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G.S PAPER II

1. POLITY

1.1 Cabinet Committees - Two New Committees

Why in news?

The government recently released the composition of 8 Cabinet Committees, including two new ones.

What are Cabinet Committees for?

- They are institutional arrangements to reduce the workload of the Cabinet.
- These committees are extra-constitutional in nature and are nowhere mentioned in the Constitution.
- The executive works under the Government of India Transaction of Business Rules, 1961.
- These Rules emerge out of Article 77(3) of the Constitution.
- Accordingly, the President shall make rules for the more convenient transaction of the business of the Government of India, and for the allocation among Ministers of the said business.
- The Rules mandate the minister-in-charge of a department (ministry) to dispose of all business allotted to a department under him or her.
- However, on subjects involving more than one department, decision will have to be taken on concurrence.
- On failing such concurrence, decision will have to be taken by or under the authority of the Cabinet.

How are they formed?

- The Prime Minister constitutes Standing Committees of the Cabinet and sets out the specific functions assigned to them.
- S/he can add or reduce the number of committees.
- Ad hoc committees of ministers, including Groups of Ministers, may be appointed by the Cabinet or by the Prime Minister for specific matters.
- The strength of each committee varies from three to eight members.
- It usually includes cabinet ministers but non-cabinet members are not debarred.

What are the key Cabinet Committees?

- **Cabinet Committee on Appointments** - This panel makes appointments to posts of three service chiefs, Director General of Military Operations, chiefs of all Air and Army Commands.
- It also makes appointments to the posts of -
 - i. Director General of Defence Intelligence Agency
 - ii. Scientific Advisor to the Defence Minister
 - iii. Director General of Armed Forces Medical Services
 - iv. Director General of Ordnance Factories
 - v. Director General of Defence Estates
 - vi. Controller General of Defence Accounts
 - vii. Director of Institute for Defence Studies and Analyses
 - viii. Solicitor-General
 - ix. Governor of the Reserve Bank of India
 - x. Chairman and Members of the Railway Board

- xi. Chief Vigilance Officers in Public Sector Undertakings
- xii. Secretariat posts of and above the rank of Joint Secretary in the Central Government
- It also decides on all important empanelments and shift of officers serving on Central deputation.
- **Cabinet Committee on Accommodation** - This determines the guidelines or rules with regard to the allotment of government accommodation.
- It also takes a call on the allotment of government accommodation to non-eligible persons and organisations, and decides the rent to be charged from them.
- It can consider the allotment of accommodation from the General Pool to Members of Parliament.
- It can consider proposals for shifting existing Central Government Offices to locations outside the capital.
- **Cabinet Committee on Economic Affairs** - This panel is supposed to review economic trends, problems and prospects.
- The objective is to evolve a consistent and integrated economic policy.
- It also does the following:
 - i. coordinates all activities requiring policy decisions at the highest level
 - ii. deal with fixation of prices of agricultural produce and prices of essential commodities
 - iii. considers proposals for investment of more than Rs 1,000 crore
 - iv. deal with industrial licensing policies
 - v. review rural development and the Public Distribution System
- **Cabinet Committee on Parliamentary Affairs** - This draws the schedule for Parliament sessions and monitors the progress of government business in Parliament.
- It scrutinises non-government business and decides which official Bills and resolutions are to be presented.
- **Cabinet Committee on Political Affairs** - The committee addresses problems related to Centre-state relations.
- It also examines economic and political issues that require a wider perspective but have no internal or external security implications.
- **Cabinet Committee on Security** - It deals with issues relating to law and order and internal security.
- It also deals with policy matters concerning foreign affairs with internal or external security implications.
- It also goes into economic and political issues related to national security.
- It considers all cases involving capital defence expenditure of more than Rs 1,000 crore.
- It also considers issues related to the -
 - i. Department of Defence Production
 - ii. the Department of Defence Research and Development
 - iii. Services Capital Acquisition plans
 - iv. schemes for procurement of security-related equipment

What are the two new panels?

- **Cabinet Committee on Investment** - This Committee will identify key projects required to be implemented on a time-bound basis.
- This applies to projects involving investments of Rs 1,000 crore or more, or any other critical projects, as may be specified by it, with regard to infrastructure and manufacturing.
- It will prescribe time limits for giving requisite approvals and clearances by the ministries concerned in identified sectors.
- It will also monitor the progress of such projects.

- **Cabinet Committee on Employment and Skill Development** - This is supposed to provide direction to all policies, programmes, schemes and initiatives for skill development.
- The objective is increasing the employability of the workforce for effectively meeting the emerging requirements of the economy.
- It facilitates mapping the benefits of demographic dividend.
- The committee is required to enhance workforce participation, foster employment growth and identification.
- It will work towards removal of gaps between requirement and availability of skills in various sectors.
- The panel will set targets for expeditious implementation of all skill development initiatives and to periodically review the progress in this regard.
- The addition of the two committees is indicative of the new focus areas for the government. The goal of both is new jobs.

1.2 Assam NRC - Sanaullah's Case

What is the issue?

Upon the orders of the Gauhati High Court, Mohammad Sanaullah was recently released on bail.

What is the case about?

- According to the Assam Accord, individuals who entered Assam after March 24, 1971 are illegal immigrants.
- There are two parallel processes to establish citizenship:
 - i. the Foreigners Tribunals operating under the Foreigners Act
 - ii. the [National Register of Citizens \(NRC\)](#), which is under preparation
- These two processes are nominally and formally independent. But in practice, these two systems influence each other.
- People who have been declared as foreigners by the Foreigners Tribunals, and even their families, were dropped from the draft NRC.
- Mohammad Sanaullah had been detained few days back after a Foreigners Tribunal had declared him an illegal immigrant.
- It was learnt that Mr. Sanaullah had served for three decades in the Indian Army.
- Following this, after a week of sustained public pressure, the Gauhati High Court's bail order has come.

What are the procedural contentions?

- In the intervening period of Sanaullah's release, a shocking number of irregularities surfaced.
- In its inquiry report, the Assam border police had written that Mr. Sanaullah was a 'labourer'.
- The three men who signed the case report claimed that the investigating officer had fabricated their signatures.
- The investigating officer himself admitted that it might have been an "administrative mix-up".
- Yet, it was on the basis of such disputable material that the Foreigners Tribunal concluded that Mr. Sanaullah was a "foreigner" and sent him off to a detention camp.
- [The Foreigners Tribunal is a quasi-judicial body expected to follow the rule of law.]

What is the larger issue?

- Investigative journalists have revealed over the last few years that 'administrative errors' of this kind are the rule rather than the exception.
- Sometimes, such disputable materials lead to people being detained for 10 years or more.
- For these individuals, without the benefit of media scrutiny, there may be no bail; in other words, an endless detention.



- In most cases, the legally mandated initial inquiry before an individual is brought before a tribunal as a suspected “foreigner” does not happen; it did not happen for Mr. Sanuallah.
- **Foreigners Tribunals** themselves are only constrained by a very limited number of procedural safeguards.
- This has led to situations where Tribunals have issued notices to entire families, instead of just the suspected “foreigner”.
- Additionally, reports show that Foreigners Tribunals habitually declare individuals to be “foreigners” on the basis of clerical errors in documents.
- These may include as small things as a spelling mistake, an inconsistency in age, and so on.
- The hardest hit by such irregularities are the vulnerable and the marginalised, who have limited documentation at the best of time.
- They are rarely in a position to correct errors across documents.
- On occasion, orders determining citizenship have been passed by tribunals without even assigning reasons, a basic element of the rule of law.
- In addition, a substantial number of individuals are sent to detention camps without being heard.
- In detention centres families are separated, and people are not allowed to move beyond narrow confined spaces for years on end.
- **NRC and Judiciary** - Driven by the Supreme Court, the NRC process has been defined by sealed covers and opaque proceedings.
- The Supreme Court developed a new method of ascertaining citizenship known as the “family tree method”.
- This method was not debated or scrutinised publicly, and it is found that people from the hinterland were unaware of the method.
- Also, those who were aware had particular difficulties in putting together “family trees” of the kind that were required; the burden fell disproportionately upon women.
- Recently, a process allowed for individuals to file “objections” against people whose names had appeared in the draft NRC.
- On the basis of this, such people would be forced to once again prove their citizenship.
- This had resulted in thousands of indiscriminate objections being filed, on a seemingly random basis, causing significant hardship and trauma to countless individuals.

What is the significance of Sanuallah’s case?

- Citizenship issues are very elemental and important demanding careful implementation and necessary procedural safeguards.
- This is especially true as the consequences of being declared a non-citizen are grave.
- These may include disenfranchisement, exclusion from public services, incarceration in detention camps, statelessness, and deportation.
- Ensuring rule of law in such cases is of utmost importance.
- Given this, Mr. Sanuallah’s case has brought the citizenship issue in Assam to the centre stage.
- It can prompt some urgent national introspection about a situation in which thousands of people languish in detention camps for years.
- It must serve as an urgent call for rethinking the National Register of Citizens.

1.3 Lapsing of Bills, waste of Lok Sabha time – Vice President

Why in news?

Vice President suggested to rethink the lapse procedure to avoid wastages of time.

What are the key things suggested by Vice President?

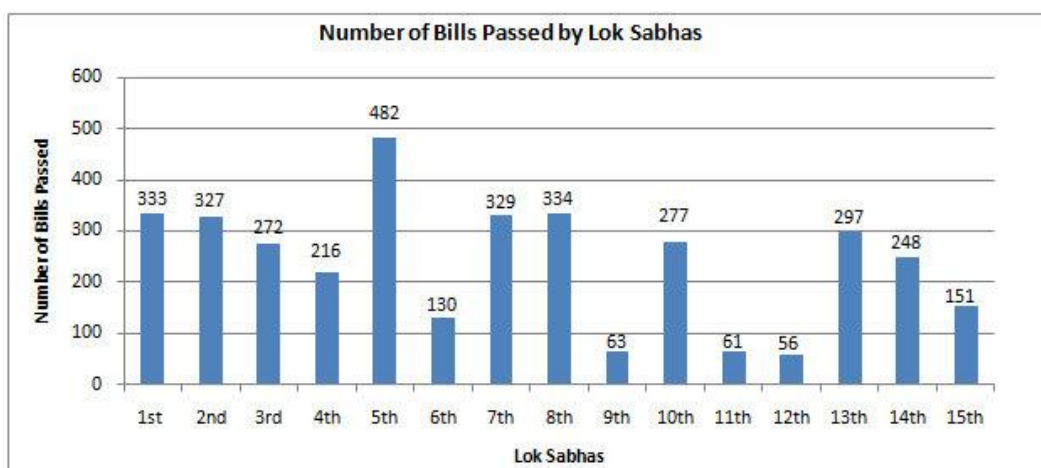
- Following the provisions of Article 107 of the Constitution, 22 Bills passed by the 16th Lok Sabha now stand lapsed.
- The Lok Sabha would now have to take up these 22 Bills again for consideration and passing which is the wastage of time.
- So the Vice President called for a debate on a Constitutional provision that provides for automatic lapsing of any Bill passed by Lok Sabha.
- He also suggested, a Bill which is not taken up for consideration and passage within five years of introduction should automatically be treated as lapsed.
- Since Rajya Sabha is a permanent House, Bills introduced there do not lapse, and remain pending, sometimes for decades.

When a bill gets lapsed in Indian Parliament?

- **Article 107** - Provison as to introduction and passing of bills.
- According to this article, **Cases when a bill lapses are**,
 - 1) A bill originated in the Lok Sabha but pending in the Lok Sabha – **lapses**.
 - 2) A bill originated and passed by the Rajya Sabha but pending in Lok Sabha – **lapses**.
 - 3) A bill originated and passed by the Lok Sabha but pending in the Rajya Sabha – **lapses**.
 - 4) A bill originated in the Rajya Sabha and returned to that House by the Lok Sabha with amendments and still pending in the Rajaya Sabha on the date of the dissolution of Lok Sabha- **lapses**.
- **Cases when a bill does not lapse -**
 - 1) A bill pending in the Rajya Sabha but not passed by the Lok Sabha **does not lapse**.
 - 2) If the president has notified the holding of a joint sitting before the dissolution of Lok Sabha, **does not lapse**.
 - 3) A bill passed by both Houses but pending assent of the president **does not lapse**.
 - 4) A bill passed by both Houses but returned by the president for reconsideration of Rajya Sabha **does not lapse**.

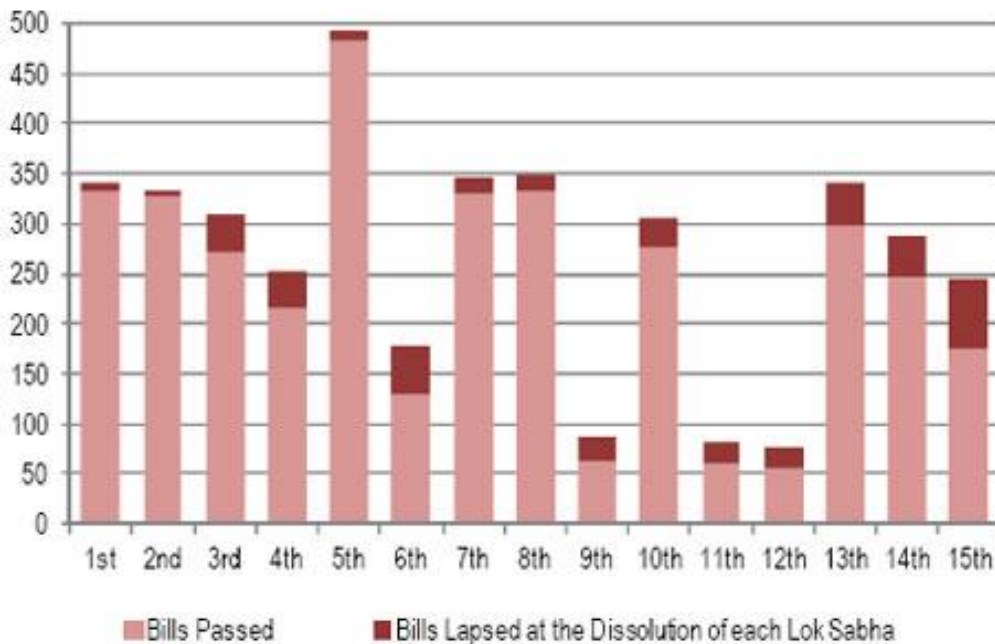
What is the Status of Legislations in the parliament?

- India's first Lok Sabha (1952-1957) passed a total of **333 Bills** in its five year tenure.
- Since then, every Lok Sabha which has completed over three years of its full term has passed an **average of 317 Bills**.
- Where a Lok Sabha has lasted for less than 3 years, it has passed an **average of 77 Bills**. This includes the 6th, 9th, 11th and 12th Lok Sabhas.



- Both houses spent nearly half their time on transacting legislative business. So lapse of bill affects the productive time spend on legislative business.
- Number of bills lapsed at the end of every Lok Sabha is increasing,

Status of Bills Passed and Lapsed: 1st to 15th Lok Sabha



Note: The 6th, 9th, 11th and 12th Lok Sabhas did not complete a five year term

- **22 Bills lapsed** after the dissolution of the **16th Lok Sabha**.
- **Pendency of Bills in Rajya Sabha (as of 2019):**
 - 1) 3 bills are pending for more than 20 years,
 - 2) 6 bills are pending between 10-20 years,
 - 3) 14 bills are pending between 5-10 years and
 - 4) 10 bills are pending for less than 5 years.
- The lapsed Bills include important bills like
 - 1) The Land Acquisition Bills passed by Lok Sabha in 2015,
 - 2) The Motor Vehicles (Amendment) Bill, 2017,
 - 3) The Banning of Unregulated Deposit schemes Bill, 2019,
 - 4) The Aadhar and Other Laws (Amendment) Bill, 2019,
 - 5) Triple Talaq Bills of 2017 and 2018, etc.
- It takes considerable time and energy to get a Bill passed in either of the Houses of Parliament.
- The efforts of Lok Sabha for passing these 22 Bills have been rendered waste and again it has to be taken up for consideration and to be passed in the parliament.
- Lok Sabha spent a larger share of its work hours on legislative business, 21% in the 15th Lok Sabha and 19% in the 14th Lok Sabha.
- 59% of the bills in the Lok Sabha were discussed for more than two hours in 16th Lok Sabha.
- So on lapsing of bills at the end of the term of Lok Sabha leads to wastage of time, as the new Lok Sabha has to take up the bills again.
- It would take a minimum of two sessions to do so there is a need to rethink the provision regarding the lapsing of Bills in the Parliament and also to increase the productivity.



1.4 Maratha Reservation

Why in news?

The Bombay High Court (HC) verdict has upheld the Maharashtra government's law on reservation for Marathas.

What is the law?

- The law had conferred reservation benefits in education and public employment on the Maratha community.
- It created a group called Socially and Educationally Backward Class (SEBC).
- SEBC had included Marathas as the sole group under the category, and extended 16% reservation.

What were the hurdles?

- The additional Maratha component takes the **reservation up to 68%** (Goes beyond the limit of 50% imposed by the Supreme Court).
- There were doubts whether **one particular caste** group can be a **special class**.
- This law had faced **strident agitations** from the community in the past for reservation benefits.

What is the HC verdict?

- It has ruled that there were "exceptional circumstances and an extraordinary situation" to warrant the crossing the 50% limit.
- It has upheld the government's decision to accept the Maharashtra Backward Classes Commission's report on the backwardness of the Maratha community.
- It faulted the government for exceeding the panel's recommendation for 12-13% reservation and pulled back the figure.

What is the 'extraordinary situation' as per HC?

- The failure to treat this group as backward for decades has pushed it into social and educational backwardness.
- Thus, it says, this is an extraordinary situation wherein the State had to treat them as a separate category.

Why many aren't convinced by the HC's reasoning?

