GSLV-Mk II.

Sources: the hindu.

17. Transiting Exoplanet Survey Satellite (TESS)

Context:

- NASA and SpaceX joining hands for their all-new combined mission known as Transiting Exoplanet Survey Satellite (TESS) mission. The mission will be launched in April this year.

About TESS mission:

- The Transiting Exoplanet Survey Satellite (TESS) is an upcoming **NASA mission that will look for planets orbiting the brightest stars in Earth's sky**. Its **launch vehicle will be a Falcon 9 rocket from SpaceX**.
- **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. Its closest point to Earth (67,000 miles or 108,000 kilometers) is about triple the distance of geosynchronous orbit, where most communications satellites operate.

Sources: the hindu.

18. Basmati GI tag

Context:

- Madhya Pradesh has filed a writ petition in the Madras High Court challenging an order passed by Assistant Registrar of Geographical Indications (GI) on March 15 excluding the State from being granted the GI tag for basmati rice.

RICE AND SHINE

The Intellectual Property Appellate Board on Friday cleared the decks for issuing the Geographical Indication tag to Indian basmati rice

What is a Geographical Indication?

A 'geographical indication' (GI) is a place name used to identify the origin and quality, reputation or other characteristics of products. For instance, Champagne.

Why is it important?

Article 22 of the Trade-Related Aspects of Intellectual Property Rights agreement says unless a geographical indication is protected in the country of its origin, there is no

obligation under the agreement for other countries to extend reciprocal protection.

India's Basmati credentials... India is the largest producer and exporter of Basmati rice in the world. Exports totalled Rs. 27,597 crore in 2014-15.

Some popular registered GIs in India

Darjeeling Tea, Mysore Silk, Mysore Pak (sweet), Thanjavur Veena



Pusa Basmati 1, a high-yielding Variety of scented Basmati rice.

— FILE PHOTO



Sources: WTO and APEDA

What's the issue?

- In May 2010, GI status was given to basmati grown only in Punjab, Haryana, Delhi, Himachal Pradesh, Uttrakhand and parts of western Uttar Pradesh and Jammu & Kashmir. Madhya Pradesh moved a statutory opposition demanding that its 13 districts be recognised as traditional Basmati growing regions.
- However, GI registry had rejected Madhya Pradesh's claim as being the original and unique basmati growing region. It had observed that the documents and evidence filed by Madhya Pradesh show the importance,

special characters of rice cultivated in Madhya Pradesh but not the basmati cultivation in the traditional growing area.

What's the concern now?

- Madhya Pradesh says non-inclusion of the state in the basmati growing areas would have an adverse effect on the lives of farmers who mainly depend upon basmati cultivation and it will also affect the export potential, which will indirectly reduce the country's turnover from the export of basmati.

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:

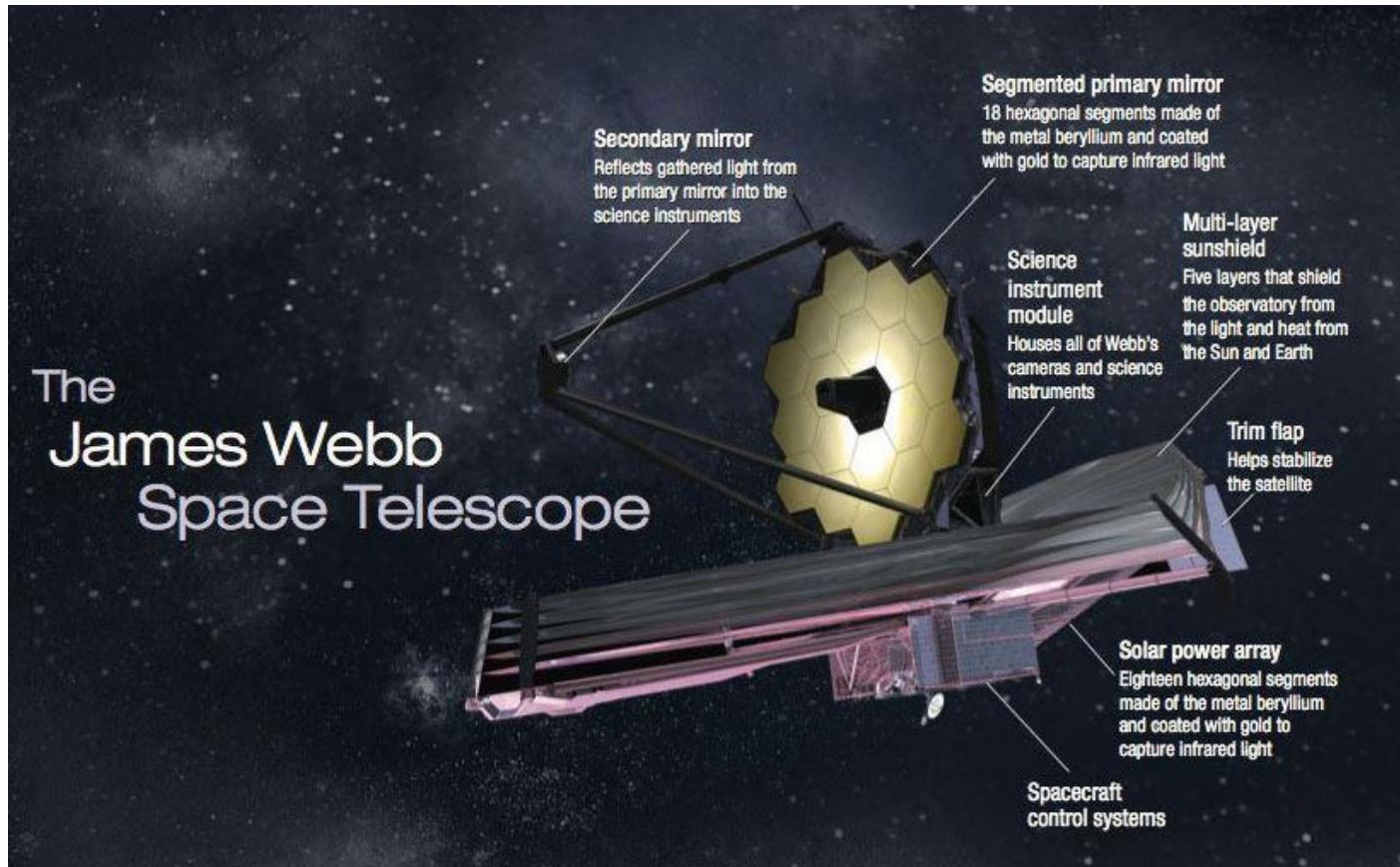
- Once the GI protection is granted, no other producer can misuse the name to market similar products. It also provides comfort to customers about the authenticity of that product.

Sources: the hindu.

19. James Webb Space Telescope

Context:

- NASA has delayed the launch of its much awaited, \$8 billion James Webb Space Telescope — set to be the world's biggest space observatory — until at least May 2020.



What is the James Webb Space Telescope?

- The James Webb Space Telescope, also called Webb or JWST, is a large, space-based observatory, optimized for infrared wavelengths, which will complement and extend the discoveries of the Hubble Space Telescope.

- It will cover **longer wavelengths of light than Hubble** and will have greatly improved sensitivity. The longer wavelengths enable JWST to look further back in time to see the first galaxies that formed in the early universe, and to peer inside dust clouds where stars and planetary systems are forming today.

Why is Webb an infrared telescope?

- By viewing the universe at infrared wavelengths Webb will show us things never before seen by any other telescope.
- It is only at infrared wavelengths that we can see the first stars and galaxies forming after the Big Bang. And it is with infrared light that we can see stars and planetary systems forming inside clouds of dust that are opaque to visible light.

Who is James Webb?

- This space-based observatory is named after James E. Webb (1906- 1992), NASA's second administrator. Webb is best known for leading Apollo, a series of lunar exploration programs that landed the first humans on the Moon.
- However, he also initiated a vigorous space science program that was responsible for more than 75 launches during his tenure, including America's first interplanetary explorers.

Sources: the hindu.

20. GSAT-6A

Context:

- The Indian Space Research Organisation (Isro) has successfully launched communication satellite GSAT-6A, on board its geosynchronous rocket GSLV-F08, at the Satish Dhawan Space Centre in Sriharikota, Andhra Pradesh. ***This is the 12th flight of the GSLV rocket and the sixth with an indigenous cryogenic upper stage.***



About GSAT- 6A satellite:

- The GSAT-6A is a high power S-band communication satellite with a mission life of about 10 years.
- A key feature of the satellite is to provide mobile communication to India through multi beam coverage facility.
- The satellite will also provide a platform for developing technologies such as demonstration of 6 m S-Band Unfurlable Antenna, handheld ground terminals and network management techniques that could be useful in satellite based mobile communication applications.
- The satellite is expected to be heavily used by security forces which are stationed in the remotest areas of the country.

What Is An 'Unfurlable Antenna'? What Does It Do?

- ISRO's 'unfurlable antenna' is a six-meter-wide antenna which looks somewhat like an umbrella. This will be 'unfurled' once the GSAT-6A satellite has been put in orbit.
- This antenna, specially designed for the mission, is three times as broad as the antennas that are usually used by ISRO.
- This antenna will allow mobile communication from anywhere via hand-held ground terminals. Apart from communications, the GSAT-6A satellite is believed to be designated for military use as well.

What Is S-Band? How Is It Useful?

- S-band is an electromagnetic spectrum covering frequencies from 2 to 4 gigahertz (GHz). It crosses the conventional boundary between the Ultra High Frequency (UHF) and Super High Frequency (SHF) bands at 3.0 GHz. S-band is used by weather radars, surface ship radar, and some communications satellites.

About GSLV:

- The GSLV is a three stage/engine rocket. The core of first stage is fired with solid fuel while the four strap-on motors by liquid fuel. The second stage is the liquid fuel-propelled and the third is the cryogenic engine.
- GSLV-F08, weighing 415.6 tonnes with a height of 49.1 meters comes with notable improvements like induction of High Thrust Vikas Engine, electromechanical actuation system in place of electro-hydraulic actuation system.

- S-band is very useful because the 2.5 Ghz band is used globally for 4G services, and is worth billions of dollars. The S-band spectrum is extremely valuable for mobile broadband services.

What's important?

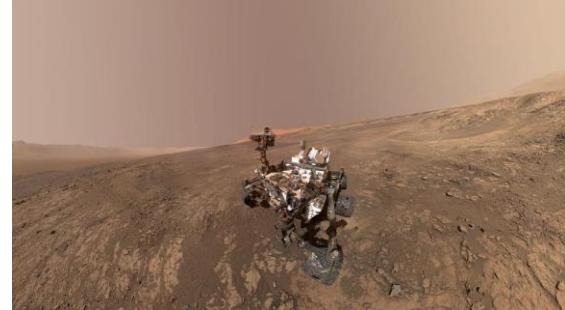
- **For Prelims:** GSAT 6A, Unfurlable antenna, S band.

Sources: the hindu.

21. InSight Mission

What is it?

- It is the first-ever mission by NASA dedicated to exploring the deep interior of Mars. It will also be the first NASA mission since the Apollo moon landings to place a seismometer, a device that measures Marsquakes, on the soil of another planet.



About the mission:

- InSight (Interior Exploration using Seismic Investigations, Geodesy and Heat Transport) is a NASA Discovery Program mission that will place a single geophysical lander on Mars to study its deep interior.
 - But InSight is more than a Mars mission – it is a terrestrial planet explorer that will 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.
 - By using sophisticated geophysical instruments, InSight will delve deep beneath the surface of Mars, detecting the fingerprints of the processes of terrestrial planet formation, as well as measuring the planet's "vital signs": Its "pulse" (seismology), "temperature" (heat flow probe), and "reflexes" (precision tracking).

Significance of this mission:

- Mars is the exoplanet next door—a nearby example of how gas, dust and heat combine and arrange themselves into a planet.
- Looking deep into Mars will let scientists understand how different its crust, mantle and core are from Earth.

What's important?

- **For Prelims and Mains:** InSight mission.

Sources: the hindu.

22. BeiDou Navigation Satellite System (BDS)

Context:

- China has successfully launched two satellites with a single rocket to strengthen its BeiDou Navigation Satellite System (BDS). The two satellites are coded as the 30th and 31st members in the BDS.