- It is doubtful whether a **politically influential and dominant community** can be treated as a special category in itself.
- Marathas are the **only member** of the newly created 'SEBC'.
- It is confusing how can **SEBC be a separate category** outside the OBCs.
- There is **no need for separate reservation** for Marathas.
- The upliftment can be achieved by including them in the **OBC list** itself.
- If there were concerns about too large a population sharing too small a quota, the existing OBC reservation could have been expanded.
- As **mere expansion of the reservation** pool is unlikely to be a constitutionally permissible reason, exception to the 50% limit should be examined by the Supreme Court closely.

2. GOVERNMENT POLICIES

2.1 Draft National Education Policy 2019

Why in news?

The draft of New National Education Policy has been recently submitted by the Committee led by the Chairman Dr. Kasturirangan on education policy.

What are the key changes proposed?

- **Ministry** - The committee has proposed to rename the Ministry of Human Resource Development as Ministry of Education (MoE).

- **Curriculum** - In school education, a major reconfiguration of curricular and pedagogical structure was proposed.
- The policy calls for an Early Childhood Care and Education (ECCE) as an integral part of school education.
- A 5+3+3+4 curricular and pedagogical structure based on cognitive and socio-emotional developmental stages of children was proposed.
- It consists of -
 1. Foundational Stage (age 3-8 yrs): 3 years of pre-primary plus Grades 1-2
 2. Preparatory Stage (8-11 years): Grades 3-5
 3. Middle Stage (11-14 years): Grades 6-8
 4. Secondary Stage (14-18 years): Grades 9-12
- The policy also seeks to reduce content load in school education curriculum.
- There will be no hard separation of learning areas in terms of curricular, co-curricular or extra-curricular areas.
- All subjects, including arts, music, crafts, sports, yoga, community service, etc will be part of the curricular.
- Thus, schools will be re-organized into school complexes.
- The policy promotes active pedagogy to focus on the development of core capacities and life skills, including 21st century skills.
- **RTE Act** - The committee recommends Extension of Right to Education Act 2009 to cover children of ages 3 to 18 (currently, 6-14).
- **Teacher education** - The committee proposes for massive transformation in teacher education.
- It calls for shutting down sub-standard teacher education institutions.
- It proposes moving all teacher preparation/education programmes into large multidisciplinary universities/colleges.
- The 4-year integrated stage-specific B.Ed. programme will eventually be the minimum degree qualification for teachers.
- **Higher education** - A restructuring of higher education institutions with three types of higher education institutions was proposed -
 1. Type 1: Focused on world-class research and high quality teaching
 2. Type 2: Focused on high quality teaching across disciplines with significant contribution to research
 3. Type 3: High quality teaching focused on undergraduate education
- This will be driven by two Missions -Mission Nalanda & Mission Takshashila.
- There will be re-structuring of Undergraduate programs such as BSc, BA, BCom, BVoc of 3 or 4 years duration and having multiple exit and entry options.
- **Institution** - A new apex body Rashtriya Shiksha Ayog is proposed.
- This is to enable a holistic and integrated implementation of all educational initiatives and programmatic interventions.
- The body will also coordinate efforts between the Centre and states.
- The National Research Foundation, an apex body, is proposed for creating a strong research culture.
- It will help build research capacity across higher education.
- The four functions of Standard Setting, Funding, Accreditation and Regulation will be separated and conducted by independent bodies.
- National Higher Education Regulatory Authority will be the only regulator for all higher education including professional education.



- The policy proposes to create an accreditation eco-system led by a revamped NAAC (National Assessment and Accreditation Council).
- Professional Standard Setting Bodies for each area of professional education was proposed.
- UGC is to be transformed to Higher Education Grants Commission (HEGC).
- The private and public institutions will be treated on par, and education will remain a 'not for profit' activity.
- Besides the above, the committee also recommended several new policy initiatives for -
 - i. promoting internationalization of higher education
 - ii. strengthening quality open and distance learning
 - iii. technology integration at all levels of education
 - iv. facilitating adult and lifelong learning
 - v. enhancing participation of under-represented groups
 - vi. eliminating gender, social category and regional gaps in education outcomes

What are the old and new proposals regarding language?

- **Earlier provision** - Students who wish to change one of the three languages they are studying may do so in Grade 6.
- But this is only as long as the study of 3 languages by students in the Hindi-speaking states would continue to include Hindi and English and one of the modern Indian languages from other parts of India.
- Likewise, study of languages by students in the non-Hindi-speaking states would include the regional language, Hindi and English.
- **New change** - Students who wish to change one or more of the 3 languages they are studying may do so in Grade 6 or Grade 7.
- This is only as long as they are able to still demonstrate proficiency in three languages (one language at the literature level).
- This will be as per their modular Board Examinations held some time during secondary school.

What is the continuing contention?

- As per the earlier version, the committee stipulated the languages that students must choose to study from Grade 6.
- In the revised draft, the committee has merely omitted the references to the language that students may choose.
- However, the broader recommendation regarding the implementation of a three-language formula remains.
- In other words, the revised draft retains the recommendation to introduce a three-language formula from Class 1 onwards.
- It simply removes the clause stipulating the specific languages that students must choose in Grade 6.
- Also, the revision was not done by the Central government but by the committee that drafted the policy.

Is Centre's rationale justified?

- The draft policy's push for Hindi seems to be based on the premise that 54% of Indians speak Hindi.
- But according to the 2001 Census, 52 crore out of 121 crore people identified Hindi as their language.
- About 32 crore people declared Hindi as their mother tongue.
- This means that Hindi is the language of less than 44% Indians and mother tongue of only little over 25% people in India.
- But there has been greater push for making Hindi a pan-India language, which is seen as imposition of Hindi by many states, especially that of the South.

How has the official position of Hindi evolved?

- **Constituent Assembly** - The debate over Hindi has been raging since Independence.
- The Constituent Assembly witnessed heated exchanges over the use and scope of Hindi.
- The Sub-Committee on Fundamental Rights of the Constituent Assembly recommended the following:
 1. Hindustani, written either in Devanagari or the Persian script at the option of the citizen, shall, as the national language, be the first official language of the Union.
 2. English shall be the second official language for such period as the Union may, by law, determine.
- **Constitution** - Article 343 of the Constitution prescribes Hindi as written in Devanagari script as the official language of the government along with English for 15 years initially.
- [It has however been extended subsequently.]
- Clearly, the Constitution did not declare Hindi as the 'national language'.
- It rather accorded Hindi the status of 'official language' along with English.

2.2 DNA Regulation Bill

Why in news?

The Cabinet has cleared the DNA Technology (Use and Application) Regulation Bill, 2018 once again, for its re introduction in Parliament.

What is the need?

- To create a **regulatory framework for obtaining, storing and testing of DNA samples** of human beings, mainly for the purposes of **criminal investigations**.
- The proposed law seeks to bring in a **supervisory structure** so that the DNA technology is not misused.

What are the provisions of the Bill?

- The Bill regulates the use of DNA technology for **establishing the identity of persons** in respect of matters listed in a Schedule. These include,
 1. Criminal matters (offences under the IPC, 1860)
 2. Civil matters (parentage disputes, transplantation of human organs etc).
- The Bill **establishes National and Regional DNA Data Banks**. Every Data Bank will maintain the following indices:
 1. crime scene index
 2. suspects' or undertrials' index,
 3. offenders' index
 4. missing persons' index, and
 5. unknown deceased persons' index.
- It **establishes a DNA Regulatory Board**. Every DNA laboratory that analyses a DNA sample to establish the identity of an individual, has to be accredited by the Board.
- **Written consent is required** from individuals to collect DNA samples from them.
- **Consent is not required** for offences with punishment of more than 7 years of imprisonment or death.
- It also provides for the **removal of DNA profiles** of suspects on filing of a police report or court order, and of undertrials on the basis of a court order.
- Profiles in the crime scene and missing persons' index will be removed on a written request.

What are all the issues with this bill?

- **Clarity** - The Schedule lists civil matters where DNA profiling can be used. This includes issues relating to establishment of individual identity.



- So, it is unclear if it intends to regulate the medical or research laboratories where the DNA testing is carried out.
- **Consent** - The Bill hasn't specified for any requirement of the consent of the individual when DNA profiling is used in civil matters.
- **Privacy** - DNA laboratories are required to share DNA data with the Data Banks.
- It is unclear whether DNA profiles for civil matters will also be stored in the Data Banks which may violate the right to privacy.
- **Removal** - The Bill specifies the process by which DNA profiles may be removed from the Data Banks.
- However, the Bill does not require DNA laboratories to remove DNA profiles.

3. SOCIAL JUSTICE

3.1 Mob Lynching

What is the issue?

The death of Tabrez Ansari in Jharkhand by mob lynching calls for an understanding on vigilantism.

What are the worrying trends?

- **Vigilantism** - The incident has again brought to light the disturbing phenomenon of lynching and vigilantism in India.
- [Vigilantes are those who organize themselves into an unofficial group and take up law enforcement into their hands.]
- **Communalism** - Organised vigilantism by cow protection groups was initially behind a wave of lynchings.
- Rumour-mongering through social media platforms came next as the cause.
- Now, the Ansari incident shows that the problem has moved into a form of enforcing the chanting of Hindu slogans by citizens professing other religions.
- The communal angle was on display, with the crowd forcing Ansari, a Muslim, to shout 'Jai Sri Ram' and 'Jai Hanuman'.
- It reflects an instance of mob mentality combining with a communal motive.
- **Lynching** - Lynching has acquired the status of a predominant social trend.
- It is taking place as a consequence of vigilantism, communal bigotry and dissemination of hate messages and rumours on social media.
- Rising intolerance and growing polarisation expressed through mob violence is becoming a normal way of life or the normal state of law and order.
- The Supreme Court too noted this and condemned it in a judgment last year.

What does this call for?

- As directed by the Supreme Court earlier, the State should take specific preventive, punitive and remedial measures.
- It mooted a special law to deal with lynching and the appointment of a nodal officer in each district to combat the threat.
- While these measures are not yet in place, the latest incident must be thoroughly investigated and the perpetrators be punished.
- Beyond these, the larger issue of organized vigilantism on communal motives has to be addressed by the political leadership.

3.2 SDG Gender Index - Equal Measures 2030

Why in news?

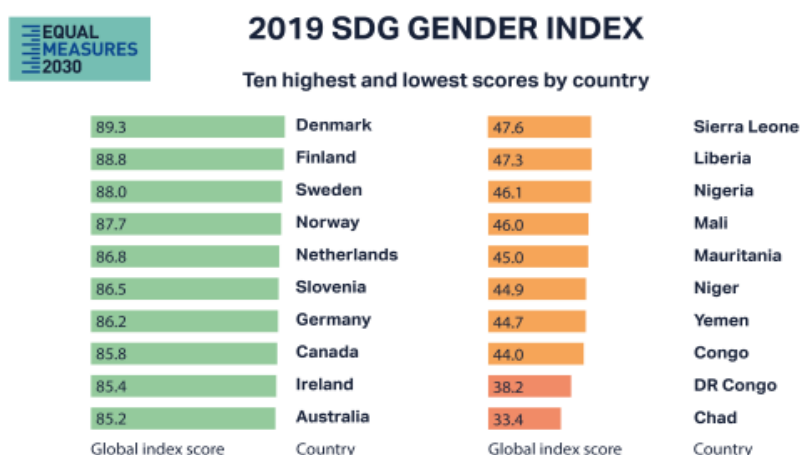
The SDG Gender Index, a new index to measure global gender equality, was launched recently.

What is the SDG Gender Index?

- The SDG Gender Index has been developed by Equal Measures 2030, a joint effort of regional and global organisations including:
 - African Women's Development and Communication Network
 - Asian-Pacific Resource and Research Centre for Women
 - Bill and Melinda Gates Foundation
 - International Women's Health Coalition
- The index accounts for 14 out of 17 SDGs (sustainable development goals).
- The goals cover aspects such as poverty, health, education, literacy, political representation and equality at the workplace.
- A score of 100 reflects the achievement of gender equality in relation to the targets set for each indicator.
- A score of 50 signifies that a country is about halfway to meeting a goal.

What are the key findings?

- The global average score of the 129 countries (with 95% of the world's girls and women) is 65.7 out of 100 ("poor" in the index).
- Nearly 1.4 billion girls and women are living in countries that get a "very poor" grade.
- Altogether, 2.8 billion girls and women live in countries that get either a "very poor" (59 and below) or "poor" score (60-69).
- Just 8% of the world's population of girls and women live in countries that received a "good" gender equality score (80-89).
- Notably, no country achieved an "excellent" overall score of 90 or above in gender equality.
- Besides, not all countries' scores on the index correlate with national income.
- Some countries perform better than what would be expected based on their GDP per capita, and others underperform.
- With all these, it was highlighted that the world was far from achieving gender equality.



How does India perform?

- India was ranked at 95th among 129 countries.**
- India's highest goal scores are on health (79.9), hunger & nutrition (76.2), and energy (71.8).

- Its lowest goal scores are on partnerships (18.3, in the bottom 10 countries), industry, infrastructure and innovation (38.1), and climate (43.4).
- On indicators that define the goals, India scored 95.3 on the percentage of female students enrolled in primary education who are overage.
- In the proportion of seats held by women in national parliament, India scored 23.6; women made up 11.8% of Parliament in 2018.
- On seats held by women in the Supreme Court (4%), India has a score of 18.2.
- On gender-based violence, indicators include -
 - i. proportion of women aged 20-24 years who were married or in a union before age 18 (27.3%)
 - ii. women who agreed that a husband/partner is justified in beating his wife/partner under certain circumstances (47.0%)
 - iii. women aged 15+ who reported that they feel safe walking alone at night in the city or area where they live (69.1%)
- Overall, India largely performs as expected based on its GDP per capita.

3.3 Free Rides for Women - Delhi

Why in news?

Delhi government has proposed to make travel by buses and metro rail free for all women in about 3 months.

What is the rationale?

- The National Capital Region is among the most unsafe urban regions for women worldwide.
- In this backdrop, the free rides measure is meant to encourage more women to use public transport.
- This is because the government reckons public transport as the safest mode of transport for women.
- Free rides is expected to increase the use of public transport by women as metro rides have become rather expensive after May 2017.

What are the concerns with the proposal?

- **Relevance** - A larger proportion of female travellers on the metro are actually the women who can afford to pay the full fare.
- On the other hand, women who should ideally benefit from free rides might still not use the metro or the buses.
- This is simply because such modes of transport do not connect their place of residence and place of work.
- Domestic helps who walk 2-6 km daily fall in this category.
- **Discrimination** - Besides, asymmetric pricing benefits tend to be socially divisive as it would discriminate against poor men and boys.
- **Economy** - The Delhi government has not explained how it will compensate the two services.
- It is speculated that the measure would cost the Delhi government around Rs 700 crore on an annual basis.
- The Delhi Transport Corporation has seen its working losses rise from around Rs 940 crore in 2013-14 to Rs 1,750 crore in 2018-19.
- On the other hand, the Delhi metro, it raised fares after a long gap of 8 years to much controversy.
- Its operating ratio is in danger of being skewed again if a large segment of its passengers travels free.

What could be done?

- Discounted fares for certain classes of commuters, including students and seniors could be introduced.
- This, along with, daily and weekly cap on fares might encourage greater use of buses and metros.
- That requires widespread adoption of smart payment cards that are valid across various modes of public transport.

- Cities such as London and Sydney are among the many that have such a system in place.
- E.g. the Oyster card is valid for travel through all 6 zones of London and has a daily cap of £12.80
- Likewise, the Opal card in Sydney comes with a daily cap of A\$15.80 and weekly cap of A\$63.20. On Sundays, the maximum fare is A\$2.70.
- Besides, the real demands in light of the safety concerns are enlightened education campaigns and a heightened investment on security and vigilance.
- Instead of subsidies, the government can augment Delhi's bus service in terms of quantity and security.
- It can work with the central government to train the police force in gender sensitivity to make the national capital safer for women in overall terms.

3.4 Declining Women Workforce Participation

Why in news?

The [Periodic Labour Force Survey](#) (PLFS) data for 2017-18 and the December quarter was released recently by the Ministry of Statistics and Programme Implementation (MoSPI).

How is women labour force participation in India?

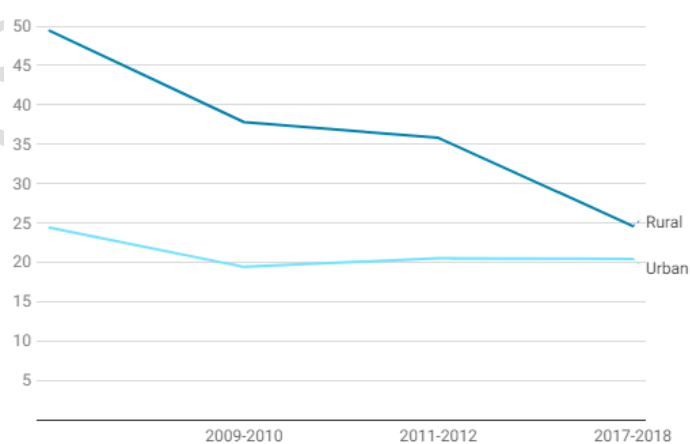
- As per 61st round of the NSSO survey (2004-2005), 48.5% rural women (above 15 years) were employed either as their major activity or as their subsidiary activity.
- But this number dropped to 23.7% in the recently released report of the Periodic Labour Force Survey (PLFS).
- In other words, in rural India, nearly half the women who were in the workforce in 2004-05 had dropped out in 2017-18.

Is this a new change?

- The drop in work participation by rural women is not sudden.
- The latest data from the PLFS simply continue a trend that was well in place by 2011-12.
- Worker to population ratio (WPR) for rural women aged 15 and above had dropped from 48.5% in 2004-05 to 35.2% in 2011-12 itself.
- In contrast, the WPR for urban women aged 15 and above declined only mildly from 22.7% in 2004-5 to 19.5% in 2011-12, and to 18.2% in 2017-18.

India's falling female labour force participation

Female labour force participation rate (%)



What does the sectional data suggest?

- It is to be noted that the drop is not located primarily among the privileged sections of the rural population.
- More importantly, most of the decline in the WPR has taken place among women with low levels of education.
- For illiterate women, the WPR fell from 55% to around 29% while that for women with secondary education fell from 30.5% to 15.6%.
- In all, the broad-based decline has higher concentration among the least educated and the poorest.
- So clearly, the drop is not a result of a choice made due to rising incomes of the households.
- In other words, it is not a choice by the richer households that women's time could be better spent caring for home and children.
- It is neither a trend among women with higher education.

- So, it is largely a result of the fact that women are unable to find work in a crowded labour market.
- This reflects the conditions of disguised unemployment, which is a cause of concern for the nation as a whole.

Periodic Labour Force Survey (PLFS)

- PLFS is a recent initiative aimed at generating estimates of various labour force indicators.
- It measures employment every 3 months in urban areas and once a year in both rural and urban areas.
- The quarterly survey only captures data classed as current weekly status (CWS), while the annual survey measures both the usual status and CWS.
- The National Sample Survey Office (NSSO) under the Ministry of Statistics and Programme Implementation conducts the survey.

Which components have recorded decline?

- The decline in work on family farms and allied activities contributed the most (14.8 percentage points).
- This is followed by casual wage labour (8.9 percentage points).
- Next came the work on family enterprises in other industries (2.4 percentage points).
- These were counter-balanced by a 0.7 percentage point increase in regular salaried work.
- There was also a 0.5 percentage point increase in engagement in public works programmes such as Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA).
- In all, most of the decline (23.1 percentage points out of 24.8) came from reduced participation in agriculture and allied activities.
- Men's participation in agriculture has also declined.
- Among men aged 15 and above, 56.1% participated in agriculture in 2004-5. In contrast, only 39.6% did so in 2017-18.

What are the causes?

- **Mechanisation and land fragmentation** have reduced agricultural work opportunities for both men and women.
- While men were able to pick up work in other industries, women reduced their participation in other industries as well as agriculture.
- A man with class 10 education can be a postal carrier, a truck driver or a mechanic.
- Such other **work opportunities**, except for work in public works programmes, are not easily open to women.
- This challenge is particularly severe for rural women with moderate levels of education.
- Hence, education is associated with a lower WPR for women, in the rural context.
- Evidently, in 2016-17, around 29% illiterate women were employed, compared to only 16% women with at least secondary education.
- The method of **categorisation of workers** in the NSSO survey and PLFS also contributes to the inflated numbers.
- [It counts as primary activity in which respondents spent a majority of their prior year.
- Subsidiary activity is in which individuals spent at least 30 days.]
- If individuals are defined as working by either primary or subsidiary criteria, they are counted among workers.
- Increasingly, as demand for agricultural work declines and women engage in diverse activities, their work tends to become fragmented.
- So there could be tremendous undercount of women's work under the standard labour force questions, particularly in rural areas.
- A woman who spends 15 days on her own field, 10 days as a construction labourer and 15 days in MGNREGA work should be counted as a worker using the subsidiary status criteria.

What are the possible ways out?

- The establishment of the Cabinet Committee on Employment and Skill Development is a welcome move.
- The committee is expected to take the issue of declining female employment.
- Development of transportation infrastructure could go a long way in bringing in rural women into non-agricultural work.
- If the cabinet committee formulates appropriate policies, the potential gender dividend could be far greater than the much celebrated demographic dividend.

3.5 World Population Projections 2019

Why in news?

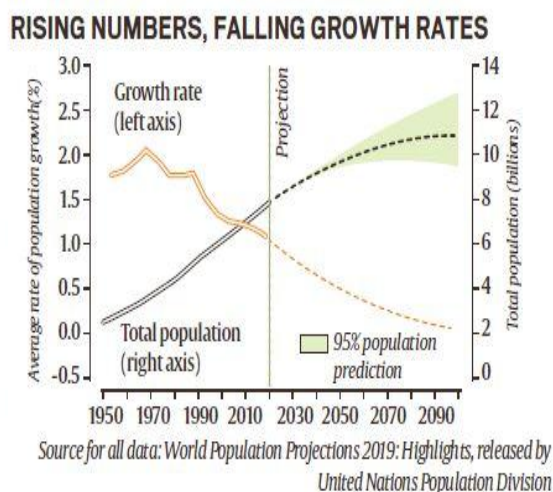
The United Nations recently released the 'World Population Projections 2019' report.

What are the highlights?

- **World population** - The report projects the world population to reach some 9.7 billion by 2050.
- However, it says that the overall growth rate will continue to fall.
- The next 30 years will see the population add 2 billion people to today's 7.7 billion.
- Half of the projected increase in the global population up to 2050 will be concentrated in just 9 countries.
- This is led by India and followed by Nigeria, Pakistan, Democratic Republic of the Congo, Ethiopia, Tanzania, Indonesia, Egypt and the US.
- Many of the fastest growing populations are in the poorest countries.

THE CHANGING ORDER (POPULATIONS IN mn)

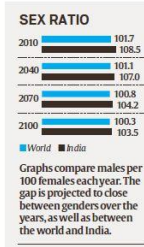
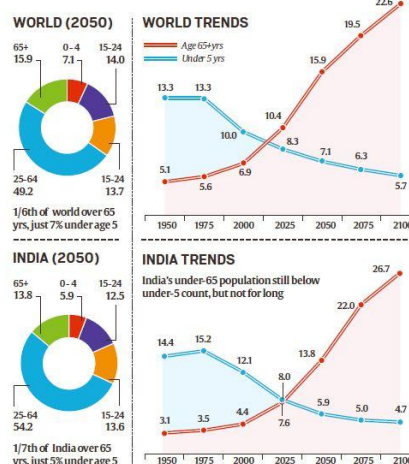
Rank	2019	2050	2100
1.	China (1,434)	India (1,639)	India (1,450)
2.	India (1,366)	China (1,402)	China (1,065)
3.	US (329)	Nigeria (401)	Nigeria (733)
4.	Indonesia (271)	US (379)	US (434)
5.	Pakistan (217)	Pakistan (338)	Pakistan (403)
6.	Brazil (211)	Indonesia (331)	Congo (362)
7.	Nigeria (201)	Brazil (229)	Indonesia (321)
8.	Bangladesh (163)	Ethiopia (205)	Ethiopia (294)
9.	Russia (146)	Congo (194)	Tanzania (286)
10.	Mexico (128)	Bangladesh (193)	Egypt (225)



- **Fertility rates**—The fertility rates are falling worldwide.
- The average number of births per woman globally, from 3.2 in 1990, fell to 2.5 by 2019.
- To avoid decline in a national population, a fertility level of 2.1 births per woman is necessary (in the absence of immigration).
- **Age composition** - In 2018, for the first time, persons aged 65 years or over worldwide outnumbered children under age five.
- Projections indicate that by 2050, there will be more than twice as many persons above 65 as children under five.
- By 2050, one in six people in the world will be over age 65 (16%), up from one in 11 in 2019 (9%).
- By 2050, the number of persons aged 65 or over will also surpass the number of adolescents and youth aged 15-24.
- The number of persons aged 80 years or over is projected to triple, from 143 million in 2019 to 426 million in 2050.

- **Life expectancy** - The overall life expectancy will increase from 64.2 years in 1990 to 77.1 years in 2050.
- However, life expectancy in poorer countries is projected to continue to lag behind.
- Today, the average lifespan of a baby born in one of the least developed countries will be some 7 years shorter than one born in a developed country.
- The main reasons cited are high child and maternal mortality rates, conflict and insecurity, and the continuing impact of the HIV epidemic.
- **Dwindling populations** - The populations of 55 countries are projected to decrease by 1% or more between 2019 and 2050.
- The largest relative reductions in population size (loss of around 20% or more) over this period are expected in Bulgaria, Latvia, Lithuania, Ukraine, and the Wallis and Futuna Islands.
- The key reasons are sustained low levels of fertility, and, in some places, high rates of emigration.
- **Migration** - Migration flows have become a major reason for population change in certain regions.
- Bangladesh, Nepal and the Philippines are seeing the largest migratory outflows resulting from the demand for migrant workers.
- Myanmar, Syria and Venezuela are the countries where the largest numbers are leaving because of insecurity or conflict.
- **Sex ratio** - Males are projected to continue to outnumber females until the end of the century, but the gap will close eventually.

MORE ELDERLY, FEWER KIDS



WHEN INDIA OVERTAKES CHINA
(Populations in million)

Year	India	China
2018	1,353	1,427
2019	1,366	1,434
2020	1,380	1,439
2021	1,393	1,444
2022	1,407	1,448
2023	1,419	1,452
2024	1,432	1,455
2025	1,445	1,458
2026	1,457	1,460
2027	1,469	1,462
2028	1,481	1,463

How will India's population be?

- India is projected to surpass China as the world's most populous country in the next 8 years i.e. by around 2027.
- India is expected to add nearly 273 million people between 2019 and 2050.
- It will remain the most populated country through the end of the current century.
- **Over-65 population** - In India, children under age five still outnumber the over-65 population.
- But the over-65 population is projected to overtake the under-five group between 2025 and 2030.

How is India in comparison with China?

- India's population has ballooned from around 555 million in 1970 to close to 1,300 million now, a 146% expansion.
- In comparison, China's population grew at about half that pace (73%), during the same period.
- This was largely on account of undemocratic decisions such as one-child policy in China.
- China saw its total fertility rate decline from 6.30 in 1965-70 to 5.41 in 1970-75 after the two-child policy was introduced.
- It fell further after the one-child policy was implemented and currently stands at 1.69.
- In contrast, in India, the total fertility rate declined from 5.7 in 1965-70 to 4.85 in 1970-75 and is currently at 2.24.
- However, there are wide variations across States with 1.6 in Tamil Nadu and West Bengal and at 3.3 in Bihar and 3.1 in Uttar Pradesh.
- The fertility rate in the rural areas is much higher than in the urban areas.
- An encouraging factor is that the median age of India's population will be 28.43 years in 2020 compared to 38.4 years in China.



How will migration trend be?

- The UN report shows migration to 'countries with a falling ratio of working-age people to those above 65' will be steady.
- This is because such economies open up to workers to sustain economic production.
- Japan has the lowest such ratio, followed by Europe and the Caribbean.
- In over three decades, North America, Eastern and South-eastern Asia will join this group.
- India will have a vast number of young people and insufficient natural resources left for exploitation.
- Preparing for the changes and opportunities that migration offers will depend on a skills revolution.

What are the challenges ahead for India?

- India's growing population poses more challenges than opportunities.
- The country will have to invest in -
 - i. augmenting the education and healthcare system
 - ii. grow more food
 - iii. provide more housing
 - iv. sharply increase drinking water supply
 - v. add capacity to basic infrastructure, such as roads, transport, electricity and sewage
- To fund all such expansion, the nation needs to raise resources through taxation and other means.
- Even if less than 5 million people are entering the workforce every year, employing them at a decent wage is a challenging task.

3.6 Prison Statistics India 2016 - NCRB

What is the issue?

- The Prison Statistics India 2016 report was published by the National Crime Records Bureau (NCRB) some time back.
- The lack of certain categories of information in the report calls for the NCRB to be more prompt and open in releasing data.

What are the report highlights?

- **Prison population** - The report notes that at the end of 2016, there were close to 4,33,000 people in prison.
- Of these, 68% were undertrials, or people who are yet to be found guilty of the crimes they are accused of.
- India's under-trial population remains among the highest in the world.
- More than half of all undertrials were detained for less than 6 months in 2016.
- This suggests that the high proportion of undertrials in the overall prison population may be the result of unnecessary arrests and ineffective legal aid during remand hearings.
- **Preventive detention** - Another concern is the rise in the number of people held under administrative (or 'preventive') detention laws in Jammu and Kashmir.
- There has been a 300% increase, with 431 detainees in 2016, compared to 90 in 2015.
- Administrative, or 'preventive', detention is being used by authorities to unfairly detain persons without charge or trial and circumvent regular criminal justice procedures.
- **Prisoner release** - A new and important addition to the report is the data on number of prisoners eligible to be released and actually released.
- In 2016, out of the nearly 1,500 undertrials found eligible for release under Section 436A, only 929 were released.
- [Section 436A of the Code of Criminal Procedure allows undertrials to be released on a personal bond.



- This is possible if they have undergone half of the maximum term of imprisonment they would have faced if convicted.]
- Research by Amnesty India has found that prison officials are frequently unaware of this section and unwilling to apply it.
 - In 2017, the Law Commission of India had recommended that undertrials who have completed a third of their maximum sentence for offences attracting up to 7 years of imprisonment be released on bail.
 - The NCRB could consider including the number of such undertrials in its upcoming report for informing the policy on the use of undertrial detention.]
- **Unnatural deaths** - Unnatural deaths doubled between 2015 and 2016, from 115 to 231.
- **Mental health concerns** - About 6,000 individuals with mental illness were in jail in 2016.
- The rate of suicide among prisoners has also increased by 28%, from 77 in 2015 to 102 in 2016.
- The National Human Rights Commission in 2014 stated that on average, a person is one-and-a-half times more likely to commit suicide in prison than outside.
- This is an indicator of the magnitude of mental health concerns within prisons.
- Moreover, the report mentions that there was only one mental health professional for every 21,650 prisoners, in 2016.
- Only 6 States and one Union Territory had psychologists/psychiatrists.
- Odisha, U.P. and M.P., the 3 States with the most prisoners with mental illness, did not have a single psychologist or psychiatrist.

What are the shortcomings in the report?

- **Demographic details** - The NCRB failed to include demographic details of religion, and the Scheduled Caste and Scheduled Tribe status of prisoners.
- But these demographic details, which were consistently published for the last 20 years, are crucial to understand India's prison population.
- It had, notably, been instrumental in revealing the overrepresentation of Muslims, Dalits and Adivasis among under-trials in prisons.
- [The 2015 report noted that Muslims, Dalits and Adivasis accounted for 55% of the under-trial population.
- This was despite the fact that they made up only 50% of the convict population and 38% of the total Indian population.]
- **Prison visits** - The 2016 prison statistics do not mention the number of prison visits by official and non-official visitors.
- [The non-official visitors include district magistrates and judges, social workers and researchers.]
- The number of "unnatural" deaths in prisons underlines the relevance of prison visits.
- The details on this aspect can be used to provide some information on independent monitoring of prisons.
- This is essential to uncover torture and other forms of ill-treatment, increase transparency and balance the power asymmetry in prisons.
- **Mental health concerns** - The report does not provide information on whether the reported mentally affected prisoners were diagnosed with mental illness before entering prison.
- The resultant lack of clarity thus makes it difficult to determine whether prison conditions worsened their plight.

4. HEALTH

4.1 Acute Encephalitis Syndrome

Why in news?

- The outbreak of acute encephalitis syndrome (AES) in Bihar has led to around 100 deaths.
- While the causes of AES are still researched, the association with hypoglycaemia and litchi fruit has drawn attention.

What is AES?

- It is a broad term involving several infections, and it affects young children.
- AES is not a disease; it is a syndrome.
- Under its umbrella comes the hypoglycaemia, Japanese Encephalitis, Herpes meningitis, Race syndrome, cerebral malaria, scrub typhus, etc.
- All of them are grouped under AES as they have a classical triad of sudden onset of fever, convulsions and loss of consciousness.

What causes AES?

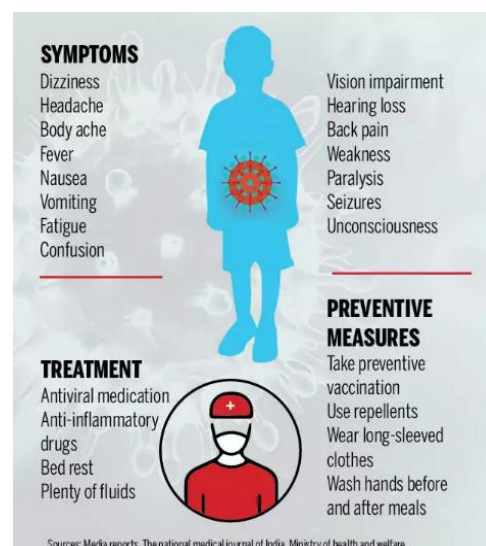
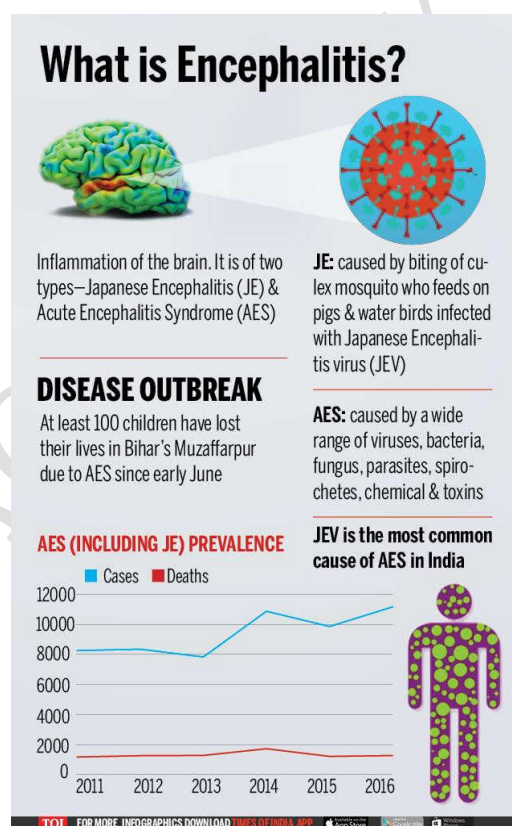
- The syndrome can be caused by viruses, bacteria or fungi.
- In India, the most common cause is the virus that causes Japanese encephalitis (JE).
- Health Ministry estimates attribute 5-35% of AES cases to the JE virus.
- In Bihar, the Directorate of Health Services claimed that the JE virus had caused only two of the total 342 AES cases this year.
- The syndrome is also caused by infections such as scrub typhus, dengue, mumps, measles, and even Nipah or Zika virus.
- In the latest outbreak in Muzaffarpur, the cause is yet to be clinically identified in most of the children.