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).
- It has total 22 Operational satellites in orbit and 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.

Beidou satellite navigation network

29 satellites launched between 2000 and November 2017, including



2 third-generation satellites launched Nov 5.

16 satellites to be launched by end of 2018



Launches in 2019 and 2020 will comprise



2 into geostationary orbits

3 into inclined geosynchronous satellite orbits



6 into medium Earth orbits



By end of 2020:

Network will consist of more than **30** satellites (several now in orbit will be decommissioned) to give global coverage.

* Third-generation satellites:

They are more accurate, stable and with better signal clarity, and also more compatible with GPS, GLONASS and Galileo systems.

Source: China Satellite Navigation Office
CHINA DAILY

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.

23. Russia's 'Sarmat'

What is it? It is Russia's most advanced nuclear-capable intercontinental ballistic missile. It was flight-tested recently.

Key facts:

- The Sarmat is a heavy ICBM intended to replace Russia's aging, Soviet-era missiles that form the basis of its nuclear deterrent.
- The chief innovation of the Sarmat is its ability to carry a large number of guided warheads.
- The missile is believed to be able to fly 16,000 miles and is capable of flying over the South Pole to strike the U.S.
- NATO has named this missile as 'Satan 2'.

Paper 3 Topic: Conservation, environmental pollution and degradation, environmental impact assessment.

1. Conservation Assured | Tiger Standards (CA|TS) Partnership

Context:

- A survey of over a hundred tiger conservation areas by 11 leading conservation organisations and countries with tiger ranges that are part of the Conservation Assured | Tiger Standards (CA|TS) Partnership has found that only 13% of tiger conservation areas meet global standards.



Important findings:

- The surveyed area is home to approximately 70% of the world's wild tigers. At least one-third of these areas are severely at risk of losing their tigers and most of these sites are in southeast Asia.
- While basic needs such as encroachment against poaching, engaging local communities and managing conflict between people and wildlife remained weak for all surveyed areas, two-thirds of the surveyed area reported fair to strong management.
- Despite poaching being one of the greatest threats faced by the big cats, 85% of the areas surveyed do not have the staff capacity to patrol sites effectively and 61% of the areas in Southeast Asia have very limited anti-poaching enforcement.

What is Conservation Assured | Tiger Standards (CA|TS)?

- CA|TS is a set of criteria which allows tiger sites to check if their management will lead to successful tiger conservation. CA|TS is organised under seven pillars and 17 elements of critical management activity.
- Officially launched in 2013, CA|TS is an important part of Tx2, the global goal to double wild tiger numbers by the year 2022.
 - Developed by WWF and partners, the Global Tiger Forum (GTF) has endorsed CA|TS and has requested member countries to establish National Review Committees for purpose of initiating CA|TS.
 - CA|TS is an important tool in the achievement of the CBD's Global Aichi Targets, in particular Aichi Target 11 and 12, and contributes to the implementation of the Programme of Work on Protected Areas, particularly the last goal related to Standards, Assessment and Monitoring.



HOW DOES CA|TS WORK AND WHO IS USING IT?

- Sites taking part will initially be 'registered' (standards not yet attained) then, when all required standards are met, 'approved' (standards achieved). An approved site has achieved excellence in tiger site management.
- Sites are evaluated through an assessment and independent review process.
- Of the 13 tiger range countries Nepal, India, Bangladesh and Russia have registered and rolled out CA|TS, whilst discussion is ongoing with Bhutan, Indonesia, Thailand, Malaysia and China.

WHY IS CA|TS IMPORTANT?

- Protected areas are a good strategy for retaining forest cover, however their role in protecting wildlife depends on the quality of management.
- Many studies show that tiger numbers can continue to decline in protected areas, particularly due to bushmeat (tiger prey) hunting or the poaching of tigers themselves for trophies, traditional medicines and other illegal activities.

- Until CA|TS, there has not been a set of criteria which not only provide clarity on management of tiger sites, but also encourage further development and sharing of best practice across the tiger range countries.

What's important?

- For Prelims:** CA/ TS.
- For Mains:** Tiger conservation- issues, challenges and international efforts.

Sources: Indian express.

2. World Wildlife Day

Context: World Wildlife Day was celebrated on March 3rd.

Theme: "Big cats: predators under threat".

Big Cats:

- Big cats are among the most widely recognized and admired animals across the globe. However, today these charismatic predators are facing many and varied threats, which are mostly caused by human activities. Overall, their populations are declining at a disturbing rate due to loss of habitat and prey, conflicts with people, poaching and illegal trade. For example, tiger populations plummeted by 95% over the past 100 years and African lion populations dropped by 40% in just 20 years. But a range of measures are underway to arrest this decline.
- In an effort to reach as wide an audience as possible, the expanded definition of big cats is being used, which includes not only lion, tiger, leopard and jaguar — the 4 largest wild cats that can roar — but also cheetah, snow leopard, puma, clouded leopard, etc. Big cat species are found in Africa, Asia, and North, Central and South America, representing a virtually global distribution.



Background:

- On 20 December 2013, at its 68th session, the United Nations General Assembly (UNGA) proclaimed 3 March, the day of signature of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), as UN World Wildlife Day to celebrate and raise awareness of the world's wild animals and plants.
- The UNGA resolution also designated the CITES Secretariat as the facilitator for the global observance of this special day for wildlife on the UN calendar.

How does CITES work?

- The convention works primarily through a system of classification and licensing. Wild species are categorised in Appendices I to III. This often reflects species' threat status on the Red List of the IUCN, the International Union for Conservation of Nature's Red List of Threatened Species first created in 1964.
 - Appendix I** prohibits trade in species classified as highly endangered.
 - Appendix II** allows trade under very specific conditions. This requires exporting countries obtain a permit, but not the importing country.
 - Appendix III** species require only a certificate of origin to be traded.
- National CITES management authorities may issue permits once scientific authorities show non-detriment findings. In other words, scientific evidence must demonstrate that species sustainability will not be adversely affected by trade. Where data is lacking, the precautionary principle applies.

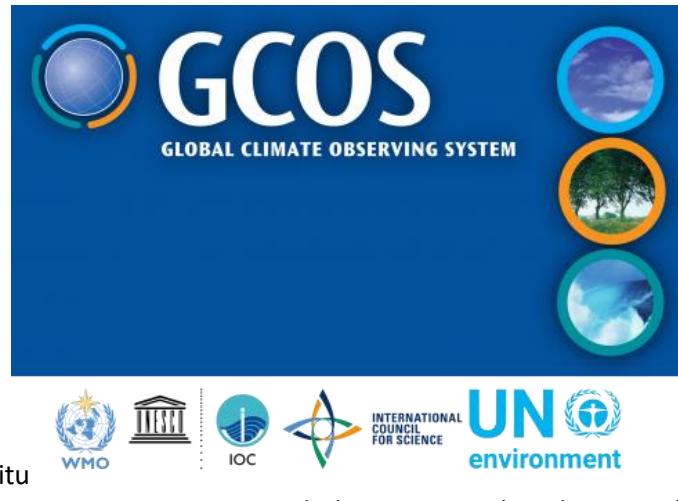
What's important?

- For Prelims:** World Wildlife Day, CITES.
- For Mains:** Big cats- need for conservation, challenges and project tiger.

3. Global Climate Observing System (GCOS)

GCOS:

- Global Climate Observing System (GCOS) was established in **1992** to ensure that the observations and information needed to address climate-related issues are obtained and made available to all potential users.
- The GCOS is co-sponsored by the World Meteorological Organization (**WMO**), the Intergovernmental Oceanographic Commission (**IOC**) of UNESCO, the United Nations Environment Programme (**UNEP**), and the International Council for Science (**ICSU**).
- In order to assess and monitor the adequacy of in-situ observation networks as well as satellite-based observing systems, GCOS regularly reports on the adequacy of the current climate observing system to the United Nations Framework Convention on Climate Change (**UNFCCC**), and thereby identifies the needs of the current climate observing system.



Objective:

- The vision of Global Climate Observing System (GCOS) is for all users to have access to the climate observations, data records and information they need to address pressing climate-related concerns.
- GCOS users include individuals, national and international organizations, institutions and agencies.
- GCOS works with partners to ensure the sustained provision of reliable physical, chemical and biological observations and data records for the total climate system – across the atmospheric, oceanic and terrestrial domains, including **hydrological** and **carbon cycles** and the **cryosphere**.

4. In-situ management of crop residue

Context:

- The government has approved a Rs 1,151 crore scheme to promote in-situ (in the farm itself) management of crop residue in Punjab, Haryana, Uttar Pradesh and Delhi. The new central scheme will be implemented for two years.
- The move is aimed at providing a cost-effective and eco-friendly solution to farmers to deal with the problem of stubble burning that results in raising air pollution levels in the capital and neighbouring states every winter.

About the 'Promotion of agricultural Mechanization for in-situ management of crop residue' scheme:

- **Part of budget:** This scheme is as per the government's budget announcement on having a special scheme to support efforts of the governments of Haryana, Punjab, Uttar Pradesh and Delhi to address air pollution.
- **Fund:** Under the scheme, a fund will be created which will be used to promote agricultural mechanisation for the next two years (2018-20). The fund will primarily be used to subsidise machinery required for in-situ management of the crop residue.
- **Beneficiaries:** The government, under this fully centrally-funded scheme, will assist individual farmers, cooperative societies, farmer producer organisations (FPOs), Self Help Groups (SHGs), private entrepreneurs and registered groups of women farmers.
- **Identification of beneficiaries:** It will be the responsibility of the agriculture ministry to identify manufacturers and equipment for in-site management of crop. The costs of these equipment will also be decided by the ministry in consultation with manufacturers so that it can be made available to users at reasonable price.
- **Farm Machinery Banks:** Establishment of 'Farm Machinery Banks' for custom hiring of in-situ crop residue management machinery will be the key component of the scheme. Under the scheme, financial assistance of 80% of the project cost to set up 'Farm Machinery Banks' for custom hiring will be provided to cooperative societies of the farmers, FPOs, SHGs, registered farmers societies/farmers group, private entrepreneurs and group of women farmers.

- Individual beneficiaries:** If an individual farmer would like to buy such machinery\equipment, the government will provide financial assistance of 50% of the cost of machinery for crop residue management.
- Role of state governments:** At the state level, department of agriculture of concerned state government will be the nodal implementing agency. It would be the responsibility of state governments to identify various beneficiaries and location-specific agricultural equipment, depending on the farming system. They will also identify and select beneficiaries for establishment of '**Farm Machinery Bank**' for custom hiring and procurement of machines on individual ownership basis to avail the benefit in transparent and time-bound manner.
- Tie up with banks:** Under the scheme, the state agencies may tie up with banks for credit requirements of the beneficiaries.

Significance of the scheme:

- The move is expected to go a long way in tackling the air pollution issue as stubble burning is identified as one of the key problem areas, specially during the post-harvest season of October-November when the prevailing meteorological condition aggravates the situation further in Delhi and the national capital region.

Need for crop residue management:

- The problem of crop residue burning has been intensifying over the years, with Punjab, Haryana and Uttar Pradesh being the major burning hotspots.
- Increased mechanization, declining number of livestock, long period required for composting and no economically viable alternate use of residues are some of the reasons for residues being burnt in field.
- This not only has implications for global warming, but also has an adverse impact on air quality, soil health and human health.

ADVANTAGES OF CROP RESIDUE

- It is a fuel which is available free of cost to the poor rural families.
- It is remain safer than LPG which poses some safety concerns in local transport and use.
- It is a useful way to dispose of the crop residues in the field, instead of burning them *in situ*.
- It is easy to handle and transport.
- It is much easier to light than wood and charcoal.

Sources: pib.

5. CleanSeas campaign

Context:

- New Zealand has joined the United Nations-led CleanSeas campaign to rid oceans of plastic.
- More than 40 other countries have already signed up.

Concerns:

- Scientists estimate that there are over 150 million tonnes of plastics in the ocean today.
- If nothing changes then plastic in oceans will weigh more than all the fish that live in them by 2050.