How is hypoglycaemia linked to AES?

- Hypoglycaemia (low blood sugar) is a commonly seen sign among AES patients, and the link has been the subject of research for long.
- The combination of AES with hypoglycaemia is unique to Muzaffarpur, Vietnam and Bangladesh.
- A 2014 study in Muzaffarpur suggested that hypoglycaemia was the trigger that led to diagnosis of encephalitis.
- So, Hypoglycaemia is not a symptom but a sign of AES.
- With 98% of AES patients in Bihar also suffering hypoglycaemia, doctors are attributing deaths to the latter.
- In Bihar, convulsions in children (which is AES) are found in combination with hypoglycaemia.

What is the litchi connect?

- Methylene cyclopropyl glycine (MCPG), also known as hypoglycin A, is known to be a content of litchi fruit.
- Undernourished children who ate litchi during the day and went to bed on an empty stomach presented with serious illness early the next morning.





- MPCG lowers blood sugar level during night, and these children are found unconscious in the morning.
- Blood glucose falls sharply causing severe brain malfunction (encephalopathy), leading to seizures and coma, and death in many cases.
- However, this remains a subject of debate, and the possible association needs to be documented.

What role does malnutrition play?

- If toxins from litchi were causing hypoglycaemia, then these cases should have remained consistent each year.
- Also, it should have affected children of all socio-economic strata.
- But in contrast, this year, all deaths have been recorded in the lower income groups.
- While well-nourished children eating litchi remain unaffected even if they go to bed on an empty stomach, the under-nourished ones were at grave risk.
- This is because under-nourished children lack sufficient glucose reserve in the form of glycogen.
- Also, the production of glucose from non-carbohydrate source is unsafe as it is unsustainable and thus stopped midway.
- This leads to low blood sugar level, giving way for further health complications.
- In all, even if litchi is a triggering factor, the real cause for adverse effects is said to be malnutrition.
- So, while the cause of AES is still being researched, hypoglycaemic AES may be caused by malnutrition, heat, lack of rain, and entero-virus.

Dextrose

- Dextrose is the name of a simple sugar that is made from corn and is chemically identical to glucose, or blood sugar.
- Dextrose is often used in baking products as a sweetener, and can be commonly found in items such as processed foods and corn syrup.
- For medical purposes, it is dissolved in solutions that are given intravenously, which can be combined with other drugs, or used to increase a person's blood sugar.
- As dextrose is a "simple" sugar, the body can quickly use it for energy.
- Simple sugars can raise blood sugar levels very quickly, and they often lack nutritional value.

What makes Bihar and UP so vulnerable?

- Malnutrition is high in both states, and malnourished children are prone to infection.
- As per Health Ministry data, UP and Bihar together account for over 35% of child deaths in the country.
- National Family Health Survey-4 data show that in 2015-16, 48% children aged less than 5 in Bihar were stunted, which is the highest in India.
- Also, heat, humidity, unhygienic conditions and malnutrition which are unique to these areas, together contribute to the rise in AES.
- Incidence is higher in litchi fields around which malnourished children live.

4.2 Health Index 2019 - NITI Aayog

Why in news?

The second edition of NITI Aayog's Health Index was recently released in its report titled 'Healthy States, Progressive India: Report on Rank of States and UTs'.

What is the index on?

- The Index ranks the States and Union Territories based on 23 health-related indicators which include –
 - i. neonatal mortality rate
 - ii. under-five mortality rate
 - iii. proportion of low birth weight among new-borns
 - iv. progress in treating tuberculosis and HIV
 - v. full immunisation coverage
 - vi. improvements to administrative capability and public health infrastructure

- vii. proportion of districts with functional Cardiac Care Units
- viii. proportion of specialist positions vacant at district hospitals
- The report has ranking in three categories - larger States, smaller States and Union Territories, to ensure comparison among similar entities.
- The Health Index does not capture other related dimensions, such as non-communicable diseases, infectious diseases and mental health.
- It also does not get uniformly reliable data, especially from the growing private sector.

What are the report highlights?

- Kerala continued to top the list for the best performing State in the health sector among the 21 large States.
- Kerala was followed by Andhra Pradesh, Maharashtra, Gujarat and Punjab, Himachal Pradesh, Jammu and Kashmir, Karnataka and Tamil Nadu.
- Andhra Pradesh and Maharashtra have had the additional distinction of making incremental progress from the base year.
- Uttar Pradesh retains the worst performer tag in the index.
- Uttar Pradesh continued to be at the bottom of the list with its score falling to 28.61; Kerala got a score of 74.01.
- Other States at the bottom of the list are Bihar (32.11), Odisha (35.97) and Madhya Pradesh (38.39).
- Among the UTs, Chandigarh jumped one spot to top the list with a score of (63.62).
- It is followed by Dadra and Nagar Haveli, Lakshadweep, Puducherry, Delhi, Andaman and Nicobar and Daman and Diu (41.66).
- Overall, only about half the States and UTs showed an improvement in the overall score between 2015-16 (base year) and 2017-18 (reference year).
- Among the 8 Empowered Action Group States, only 3 States (Rajasthan, Jharkhand and Chhattisgarh) showed improvement in the overall performance.

Top 5 and bottom 5 states in overall performance in 2018 and 2017

Top states (2018)	Top states (2017)	Bottom states (2018)	Bottom states (2017)
Kerala	Kerala	Uttar Pradesh	Uttar Pradesh
Andhra Pradesh	Punjab	Bihar	Rajasthan
Maharashtra	Tamil Nadu	Odisha	Bihar
Gujarat	Gujarat	Madhya Pradesh	Odisha
Punjab	Himachal Pradesh	Uttarakhand	Madhya Pradesh

NOTE: Health index-2018 has the base year of 2015-16 and reference year of 2017-18; while health index-2017 has the base year of 2014-15 and reference year of 2015-16
Source: NITI Aayog

What does the trend imply?

- Some States and Union Territories are doing better on health and well-being even with a lower economic output.
- In contrast, others are not improving upon high standards, and some are actually slipping in their performance.
- In the assessment during 2017-18, a few large States showed less encouraging progress.
- This reflects the low priority their governments have accorded to health and human development since the first edition of the ranking for 2015-16.

- The disparities are very evident in the rankings, with the populous and politically important Uttar Pradesh being in the bottom of the list.








4.3 Nipah Virus Case in Kerala

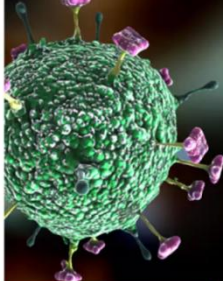
Why in news?

A youth from Ernakulam district in Kerala has tested positive for the Nipah virus infection.

What is the Nipah virus infection?

- **Cause** - The natural host of the Nipah virus are fruit bats of the Pteropodidae family and Pteropus genus, widely found in South and South East Asia.
- However, the actual source of the current infection is not yet known.
- Scientists are currently working on finding the epidemiological link of the outbreak.
- **Effect** - Nipah virus causes a so far incurable infection in human beings, which can sometimes be fatal.
- Patients either show no symptoms of the infection, thereby making it difficult to detect.
- Otherwise, patients develop acute respiratory problems, or encephalitis that often becomes fatal.
- The World Health Organization (WHO) says the infection has been found to be fatal in 40% to 75% of the infected patients.
- There is **no treatment** available as of now, either for humans or animals, nor any vaccine.
- **Transmission** - The infection is generally transmitted from animals to human beings, mainly from bats and pigs.
- Human-to-human transmission is also possible, and so is transmission from contaminated food.

SYMPTOMS	
	Fever
	Headache
	Drowsiness
	Disorientation
	Mental confusion
	Coma
	Potentially death



After exposure and incubation period of 5-14 days, illness presents with 3-14 of fever and headache followed by other symptoms

TREATMENT	
No specific treatment for Nipah Virus	
Primary treatment is intensive supportive care	

Source: WHO & Centers for Disease Control and Prevention, US

What are the previous instances?

- Nipah virus infections were first identified in 1999 in Malaysia.
- From then on infections have been detected quite frequently in Bangladesh.
- **Kerala** - There have been a few incidents of infection in India earlier, apart from the 2018 outbreak in Kerala.
- The 2018 outbreak was confined to two districts of Kerala, Kozhikode and Malappuram.
- Studies have revealed that a particular kind of fruit bat, Pteropus spp, was most likely the source of human infection in 2018.
- Research suggested that this particular strain might have been circulating in the local bat population.
- The newly detected case in Kerala is believed to have actually been a result of intensified preventive and containment efforts after last year's outbreak.
- The increased awareness and vigilance in the community has helped in early detection this time.
- **Elsewhere in India** - The first outbreak was in 2001 in Siliguri, West Bengal.
- More than 30 people were hospitalised with suspected infection then.
- Another outbreak happened in 2007 in Nadia of West Bengal, with over 30 cases of fever with acute respiratory distress and/or neurological symptoms.
- Notably, five of them turned out to be fatal.



Who are the potentially at risk?

- Transmission to 18 contacts last year and the two health-care workers this year has been only through the human-to-human route.
- As of now, the current outbreak is likely localised, like last year's.
- More people showing symptoms are being screened and so are people in physical contact with them.
- Those with exposure to body fluids (saliva, urine, sputum) of infected patients had higher risk for asymptomatic infections (not showing overt symptoms).
- Those who only had physical contact with the infected patients had relatively lesser risk.

What are the measures taken?

- The National Institute of Virology (NIV) advised extreme care for healthcare workers and caregivers.
- These include providing double gloves, fluid-resistant gown, goggles, face shields, closed shoes and similar other protective gear.
- Currently, steps are being taken to prevent the spread of the disease by tracing the contacts, setting up isolation wards and public engagement.

5. GOVERNANCE

5.1 Assessment of the Civil Service - Selection and Training

What is the issue?

- Senior civil servants assume leadership positions right after they join, but the testing criteria is far from assessing the skill required for the role.
- In this context, here is an assessment of the priorities and challenges in the civil services at the selection and training phases.

What are the present drawbacks?

- There has so far been no concerted or sustained effort to manage senior civil service in a comprehensive manner.
- The steps have been only ad hoc in nature; the [lateral recruitment](#) is also one such effort.
- What really needs to be done is to look at -
 - i. the manner in which recruitment takes place
 - ii. the in-service training, transfers, assessment of officers
 - iii. incentives and disincentives

What should the selection priorities be?

- Almost all the IAS officers occupy leadership positions right from the beginning of their careers.
- Even in the Secretariat jobs, each officer has to lead a team.
- Hence, the objective should be to select such persons who have leadership qualities or have the potential to become leaders.
- A leader, in this context, has to be able to build a team and carry it along with her/him by motivating those working with him.
- S/he has to excel in communication skills beyond the written one.
- S/he has to be ethical in behaviour with a positive attitude.

How is the selection at present?

- Most of the above requirements are not tested at the time of recruitment.

- The entrance exams primarily select brilliant individuals by testing written communication skills, some analytical skills and general awareness.
- It tests the examinees capability to “crack” the exam, and various coaching institutes assist them in doing so.
- But a leader requires much more than that.

What is to be done?

- **Recruitment** - The tools to assess the above discussed skills which are in use in the private sector and elsewhere in the world should be adopted.
- **Training** - The officers have knowledge and they are capable of acquiring more of it.
- What is required is the transformation of attitude as an officer, the necessity and utility of ethical behaviour.
- Given the high maximum age of entry into the civil service, this process becomes difficult and challenging.
- In this line, the training should be centered around inculcating leadership skills.
- It has to be focused on imparting skills and attitude that would enable the officer to evolve as a leader.
- Periodic upgradation of skills and learning from each other should be the focus of in-service training.
- This is imperative in the context of a fast-changing world both in terms of technology and management.
- **Certainty** - The inclination and aptitude of the officer needs to be monitored to determine his/her postings and assignments.
- Once assigned a task, he/she should be left to deliver.
- Frequent transfers interrupt the implementation process and leaves way for politicisation of bureaucracy.
- An agency, like the UPSC, can be assigned to prepare a panel from which the government can select an officer.

5.2 Reimagining India's Fiscal Federalism

What is the issue?

There is a need to refresh India's fiscal federalism by restructuring its four pillars.

What is the need?

- India's Constitution-makers thought of India as a union of States with a strong centre.
- It was done to preserve the unity and integrity of a newly fledged nation.
- Since then, the Indian economy, polity, demography and society have undergone many changes.
- India is now firmly on a growth turnpike.
- It is in this context that we need to redesign India's fiscal federalism around its four pillars.

What are the 4 pillars of India's fiscal federalism?

- Finance Commissions
- NITI Aayog
- Decentralisation (Local public finance)
- Flawless or model GST

What are the imbalances faced by federations?

- **Vertical imbalance** - It arises because the tax systems are designed in a manner that yields much **greater tax revenues to the Central government** when compared to the State or provincial governments.
- The Constitution mandates relatively greater responsibilities to the State governments.
- **Horizontal imbalance** - It arises because of **differing levels of attainment by the States** due to differential growth rates and their developmental status in terms of the state of social or infrastructure capital.
- It involves two types of imbalances.



1. Type I is to do with the adequate provision of basic public goods and services.
2. Type II is due to growth accelerating infrastructure or the transformational capital deficits. They are known to be historically conditioned or path dependent.

How can the pillars be strengthened?

- **Finance Commission** - Union Finance Commissions should only be confined to focussing on the removal of the horizontal imbalance across States of the **Type I** Horizontal imbalance.
- **NITI Aayog** - It is the most appropriate institution to tackle the Type II horizontal imbalance.
- Planning Commission used to give grants to the States as conditional transfers using the Gadgil-Mukherjee formula.
- Now as the Planning Commission disbanded, there is a vacuum as the NITI Aayog is primarily a think tank with no resources to dispense.
- NITI Aayog should be engaged with the allocation of capital in a formulaic manner, complete with incentive-compatible conditionalities.
- It should be mandated to create an independent evaluation office which will monitor and evaluate the efficacy of the utilisation of such grants.
- **Decentralisation** - It is crucial because **intra-State regional imbalances** are likely to be of even greater import than inter-State ones.
- It can be strengthened by forming **local public finance** through the creation of a local body consolidated fund.
- This **requires the amendment** of Articles 266/268/243H/243X of our Constitution to ensure that relevant funds flow into the consolidated fund of the third tier.
- Further, the **State Finance Commissions** should be accorded the same status as the Finance Commission
- **GST** - GST should be simplified and coverage should be extended.
- Centre and States should **contribute an equal proportion** of their **CGST** and **SGST** collections to the local body consolidated fund.
- The **GST Council** should adopt **transparency** in its working, and create its **own secretariat** with independent experts also as its staff.

6. INDIA & ITS NEIGHBORHOOD

6.1 Blacklisting Pakistan under FATF

What is the issue?

- The Financial Action Task Force (FATF) is to hold its Plenary and Working Group meeting in Orlando, Florida.
- It is likely to take up a proposal to downgrade Pakistan to the blacklist on terrorist financing from its current [greylist status](#).

What is the present status?

- Pakistan has been under the FATF's scanner since June, 2018.
- It was put under the greylist for terror financing and money laundering risks.
- This was done after an assessment of its financial system and law enforcement mechanisms.
- FATF and its partners such as the Asia Pacific Group (APG) review Pakistan's processes, systems, and weaknesses.
- This is done on the basis of a standard matrix for anti-money laundering (AML) and combating the financing of terrorism (CFT) regime.



What was Pakistan's subsequent commitment?

- In June 2018, Pakistan gave a high-level political commitment to work with the FATF and APG.
- It promised to strengthen its AML/CFT regime, and to address its strategic counter-terrorism financing-related deficiencies.
- Based on this commitment, Pakistan and the FATF agreed on the monitoring of 27 indicators under a 10-point action plan, with deadlines.
- Successful implementation of the action plan and its physical verification by the APG will lead the FATF to move Pakistan out of the greylist.
- But failure in implementation and in meeting the deadlines would result in Pakistan's blacklisting by September 2019.

What is FATF's current stance?

- There was only limited progress by Pakistan on action plan items due in January 2019.
- So FATF, in February, 2019, urged Pakistan to swiftly complete its action plan, particularly those with timelines of May 2019.
- Pakistan, recently, presented its progress on the 27 indicators in a meeting with the Joint Group of the APG.
- It was agreed that there have been improvements in the AML/CFT regime and the integrated database for currency declaration arrangements.
- But the Joint Group informed Pakistan that its compliance on 18 of the 27 indicators was unsatisfactory.
- The other gaps in progress include the following:
 - i. contradictory situations and poor coordination among stakeholders
 - ii. lack of cooperation among law enforcement agencies at various tiers of Pakistan's government
 - iii. insufficient physical action against proscribed organisations to block the flow of funds
- Pakistan was thus asked to do more to demonstrate strict action against 8 terrorist groups, and in combating money laundering.
- It must show that terror financing prosecutions result in effective, proportionate and restrictive sanctions.

What if Pakistan is blacklisted?

- Pakistan faces an estimated annual loss of \$10 billion if it stays in the greylist.
- If blacklisted, its already fragile economy will get even weaker.
- Its \$6 billion loan agreement with the International Monetary Fund (IMF) could be threatened.
- Notably, the IMF has asked Pakistan to show commitment against money laundering and terror financing. Click [here](#) to know more.

What is India's role here?