CleanSeas campaign:

- The CleanSeas campaign was launched by the UN Environment in February 2017.**
- The campaign aims to engage governments, the general public, civil society and the private sector in the



- fight against marine plastic by reducing the use of non-recoverable and single-use plastics.
- It addresses the root-cause of marine litter by targeting the production and consumption of non-recoverable and single-use plastic.
- The campaign contributes to the goals of the Global Partnership on Marine Litter**, a voluntary open-ended partnership for international agencies, governments, businesses, academia, local authorities and non-governmental organizations hosted by UN Environment.

Sources: [toi](#).

6. Newton-Bhabha Fund for arsenic research in Ganga basin

Context:

- An India-UK Joint Team has won the Newton-Bhabha Fund for a project on Groundwater Arsenic Research in Ganga River Basin.

Key facts:

- The Newton Bhabha Fund, provided by the British Council, aims to bring together the UK and Indian scientific research and innovation sectors to find joint solutions to the challenges facing India in economic development and social welfare.
- The team members involved with the project will try to assess how the problem of arsenic poisoning can get aggravated in the next 25 to 30 years and influence groundwater management practices and suggest water remedial technologies accordingly.

Arsenic in groundwater:

Arsenic in ground water is a geogenic contaminant i.e. caused by natural geologic processes.

- Arsenic-containing groundwater in Ganga River basin is hosted by the sediments deposited by the rivers during the late Quaternary or Holocene age (<12 thousand years). Incidence of high arsenic in groundwater reported from various parts of the country, particularly in the Ganga- plains is a serious threat to the health of human being.
- Over the last three decades numerous measures have been initiated which includes alternate arrangement for supply of arsenic free water to the affected populace and providing arsenic removal plants.
- Arsenic occurrences in ground water in these areas is highly sporadic in nature and all the sources in these areas are not necessarily contaminated.

Way ahead:

- Technological options to combat arsenic menace, in groundwater, to ensure supply of arsenic free water, in the affected areas can be in-situ remediation of arsenic from aquifer system, ex-situ remediation of arsenic from tapped groundwater by arsenic removal technologies, use of surface water source as an alternative to the contaminated groundwater source, tapping alternate safe aquifers for supply of arsenic free groundwater or combination of above techniques.

What's important?

- For Prelims and Mains:** Arsenic contamination- effects, causes and solutions.

Sources: [the hindu](#).

What is Newton Bhabha?

- The Newton Bhabha Fund aims to bring together the UK and Indian scientific research and innovation sectors to find joint solutions to the challenges facing India in economic development and social welfare.
- How it works:
 - People: building skills and capacity through training and people exchanges;
 - Programmes: research collaboration on development topics;
 - Translation: taking innovation from universities to industry.
- What it does:
 - Sustainable Cities and Rapid Urbanisation
 - Public Health and Well being
 - Energy Water Food Nexus



**Newton-Bhabha
Fund**

400 Crore Rupees over
5 years

7. Climate Watch

- Climate Watch is an online platform designed to empower policymakers, researchers, media and other stakeholders with the open climate data, visualizations and resources they need to gather insights on national and global progress on climate change.
- Climate Watch is managed by **World Resources Institute**. It is a contribution to the **NDC Partnership (World Bank, UNFCCC, Google etc.)**.
- Climate Watch brings together dozens of datasets for the first time to let users analyze and compare the **Nationally Determined Contributions (NDCs)** under the Paris Agreement, access historical emissions data, discover how countries can leverage their climate goals to achieve their sustainable development objectives, and use models to map new pathways to a lower carbon, prosperous future.
- It contributes to the goals of the Paris Agreement by using open data to increase transparency and accountability, and provide actionable analysis on how countries can enhance their efforts to combat climate change.

Climate Watch includes:

- Data and visualizations on all countries' greenhouse gas emissions;
- A comprehensive, user-friendly database of all countries' Nationally Determined Contributions (NDCs);
- Comprehensive mapping of linkages between Nationally Determined Contributions (NDCs) and the Sustainable Development Goals (SDGs) and associated targets of the 2030 Agenda for Sustainable Development;
- Data and visuals of emissions scenario pathways for major emitting countries, derived from a growing library of models;
- National and sectoral profile pages that offer a snapshot of climate progress, risks and vulnerabilities;

8. In news- Loktak lake

- **Context:** A floating laboratory has been introduced to save the Loktak lake. Researchers in a custom motorboat monitor levels of pollution in the 300 sq km water body.
- **Concerns:** Rising urbanisation and land-use change over the years has seen the Loktak Lake, the largest in the northeast, become a dump-yard for the city's municipal waste, ranging from plastic refuse to chemical runoff from farming. This worsens during years of floods.
- **About Loktak lake:** Loktak Lake is the largest freshwater lake in Northeast India, and is famous for the **phumdis** (heterogeneous mass of vegetation, soil, and organic matter at various stages of decomposition) floating over it. It has first of its kind loktak floating elementary school.
- Located on this phumdi, **Keibul Lamjao National Park** is the only floating national park in the world. The park is the last natural refuge of the endangered **Sangai** (state animal).



9. Strategy on Resource efficiency

Context:

- **Niti aayog** has initiated implementation of strategy on Resource efficiency. After detailed discussion, a road map for implementation of the RE in the country has also been evolved.

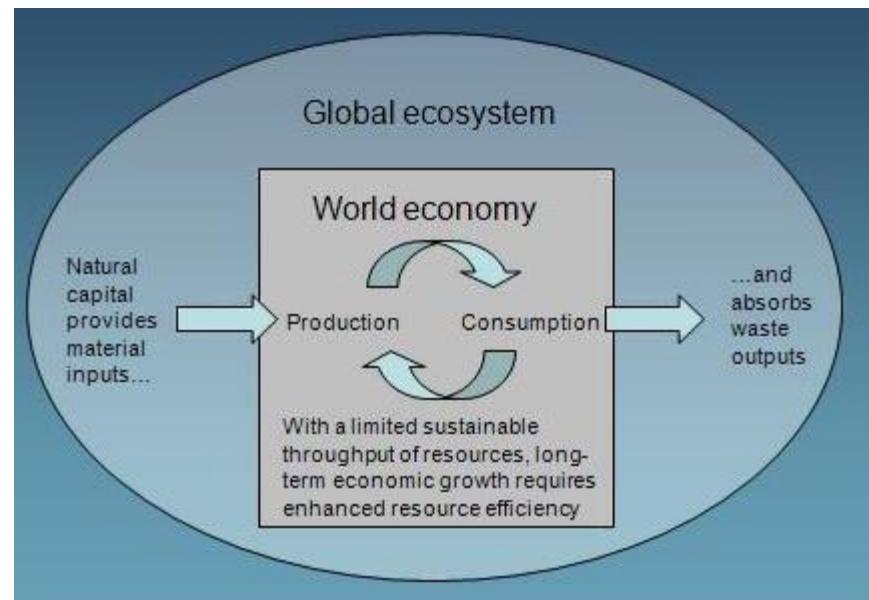
Following measures related to implementation of strategy on resource efficiency was announced by the NITI Aayog:

- **NITI Aayog** will facilitate the RE strategy implementation. Implementation however will be the responsibility of the line ministries/departments.

- A baseline survey on RE could be considered for better targeting.
- A Status paper on RE and Four sectoral strategy papers on RE are to be prepared.
- SWACH Bharat also means a clean production/mining environment, therefore resource efficiency and circular economy are also a part of this initiative.
- One pilot study on Ease of Doing RE Business in collaboration with DIPP could be considered.
- Finally, RE is a potential instrument for generating wealth from waste. Measures for promoting effective recycling of scrap generated in the country could be explored.

Strategy on Resource Efficiency:

- **NITI Aayog in collaboration with the European Union delegation to India have released the Strategy on Resource Efficiency.** The strategy aims to promote resource efficiency in India.
- **This strategy is the first policy document to emphasize resource productivity in the country.** The Strategy emphasizes on Sustainable Public Procurement (SSP) as an action agenda which will be the market transformation tool to transform to a resource efficient economy.
- It is developed with the recommendations from the Indian Resource Efficiency Programme (IREP), launched by the Indian Ministry of Environment, Forests and Climate Change (MoEFCC) and Indian Resource Panel (InRP) in April 2017.



What is Resource Efficiency and why do we need it?

- Resource efficiency very simply put is making more with fewer materials. In practice, through a life-cycle approach, it leads to minimizing impact on environment & the associated societal burdens, transforming 'waste' into 'resources' fostering circular economy, and strengthening resource security.
- Resource Efficiency and Circular Economy are important goals and central principles for achieving sustainable development. Sustainability is a global priority and SDGs commitment and 11th Five year plan also clearly enunciate importance of Resource efficiency (RE).

Facts for Prelims:

- **About InRP:** The new Indian Resource Panel (InRP) was officially unveiled in 2016, making India one of the first emerging economies to set up a national advisory body on resource efficiency.
- The InRP was created with support from the International Climate Initiative as part of the project 'Resource efficiency and secondary raw materials management as a contribution to climate change mitigation'.
- The InRP will issue recommendations to Indian businesses and policy-makers on improving the general conditions for resource efficiency.

What's important?

- **For Prelims:** InRP, Niti aayog strategy on Resource efficiency.
- **For Mains:** Resource efficiency and its significance for India.

Sources: pib.

10. World Water Day 2018

Context:

- Every year on **March 22**, World Water Day is celebrated. 2018 marks the 25th anniversary of World Water Day.
- **Theme:** This year's theme of World Water Day is '**Nature for Water**' and exploring nature-based solutions (NBS) to the water challenges that we are currently facing.

- **Campaign:** The campaign which is being run by UN is being called '*The answer is in nature*' and the motto is to raise awareness on how we nations together can save water by following nature based solutions.

About World Water Day:

- In the year 1992, March 22 was first officially added in the schedule 21 of United Nations Conference on Environment and Development as World Water Day in the Rio de Janeiro, Brazil.
- The celebrations to mark world water day started from the year 1993. The aim of the day is to increase awareness among people about the importance, need and conservation of water.
- The World Water Development Report is also released by the UN every year around World Water Day.

SDG:

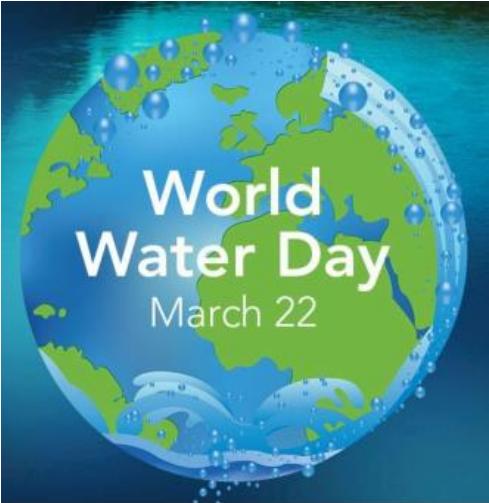
- The goals of World Water Day are in line with the **UN's Sustainable Development Goal 6**, a program which targets bringing safe drinking water and clean sanitation to everyone around the world.

How The Day Is Celebrated?

- The United Nations including all the member nations celebrate March 22 by implementing the UN recommendations as well as promoting the global water conservation through the real activities like promotion of clean water conservation, governments' plan of action for water conservation and publishing critical reports that highlights the statistics and data on water.
- **The UN-Water is responsible for the selection of World Water Day theme every year**, distribution of global messages as well as leading the UN agencies for celebrating the World Day for Water.

Need for conservation of water:

- Today, around 1.9 billion people live in potentially severely water-scarce areas. By 2050, this could increase to around 3 billion people. This translates to an increase of nearly one and half times in just 30 years.



Sources: pib.

11. International Day of Forests

Context: International Day of Forests is observed on March 21st every year.

2018 Theme: Forests and Sustainable Cities.

About the International Day of Forests:

- The United Nations General Assembly proclaimed 21 March the International Day of Forests (IDF) in 2012. The Day celebrates and raises awareness of the importance of all types of forests.
- On each International Day of Forests, countries are encouraged to undertake local, national and international efforts to organize activities involving forests and trees, such as tree planting campaigns.



FORESTS AND SUSTAINABLE CITIES

Let's make our cities greener, healthier, happier places to live!