- India is a voting member of the FATF and APG, and co-chair of the Joint Group.
- [India is represented by the Director General of India's Financial Intelligence Unit (FIU) in the Joint Group.]
- Pakistan had asked for India's removal from the group, citing bias and motivated action, but that demand has been rejected.
- But India was not part of the group that moved the resolution to greylist Pakistan in 2018 in Paris.
- The movers were the US, UK, France, and Germany; China did not oppose it.

Financial Action Task Force

- The Financial Action Task Force (FATF) was set up in 1989 by the western G7 countries, with headquarters in Paris.
- It acts as an 'international watchdog' on issues of money-laundering and financing of terrorism.
- FATF has 37 members that include all 5 permanent members of the Security Council, and other countries with economic influence.
- Two regional organisations, the Gulf Cooperation Council (GCC) and the European Commission (EC) are also its members.
- Saudi Arabia and Israel are "observer countries" (partial membership).
- India became a full member in 2010.

7. BILATERAL RELATIONS

7.1 Foreign Policy Challenges and Priorities for India

What is the issue?

- The new geo-political developments at the global level poses varied challenges for India.
- In such an unpredictable global environment and with resource constraints, India needs to realign its foreign policy priorities.

What are the new global developments and challenges?

- U.S. President Donald Trump's election and the unpredictability in U.S. policy pronouncements.
- The trade war between the U.S. and China which is becoming a technology war.
- Brexit and the European Union's internal priorities and preoccupations.
- Erosion of U.S.-Russia arms control agreements and the likelihood of a new arms race covering nuclear, space and cyber domains.
- The U.S.'s withdrawal from the Iran nuclear deal and growing tensions between Saudi Arabia and Iran.
- Besides all these is India's principal foreign policy challenge of dealing with the rise of China.

What is India's redefined neighbourhood?

- As in 2014, in 2019 too Indian PM Modi began his term with a neighbourhood focus, but redefined it.
- In 2014, all South Asian Association for Regional Cooperation (SAARC) leaders had been invited for his swearing-in.
- After the Uri attack in 2016, India's stance affected the convening of the SAARC summit in Islamabad.
- For the second term, leaders from the Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation (BIMSTEC) countries along with Kyrgyzstan was invited.
- This shift highlighted a new neighbourhood emphasis.

Can Pakistan be totally ignored?

- A terrorist attack (Uri) cannot be ruled out and it would definitely attract retaliation.
- But despite good planning there is always the risk of unintended escalation after such attacks.
- E.g. the recent [Balakot strike](#) and the downing of an Indian Air Force (IAF) MiG-21
- In the absence of communication channels between India and Pakistan, the U.S., Saudi Arabia and the UAE played a role in this regard.
- They ensured the quick release of the IAF pilot, [Wing Commander Abhinandan Varthaman](#), thereby defusing the situation.
- Clearly, the turn of events suggests that it would be better to have some kind of dialogue with Pakistan than outsourcing crisis management to external players.
- In other words, it is not a wise option for India to ignore Pakistan altogether.

What should India's priorities be?

- Translating India's natural weight in the region into influence was easier in a pre-globalised world and before China's assertiveness.
- But today, the process is more complex.
- Relations with countries in India's periphery will always be complex and need calculated political management.
- This is irrespective of how India defines its neighbourhood.
- Given all, it is preferable to work on the basis of generating broad-based consent rather than dominance.
- This necessitates using multi-pronged diplomatic efforts and being generous as the larger economy.

- India also needs a more confident and coordinated approach in handling neighbourhood organisations including –
 - i. SAARC
 - ii. BIMSTEC
 - iii. the [Bangladesh-China-India-Myanmar Forum](#) for Regional Cooperation
 - iv. the Bangladesh, Bhutan, India, Nepal Initiative
 - v. the Indian Ocean Rim Association
- This strategy should preferably be in tandem with bilateralism, as India's bilateral relations comes with significant advantages.

How can China be managed?

- India largely followed the old policy since the Rajiv Gandhi period, in the context of relations with China.
- This largely focusses on growing economic, commercial and cultural relations.
- On the other hand, differences on the boundary dispute are dealt through dialogue and confidence-building measures.
- It was believed that such measures would create a more conducive environment for eventual negotiations.
- The underlying assumption was that with time, India would be better placed to secure a satisfactory outcome.
- But apparently, the reality has proved otherwise and the gap between the two country was widening.
- This was evident in the [Doklam stand-off](#) where the assumption behind the policy followed for 3 decades could no longer be sustained.
- The [informal summit in Wuhan](#) seemed to have restored calm but did not address the long-term implications of the growing gap.
- Meanwhile, there is the growing strategic rivalry between the U.S. and China.
- India no longer have the luxury of distance to be non-aligned.
- At the same time, the U.S. is an inconsistent partner and never has it been more unpredictable than at present.
- Given these, how India manages its relations with the U.S. will be closely watched by China and Russia.

7.2 ASEAN Summit Highlights

Why in news?

The 34th ASEAN Summit was recently held in Thailand's capital Bangkok.

[Click here to read on ASEAN's RCEP decision](#)

What is ASEAN?

- The Association of Southeast Asian Nations (ASEAN) is a regional intergovernmental organization of countries in Southeast Asia.
- Its objective is to promote intergovernmental cooperation and facilitate economic, political, security, military, educational, and socio-cultural integration.
- ASEAN was established in 1967 in Bangkok, Thailand.
- It came consequent to the signing of the ASEAN Declaration (Bangkok Declaration) by the founding members of ASEAN.
- [These are Indonesia, Malaysia, Philippines, Singapore and Thailand.]
- It, now, also includes Vietnam, Brunei, Myanmar (Burma), Cambodia, and Laos, totalling to 10 members.
- ASEAN's six FTA partners are India, China, Japan, South Korea, Australia and New Zealand.



What are the key outcomes of the summit?

- **Indo-Pacific Outlook** - Ten leaders of the ASEAN member states have agreed to adopt the ASEAN Outlook on the Indo-Pacific concept which was led by Indonesia.
- There are 5 main points related to the Outlook - the background and reason behind, the key elements, objectives, principles, and areas of cooperation.
- The outlook reflects the centrality and strength of ASEAN in respecting peace and dialogue culture and strengthening cooperation.
- The outlook on the Indo-Pacific issue has come amidst the current global developments in the region. Click [here](#) to know more.
- **BIMSTEC** - With the Indo-Pacific strategy, ASEAN has reserved a special place for India's BIMSTEC grouping as one to connect with.
- This will be the first sign of acceptance in the region of India's renewed interest in BIMSTEC.
- Notably, India has put in more diplomatic energy into BIMSTEC in recent years.
- This comes as an effort to redefine India's neighbourhood eastwards, for better connectivity and economic and strategic engagement.
- **Marine debris** - The Bangkok Declaration on Combating Marine Debris in the region was endorsed at the summit.
- Efforts will be taken to significantly reduce and prevent the amount of marine debris, particularly from land-based activities.
- Leaders also agreed to –
 - i. encourage integrated land-to-sea approaches to prevent and reduce marine debris
 - ii. strengthen their respective legislation
 - iii. intensify regional and international cooperation, including dialogs on policies and exchanges of information
- In this regard, ASEAN will promote inter-sectoral coordination among ASEAN sectoral bodies.
- This is to address the multidimensional negative and far-reaching impact of marine debris.
- Leaders also agreed to promote an innovative solution to raise plastic costs.
- Strengthening research capacities and applications of scientific knowledge to combat marine debris were also discussed.

What is China's stake in the region?

- China does not like the notion of Indo-Pacific, and prefer calling it Asia-Pacific.
- ASEAN also gave a prominent space to the UN Law of the Sea and freedom of navigation.

- Despite being a signatory to UNCLOS (United Nations Convention on the Law of the Sea), China has built artificial islands in the Spratly Islands.
- It is also on the way to militarising them.
- These seas and islands are heavily contested between China, Taiwan, Philippines, Vietnam, etc.
- The US and its allies have been running freedom of navigation operations (FONOPs) in these seas for some time now, as a show of resistance to China's domination.

What is the decision regarding RCEP?

- Leaders of the ASEAN have committed to conclude negotiations for the RCEP free trade agreement by the end of 2019.
- Some like the Malaysian Prime Minister suggested that countries not ready to join the RCEP could join it at a later date.
- This, in particular, includes India along with Australia and New Zealand.
- Such a move would allow a smaller 13-member RCEP to go ahead.
- However, other leaders insist that all 16 members must agree on the final RCEP document.
- In this line, it was agreed in the summit to send a three-member delegation to India to take forward the talks.

What is India's stance?

- Six years into negotiations on the finalization of RCEP, India's continuing concerns include -
 - i. opening its markets for cheaper goods from countries like China and South Korea
 - ii. ensuring that RCEP countries open their markets for Indian manpower (services)
- India has a trade deficit with as many as 11 of the 16 RCEP countries.
- Also, India is the only one among them that is not negotiating a bilateral or multilateral free trade agreement with China at present.
- So, negotiators have agreed to India's demand for differential tariffs for its trade with China vis-à-vis the others.
- But India has also made tagging the "Country of Origin" on all products a point of contention in RCEP negotiations.
- Despite these concerns, India has reiterated its commitment to making RCEP work.

8. INTERNATIONAL ISSUES

8.1 St. Petersburg International Economic Forum – Russia-China Relations

Why in news?

The 23rd St. Petersburg International Economic Forum (SPIEF) was recently held in St. Petersburg, Russia.

How is the relation with the U.S.?

- St. Petersburg International Economic Forum is Russia's annual investment gathering.
- The meet took place in the backdrop of heightened tensions between the U.S. and Russia and China.
- Unsurprisingly, it was boycotted by the U.S. Ambassador to Russia, Jon Huntsman.
- His absence was ascribed to the prevailing environment in Russia for foreign entrepreneurs.

- This is particularly in regards with the detention of U.S. private equity investor Michael Calvey on allegations of fraud.
- Conversely, the Chinese telecommunications equipment manufacturer Huawei signed an agreement with Russia's principal mobile operator to start 5G networks.
- This came after Washington blacklisted Huawei, prohibiting it from selling technology to the U.S.
- The U.S. also barred domestic firms from supplying semiconductors to Beijing.



What are the geopolitical irritants in this regard?

- The rift between the West and Russia began with Moscow's annexation of Crimea in 2014 and the stand-off in eastern Ukraine that continues.
- Russia's tensions with the U.S. and some EU countries are also due to their opposition to the 1,200-km-long *Nord Stream 2 gas pipeline* from Russia to Germany.
- U.S. plans to export liquefied natural gas to Europe, which is partly the reason why it objects Russia's initiative.
- Thwarting Russia's ambition to dominate the region's energy market is also one of U.S.'s objectives.
- Another more sensitive issue is U.S. Special Counsel Robert Mueller's inquiry into possible Russian meddling in the 2016 U.S. presidential election.

What is the new Russia-China bonhomie?

- Russian President Putin and his Chinese counterpart Xi Jinping made it clear that the tensions with the West had only drawn them closer.
- Amid the tensions, both leaders emphasised that bilateral relations were at a historic high, marked by increased diplomatic and strategic cooperation.
- Notably, China participated in Russian military exercises on its eastern border recently, marking a watershed.
- Also, Moscow and Beijing, hostile rivals of the Cold War era, have for a while been adopting common positions at the UN Security Council on critical international issues.
- Bilateral relations are also guided by pragmatism.
- Russia appears realistic about the growing Chinese economic influence in Central Asia.
- This is primarily driven by China's massive infrastructure investments under the Belt and Road Initiative.
- For Russia, Chinese cooperation would also prove critical for its plans to exploit the *Northern Sea Route* along the Arctic as an alternative transportation hub.
- Besides, international sanctions have not been very effective in isolating Russia.
- European states, notably Germany, recognise the importance of engaging with Russia to contain Mr. Putin's expansionist aims.
- Equally, President Donald Trump's "America first" policy is compelling potential rivals to make common cause.



8.2 Protests in Hong Kong - Extradition Bill

Why in news?

Lakhs of protesters marched the streets of Hong Kong in the biggest protest since the Umbrella Revolution.

What is the political status of Hong Kong?

- Hong Kong, at roughly 1,100 sq km, is smaller in size than Delhi, and is home to an estimated 7.4 million people.
- It was a British colony from 1841 until sovereignty was returned to China in 1997.
- Hong Kong is now part of China under the “one country, two systems” principle.
- Under this, the city of Hong Kong remains a semi-autonomous region with the Basic Law (the city’s mini-constitution) for 50 years.
- This ensures that Hong Kong keeps its own judicial independence, its own legislature and economic system.
- It has its own laws and courts, and allows its residents a range of civil liberties.
- [The Umbrella Revolution/Umbrella Movement/Occupy Movement refers to a series of sit-in street protests in Hong Kong in Sep-Dec 2014.
- It was triggered over a decision regarding proposed reforms to the Hong Kong electoral system, and is largely a movement for democracy and autonomy.]



What is the extradition agreement status?

- Extradition agreement refers to arrangement in regards to surrender of person(s) accused of a crime.
- Hong Kong has entered into extradition agreements with 20 countries, including the UK and the US.
- When the extradition agreements for Hong Kong was finalised, Taiwan and mainland China were excluded.
- This was because of the different criminal justice systems that existed in those regions.
- China has steadily tried to deepen its influence in this regard, but an extradition agreement with it has never been reached.

What is the recent extradition Bill?

- The Fugitive Offenders and Mutual Legal Assistance in Criminal Matters Legislation (Amendment) Bill 2019 was proposed by Hong Kong’s government in February, 2019.
- Carrie Lam, who became Chief Executive of Hong Kong in 2017 as the candidate favoured by Beijing, is pushing for the amendments.
- The Bill will allow the local government to extradite a suspect to places with which the city has no formal extradition accord.
- In effect, this would allow suspects accused of crimes such as murder and rape to be extradited to mainland China to face trial.
- Once the law is changed, Hong Kong will also handover to China individuals accused of crimes in Taiwan and Macau.
- [Macau, like Hong Kong, is a Chinese special administrative region with significant autonomy.
- Taiwan is seen as a sovereign state but its sovereignty is highly contended, and it has a tense relationship with China.]
- The government says that the proposed amendments would plug loopholes in the criminal justice system.
- The current shortfalls allow criminals evade trial elsewhere by taking refuge in Hong Kong and allow the city to be used by criminals.



- The government has assured that, under the bill, the courts in Hong Kong would make the final decision on extradition.
- Courts can specify that only certain categories of suspects would be liable.
- They can also lay down that individuals accused of political and religious offences would not be extradited.

What are the protesters' concerns?

- Despite government assurances, there is a firm concern that China would use the changed law to target political opponents in Hong Kong.
- Protestors highlight China's flawed justice system and thus there is a fear that extradited suspects would likely face torture.
- Also, there is a concern that the provision would deal another blow to Hong Kong's already declining autonomy.
- It would further erode the freedoms people enjoy under the Basic Law.
- [There are already instances of disqualifying elected lawmakers, banning activists from running for office, prohibiting political parties and expelling foreign journalists.]
- The recent march included people from the business community, lawyers, students, members of religious groups, and even housewives.
- The issue thus brings to light the tensions between the Hong Kong's Beijing-appointed elite rule, and the expectations of civil society and pro-democracy movement.
- In all, the Bill could affect Hong Kong's reputation as an international finance centre and also its judicial system.

G.S PAPER III

9. ECONOMY

9.1 RBI Bimonthly Monetary Policy - June 2019

Why in news?

The Reserve Bank of India (RBI) made a 25 basis point (0.25 percentage point) cut in the key policy rate, the repo rate (at which banks borrow from the RBI).

What is the RBI's rationale?

- The inflation is well under the benchmark figure of 4%.
- Given this, a deeper 50 basis point cut was expected as well.
- But the RBI has played conservative in announcing a rate cut of just 25 basis points.
- The idea could have been to ensure space for a further rate cut, if needed, in the next policy.
- The RBI's current stance indicates that its focus is more on growth.

What are the other key decisions and observations?

- **Policy stance** - The RBI Governor Shaktikanta Das's statement suggested a change of stance to 'accommodative' from 'neutral'.
- An 'accommodative' stance eradicates the possibility of going back to a rate hike suddenly.
- This also signals higher chances of more cuts in the coming months if inflation persisted within tolerable limits.
- **Liquidity** - Ensuring systemic liquidity seems to remain a key priority for the central bank.

- The RBI Governor also suggested setting up of an internal working group to review the existing liquidity management framework.
- **Digital Transaction** - The RBI has decided to do away with its charges on RTGS/NEFT (Real Time Gross Settlement System/National Electronic Funds Transfer) transactions.
- This is welcome provided it can ensure that banks pass on the benefit to customers.
- **Basel norms** - The central bank has also proposed measures such as a reduction in the leverage ratio under Basel norms for banks.
- This will increase the banks' lendable resources.
- **Growth rate** - The projected growth rate for this fiscal has been lowered to 7% from the 7.2% projected in April, 2019.
- The first-half growth is estimated at 6.4-6.7%, which by itself appears ambitious given the current trends in the economy.

9.2 GST Council Meet Highlights - June 2019

Why in news?

The 35th GST Council meeting was held recently.


What are the highlights?

- **NAA** - The Council has decided to extend the tenure of *National Anti-profiteering Authority* (NAA) by another 2 years, till November 2021.
- It was originally scheduled to end this year. Click [here](#) to know more on National Anti-Profiteering Authority,
- The council also made the rules more stringent to ensure companies pass on the benefit of lower taxes to consumers.
- It thus approved the imposition of an additional penalty of up to 10% of the profited amount if companies do not pay fine in 30 days.
- At present, companies have to deposit a penalty of Rs 25,000.
- **Electronic Invoicing** - The council decided to introduce e-invoicing in a phased manner for business-to-business (B2B) transactions.
- E-invoicing would help tax authorities in combating the menace of tax evasion.
- Phase 1 is proposed to be voluntary and will be rolled out in January 2020.
- The council also gave in principle nod to an electronic invoicing system for companies and e-ticketing for multiplexes.
- E-tickets issued by registered multiplexes shall be deemed to be tax invoices.
- **Aadhaar** - Aadhaar has been approved as sufficient proof to obtain GST registration.
- **Returns filing** - The council extended the deadline to file annual GST returns for 2017-18 by 2 months to August 31.
- **EV tax rate** - Proposals to cut GST on electronic vehicles (EVs) to 5% from 12% and on electric chargers to 12% from 18% have been referred to the *fitment committee*.
- The issue over fixing the GST rate on leased EVs has also been assigned to the committee.
- **The taxation of lotteries** has been referred to the attorney general, seeking his view on the issue.
- [There has been a Calcutta High Court judgment and there is a petition before the Supreme Court in this regard.]
- Right now private and state-run lotteries face differential rates.
- A state-organised lottery attracts 12% GST while a state-authorized lottery attracts 28% tax.
- There is a dispute on whether a uniform tax rate should be imposed on lotteries or the current differential tax rate system should be continued.

- An eight-member group of state finance ministers could not reach a consensus on this.
- The attorney general will thus see if a product (being one good) can be taxed differently or not under the GST.
- **GSTAT** - The council decided on the location of state and area benches for the *GST Appellate Tribunal* (GSTAT) for various states and UTs with legislatures.
- It has been decided to have a common state bench for Sikkim, Nagaland, Manipur and Arunachal Pradesh.

First Show

KEY TAKEAWAYS

Anti-profiteering body's tenure extended	EV rate cut referred to fitment panel	E-invoice approved for B2B from Jan 2020	E-ticketing permitted for multiplexes
Anti-profiteering penalty norm strengthened	Aadhaar allowed for registration under GST	Annual return date extended by 2 months	 The GST Council passed a resolution acknowledging the role played by Arun Jaitley, former union finance minister and chairperson of the GST Council, in making the council a shining example of cooperative federalism.

How effective would NAA tenure extension be?

- The anti-profiteering system was meant to shield consumers against any sudden spike in prices after GST was rolled out in July 2017.
- This was to ensure that companies passed on savings from lower taxes to buyers.
- The NAA was earlier supposed to have a two-year sunset horizon.
- The extension of term of National Anti-profiteering Authority (NAA) now is an anticipated one.
- But it was expected that the government would come up with detailed guidelines and seek to restrict the same only in case of consumer complaints.
- Also, the industry demand for clarity on methodology for anti-profiteering has still not been addressed by the government.
- **Concern** - Companies should be free to respond to tax changes, in a manner determined by competitive dynamics and commercial considerations.
- The particularly complex changes such as the GST would have multiple conflicting effects on companies' costs.
- If competitive dynamics are weak and do not allow for a proper transmission of tax cuts, then that is the concern of the Competition Commission.
- So it is anyway unfair to assume that competition would not result in passing on cost reduction from lower taxes to consumers.
- Even if a temporary authority was required in the initial years of the GST introduction, the NAA should have been wound up within its stipulated time.
- **Other concerns** - GST Council has missed the chance to send positive signals to boost consumer demand.
- There was no any significant cut in tax rates to help spur consumer demand that has been weak in recent quarters.

9.3 Over Estimation of GDP - Arvind Subramanian Remarks

Why in news?

Former Chief Economic Adviser (CEA) Arvind Subramanian recently claimed in a research paper that India's GDP growth from 2011-12 to 2016-17 was likely to have been overestimated.

What is the former CEA's claim?

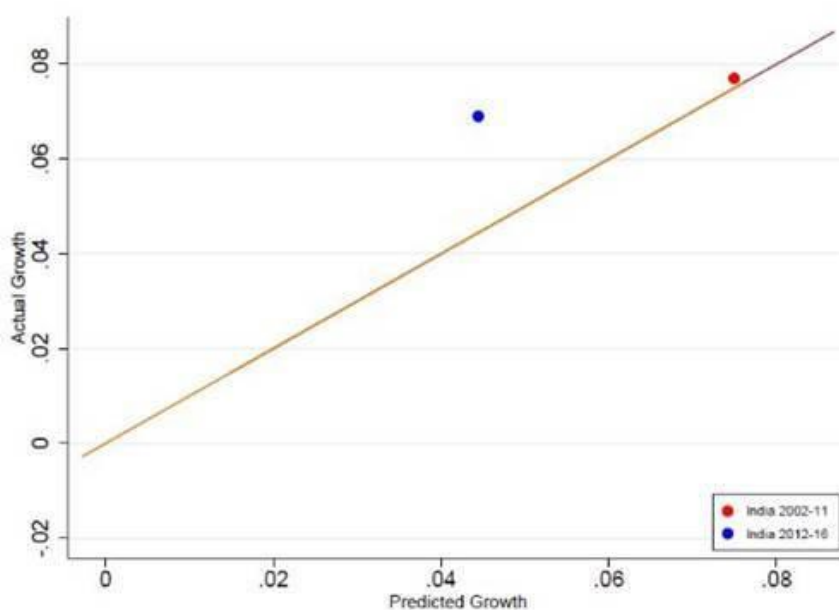
- Official estimates place average annual growth at about 7% for the 2011-12 to 2016-17 period.
- But actual growth may have been about 4.5%, with a 95% confidence interval of 3.5% to 5.5%.

- The methodological changes have led to GDP growth being overstated by about 2.5 percentage points per year between 2011-12 and 2016-17.

What were the parameters used?

- Firstly, 17 key indicators that are typically correlated with GDP growth were compiled for the period 2001-02 to 2017-18.
- These include –
 - i. electricity consumption
 - ii. two-wheeler sales, commercial vehicle sales, tractor sales
 - iii. airline passenger traffic, foreign tourist arrivals, railway freight traffic
 - iv. index of industrial production (IIP), IIP (manufacturing), IIP (consumer goods), petroleum, cement, steel
 - v. overall real credit, real credit to industry
 - vi. exports and imports of goods and services
- Secondly, India is compared with other countries.
- For a sample of 71 high and middle income countries, relationship between a set of indicators and GDP growth for the pre and post-2011 periods was estimated.
- [The indicators chosen (credit, exports, imports and electricity) are simple, reliable, and typically not produced by the agency that estimates GDP.]

What are the key arguments?

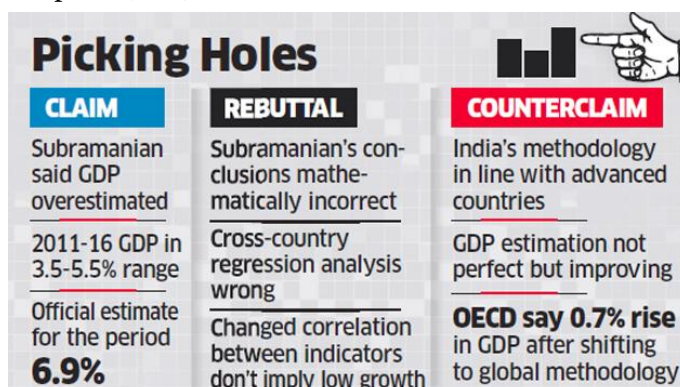


The horizontal axis shows growth predicted for different countries based on the cross-country relationship between the indicators and GDP growth; the vertical axis shows actual growth.

The line shows the growth predicted by the indicators (horizontal axis) and what is officially reported (vertical axis).

- **Mismatch** - In the first period (2001-2011), the India data point (red) is right on the line.
- This indicates that it is a normal country i.e. India's reported GDP growth is consistent with the cross-country relationship.

- However, in the second period (2012-2017) the India data point (blue) is well above the line.
- This implies that its GDP growth is much greater than what would be predicted by the cross-country relationship.
- It is high by over 2.5 percentage points per year.
- **Cause** - Reproducing the detailed methodology underlying the GDP estimates is hard for outside researchers.
- So it is difficult to trace the source of the problem.
- But, possibly, one sector where the mis-measurement seems particularly severe is the formal manufacturing.
- Before 2011, formal manufacturing value added from the national income accounts moved closely with IIP (Mfg.) and with manufacturing exports.
- But afterward, the correlations turn strongly and bizarrely negative.



What was the government response?

- The government has issued a clarification refuting the claim.
- Also, the Economic Advisory Council to the Prime Minister (EAC-PM) is planning to issue a point by point rebuttal.

What are the implications of overestimation?

- Growth estimates are significant not just for reputational reasons but critically for internal policy-making as well.
- The new evidence implies that both monetary and fiscal policies over the last years were overly tight from a cyclical perspective.
- E.g. interest rates may have been too high, by as much as 150 basis points
- Also, inaccurate statistics on the economy's health weaken the drive for reform.
- E.g. if it was known that India's GDP growth was actually 4.5%, the urgency to act on the banking system or on agricultural challenges may have been greater
- The popular narrative has been one of "jobless growth", hinting at a disconnect between fundamental dynamism and key outcomes.
- But in reality, weak job growth and acute financial sector stress may have been a consequence of the modest GDP growth.

9.4 \$5 Trillion Economy by 2024 - Significance of FDI

What is the issue?

- PM, in the NITI Aayog's 5th Governing Council meeting held recently, called for making India a \$5 trillion economy by 2024.
- Here is an assessment of Foreign Direct Investment (FDI) status in India, in this regard.

What is the current FDI scenario?

- **Gross inflows** of foreign direct investment (FDI) rose to \$64.37 billion in 2018-19.
- [It was stagnated at around \$60 billion for the previous two years.]
- The gross FDI inflows have nearly trebled since 2006-07 when it was mere \$22.8 billion.

TABLE 1: GROSS FDI INFLOWS (\$ bn)

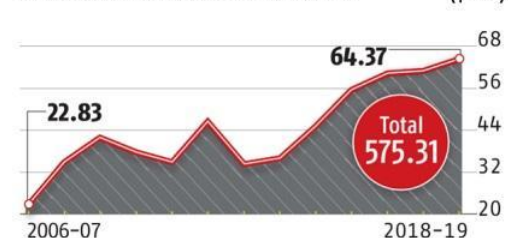
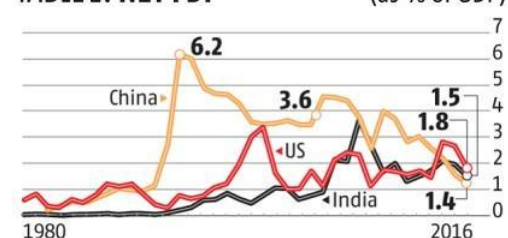


TABLE 2: NET FDI (as % of GDP)



- Evidently, despite domestic economic ups and downs, foreign investors have retained faith in the Indian economy.
- **Net FDI inflows** – It is the net FDI inflows that actually contribute towards balancing the country's external account and boosting economic activity.
- Encouragingly, net FDI inflows in 2018-19 increased to around \$45 billion from around \$39 billion in 2017-18.
- This represents a much needed acceleration in these flows with growth rate in FY19 touching 15%.
- This is in sharp contrast to the previous two years, when net FDI inflows had actually declined by (-) 6% and 6.6% respectively.
- Thus, net flows in 2018-19 have staged a comeback and marginally surpassed the peak of \$44.9 billion reached in 2015-16.

What do other indicators show?

- **Recipient of FDI flows** - According to UNCTAD (World Investment Report), India is now the 10th largest recipient of FDI flows.
- [The US leads the list with attracting \$252 billion through FDI in 2018.]
- **Cross-border investment flows** - India's share in global cross-border investment flows has increased from 2% in 2010 to 3.2% in 2018.
- **Share in GDP** - World Bank data (World Development Indicators) shows that the share of net FDI inflows in India's GDP has less than halved over the years.
- It had peaked in 1999 at 3.6% of GDP and has since then declined to stand at 1.6% in 2017.
- Having staged a comeback in 2018-19, the share would be slightly higher now.

How does India compare with China?

- In terms of share in GDP, India's FDI performance looks comparable in 2017 to both China and the US.
- However, now, with its GDP nearly 5 times the size of India's economy, China managed to attract \$129 billion in 2018.
- Also, since its structural reforms in 1982, China has seen remarkable economic performance driven by a persistent pursuit of FDI.
- Consequently, the share of net FDI inflows in Chinese GDP rose from about 0.2% in 1982 to 6.2% in 1993.
- During this time, per capita incomes in China also rose from \$203 to \$377 and have maintained this rising trajectory.
- India's net FDI inflows as a percentage of GDP has been negligible in 1982, but increased and peaked in 2008.
- But even at its peak, FDI's share in India's GDP was just more than half of Chinese peak levels.
- Also, in 1991, per capita incomes in China and India were at somewhat similar levels (6-7%) of global average per capita incomes.
- By 2018, Chinese per capita incomes were more than 85% of global averages.
- On the other hand, India's per capita incomes just reached up to 18% of the global averages over this period.
- **Reason** - India decided to reduce the dependence on foreign investors for creating additional jobs and spurring economic growth.
- It decided this at a much earlier stage compared to China.
- This is one of the reasons for the low FDI levels in India.

9.5 RBI New Norms for Stressed Assets

Why in news?

The Reserve Bank of India (RBI) has issued a new prudential framework for resolution of stressed assets.



What are the highlight provisions?

- The new framework effectively replaces RBI's controversial [12 February 2018 circular](#).
- The central bank has made it **voluntary for lenders** to take defaulters to the bankruptcy court i.e. to use the Insolvency and Bankruptcy Code.
- The norms give lenders 30 days to start working on a resolution plan from the day of default.
- [Earlier norms, struck down by the Supreme Court, stipulated that even a one-day default must be reported and acted upon.]
- A lender will now have to set aside -
 - i. 20% more provisions if the plan is not implemented within 210 days from the date of default
 - ii. 35% if the plan is not implemented within 365 days of default
- Besides, the new norms said that wherever necessary, the RBI will direct banks to start insolvency proceedings for specific defaults.
- The lenders may also choose to initiate legal proceedings for either insolvency or recovery.
- Meanwhile, the norms put in place penal provisions, for lenders, for resolution plans that are not implemented.
- The RBI circular also mandated signing of the [inter-creditor agreement](#) by all lenders.
- The RBI said that lenders must put in place **board-approved policies** for resolution of stressed assets.
- This must include the timelines for resolution.
- RBI said that it ideally expects lenders to initiate the process of implementing a resolution plan (RP) even before a default.
- During 30 days review period, lenders may decide on the resolution strategy.
- These include the nature of the RP and the approach for implementation of the RP.
- Here, the review period for defaulters of Rs.2,000 crore and above will start immediately.
- And that for defaulters between Rs. 1,500 crore and less than Rs. 2,000 crore will start only from 1 January 2020.
- The **framework now applies to** a larger universe of lenders including small banks and non-banking finance companies (NBFCs).
- This essentially means that the lenders will also have to follow the early stress recognition guidelines of RBI.
- These specify that borrowers must be categorized into special mention accounts based on their delay in repayment, which are:
 1. special mention account-o (SMA-o) loans, where the repayment overdue is between 1-30 days
 2. SMA-1 where the repayment overdue is between 31-60 days
 3. SMA-2 where the repayment overdue is between 61-90 days

9.6 SEBI Norms for Credit Rating Agencies

Why in news?

Securities and Exchange Board of India (SEBI) has released a new framework for financial disclosure by credit rating agencies (CRAs).

What are credit rating agencies?

- Credit Rating Agencies (CRAs) are companies that evaluate the financial condition of issuers of debt instruments.
- CRAs assign a rating that reflects its assessment of the issuer's ability to make the debt payments.
- Rating is denoted by a simple alphanumeric symbol. E.g. AA+, A-, etc.

- In India, CRAs are regulated by SEBI (Credit Rating Agencies) Regulations, 1999 of the Securities and Exchange Board of India Act, 1992.
- The entities that are rated by credit rating agencies comprise companies, state governments, non-profit organisations, countries, securities, special purpose entities, and local governmental bodies.
- Some of the key CRAs in India include -
 - i. Credit Rating Information Services of India Limited (CRISIL)
 - ii. ICRA Limited
 - iii. Credit Analysis and Research limited (CARE)

What are the new norms?

- Rating agencies have to clearly state the “**probability of default**” of the instruments they rate for the benefit of investors.
- Probability of default describes the likelihood of a default over a particular period.
- It provides the likelihood that a borrower will be unable to meet its debt obligations.
- SEBI will prepare and share standardised and uniform probability of default benchmarks.
- This will be fixed for each rating category for one-year, two-year and three-year cumulative default rates - both for the short run and long run.
- Probability will be based on a 10-year marginal default rate and the economic cycle.
- The agencies will also have to publish **information on their performance** in the rating of debt instruments, in comparison with a benchmark created in consultation with SEBI.
- This will help investors to better judge the performance of credit rating agencies.
- SEBI also introduced **disclosure of factors** to which the rating is sensitive.
- Rating agencies will have a specific section on rating sensitivities in each SEBI's press release.
- This would explain the broad level of operating and financial performance levels that could trigger a rating change - upward and downward.
- This is critical for the end-users to understand the factors that would have the potential to impact the credit worthiness of the entity.
- Besides, SEBI expects rating agencies to make meaningful disclosures on **client's liquidity position** using simple terms.
- This may include terms such as superior or strong, adequate, stretched or poor.
- This should also come with appropriate explanations, to help the end users understand them better and avoid any ambiguity.



What is the rationale?

- The credibility of rating agencies has been eroding since the global financial crisis in 2008.
- This is primarily because of the conflict of interest arising from issuer-pays model.
- Under this, the ratings agency is paid by the issuer of the instrument that it rates.
- So agencies are found to be more loyal to companies whose instruments they rate rather than to investors who provide precious capital.
- In effect, agencies fail to downgrade troubled firms until they are on the verge of bankruptcy.
- The [defaults at Infrastructure Leasing and Financial Services \(IL & FS\)](#) in 2018 that led to a liquidity crisis among non-bank lenders in India has brought the focus back to CRAs.