Importance of trees for sustainable cities:

- Forests and trees store carbon, which helps mitigate the impacts of climate change in and around urban areas.
- Trees also improve the local climate, helping to save energy used for heating by 20-50%.
- Strategic placement of trees in urban areas can cool the air by up to 8 degrees Celsius, reducing air conditioning needs by 30%.
- Urban trees are excellent air filters, removing harmful pollutants in the air and fine particulates.

- Trees reduce noise pollution, as they shield homes from nearby roads and industrial areas.
- Local populations use the fruits, nuts, leaves and insects found in urban trees to produce food and medicines for use in the home, or as a source of income.
- Wood fuel sourced from urban trees and planted forests on the outskirts of cities provides renewable energy for cooking and heating, which reduces pressures on natural forests and our reliance on fossil fuels.
- Forests in and around urban areas help to filter and regulate water, contributing to high-quality freshwater supplies for hundreds of millions of people. Forests also protect watersheds and prevent flooding as they store water in their branches and soil.
- Well-managed forests and trees in and around cities provide habitats, food and protection for many plants and animals, helping to maintain and increase biodiversity.
- Forests in cities and surrounding areas generate tourism, create tens of thousands of jobs and encourage city beautification schemes, building dynamic, energetic and prosperous green economies.
- Urban green spaces, including forests, encourage active and healthy lifestyles, improve mental health, prevent disease, and provide a place for people to socialize.

Sources: pib.

12. Earth Hour 2018

Context:

- Earth Hour is being observed on March 24 from 8:30 to 9:30 p.m. Earth Hour is also a “part and parcel” of the “Green Good Deeds” movement, in which every individual ought to take small, voluntary green actions to protect and conserve the environment and the earth.

“Give Up to Give Back”:

- On the occasion of Earth Hour, the World Wide Fund India has made a strong pitch for “Give Up to Give Back”.
- The “Give Up to Give Back” initiative to inspire organisations, institutions and individuals to make the choice to curb some habits, practices and lifestyles that burden our lives and the environment.
- It includes taking steps like giving up single-use plastics, giving up fossil fuels, giving up lonely car rides for your employees, give up e-waste.

Background:

- It was famously started as a lights-off event in Sydney, Australia in 2007. Since then it has grown to engage more than 7000 cities and towns worldwide.
- Today, Earth Hour engages a massive mainstream community on a broad range of environmental issues. The one-hour event continues to remain the key driver of the now larger movement.

Why do we need earth hour?

- Global warming and climate change have dominated the scientific discourse in the past more than one decade. With ever rising population of the world, the climate change has put the humankind at a great risk along with other species.
- Global warming, rising levels of pollution due to ever increasing industrialisation, declining forest cover and rising sea levels are some of the dangers that drastically affect the workings of life on the earth.
- Though the largest polluters are big industries, the WWF tries to make the masses more and more aware about the impending dangers of adverse climate so that they could put pressure on the respective governments to frame environment-friendly policies and laws.

What is Earth Hour?

- Dating back to 2007, Earth Hour is an annual event organized by the World Wildlife Fund that promotes conservation and sustainable energy.
- During this time, civilians are encouraged to switch off their lights for one hour to help reduce the effect of global warming and raise awareness for climate change and wildlife conservation.



What's the difference between Earth Hour and Earth Day?

- Whereas Earth Hour stands as a climate change initiative where people reduce their electricity usage, Earth Day (April 22) celebrates our natural environment by inspiring people to plant trees, recycle regularly and keep the planet tidy.

- With Earth Hour, the WWF aims to engage people across the globe to adopt more sustainable lifestyle. Turning off lights for an hour is just an annual reminder that if the world does not mend its ways, it will be heading to a dark age, literally.

What's important?

- For Prelims:** Earth hour, Earth day and give up to give back.
- For Mains:** Climate change and its effects.

Sources: the hindu.

13. Chipko Movement

Context: Google on March 26th commemorated the 45th year of the Chipko movement.



What is Chipko movement?

- Chipko, signifying 'embrace or hug', was the strategy of hundreds of villagers –*mostly women-in Chamoli district of Uttarakhand*, to save the forest cover on the Garhwal Himalayas.
- Reckless felling of trees on the hill slopes was having a devastating effect on the livelihood of the villagers. The floods in 1970, when the Alakananda River broke its banks, led to massive landslides that blocked the river and washed away hundreds of hamlets downstream.
- Widespread protests followed in the early 70s, when villagers led by **Chandi Prasad Bhatt**, a Gandhian, literally embraced the trees to save them from the woodcutters' axe.

Background:

- The original Chipko andolan dates back to the 18th century and was started by Rajasthan's **Bishnoi** community. The incident has been etched in the annals of history for the sacrifice of a group of villagers, who led by a lady named Amrita Devi, laid down their lives while protecting trees from being felled on the orders of then King of Jodhpur. After this incident, the king, in a royal decree, banned cutting of trees in all Bishnoi villages.

What's important?

- For Prelims:** Chipko movement.
- For Mains:** Conservation of environment, issues, challenges and community participation.

Sources: the hindu.

Paper 3 Topic: Disaster and disaster management.

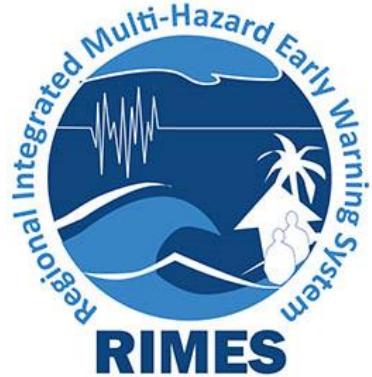
Regional Integrated Multi-Hazard Early Warning System (RIMES)

Context:

- The Regional Integrated Multi-Hazard Early Warning System (RIMES), an **UN-registered agency** will collaborate with Odisha State Disaster Management Authority (OSDMA) to strengthen its quality, prediction ability and response capacity.

Benefits of this collaboration:

- RIMES will provide technical support to OSDMA regarding analysis of data to be generated through automatic weather stations being installed in all the gram panchayats, validation of the forecast, early warning and preparedness for lightning, heat wave, flood, draught and Tsunami.
- It would enhance the warning response capacities of the OSDMA by imparting specialized expert training. It will also help to develop a one-stop risk management system for all OSDMA needs- integration of multiple data database/servers.



About RIMES:

- RIMES, an inter-governmental body registered under the United Nations.** It is being owned and managed by 45 collaborating countries in Asia Pacific and Africa Region. The programme unit of the agency is located in Thailand.
- RIMES evolved from the efforts of countries in Africa and Asia, in the aftermath of the 2004 Indian Ocean tsunami, to establish a regional early warning system within a multi-hazard framework for the generation and communication of early warning information, and capacity building for preparedness and response to trans-boundary hazards.
- At present, India is chairing RIMES.**

Sources: the hindu.

Topic: Security challenges and their management in border areas.

1. First ever 'crime-free zone' along international border launched

Context:

- In a first for both countries, the director generals of the Border Security Force (BSF) and Border Guard Bangladesh (BGB) have declared an 8.3 km stretch of the Indo-Bangladesh border as a 'crime-free zone'.



The Crime-free zone:

- The stretch covers the Gunarmath and Kalyani Border Out Posts (BOPs) in India and the Puthkhali and Daulatpur BOPs across the border.
- This stretch is one of the most vulnerable with cattle smuggling and other criminal activities prevalent.

How this zone works?

- Both border guarding forces with the help of the civil administrations of the two countries, NGOs and the local populace will help in ensuring that no crime takes place along the stretch. Both the forces will work together to ensure that no crime or anti-social activity occurs along this stretch.

Way ahead:

- This is a pilot project that will be reviewed after 5-6 months. The stretch will be extended to other trouble-prone areas. The idea is to target the more difficult areas along the 913 km of Indo-Bangladesh border under the BSF's South Bengal Frontier.

Background:

- Bangladesh and India share a 4,156 km long international border. This includes 262 km in Assam, 856 km in Tripura, 180 km in Mizoram, 443 km in Meghalaya, and 2,217 km in Bengal.

2. Armed Forces (Special Powers) Act (AFSPA), 1958

Context:

- The government has informed the Lok Sabha that it was considering a proposal to make the AFSPA Act more “operationally effective and humane.” The AFSPA is in force in several northeastern States.
- The decision came after the Home Ministry decided to reduce the number of Central Armed Police Force personnel deployed in the northeastern States.

What is AFSPA?

- AFSPA, enacted in 1958, gives powers to the army and state and central police forces to shoot to kill, search houses and destroy any property that is “likely” to be used by insurgents in areas declared as “disturbed” by the home ministry.
- The Act provides army personnel with safeguards against malicious, vindictive and frivolous prosecution. Security forces can “arrest without warrant” a person, who has committed or even “about to commit a cognizable offence” even on “reasonable suspicion”.

What are ‘disturbed’ areas?

- The state or central government considers those areas as ‘disturbed’ “by reason of differences or disputes between members of different religious, racial, language or regional groups or castes or communities.

How is a region declared ‘disturbed’?

- Section (3) of the Afspa empowers the governor of the state or Union territory to issue an official notification in The Gazette of India, following which the Centre has the authority to send in armed forces for civilian aid.
- Once declared ‘disturbed’, the region has to maintain status quo for a minimum of three months, according to The Disturbed Areas (Special Courts) Act, 1976.”

What is state government’s role?

- The state governments can suggest whether the act is required to be enforced or not.
- But under Section (3) of the act, their opinion can be overruled by the governor or the Centre.

What are the arguments for Afspa?

- The army is opposed to the withdrawal of Afspa. Many argue that removal of the act will lead to demoralising the armed forces and see militants motivating locals to file lawsuits against the army.

What do detractors say?

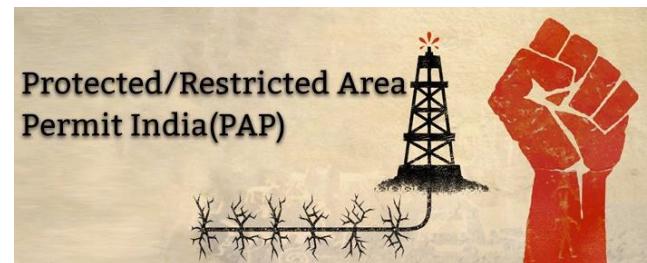
- Critics say the undemocratic act has failed to contain terrorism and restore normalcy in disturbed areas, as the number of armed groups has gone up after the act was established. Many even hold it responsible for the spiralling violence in areas it is in force.
- The justice Jeevan Reddy Committee was set up in 2005 to review Afspa and make recommendations. It recommended that Afspa should be repealed and the Unlawful Activities Protection Act strengthened to fight militancy. However, no steps were taken to repeal or reform the act.

Sources: the hindu.

3. Protected area permit

Context:

- The Union Home Ministry is planning to relax the protected area permit (PAP) regime to enable foreign tourists to access border areas. The permit is being relaxed by the Centre following several requests by Arunachal Pradesh, Himachal Pradesh, Sikkim, Uttarakhand, Nagaland, Manipur and the Tourism Ministry.



What is Protected area permit?

- Under the Foreigners (Protected Areas) Order, 1958, all areas falling between the Inner line and the International Border of some states have been declared as protected areas.
- The protected areas currently include whole of Arunachal Pradesh, Manipur, Mizoram, Nagaland and Sikkim, besides parts of Himachal Pradesh, Rajasthan, Uttarakhand and Jammu and Kashmir. Some parts of Sikkim fall under the protected area regime while others under the restricted area.

How are these regions different?

- As per the guidelines, a foreign national is not normally allowed to visit a protected or restricted area unless the government is satisfied that there are extra-ordinary reasons to justify his or her visit.
 - Every foreigner, except a citizen of Bhutan, who desires to enter and stay in a protected or restricted area, is required to obtain a special permit from a competent authority having the power to issue such permits to a foreigner, seeking it.
 - In cases, where the power to issue such permits has not been delegated to a subordinate authority by the Union government, the application for the special permit has to be referred to the Ministry of Home Affairs for prior approval, at least eight weeks before the date of the expected visit.

Who can issue such permits?