- CRAs as SEBI-registered intermediary are supposed to be an alert system of an instrument before the actual default.
- But after failing to detect early signs of the crisis, credibility of CRAs as an institution and their utility under the regulatory system were questioned.
- Given the impact of this over the larger economy, SEBI aimed at tightening the disclosure guideline.
- This is believed to enhance the quality of information made available to investors by the rating agencies.
- Overall, SEBI's attempt seems to be to align ratings methodologies with global best practices.
- But it is not clear how the new framework will effectively resolve the conflict of interest issue that for long deteriorates the rating industry.

9.7 Code on Wages Bill

Why in news?

In executing its plans on converting 35-odd labour laws into 4 codes, the government plans to first take up the Code on Wages Bill.

What is the current system?

- The present law mentions 13 most vulnerable categories of employment.
- In this, the minimum wages are fixed by both the state governments and the Centre.
- [The Centre can notify the minimum wage rate for railway, agriculture, mining or central government entities.]
- The rates vary in accordance with skill sets, sectors and location.

What are the concerns?

- The existing system has led to over 1,700 minimum wage rates, fixed by both states and the Centre.
- The varied rates turn out as a huge compliance burden on industry.
- It has the potential of unleashing inspector raj, and largely works against the welfare of workers.
- Notably, the Centre started notifying a uniform national floor level minimum wage from 1996, which is non-binding on states.
- The national floor level was last revised by 10% to Rs 176 a day in July 2017.
- But to date, even business-friendly states such as Andhra Pradesh and Gujarat have fixed their minimum wage below the national floor.
- Other states are compliant with the above non-statutory national floor.
- So the minimum wage rate varies from Rs 69 to Rs 538 across states (with the lowest in Andhra Pradesh and the highest in Delhi).
- It is Rs 321 for the industries falling in the central sphere, as of November 2018.
- The variations call for a statutory floor across the country.

How will the wage code bill help?

- The Code on Wages Bill was introduced in the Lok Sabha in August 2017. [Click [here](#) to know more on the provisions.]
- Under the proposed law, the minimum wage law will be extended to all sectors, instead of the current 13 categories of work.
- This move is expected to ensure universal wage protection against exploitation.

What are the challenges though?

- The proposed Bill empowers the Centre to fix a statutory minimum wage.
- But notably, this may differ from state to state or from one geographical area to another.

- This idea of a differentiated national minimum wage rate was taken forward by a government-appointed committee.
- The committee has suggested a national minimum wage level for five different zones.
- Four of these were grouped using varied socio-economic and labour market factors.
- The fifth group included all North-eastern states except Assam.
- Despite the grouping, a regional-level minimum wage rate can lead to disparity among various regions with varying economic profiles.
- This is bound to make the system complex and confusing and difficult to enforce.

9.8 Concerns in Utilization of Cess

What is the issue?

- Just as taxpayers have a responsibility to pay taxes, the government ought to ensure that tax proceeds are appropriately utilized.
- But the picture on utilization of the cess proceeds of the country is far from this ideal.

What is a cess?

- A cess is a tax on tax, levied by the government for a specific purpose.
- It is levied on the tax payable and not on the taxable income.
- In a sense, for the taxpayer, it is equivalent to a surcharge on tax.
- A cess can be levied on both direct and indirect taxes.
- Recent examples of cess are:
 - i. infrastructure cess on motor vehicles
 - ii. clean environment cess
 - iii. Krishi Kalyan cess (for the improvement of agriculture and welfare of farmers)
 - iv. education cess
- Unlike a tax, a cess is levied to meet a specific purpose; its proceeds cannot be spent on any other kind of government expenditure.
- E.g. the proceeds from the education cess cannot be used for cleaning the environment and vice versa
- To meet specific socio-economic goals, a cess is preferred over a tax because it is relatively easier to introduce, modify, and abolish.

How is cess proceeds managed?

- The proceeds of all taxes and cesses are credited in the Consolidated Fund of India (CFI).
- The approval of the Parliament is necessary to withdraw funds from the CFI.
- The tax proceeds are shared with the States and Union Territories according to the guidelines by the Finance Commission.
- But the cess proceeds need not be shared with them.
- In order to utilize the cess proceeds lying in the Consolidated Fund of India (CFI), the government has to create a dedicated fund.

What is the current education cess?

- The education cess, at 2%, which was first proposed in 2004, was aimed at improving primary education.
- In 2007, an additional cess of 1% was introduced to fund secondary and higher education (SHEC).
- Recently, in the 2019 Union Budget, a 4% health and education cess was announced.
- This incorporates the previous 3% education cess as well as an additional 1% to provide for the health of rural families.

What are the concerns with education cess?

- **Unutilized Fund** - There has been an increase in the amount of education cess collected via corporation tax and income tax over the years.
- From the inception of the education cess until 2019, the total proceeds have been around Rs. 4,25,000 crore.
- The dedicated fund created for primary education is the 'Prarambhik Shiksha Kosh' (PSK) in 2005.
- Likewise, that for higher and secondary education is the 'Madhyamik and Uchchar Shiksha Kosh' in 2017.
- It is uncertain why the government set up this dedicated fund for higher and secondary education in 2017, 10 years after the introduction of SHEC.
- But it is contentious that this fund had remained dormant as of March 2018.
- Comptroller and Auditor General audit data show that around Rs. 94,000 crore of SHEC proceeds is lying unutilized in the CFI.
- **Expenditure** - The unspent account, if seen in conjunction with the expenditure on education, reveal the high degree of economic injustice.
- In 2017-18, the public expenditure on school and higher education was estimated to be around Rs. 79,400 crore.
- In other words, the cumulative unutilized SHEC funds far exceeded the expenditure on both school and higher education in 2017-18.

9.9 India's Retaliatory Tariffs on U.S. Imports

Why in News?

India has decided to impose retaliatory tariffs on 29 goods imported from the U.S., from June 16, 2019 onwards.

What necessitated this decision?

- The tariffs on the 29 goods, including walnuts, apples, and some pulses, were initially announced in June 2018.
- This came as a retaliation to U.S. President Trump's decision in March, 2018 to impose [higher import tariffs on Indian aluminium and steel](#).
- India has repeatedly asked for exemption from these higher tariffs, but it was not effected.
- However, negotiations continued for about a year, and India repeatedly extended the deadline for retaliatory tariff imposition.
- Another issue is over granting India duty-free imports for certain items under the U.S.' [Generalised System of Preferences](#) (GSP).
- The talks over this too has not brought any favourable outcomes.
- Also, under a U.S. ultimatum, India had to terminate its imports of vital [crude oil from Iran](#).

What are the likely implications?

- If implemented, 29 items imported from the US will face higher duties, cutting benefits to U.S. exporters.
- The tariffs will place a burden of \$220-290 million on the U.S.
- Notably, this is about the same amount imposed by U.S. on India in 2018 on steel and aluminium.
- For India, given the robust market and sound economic fundamentals, it may not bring in any untoward effects.
- Moreover, the imposition of increased import tariffs on agricultural commodities will help domestic farmers.
- The withdrawal of GSP will not make much difference either, as Indian exports are all geared to take this challenge.



10. AGRICULTURE

10.1 High Powered Committee for Agriculture Reforms

Why in news?

Prime Minister announced a high powered committee to recommend structural reforms in agriculture, at the 5th meeting of the Governing Council of NITI Aayog.

What is the objective?

- The proposed committee would include some Chief Ministers.
- It would take a holistic approach on the subject, including allied activities of agriculture.
- The key issues marked out for reference to the proposed committee include -
 - i. private investment in agriculture
 - ii. logistics
 - iii. value-addition
 - iv. marketing support
 - v. irrigation, especially drip and other means of micro-irrigation
 - vi. legislative changes required to revamp agriculture and its allied activities

What were the earlier committees?

- The most notable among panels in this regard are -
 - i. the M S Swaminathan-headed National Commission on Farmers
 - ii. the Shanta Kumar-chaired committee on food sector reforms
 - iii. the Ashok Dalwai-led empowered committee on doubling farmers' income
- **The Swaminathan commission's report** (2006) had sought a paradigm shift in the focus of agricultural development programmes.
- It called for shift in focus from increasing production to raising farmers' income.
- But this took over a decade for the government to realize the importance of this counsel and begin acting on it.
- However, many other equally sensible recommendations of this commission still remain unattended.
- **The Dalwai committee's report** (2018) had a key focus on the structural reforms and governance framework for agriculture.
- Being the latest, its recommendation were most relevant to the prevailing agrarian situation marked by widespread farmers' distress.
- Besides, there is the government's own think tank, the National Institution for Transforming India (NITI) Aayog.
- The three-year action plan for agriculture crafted by NITI Aayog also addressed current challenges in the agriculture sector.

How effective will the new committee be?

- Most of the issues marked out for reference to the proposed committee have been dealt comprehensively before by the above panels.
- They have come out with some well-judged inputs for reforming the key segments of the farm sector.
- But invariably, many of the workable and wise recommendations in these reports remain unimplemented.
- Given this, the real need for the new committee is highly contentious.

What are the real challenges?

- Agriculture, according to the Constitution, is a state subject.
- So the truth is that the Centre has a very limited authority to intervene in matters related to agriculture.



- It can do little without the cooperation of the states which, often, is unavailable in adequate measure.
- The meager success of some of the Centre's key initiatives in agriculture stands as proof.
- E.g. the efforts at reforming agricultural marketing, legalizing land leasing and regularizing contract farming
- The model Bills drafted to serve as the guides for the amendment of the state laws have failed to deliver the desired results.

10.2 Evaluation of Farm Subsidies

What is the issue?

- There is an increasing discussion on replacing farm subsidy with direct cash transfer.
- But subsidies and cash transfers may not be enough to end farmers' woes; capital investments in agriculture are the need of the hour.

What is the current subsidy share?

- The government spent about Rs. 2.56-lakh crore on various subsidies for the farm sector in 2018-19.
- This is an increase of 43% over the previous year; the rise is primarily due to the higher MSP on crops.
- For 2019-20, farm subsidies are set to increase further to Rs.2.77-lakh crore.
- An Indian farmer enjoys numerous subsidies ranging from free power, water, to heavily discounted fertilizer.
- They also extend to interest subvention on loans, discounted premium on crop insurance and minimum support prices for crops.

What are the implications?

- **Capital Investment** - Farm subsidies are a drain on public finance.
- Subsidies are reducing the share of money that goes for capital investment.
- This, in turn, is a key reason for the sufferings of farmers.
- It's so because, offsetting high cost on inputs and helping farmers produce and earn more, initially creates an illusion of a healthy farm sector.
- But eventually, problems arising from lack of infrastructure and market inefficiency show its own negative impact.
- [Today, only about 15% of the APMCs have cold storage facilities.
- Also, less than 50% of mandis in the country have weighing machines.]
- **Unregulated use** - The other concern due to input subsidies for agriculture is the unmindful use of resources such as water and power.
- Input subsidies including those on urea have resulted in overuse of nitrogenous fertilisers and spoilt soil health.
- Likewise, subsidies on power have resulted in depletion of the groundwater.
- **Cropping pattern** - Subsidies have also skewed the cropping pattern, which has, in the process, taken a toll on the environment as well.
- Monoculture has resulted in an increase in pest and disease attacks on crops and higher usage of chemical fertilisers.
- Evidently, subsidy-driven agriculture is not sustainable.

What could be done?

- **Rationalizing subsidies** - Subsidising the cost of inputs is not going to end the problems of the marginal farmers of India.
- Completely stopping subsidies may not be possible now given its reach and popularity; but it can be rationalised.
- Subsidies could be linked to the size of the farm-holding, rather than offering them to every other farmer.

- **Direct transfers** - The government can see if these subsidies can be paid via DBT (Direct Benefit Transfer) so as to plug leakages.
- **Capital Investment** - Gradually, the government should withdraw subsidies and possibly convert them to capital investments in the sector.
- The impact of capital investment on both agricultural yield and poverty will be far higher than that of subsidies.
- The promised investments in agriculture (Rs. 25-lakh crore over 5 years) can be made in -
 - i. building a national-level warehousing grid with smaller warehouses near the farm-gate
 - ii. setting up of agri-processing centres
 - iii. providing assaying and grading machinery at mandis
- **Exports** - There is the need for long-term policies on export trade, for the government departments to engage with exporters on a regular basis.
- This can help keep farmers aligned with the global demand/supply and price situations.
- **Technical committee** - There are talks about a technical committee with ICAR-NIAP as knowledge partner to work on building an agri-market intelligence system.
- This process needs to be fast-tracked.
- The system will put out price and demand forecasts for various major foodgrains and price-sensitive horticulture crops.
- **Land** - The government should look at ways of aggregating the small land-holdings and help farmers draw benefit from farm mechanization.

11. SCIENCE & TECHNOLOGY

11.1 SIPRI Yearbook 2019

Why in news?

The Stockholm International Peace Research Institute (SIPRI) has released, SIPRI Yearbook 2019 on the current **state of armaments, disarmament and international security**.

What are the key findings of the report?

- The report states that the all 9 nuclear weapon-possessing states are reducing nuclear warheads but are modernising their arsenals.
- These 9 nuclear-armed countries had a total of some 13,865 nuclear weapons at the start of 2019
- This is a decrease from 14,465 at the start of 2018.
- It attributed the decrease mainly to Russia and the US (together still account for over 90 per cent of the total nuclear weapons) in pursuant of implementing the **New START treaty** of 2010.
- **America** - Focuses on its **non-strategic nuclear arsenal** and this could push other nations in the same direction.
- **China, India and Pakistan** - **Increasing the size of their nuclear arsenals.**
- **India and Pakistan** - Expanding their **military fissile material production capabilities.**
- **North Korea** - Continues to **prioritize its military nuclear programme** as a central element of its national security strategy.

WORLD NUCLEAR FORCES, JANUARY 2019

COUNTRY	DEPLOYED WARHEADS*	OTHER WARHEADS**	TOTAL 2019	TOTAL 2018
USA	1,750	4,435	6,185	6,450
Russia	1,600	4,900	6,500	6,850
UK	120	80	200	215
France	280	20	300	300
China	—	290	290	280
India	—	130–140	130–140	130–140
Pakistan	—	150–160	150–160	140–150
Israel	—	80–90	80–90	80
North Korea	—	—	(20–30)	(10–20)
TOTAL	3,750	10,115	13,865	14,465

* 'Deployed warheads' refers to warheads placed on missiles or located on bases with operational forces. ** 'Other warheads' refers to stored or reserve warheads and retired warheads awaiting dismantlement. Total figures include the highest estimate when a range is given. Figures for North Korea are uncertain and are not included in total figures. All estimates are approximate.

- The report sites that the **absence of transparency** on the status of the nuclear arsenals and capabilities of the nuclear-armed states.
- The report separately counts
 1. Deployed warheads (warheads placed on missiles or located on bases with operational forces) and
 2. Other warheads (stored or reserve warheads and retired warheads awaiting dismantlement).

How the countries are rated?

- **India and Pakistan:**
 1. For India, figure of 130-140 other warheads in 2019, the same as in 2018.
 2. For Pakistan, figure of 150-160 warheads.
 3. Both nations are estimated to have increased their arsenal by 10 to 20 warheads in 2018.
- **US and Russia:** Reduction in the strategic nuclear forces of US and Russia is due to
 1. Implementation of the **New START 2010** (Treaty on Measures for the Further Reduction and Limitation of Strategic Offensive Arms)
 2. Unilateral reductions by both the countries.
 3. Programmes under way to replace and modernize their arsenal.
 4. Both are concentrating on the development of their non-strategic nuclear arsenal.
- **North Korea:** Figures for North Korea were not added to the total on account of uncertainty.
- **China:** It's working to expand its nuclear forces. It's also committed to a no-first-use policy, however has also taken steps to improve its retaliation response.
- **Nuclear weapon-possessing countries** - The United States of America, Russia, the United Kingdom, France, China, India, Pakistan, Israel and North Korea.

11.2 Facebook's Cryptocurrency – “Libra”

Why in news?

Facebook announced its plans to launch “Libra” a digital currency, in 2020.

What is Libra?

- Libra is a virtual currency, which users buy and store in a digital wallet.
- It can be used for transactions on a decentralized network that is not controlled by one bank or a government.
- It is powered by a technology called ‘Blockchain’, which functions like an open ledger that gets updated in real time.
- For Libra, Facebook announced a dedicated wallet app called “Calibra.”
- “Calibra” will be built into WhatsApp and Messenger as well, to let users store and use “Libra” coins.

How it works?

- Once launched, users will be able to buy Libra and add it to their digital wallet.
- Libra will be built into Facebook Messenger and WhatsApp, allowing users to send and receive money via messages.
- People will be able to send money at “low to no cost”
- Libra will also be used for offline payments, such as paying bills, buying coffee, or paying for public transport.

Is Libra different from other Cryptocurrencies?

- The values of most cryptocurrencies, such as Bitcoin, tend to fluctuate against real currencies.
- The plan is to ensure Libra is stable and give users confidence.
- Libra will be backed by a reserve of assets designed to “give it intrinsic value” and ensure stability.

- These assets include securities and fiat currencies (like the dollar, pound).
- The Libra reserve will include bank deposits and government bonds in several international currencies.
- However, the value of the one Libra in any local currency may fluctuate.
- Libra is planned as a “global currency” for use anywhere in the world without transaction fees.
- It will target those who are left out in the formal banking sector.

Who is involved?

- Facebook is also launching its Subsidiary Company, called “**Calibra**” which will handle its crypto dealings.
- “**Calibra**” is a digital wallet, which will store Libras.
- Libra will be controlled by the ‘**Libra Association**’, a non-profit based in Geneva.
- The currency has been backed by Visa and Mastercard, as well as tech firms like Uber, Lyft, Spotify, ebay, Paypal and PayU from India.

Is ‘Libra’ a privacy concern?