- Necessary powers have been delegated to various authorities to issue such special permits without the prior approval of the Union home ministry to facilitate foreign tourists subject to the certain exceptions.
 - In cases of foreign diplomats, including the members of the United Nations and international organisations holding diplomatic or official passports, the special permits to visit such protected or restricted areas are issued by the Ministry of External Affairs.
 - In cases of the citizens of Afghanistan, China and Pakistan and foreign nationals of Pakistani origin, no permit, however, can be issued without the prior approval of the Union home ministry.

Sources: the hindu.

Paper 3 Topic: Various Security forces and agencies and their mandate.

1. India's first coastal policing academy

Context:

- The Union home ministry has sanctioned the launch of the National Academy of Coastal Policing (NACP) from a campus of Gujarat's Fisheries Research Centre located in coastal Okha in the newly created Devbhoomi Dwarka district.

Key facts:

- It will be the country's first national academy to train police forces in effectively safeguarding the Indian shoreline.*** It will sharpen the response and skills of the marine forces of multiple states which have sea lines.
- The first-of-its-kind institution of the country will be ***created and run by a multi-agency team of paramilitary and defence forces.***
- The Union home ministry's policing think tank — the Bureau of Police Research and Development (BPRD) — will pilot the establishment and running of the academy.

- The Border Security Force (BSF), that guards the Indian frontier in Gujarat with Pakistan, the navy and the Coast Guard will form the core to run the academy. The BSF will also provide security to the campus which on the Arabian Sea coast and is at a flying distance from the Pakistan coast.
- The navy and the Coast Guard will help design “the training curriculum, providing skilled trainers and ensuring access to jetties and boats” for the trainees of the academy.
- The academy, that will have faculty from the Navy, Coast Guard and the BSF, will train police personnel and other security agencies staff in maritime laws, seamanship, boat work, navigation, weapons handling, usage of sea guidance and surveillance gadgets and survival skills for long haul operations on the sea or during distress times when they may get stranded in these waters running up to 12 nautical miles from the shore.

Significance of the academy:

- India has a vast coastline of 7,516 kms touching 13 states and union territories (UTs). It also has around 1,197 islands. There is no institute in the country that trains marine or coastal police forces in these subjects in a professional manner.
- That is why the academy will be first-ever and the best practises of various agencies like the navy, the BSF and the Coast Guard will be borrowed by it for teaching purposes.
- Also, the academy was specially required since India faced its major sea-borne terror attack in November 2008 in Mumbai.

What's important?

- **For Prelims:** Coastal policing academy.
- **For Mains:** Coastal security- challenges and significance.

Sources: [toi](#).

2. National Conference on Drug Law Enforcement

Context: A National Conference on Drug Law Enforcement was recently organized by Narcotics Control Bureau (NCB).

Need for prevention of drug abuse:

- India is vulnerable to narcotic drug trafficking as it is located between two largest Opium producing regions of the world i.e. Golden Crescent in the west and Golden Triangle in the east. Drug trafficking and abuse also pose serious threat to our societies.
- Involvement of foreign nationals in drug peddling poses another significant challenge of drug trafficking in India. During 2017, 332 foreign national have been arrested in drug cases in India.

What has the government done in this regard?

- The Government has taken several policy and other initiatives to deal with drug trafficking problem. It constituted Narco-Coordination Centre (NCORD) in November, 2016 and revived the scheme of “Financial Assistance to States for Narcotics Control”. Besides, in 2017, the government approved new Reward Guidelines with increased quantum of reward for interdiction or seizure of different illicit drugs.
 - For effective coordination with foreign countries including neighboring countries, India has signed 37 Bilateral Agreements/Memoranda of Understanding.
 - Narcotics Control Bureau has been provided funds for developing a new software i.e. Seizure Information Management System (SIMS) which will create a complete online database of drug offences and offenders.
 - The government has constituted a fund called “National Fund for Control of Drug Abuse” to meet the expenditure incurred in connection with combating illicit traffic in Narcotic Drug, Psychotropic Substances; identifying, treating and rehabilitating addicts, and educating public against drug abuse, etc.
 - The government is also conducting National Drug Abuse Survey to measure extent, pattern and trends of drug abuse in India through Ministry of Social Justice & Empowerment with the help of National Drug Dependence Treatment Centre of AIIMS.

About NCB:

- The Narcotics Control Bureau is the apex coordinating agency. **The Narcotic Drugs and Psychotropic Substances Act, 1985** which came into effect from the 14th November, 1985 made an express provision for constituting a Central Authority for the purpose of exercising the powers and functions of the Central Government under the Act.

- The Bureau, subject to the supervision and control of the Central Government, is to exercise the powers and functions of the Central Government for taking measures with respect to:
 - Co-ordination of actions by various offices, State Governments and other authorities under the N.D.P.S. Act, Customs Act, Drugs and Cosmetics Act and any other law for the time being in force in connection with the enforcement provisions of the NDPS Act, 1985.
 - Implementation of the obligation in respect of counter measures against illicit traffic under the various international conventions and protocols that are in force at present or which may be ratified or acceded to by India in future.
 - Assistance to concerned authorities in foreign countries and concerned international organisations to facilitate coordination and universal action for prevention and suppression of illicit traffic in these drugs and substances.
 - Coordination of actions taken by the other concerned Ministries, Departments and Organizations in respect of matters relating to drug abuse.

Sources: pib.

Paper 3 Topic: Challenges to internal security through communication networks, role of media and social networking sites in internal security challenges, basics of cyber security; money-laundering and its prevention.

1. Fugitive Economic Offenders Bill, 2018

Context:

- The Union Cabinet has approved the proposal of the Ministry of Finance to introduce the Fugitive Economic Offenders Bill, 2018 in Parliament.
- The bill aims to tighten the noose on the wilful defaulters who tends to abscond the nation to evade the clutches of the law.

Highlights of the Bill:

- The Bill aims to curb the practice of evading the criminal prosecution by the economic offenders who flee from the country to stay out of the jurisdiction of Indian courts.
- The Bill will give the right to the government to confiscate the property of such economic offenders in India and abroad. The Bill will also be applicable on the proxy-owned properties of the economic offenders.
- The Bill defines the economic offenders as those against whom a legal warrant has been issued, but they refuse to adhere to the summons of the legal authorities.
- The law balances itself with a provision that allows the accused to file an appeal in the High Court to state their case.
- The Bill keeps the banks and other financial institutions at the Centre and seeks to help them recover the amount. The Bill will only be used for economic offences over Rs 100 crores.
- The Bill makes provisions for a Court ('Special Court' under the Prevention of Money-laundering Act, 2002) to declare a person as a Fugitive Economic Offender.
- The Bill makes provisions for a Special Court (under the Prevention of Money-laundering Act, 2002) to declare a person as a Fugitive Economic Offender.
- The FEOB will empower law enforcement agencies to confiscate the assets of economic absconders till they submit to the jurisdiction of law in India.
- This would also help the banks and other financial institutions to achieve higher recovery from fugitive economic offenders.
- The Bill will help re-establish the rule of law with respect to the fugitive economic offenders.

Significance of the Bill:

- The Bill is expected to re-establish the rule of law with respect to the fugitive economic offenders as they would be forced to return to India to face trial for scheduled offences.
- This would also help the banks and other financial institutions to achieve higher recovery from financial defaults committed by such fugitive economic offenders, improving the financial health of such institutions.

- It is expected that the special forum to be created for expeditious confiscation of the proceeds of crime, in India or abroad, would coerce the fugitive to return to India to submit to the jurisdiction of Courts in India to face the law in respect of scheduled offences.

Need for a law in this regard:

- There have been several instances of economic offenders fleeing the jurisdiction of Indian courts, anticipating the commencement, or during the pendency, of criminal proceedings.
- The absence of such offenders from Indian courts has several deleterious consequences— first, it hampers investigation in criminal cases; second, it wastes precious time of courts of law; third, it undermines the rule of law in India.

What's important?

- For Prelims:** Key provisions in the Bill.
- For Mains:** Need for law in this regard.

Sources: pib.

2. Bill on chit funds

Context:

- The **Chit Funds (Amendment) Bill, 2018** has been introduced in the Lok Sabha. The bill aims to streamline and strengthen the chit fund sector.
- The Bill is based on the recommendations of the Parliamentary Standing Committee on Finance and the Advisory Groups on Chit Funds set up by the central government.

Highlights of the Bill:

- The Amendment Bill provides for **allowing the mandatory presence of two subscribers**, as required either in person or through video conferencing duly recorded by the foreman, while the bids are being opened.
- It mandates video conferencing while the opening of bids and seeks to hike commission of foremen from 5% to 7%.

Background:

- The Chit Funds Act, 1982 was enacted to provide for the regulation of chit funds which are indigenous business in India and have conventionally satisfied the financial needs of low income households.

Sources: the hindu.

Topic: Role of external state and non-state actors in creating challenges to internal security.

1. Northeast ex-militants get more sops

Context:

- For the first time since 1998, the Ministry of Home Affairs (MHA) has increased the monthly stipend of surrendered militants in northeast India.
- The stipend for the former militants has been increased from ₹3,500 to ₹6,000 per month and the one-time grant has been enhanced from ₹1.5 lakh to ₹4 lakh.

"Surrender-cum-rehabilitation" scheme:

- Surrender-cum-rehabilitation scheme for Northeast States was meant to “wean away the misguided youth and hardcore militants who have strayed into the fold of militancy and find themselves trapped in that net.”
- The scheme also seeks to ensure that the militants who have surrendered do not find it attractive to join militancy again.
- The MHA reimburses the amount paid to the surrendered militants by the State governments under the Security Related Expenditure (SRE) scheme.

What's needed?

- The internal security situation in the North-eastern states is complex. It requires people with in-depth knowledge of the terrain, society, politics and culture and history of insurgency in the region to be placed in positions entrusted with the handling of affairs.
- The Government must also focus on concluding final peace agreements with the insurgent groups as soon as possible so that all the energies could then be applied in tackling the groups that remain intransigent.

Way ahead:

- India's Act East Policy could only be successful if we develop connectivity in the North-eastern states and permit greater people-to-people contact with the people of the ASEAN, and particularly with the people of Myanmar.
- Investments in the region are required for the economic advancement of the people. These would require the creation of a peaceful environment in the North-eastern states.

What's important?

- **For Prelims:** Surrender cum Rehabilitation scheme.
- **For Mains:** Development of the northeast and the challenges posed by militancy.

Sources: the hindu.

Facts for Prelims

1. INDIASize

What is it?

- It is a National Sizing Survey to develop a comprehensive size chart for ready-to-wear industry based on the body measurements of the Indian population.
- It is a scientific exercise where anthropometric data will be collected from a sample population in the age group 15 to 65 years to create a database of measurements that will result in a standardized size chart which is representative of the Indian population and can be adopted by the apparel industry.

How?

- The surveys entail measuring statistically relevant sample size pan country using human safe technology of 3D whole body scanner, a non-contact method of taking body measurements and analyzing the collected data to create size charts.

Need:

- A large percentage of shoppers face difficulty in finding clothes that fit perfectly according to their body measurements.
- The reason is differences in anthropometric built of people in different geographical regions across the country.

Who is conducting the survey?

- The survey will be conducted by the National Institute of Fashion Technology (NIFT), New Delhi, under the Ministry of Textiles, Govt of India.

Facts:

- Till date 14 countries have successfully completed national sizing surveys including USA, Canada, Mexico, UK, France, Spain, Germany, Korea, China and Australia.

2. Dr Harsh Vardhan App

Context: Dr Harsh Vardhan App has been launched. It is named after the Union Minister Dr Harsh Vardhan.

Details:

- The App is intended, among other things, to promote the theme of 'green good deeds' and engage with the public at large.

"Green Good Deeds" campaign:

- The campaign has been launched by the Environment Ministry to sensitise the people and students, in particular, about climate change and global warming.
- The objective of the campaign is to restore and return the clean and green environment to the next generation.



3. Anti Tank Guided Missiles (ATGM) NAG

Context: Successful Flight Test of ATGM NAG was recently carried out.



Key facts:

- The third-generation Fire and Forget ATGM Nag is equipped with many advanced technologies including IIR Seeker with integrated avionics, a capability possessed by few nations in the world.
- The missile is developed to support both mechanised infantry and airborne forces of the Indian Army.
- The missile incorporates an advanced passive homing guidance system and possesses high single-shot kill probability.
- It is designed to destroy modern main battle tanks and other heavily armoured targets.

4. "Lamitye" 2018

What is it?

- It is the joint military exercise between the **Indian Army** and **Seychelles** People's Defence Forces.
- This exercise is the **eighth** in the series of bilateral exercises being conducted in the beautiful island nation.

About Lamitye:

- The exercise is named "Lamitye" which in the local dialect 'Creole', means **friendship**.
- India and Seychelles have been conducting this joint exercise since **2001** with the aim of enhancing military cooperation and interoperability between the armies of the two countries.

5. Paschim Leher (XPL-18)

Context:

- The Western Naval Command of the Indian Navy has concluded a large scale operational exercise named 'Paschim Leher' in the Arabian Sea.

What is it?

- The exercise tests operational readiness of the Western Naval Command and the execution of its operational plans.
- The XPL 2018 enabled testing and revalidation of operational plans and manoeuvres in a hostile maritime scenario on India's Western Seaboard.
- The exercise will enable further refine the operational, logistics and administrative plans of the Western Naval Command.

6. Phirangipuram to be Andhra's first all-women rail station

Context:

- Phirangipuram is all to be Andhra Pradesh's first all-women rail station.
- It will be a big step in addressing gender equality in the biggest public sector organisation in the country.

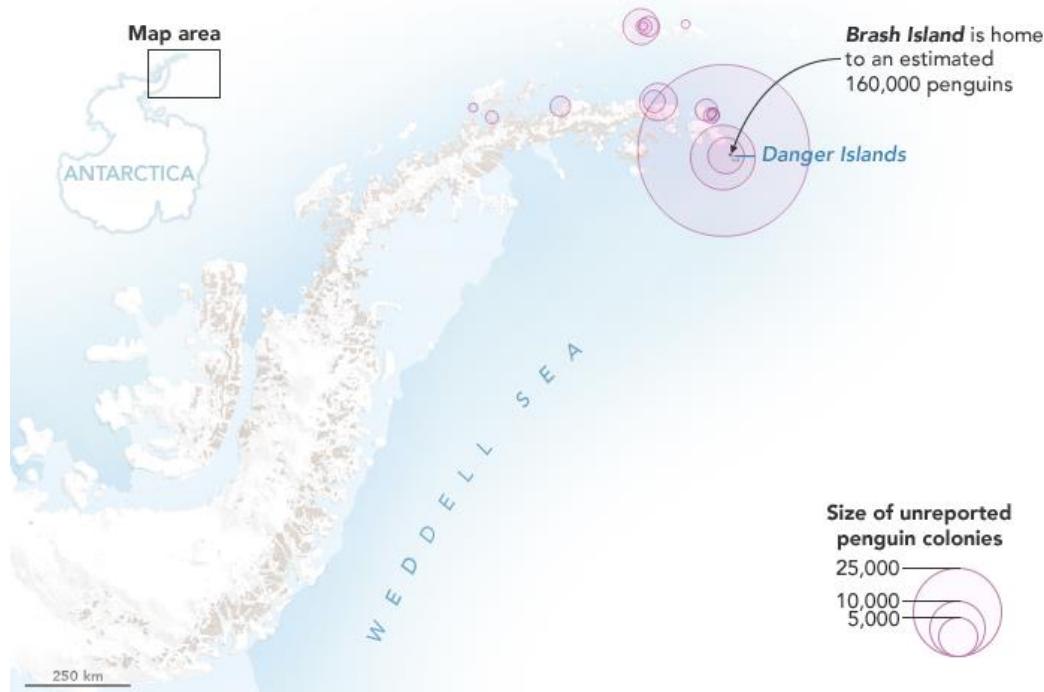
Key facts:

- It will be the third-of-its-kind railway station in the country after Jaipur's Gandhi Nagar and Mumbai's Matunga.

7. India to help build nuclear plant in Bangladesh

- India, Bangladesh and Russia have signed a tripartite memorandum of understanding (MoU) for cooperation in the construction of the Rooppur nuclear power plant in Bangladesh.
- Russia is building the nuclear power plant in Bangladesh on a turnkey basis. Indian companies can be involved in construction and installation works and in the supply of equipment of a non-critical category.

8. Danger Islands



- Context:** Scientists have announced the discovery of a previously unknown “supercolony” of more than 1,500,000 Adélie Penguins in the Danger Islands, a chain of remote, rocky islands off of the Antarctic Peninsula’s northern tip.
- What's important for Prelims?** Location of Danger Islands.

9. World's largest solar park Shakti Sthala launched in Karnataka

- Context:** The Karnataka government recently inaugurated the world's largest solar park, Shakti Sthala. It is located in Tumkur district, about 180km from Bengaluru. The park ties in with the centre's scheme to generate 100 gigawatts (GW) of solar power by 2020. It has a capacity of 2,000 MW.
- It is part of the “Karnataka Solar Policy 2014-2021” which aims to decrease dependence on traditional power sources and move to environmentally friendly ones to meet the growing power needs of the state.



10. Namaste Shalom

- **Context:** The government has launched the social media of “Namaste Shalom”, a magazine devoted to India-Israel relations.
- **Namaste Shalom:** It is a regular monthly magazine on bilateral relations between the two friendly nations. The magazine aims to strengthen India-Israel relations and provide a platform for exchanging views between Indians and Jews the world over.

11. DEFEXPO INDIA 2018

Context:

- Defexpo India 2018 – an international land, naval and internal homeland security systems exhibition – is being held in Chennai.
- It will brand India as a defence exporter of several defence systems and components for all three Services – Army, Navy and Air Force.

Key facts:

- This is the tenth edition of the exhibition.
- It is the first time that the defence expo is going to be held in Chennai.
- Till 2016, all defence expos had been held only in New Delhi. It was held in Goa (in 2017).



12. Pakistan elects its first Dalit woman Senator

- **Context:** Pakistan has elected Krishna Kumari Kohli as its first Dalit woman Senator. She won the election for the reserved seat for women from Sindh Province. This election represents a major milestone for women and minority rights in Pakistan.
- **Facts:** Earlier, Pakistan People’s Party had elected first Hindu woman named Ratna Bhagwandas Chawla as a Senator.

13. India remains 12th largest foreign holder of US govt securities

- **Context:** According to latest official data, India is the 12th largest overseas holder of US government securities, just behind oil rich Saudi Arabia, whose holding stood at USD 147.4 billion in December 2017.
- **Background:** The holding of India went up to USD 144.7 billion in December last, an increase of little over USD 26 billion compared to the year-ago period.
- **Top 3:** In 2017, neighbouring China was the largest holder of US government securities with holdings to the tune of USD 1.18 trillion, followed by Japan at USD 1.06 trillion. At the third position was Ireland whose exposure rose to USD 326.5 billion.

14. India's first helitaxi launched in Bengaluru

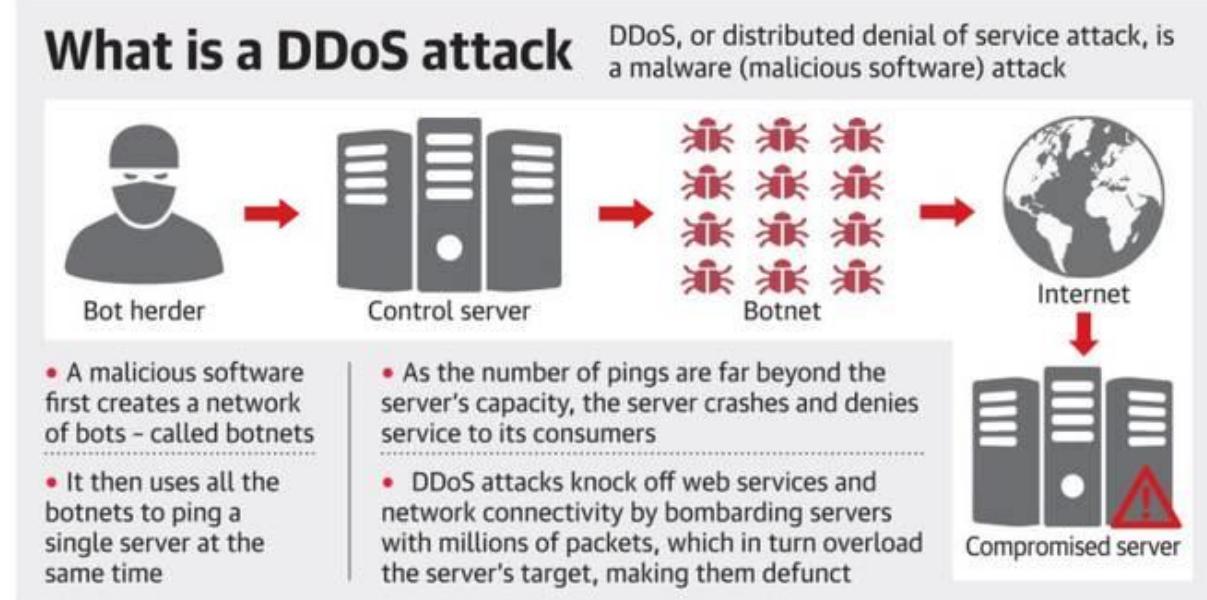
- **Context:** IT capital Bengaluru has become the first city in the country to have a HeliTaxi. The first helitaxi service is being provided by a Bell 407 helicopter.

15. Vasudhaiva Kutumbakam

- **Context:** The two-day national seminar “Vasudhaiva Kutumbakam” was recently conducted at New Delhi. The seminar was organised to spread the message that indigenous values and teachings of Vedas can only help India achieve its lost glory and attain the status of “Vishwa Guru” once again.
- **Meaning of Vasudhaiva Kutumbakam:** It is a Sanskrit phrase found in Hindu texts such as the Maha Upanishad, which means “the world is one family”.

16. Saposhi

- **What is it?** It is a new malware detected by cybersecurity agencies.
- **How it affects?** It is capable of taking over electronic devices and turning them into ‘bots’, which can then be used for any purpose, including a Distributed Denial of Service attack which, with enough firepower, can cripple entire industries.



17. Sri Lanka declares state of emergency:

- **Context:** Sri Lanka has imposed a nationwide state of emergency for the first time since the civil war era in response to days of violent unrest between Sinhalese and Muslim communities. The special measures permitting soldiers to be deployed in civilian areas will initially apply for 10 days, at which point the deployment would need to be ratified by parliament.
- **Sinhalese:** They are an Indo-Aryan-speaking ethnic group native to the island of Sri Lanka. They constitute about 75% of the Sri Lankan population. The Sinhalese people speak the Sinhalese language, an Indo-Aryan language, and are predominantly Theravada Buddhists, although a small percentage of Sinhalese follow branches of Christianity.
- **Origin:** According to the 5th century epic poem Mahavamsa, and the Dipavamsa, a 3-5th century treatise written in Pali by Buddhist monks of the Anuradhapura Maha Viharaya in Sri Lanka, the Sinhalese are descendants of settlers who came to the island in 543 BCE from Sinhapura in India, led by Prince Vijaya.

18. Airports Council International (ACI) – ASQ 2017 rankings:

Delhi's Indira Gandhi International Airport has been rated as the world number one among airports handling more than 40 million passengers per annum in a survey by the Airports Council International (ACI).



- Mumbai's Chhatrapati Shivaji International Airport has been ranked as the World's Best Airport for customer experience.
- About ACI: ACI is a trade association of 1,953 member airports across 176 countries. As part of its survey on Airport Service Quality, views of passengers on 34 key performance indicators are measured. Nearly 74% of the world's top 100 busiest airports are part of the ASQ network.
- Last year, in Airport Service Quality by ACI, South Korea's Seoul Incheon was ranked number one, followed by Delhi, Mumbai, Singapore in second position and Beijing, Haikou in third position.

19. SpaceX Landmark 50th Falcon 9 Flight

- **Context:** SpaceX has successfully launched a Spanish communications satellite- Hispasat, on the landmark 50th flight of the company's workhorse Falcon 9 rocket.
- **Falcon 9:** Falcon 9 is a two-stage rocket designed and manufactured by SpaceX for the reliable and safe transport of satellites and the Dragon spacecraft into orbit.
- Falcon 9 is the first orbital class rocket capable of reflight.



20. A toll-free number for highway users

Context:

- A 24x7 Unique Toll Free Helpline “1033” has been launched for road users on National Highways. NHAI had assigned the work for establishment of the Helpline using 4-digit toll free number “1033” to IHMCL.

Salient Features:

- A single 4-digit Toll Free Universal Access Number (UAN) “1033”.
- Single point of contact for public in case of accident or other emergencies on National Highways.
- Single point contact for reporting issues related to National Highways e.g. obstruction of highways due to a fallen tree, dharna, flat tyre, bad road condition etc.
- Immediate help to road accident victims during the golden hour by making available ambulance, treatment facilities and cranes to remove wrecked vehicles from the accident site.
- Professional call center agents with 24x7 availability.

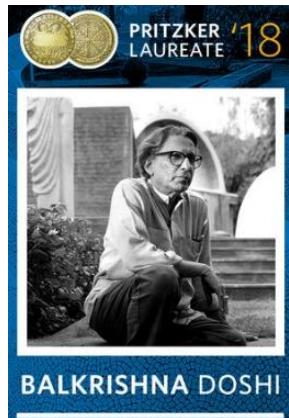


21. “Wings India 2018”

- **Context:** The biennial event on Civil Aviation and Aerospace titled “Wings India 2018” is being held in Hyderabad.
- **Organizers:** The event with the theme “India-Global Aviation Hub” is organised jointly by the Union Civil Aviation Ministry, Airports Authority of India and the Federation of Indian Chambers of Commerce and Industry.
- **About:** “Wings India 2018” aims to be the most comprehensive platform in the region for the interactions, forging alliances, investments and air connectivity between the States and the global aviation players/stakeholders. It will have a special focus on connecting the cities and towns aimed at increasing the regional connectivity in the country.

22. 2018 Pritzker prize for Balkrishna Doshi

- Context:** Balkrishna Doshi is the newest winner of the Pritzker Architecture Prize, known as the Nobel for architects. He has built more than a hundred buildings that reflect his investment in local materials, social change and the environment. He is the first Indian to receive the award.
- About the Prize:** The international prize, which is awarded each year to a **living architect/s** for significant achievement, was established by the Pritzker family of Chicago through their Hyatt Foundation in 1979. It is granted annually and is often referred to as “architecture’s Nobel” and “the profession’s highest honor.” The award consists of \$100,000 (US) and a bronze medallion. The award is conferred on the laureate/s at a ceremony held at an architecturally significant site throughout the world.



23. Nari Shakti Puraskar 2017

Context:

- Nari Shakti Puraskars 2017 were presented to 30 women by the **President** on the eve of International Women's Day.

About Nari Shakti Puraskars:

- To acknowledge Women's achievements, the Government of India confers Nari Shakti Puraskars on eminent women and institutions in recognition of their service towards the cause of women empowerment. The Nari Shakti Awards were initiated in the year 1999.
- The **Ministry of Women and Child Development** announces these national level awards for eminent women, organisations and institutions.
- The Nari Shakti Puraskar carries a cash award of Rs.1 Lakh and a **certificate for individuals and institutions**.

24. Udyam Sakhi Portal

Context:

- The Ministry of Micro, Small and Medium Enterprises(MSME) has launched a portal for women entrepreneurs of India.

About the portal:

- The portal is a network for nurturing entrepreneurship and creating business models for low cost products and services in order to empower women and make them self-reliant and self-sufficient.
- The portal provides assistance through its platform for entrepreneurship learning tools, incubation facility, training programs for fund raising, providing mentors, one-on-one investor meet, provide market survey facility and technical assistance.

25. I – Metros'

Context: I – Metros' -an association of all Indian Metro Rail companies has been launched.

About I- Metros':

- “I-Metros” is proposed to be a platform to provide a forum for exchange of ideas, pooling of knowledge and sharing of experience, best practices, innovations etc. among the Indian Metro rail companies to nurture excellence in performance.
- This **society** will be registered under **Society Registration Act-1860**.
- The objective of forming this association is to provide a common platform for all Metro rail companies for sharing experience, information, best practices, innovations etc.
- This association will also undertake and promote techno-economic studies and research. It will safeguard the interest and rights of metro rail companies and will be resource tank of information for decision making.

26. SUVIDHA

Context:

- The government has launched ‘Suvidha’, the 100% Oxo-biodegradable Sanitary Napkin, under the Pradhan Mantri Bhartiya Janaushadhi Pariyojana (**PMBJP**).

Key facts:

- The affordable sanitary napkin will be available for Rs. 2.50 per padat over 3200 Janaushadhi Kendras across India.
- It would ensure ‘Swachhta, Swasthya and Suvidha’ for the underprivileged Women of India.
- This is a step taken by the Department of Pharmaceuticals.

27. Swachh Shakti 2018

Context:

- Swachh Shakti 2018 was celebrated in Lucknow with 15000 women Swachh Bharat champions resolving to usher in clean India on International Women’s Day.

About Swachh Shakti:

- The **Ministry of Drinking Water and Sanitation**, in association with the Government of Uttar Pradesh had organized the event.
- Under this, women sarpanches, women Swachhagrahis and women champions from other walks of life from across the country will be recognised for their outstanding contribution towards making a Swachh Bharat.

28. Calcium silicate perovskite

Context:

- For the first time, scientists have found Earth’s fourth most abundant mineral—calcium silicate perovskite—at Earth’s surface.

Key facts:

- Scientists found the calcium silicate perovskite within a diamond mined from less than one kilometre beneath Earth’s crust, at South Africa’s famous Cullinan Mine, best known as the source of two of the largest diamonds in the British Crown Jewels. CaSiO₃ perovskite in diamond indicates the recycling of oceanic crust into the lower mantle.
- Usually, the mineral is found deep inside Earth’s mantle, at 700 kilometres. The only possible way of preserving this mineral at the Earth’s surface is when it’s trapped in an unyielding container like a diamond.
- Silicate perovskite may form up to 93% of the lower mantle, and the magnesium iron form is considered to be the most abundant mineral in Planet Earth, making up 38% of its volume. Under the very high pressures of the lowermost mantle, below about 2,700 km, the silicate perovskites are replaced by post-perovskite.



29. Diu becomes the first and only Union Territory to be 100% solar energy efficient

- **Context:** In a major boost for utilisation of renewable energy in the country, Diu has become the first and only Union Territory to be fully solar energy efficient.
- **Key facts:** Diu's geographical area is limited only to 42 square kilometers, however, despite the shortage of land, solar power plants have been installed at over 50 acres of land. A total of 13 megawatts of electricity from the solar power-generating systems is generated, with 3MW generated by rooftop solar plants and 10MW by other solar power plants.

30. ITB – Berlin

Context: India has won the “Best Exhibitor Award” at ITB – Berlin.

What is it?

- As the Leading Travel Trade Show, ITB Berlin is the foremost business platform for global touristic offers.
- The ITB Berlin takes place annually in March at the Messe Berlin. The fair always has an official partner country, in 2018 represented by the German state of Mecklenburg-Vorpommern.
- ‘ITB- Berlin World Tourist Meet’ 2018 was convened at Berlin, Germany.



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31. ‘Ex Samvedna’

Context: A Multilateral Air Force exercise, ‘Ex Samvedna’, is being spearheaded by Indian Air Force and conducted by Southern Air Command (SAC).

What is it?

- It is the first composite HADR Air exercise in the South Asian region and would be focused on practicing Air Force centric HADR solutions in a Multi-national cooperative Disaster Management environment.
- It is aimed at setting up a scenario of pre and post Tsunami disaster requirements and guide participants to work out Air Force Centric HADR solutions.
- ‘Samvedna’ means ‘Empathy’ and will ensure better understanding and sharing of response procedures between a number of friendly neighbouring nations.



32. National Legislators Conference

Context: National Legislators Conference was recently inaugurated at the Central Hall of Parliament House.

What is it?

- Hosted by Lok Sabha Speaker Sumitra Mahajan, the conference is based on the theme “We for development”.
- It is being attended by Members of Parliament and state Assemblies.
- The motive of the conference is to bring MPs and MLAs on a single platform where ideas and plans for development can be exchanged.

33. Reciprocal logistics support deal

Context: A reciprocal logistics support deal has been signed between the respective armed forces of **India** and **France**.

What is it?

- The deal will facilitate the French and Indian armed forces to receive logistical support, supplies and services from each other during authorised port visits, joint exercises, joint training, humanitarian assistance and disaster relief efforts.
- The deal, which is similar to the logistical support pact with the US, is an indicator of the strategic depth and maturity in defence ties between the two countries.

34. MILES-18

Context:

- As part of the tenth edition of MILAN, the first ever multi-nation naval exercise at sea called MILES-18 is being held in the Andaman Sea.

Key facts:

- **Theme:** 'Friendship across the seas'.
- Participating **countries**: Australia, Bangladesh, Indonesia, Malaysia, Myanmar, Singapore, Sri Lanka and Thailand.
- Apart from enhancing inter-operability, the exercise will enable honing of search and rescue operations procedures, maritime interdiction operations, core operational skills and exercise a variety of maritime security scenarios.

36. 'Kinzhal' missile

- **Context:** The Russian Aerospace Forces have conducted the first successful test firing of the air-launched Kinzhal (Dagger) hypersonic missile.
- **About the missile:** Kinzhal is claimed to be a strategic air-to-surface strike missile. The missile is claimed to have maneuverable flight characteristics not typically seen in hypersonic, solid fuel missiles. The missile is reported to have a range of 1,200 miles (approximately 2,000 kilometers).



37. Country's 'tallest' flag unfurled in Belagavi

- **Context:** The largest national flag in the country was recently hoisted at Belagavi.

Key facts:

- The national flag is 110m (365 feet) high from the base plate to the top. The size of the flag is 120X80 ft. It will weigh 500 kg.



38. Places in News- Tel Aviv

- **Context:** Air India has launched New Delhi to Tel Aviv direct flight seeing growth in Indian travellers.

Tel Aviv:

- Tel Aviv is the second most populous city in Israel – after Jerusalem. It is a city on Israel's Mediterranean coast.
- Tel Aviv's White City, designated a UNESCO World Heritage Site in 2003, comprises the world's largest concentration of International Style buildings, including Bauhaus and other related modernist architectural styles.

39. India emerges as world's largest importer of arms

Context:

- India has emerged as the largest importer of major arms according to a latest research released by the Stockholm International Peace Research Institute (SIPRI).

Top importer:

- India became the world's largest importer of major arms in 2013-17 accounting for 12% of the total global import.
- The country that accounts for the maximum arms import of India is Russia with 62%.
- America is the second largest arms supplier to India.

Top exporters:

- The US emerged as the world's top exporter of weapons accounting for 34% of global arms sales in the last five years.
- Russia accounted for 20% of the export ranking second in the list.

40. C-17 Globemaster

Context:

- The Indian Air Force's (IAF) largest transport aircraft – C-17 Globemaster – has made a historic landing at Arunachal Pradesh's Tuting Advanced Landing Ground (ALG) near the Chinese border. The landing of the aircraft is seen as part of the IAF's move to strengthen its overall operations in the strategically important border state.



What is C-17 Globemaster?

- It is a US-manufactured aircraft named after two previous piston-engined military cargo aircraft, the Douglas C-74 Globemaster and the Douglas C-124 Globemaster II.
- It is commonly used to perform strategic airlift missions, transporting troops and cargo throughout the world; additional roles include medical evacuation and airdrop duties.
- They are operated in diverse terrain – from Himalayan air bases in North India at 13,000 ft to Indian Ocean bases in South India.

41. Bidya Devi Bhandari, Nepal's 1st female president, wins second term

Context:

- Nepal's lawmakers have elected President Bidya Bhandari for a second term.

Key facts:

- In 2015, she was elected as the first female head of the state.
- An electoral college, including members of parliament and provincial assemblies, will vote in the Presidential election.



42. The Delhi End TB Summit

Context: The Delhi End TB Summit was recently held in the national capital.

Key facts:

- The Summit was co-hosted by the Ministry of Health and Family Welfare, WHO South East Asia Regional Office (SEARO) and Stop TB Partnership.

- The Summit will continue the high-level dialogue that was started in Moscow last year during the Global Ministerial Conference to End TB.
- It will set the stage for the September 2018 United Nations High-Level Meeting (HLM) on TB, where Heads of State are expected to commit to an ambitious plan of action to put the world on track to ending TB.

43. World Hindi Secretariat

Context: World Hindi Secretariat building has been inaugurated in Mauritius.

About WHS:

- It is an international organisation representing countries and regions where Hindi is the first or customary language, where a significant proportion of the population consists of Hindi speakers or where there is a notable affiliation with North Indian culture.
- The organisation was set up by the governments of India and Mauritius to promote Hindi across the world.
- The main objective of the WHS is to promote Hindi as an international language and further its cause for recognition at the United Nations as an Official Language.



44. 8th Theatre Olympics

Context:

- Jaipur is all set to be one of the co-hosts of the 8th Theatre Olympics*, the largest international theatre **festival to be held for the first time in India**.

Organizers:

- The Jaipur chapter of Theatre Olympics 2018 is organised by the National School of Drama (**NSD**) under the aegis of Ministry of Culture, Govt. of India in collaboration with Ravindra Manch Society and Art & Culture Department, Government of Rajasthan.

About Theatre Olympics:

- The Theatre Olympics was established in 1993 in Delphi, Greece, on the initiative of the famous Greek theatre director, Theodoros Terzopoulos.
- It is an international theatre festival, which is presenting some of the achievements of the greatest theatre practitioners from around the world.

45. Maharashtra to ban plastic

Context:

- The Maharashtra government has decided to ban the use of plastic. The changes will be brought in with amendments to the Solid Waste Management Act 2016 and the Plastic Carry Bags (Manufacture and Usage) Rules 2006.
- Penalty:** The highlight of the ban is that both manufacturers and users will be penalized. The punishment is a fine ranging from Rs 5,000 to Rs 25,000 and a jail term of three months.
- Implementation:** Implementation will be the responsibility of local bodies and the state pollution control board (MPCB).

What's banned?

- The ban would cover the production, use, storage, sale, distribution, import and transportation of plastic. The ban covers disposable plastic cups, plates, spoons and flex, but excludes garbage bin liners and PET bottles.

What's allowed?

- Plastic used to cover medicines, forest and horticulture products, solid waste, tree saplings and the use of plastic in special economic zones for export purposes would be exempt from the ban.
- Similarly, plastic covers and wrappers used for manufactured and processed products would also be exempt.

46. New species of water strider found in Nagaland

- Context:** Scientists from the Zoological Survey of India (ZSI) have discovered a new species of water strider from Nagaland. The species is named Ptilomera nagalanda Jehamalar and Chandra.
- Significance of this discovery:** Water striders are a group of insects adapted to life on the surface of water, using surface tension to their advantage. Their presence serves as an indicator of water quality and they are found on water surfaces. Other than being a good indicator of water quality, water striders also play an important role in the food chain by feeding on mosquito larvae.
- So far, only five species of water striders under the subgenus Ptilomera were known in India. With the discovery of Ptilomera nagalanda the number of species of water striders belonging to the subgenus has increased to six.
- Ptilomera is that they are only found in rocky, fast flowing streams and rivers that are not exposed to a lot of sunlight.



47. ICGS C-437

- What is it?** It is the Indian Coast Guard ship commissioned recently at Porbandar.
- About:** The boat is capable of undertaking multifarious tasks such as surveillance, interdiction, search and rescue and rendering assistance to boats and craft in distress at sea. The boat has advanced navigational and communication equipment with capability to respond to any maritime situation.

48. Varuna-18

- Context:** The Indo-French joint naval exercise, "Varuna-18", has commenced in the Arabian Sea off the Goa coast.
- About Varuna:** The Indian Navy and the French Navy have been conducting naval exercises since 1983. These exercises were christened as "Varuna" in 2001. The last edition of the exercise was conducted off the French coast in April last year.



49. 106th Indian Science Congress to be held in Bhopal

- Context:** 106th edition of the Indian Science Congress will be held next year in January in Bhopal.
- The theme:** "Future India: Science & Technology".

50. Plastic Park to be set up in Deoghar District, Jharkhand

- Context:** Government of India has approved the setting up of a Plastic Park in Deoghar District, Jharkhand.
- About the project:** The project would be set up at a cost of Rs. 120 crores in an area of 150 acres and a range of polymer products including woven sacks, moulded furniture, water tanks, bottles, pipes, mosquito nets, etc. would be manufactured. It has great potential for attracting investment for setting up an ecosystem for plastic industry and generate employment opportunities for the local populace. The project is likely to provide direct employment generation to about 6000 people and indirect employment to over 30000 people.

51. Gulf Shield 1

- Context:** Royal Saudi Navy is holding exercises "Gulf Shield 1" in the Gulf, Strait of Hormuz, and Oman Sea.
- The drill, which is considered the largest military drill in the region in terms of diversity of expertise and quality of weapons, aims at raising the military readiness of the participating countries, modernizing the joint mechanisms and enhancing coordination and cooperation.
- "Gulf Shield 1" is part of a series of exercises the fleet has carried out in the area aiming to raise combat readiness, gain the necessary skills, and improve ability to perform the essential leadership services.

52. Okhla Bird Sanctuary

- Context:** Foundation Stone for Redevelopment And Upgradation of Okhla Bird Sanctuary was recently laid.

Key facts:

- Okhla Bird Sanctuary is located close to New Delhi and is one of the 467 Important Bird Areas (IBA) of the country and is home to a large number of resident, as well as migratory birds like grey-headed fish eagle, Baikal teal, Baer's pochard and Sarus crane.**
- It is home to 32 species of reptiles, 7 species of amphibians and 186 plant species.
- Okhla Bird Sanctuary, belonging to the State of Uttar Pradesh, has an area of 400 ha, out of which 120 ha falls within the National Capital Region of Delhi.**



53. World's first brass futures contract

- Context:** MCX, the country's largest commodity exchange, has launched futures trading in brass for first time in the world. With the launch of a transparent brass futures contract, MCX will emerge as the benchmark price as volume picks up in two months time.

Key facts:

- Brass would be first non-ferrous contract with compulsory delivery options – the IS-319 grade brass ingots and billets can be delivered at Jamnagar in Gujarat.
- Brass, an alloy, usually contains 60% zinc and the rest is copper.** It finds varied industrial use in electrical appliance, switch gears, sanitary ware, automobiles and defence sectors.

54. First Indian Sign Language Dictionary of 3000 Words Launched

- Context:** First Indian Sign Language Dictionary of 3000 words has been launched. As per the census 2011, there are 50, 71,007 Deaf people and 19, 98,535 with speech disability in India.

Key facts:

- The dictionary has been developed by Indian Sign Language Research & Training Centre (ISLR&TC) under Department of Empowerment of Persons with Disabilities (DEPwD), M/o Social Justice & Empowerment.
- Its aim is to give Deaf people the constitutional right to speech and opportunity of freedom of expression and also bringing them into the main stream of the society.

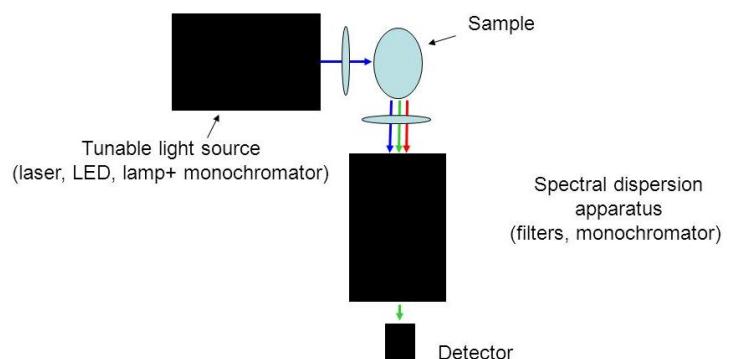
55. Fluorimeter

- Context:** An instrument to measure traces of uranium in water has been developed by a unit of the Department of Atomic Energy (DAE).

Key facts:

- The instrument, "Fluorimeter", has been developed by the Raja Ramanna Centre for Advanced Technology (RRCAT), an Indore-based unit of the DAE.
- The device, costing Rs 1 lakh, would help in detecting traces of uranium in water.
- The instrument is capable of examining traces of uranium in a sample of water from 0.1 PPB (Parts-per-billion) unit to 100 PPB.
- Uranium: Uranium is a radioactive element. If in any source of water its quantity is more than the permissible limit, then use of such water may cause thyroid cancer, blood cancer, depression and other serious ailments. Notably, the Atomic Energy Regulatory Board has fixed the permissible radiological limit to 60 PPB of uranium concentration for drinking water.

General layout of a fluorimeter



56. BrahMos Supersonic Cruise Missile

- **Context:** Supersonic cruise missile BrahMos was recently successfully flight-tested for the first time with an indigenous seeker. So far, the seeker, a critical technology in missiles, had come from Russia.
- The seeker technology determines the accuracy of a missile.

Key facts:

- 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.
- BrahMos missile is the heaviest weapon to be deployed on India's Su-30 fighter aircraft.
- Since India's entry into the MTCR, the range has been extended to 450 km and the plan is to increase it to 600km.

57. NAIPUNYA RATHAM

- **What is it?** NAIPUNYA RATHAM or World on Wheels is a multi-utility vehicle which aims to bring technology to the remote corners.
- **Where?** It was launched recently in Andhra Pradesh.
- **Why?** As part of the Smart village Smart Ward Programme, the Naipunya Rathaams will facilitate and look to improve digital literacy, digital skills and create an awareness on various government schemes that are underway in the new state of Andhra Pradesh.

58. World's longest sandstone cave discovered in Meghalaya

- **Context:** Meghalaya is now also home to the longest sandstone cave in the world at 24,583m.

Key facts:

- The cave system has fossils of dinosaurs, especially the Mosasaurus, a giant reptile that lived 66-76 million years ago.
- The cave in Meghalaya is 6,000m longer than the current listed sandstone cave in the world, Cueva El Samán, (18,200m) in Venezuela.

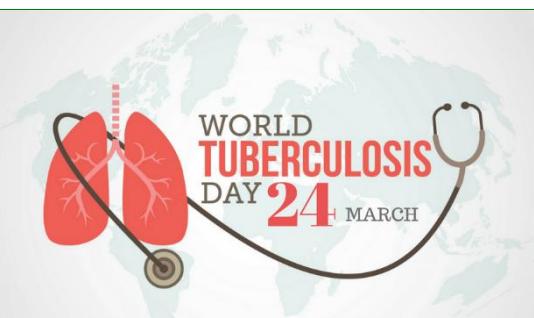


59. World Tuberculosis Day 2018

- **Context:** Observed on March 24 every year, World Tuberculosis Day is designed to build public awareness about the global epidemic of TB and efforts to eliminate the disease. World TB Day commemorates the date in 1882 when Dr. Robert Koch announced his discovery of Mycobacterium tuberculosis, the bacteria that causes TB.
- **Significance:** According to WHO, World TB Day provides a platform for affected persons and communities, civil society organizations, health-care providers, policy makers, development partners and others to advocate, discuss and plan further collaboration to fulfil the promise of reaching all people with quality TB prevention and care services, as well as enabling TB prevention through multisectoral development efforts.
- **The theme** of World TB Day 2018 – “Wanted: Leaders for a TB-free world”.

Key facts:

- Tuberculosis (TB) is caused by bacteria (Mycobacterium tuberculosis) that most often affect the lungs. Tuberculosis is curable and preventable.
- TB is spread from person to person through the air. When people with lung TB cough, sneeze or spit, they propel the TB germs into the air. A person needs to inhale only a few of these germs to become infected.
- Ending the TB epidemic by 2030 is among the health targets of the Sustainable Development Goals.



60. 'Print Biennale India 2018'

- **What is it?** It is the first International Exhibition of Graphic Prints held recently in New Delhi.
- **Host:** Lalit Kala Akademi hosted the event.

61. Surat becomes first district to have 100% solar powered health centres

- **Context:** Surat has become the first district in the country to have 100% solar powered Primary Health Centers (PHC). There are a total of 52 PHCs in the district and all of them are now powered by solar system.

62. India's first insect museum opens in Tamil Nadu

- **Context:** India's first insect museum with the state-of-the-art amenities was recently unveiled in Tamil Nadu.

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