- Libra will be built on its own blockchain, a decentralised database that records the history of transactions over time.
- Facebook has said that account details will not be shared with Facebook or third parties for advertising purposes, except for cases of data sharing “to keep people safe, comply with the law.
- Also Facebook stated that, If someone loses their Libra coins from Calibra wallet, they will get a refund.
- For Libra, a new programming language called ‘**Move**’ is being built, which the organization claims is more secure and private.

What about Indian Crypto law?

- Current regulations do not permit use of the banking network for blockchain currency transactions.
- The Ministry of Corporate Affairs Investor Education and Protection Fund (IEPF) Authority favours a ban on cryptocurrencies,
- Any such ban would hugely restrict the reach of Libra.

12. ENVIRONMENT

12.1 Rain Deficit and Water Stress

Why in news?

Reportedly, nearly 40% of the country is facing an acute paucity of pre-monsoon rain, causing severe water distress in scorching heat.

How is the rain deficit scenario?

- Though summer droughts are very common, the extent and intensity of aridity witnessed this year are rare.
- The rain deficit has been as high as 48% in the southern peninsula, especially Tamil Nadu and coastal Karnataka.
- It is nearly 30% in western India, notably Gujarat and large parts of Maharashtra, and 17% and 12% in the Central and north-east region respectively.
- Shortfalls of 70 to 80% have also been reported from some places.
- The overall countrywide average rainfall between March and May, 2019 remained 23% below normal.

Drought Type	Impact
Meteorological	Below-average rain or snowfall (precipitation)
Hydrological	Lack of precipitation decreases streamflow, lake/reservoir and ground water levels
Agricultural	Lack of soil moisture/ground water that affects crops/livestock
Socioeconomic	Food/water supply does not meet demands due to lack of water
Ecological	Lack of precipitation impacts native plant/animal species



What do monsoon forecasts suggest?

- The rain deficit conditions across the country are a matter of grave concern.
- But the redeeming factor is that the onset of the monsoon is round the corner.
- The rain during the 4-month monsoon season (June to September) is anticipated to be well spread out.
- It is also expected to be quantitatively normal or somewhat below normal.
- The [India Meteorological Department \(IMD\) forecast](#) has suggested rainfall to be likely around 96% of the long-period average (LPA).
- On the other hand, private weather forecaster Skymet has put it at 91%.

What is the concern though?

- The problem is that both IMD and Skymet have forecast that the monsoon would be sluggish/slow to begin with.
- The reason cited for this is the existence of El Nino (warming up of the Pacific Ocean), which often impairs the monsoon performance.
- Also, IMD and Skymet differ on the progression of El Nino.
- The IMD expects El Nino conditions to turn neutral in the second half of the rainy season.
- But Skymet reckons it to last the whole season, even if in a weaker form.
- So clearly, there is a possible delay in relief from the current water crisis in some areas.

What is a favourable factor yet?

- Of the three main facets of drought (meteorological, hydrological, agricultural), the present conditions conform chiefly to the meteorological drought (rainfall inadequacy).
- Only in some areas, aridity has accentuated to cause hydrological drought, reflected in exhaustion of the surface and groundwater resources.
- The overall hydrological profile of the country is still positive.
- The total water stock in 91 major reservoirs monitored by the Central Water Commission is around 14% above the last year's corresponding level.
- It is 3% higher than the long-period average (May, 2019 data).
- Agricultural drought has, by and large, been averted as the rabi crops have mostly been harvested and the kharif ones are yet to be planted.

12.2 Understanding Sustainable Development - Chennai-Salem Highway Case

What is the issue?

- The Supreme Court is to hear arguments on an appeal filed against a judgment of the Madras High Court in regards with the [Chennai-Salem highway](#).
- The highway case gains significance as it will test the judiciary's assessment of environmental and economic interests.

What is the case about?

- The case relates with acquisition of land for the proposed eight-lane expressway connecting Chennai to Salem in the state of Tamil Nadu.
- The eight-lane highway is part of the "Bharatmala Pariyojana", a centrally sponsored highways programme.
- It is aimed chiefly as a corridor for more efficient freight movement.
- The intended highway will cover more than 250 km.
- Once constructed, it will pass through many agricultural and reserve forest lands.



- The project could have a harmful impact on the forests, the surrounding water bodies and the wildlife of the region.
- Given this, the key contention is the debate over the need for an environmental impact assessment (EIA) before land acquisition.
- According to the petitioners (mostly landowners), the state had failed to obtain an environmental clearance before acquiring land.
- Subsequently, the Madras High Court quashed a series of notifications acquiring land for the project.
- The Supreme Court too had already denied the National Highway Authority of India's urgent request for a stay of the judgment.

What is the government's stance?

- The TN government argued that its power to acquire land under the National Highways Act, 1956 was unconditional.
- It maintains that there was no law mandating an EIA before efforts are made to acquire private land.
- It says that a notification under the Environment (Protection) Rules, 1986 requiring EIA did not call for such an assessment for the purposes of securing the land.

How did the idea of sustainable development emerge?

- Recognising the state of deteriorating environment, in 1987, a UN-backed committee led by the former Norwegian PM Gro Brundtland proposed some measures.
- It gave a long-term strategy which called for sustainable development, among other things.
- The core idea was to meet the needs of the present without compromising the ability of the future generations to meet their own needs.
- In India, even before a binding international norm was in place, the Supreme Court read the idea as intrinsic to India's constitutional structure.

What is the approach at ground level?

- Over time, the traditional concept that development and ecology are opposed to each other became no longer acceptable.
- The courts have invariably seen sustainable development as demanding a balancing exercise.
- It is seen as that which requires a calculation of trade-offs between the environment and the economy.
- In other words, any development would have an adverse effect on the ecology and the environment, and so a balance had to be struck.
- So, if a project would bring in results which are far more useful for the people, difficulty of a small number of people has to be bypassed.
- The convenience and benefit to a larger section of the people has to get primacy over comparatively lesser hardship.

What is the concern here?

- The prominence accorded to sustainable development may be laudable.
- But the utilitarian calculations represent a problem inherent in seeing sustainable development as an ideal model.
- In effect, a project which may not be beneficial for the environment may be justified under the utilitarian calculations.

What does the Chennai-Salem highway issue imply?

- Going by the utilitarian argument, the project could be justified by the government as it would economically benefit many.
- But it is a greenfield project where an altogether new road will be constructed on virgin land.
- So to avoid an EIA before land was obtained would have created irreversible effects.

- This would have had a bearing not only on the environment, but also on the social and economic life of the landowners.
- The highway may further make way for new establishments, poaching of endangered species, illicit felling and transportation of valuable timber, etc.

12.3 Corporate Average Fuel Efficiency Norms – Vehicular Pollution

What is the issue?

- The government is considering advancing the 2030 deadline for Indian manufacturers to switch over to electric vehicles in bikes and three-wheelers segments.
- With manufacturers opposing it, targeting cleaner air through stricter CAFE norms instead is suggested.

What are the CAFE norms?

- CAFE (Corporate Average Fuel Efficiency/Economy) norms aim at lowering fuel consumption (or improving fuel efficiency) of vehicles.
- It is achieved by lowering carbon dioxide (CO₂) emissions.
- Thus, it serves the twin purposes of reducing dependence on oil for fuel and controlling pollution.
- Corporate Average refers to sales-volume weighted average for every auto manufacturer.
- The norms are applicable for petrol, diesel, LPG and CNG passenger vehicles.
- The CAFE regulations are in place in many advanced as well as developing nations, including India.
- CAFE regulations in India came into force from April 1, 2017.
- Under this, average corporate CO₂ emission must be less than 130 gm per km till 2022 and below 113 gm per km thereafter.
- In other words, it requires cars to be 10% or more fuel efficient between 2017 and 2021, and 30% or more fuel efficient from 2022, in terms of CO₂ emission.

Why is it important to India?

- Global automakers are attracted to make investments in India as vehicle penetration is still low here compared to developed countries.
- Also, pollution caused by the ever-increasing number of vehicles on road is worsening the air quality in many cities.
- Upgrading to stricter fuel standards is one way to tackle air pollution.
- In this context, CAFE norms assume importance in the light of their ability to reduce the carbon footprint of the auto industry.
- Stricter CAFE targets can also lead to manufacturers moving to electric or strong hybrid vehicles over the medium to long-term to comply with the norms.
- This can complement other efforts at ensuring cleaner air through measures such as the -
 - i. implementation of the [BS VI emission norms](#) from April 2020 onwards
 - ii. the plan to shift to mass use of electric vehicles by 2030
 - iii. incentives under the [FAME](#) (Faster Adoption and Manufacturing of Hybrid & Electric Vehicles) scheme
- [While CAFE regulations focus on reducing CO₂ emissions, BS VI focusses on other harmful exhaust from vehicles.]

What does India's Auto Policy specify?

- The [Draft National Auto Policy](#) given in early 2018 calls for developing a roadmap for reduction in CO₂ emissions through CAFE regulations.
- It aspires to match Indian CO₂ reduction targets to those set by developed countries by 2025.



- The Auto Policy also contemplates economic penalties for manufacturers who do not meet the targets.
- It also envisages a system where credits (for achieving more than the mandated fuel efficiency) can be banked and traded.

PRELIM BITS

13. HISTORY, ART & CULTURE

Karikiyoor Rock Paintings

- 5,000 year old rock paintings are found Karikiyoor at KilKotagiri in the Nilgiri forests.
- The society that painted the symbols onto these rocks were contemporaneous with the Indus Valley civilisation.
- The rock paintings in Karikiyoor contain analogous-Indus script, meaning they resemble the script found in Indus civilization sites of northern India.
- Members of the Irula tribal community have an ancestral link to the site.
- The rock paintings serve both, as a “historical record,” detailing the hunting habits and ways of life of the local communities, and also a ritualistic purpose.

Folk arts of Himachal Pradesh

- Himachal Pradesh has two stylistic streams of art and culture - classical or courtly (the Great Tradition) and folk (the Little Tradition).
- The figures of Hindu deities such as Shiva, six-headed Karttikeya or Kumara, Gaja-Lakshmi, Krittika, Rishi Vishvamisra, etc were engraved on the coins issued by the chieftains of the janapadas (republics) such as the Kunindas, the Malavas, the Audumbaras, etc. by the 3rd century BCE.
- The stone statues of Vishnu and numerous reliefs carved in the Sarnath style are found in Ambika Mata and Parashurama temples in Nirmand in Kulu district, popularly known as the Kashi of the Himalayan region, dated to the 4th-5th centuries CE.
- Free standing wood statues of Surya and one of his attendants Dandi and Pingala, and four door frames featuring flowing forms of Hindu goddesses executed in Gupta and post-Gupta style, i.e. late 6th-early 7th centuries CE are found in wooden temple of Surya that has been reconstructed and dedicated to Docha-Mocha (a village deity) in Gajan hamlet in Kulu valley.

Ajivika Philosophy

- Around the 6th century BC, at the time of the Buddha, there was an explosion all across India of different schools of thought and philosophy.
- One of the most popular was the Ajivika sect, Makkhali Goshala was its most important leader.
- The Ajivikas' central belief was that absolutely everything is predetermined by fate, or niyati, and hence human action has no consequence one way or the other.
- Like Jains, Ajiviks wore no clothes, and lived as ascetic monks in organised groups.
- They were known to practice extremely severe austerities, such as lying on nails, going through fire, exposing themselves to extreme weather, and even spending time in large earthen pots for penance.
- There was no caste discrimination and people from all walks of life joined them.
- The Barabar Caves (ancient rock cut caves) in Bihar dating from the Mauryan Empire, were made for Ajiviks and Jains to retreat and meditate.
- Buddhist and Jain texts are very critical of the Ajiviks, Ajiviks are considered fairly important rivals of both.
- The sect reached its peak during the Mauryan Emperor Ashoka's father's Bindusara's was a follower of Ajivika.



- Ashoka himself, best known for his spreading of Buddhism all over India and Southeast Asia, was an Ajivik for most of his life.

Vedas

- Vedas are the most sacred and ancient Hindu texts, there are four Vedas, the Rigveda, Samaveda, Yajurveda and Atharvaveda.
- The Rigveda is by far the oldest and consists of about one thousand hymns, made up of about 10,600 verses.
- The others are typically shorter; the Samaveda has about 1,500 verses, the Atharvaveda has about 6,000 mantras and so on
- The Vedas were composed somewhere around 2000 BC, while writing in India began more than 2,500 years later.
- Vedas transferred from one to the other through the process of memorization, by listening was called the 'shruti', which means "what is heard", and is often used to refer to the Vedas themselves.

Vedic Chanting

- To preserve the purity of the Vedas, ancient Indians came up with ingenious techniques.
- In addition to memorizing each mantra the standard way, they would learn the same sentence in many different ways backwards, forwards, combining two words at a time and so on.
- There were more than ten recitation techniques, which are as follows Vakya-patha (Sentence recitation), Pada-patha (ord recitation), Krama-patha (Step recitation), Jata-patha (Woven recitation), Ghana-patha, mala (garland), shikha (peak), dhvaja (flag), rekha (line), danda (stick) and ratha (chariot).
- Reciting the entire Rigveda in the Ghanam style just once could take up to 450 hours.
- UNESCO has designated the tradition of the Vedic chant a "Masterpiece of the Oral and Intangible Heritage of Humanity", due to its cultural significance.

Chaukhandi Stupa

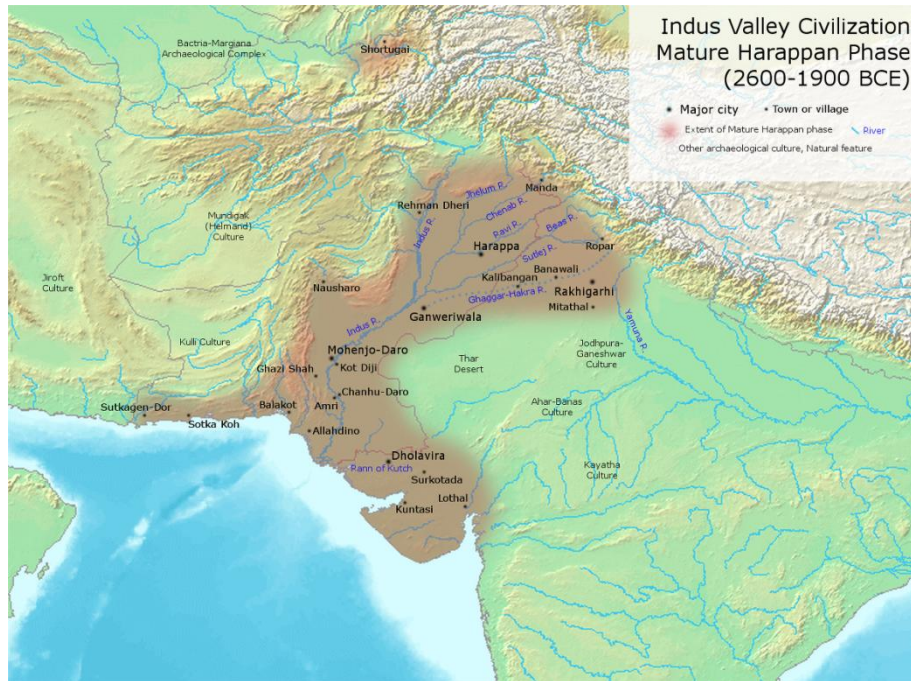
- Chaukhandi Stupa is an ancient Buddhist site in Uttar Pradesh's Sarnath.
- Stupas have evolved from burial mounds and serve as a shrine for a relic of the Buddha.
- The Chaukhandi Stupa was built as a terraced temple during the Gupta period between the 4th and 6th centuries to mark the site where Lord Buddha and his first disciples met traveling from Bodhi Gaya to Sarnath.
- Later Govardhan, the son of a Raja, modified the stupa by building an octagonal tower to commemorate the visit of Mughal ruler Humayun.
- The monument has been declared to be "of national importance" by the Archaeological Survey of India.



Lothal

- Lothal was one of the southernmost cities of the ancient Indus Valley Civilization,
- It is located in the Bhal region of the modern state of Gujarat and first inhabited c. 3700 BCE.
- Lothal had the world's earliest known dock, which connected the city to an ancient course of the Sabarmati River on the trade route between Harappan cities in Sindh and the peninsula of Saurashtra when the surrounding Kutch desert of today was a part of the Arabian Sea.
- Lothal was a vital and thriving trade Centre in ancient times, with its trade of beads, gems and valuable ornaments reaching the far corners of West Asia and Africa.

- The Lothal site has been nominated as a UNESCO World Heritage Site, and its application is pending on the tentative list of UNESCO.



Ancient North Siberians

- About 200,000-300,000 years ago, Homo sapiens — the modern humans evolved from their early hominid predecessors in Africa.
- They migrated out of Africa about 70,000-100,000 years ago to parts of Europe and Asia.
- Recently scientists have identified a previously unknown group of ancient people who lived in north eastern Siberia during the last Ice Age that lasted from about 126,000 to 11,700 years ago.
- During the Last Glacial Maximum (about 26,500 to 19,000 years ago), hunter-gatherer populations made their way from Siberia to North America through a land bridge at what is now Bering Strait.
- It was submerged at the end of the last Ice Age (that lasted from about 126,000 to 11,700 years ago).
- The people, known as the Ancient North Siberians, endured extreme conditions during the late Pleistocene (often referred to as the Ice Age).
- They were ancestors both to the first humans who inhabited the Americas (the first Peoples) and to a subsequent Siberian group (the Ancient Palaeo-Siberians).

Ugra Tara Temple

- UgraTara Temple is a temple dedicated to Tara (Devi) is an important Shakti shrine, located in Guwahati, Assam.
- The present temple of Ugra Tara was built by Ahom King Siva Singha in 1725 AD.
- In the garbhagriha of Ugra Tara there is no image or idol of her, a small pit filled with water is considered as the Goddess.
- Recently black soft shell turtle conservation was conducted in the temple pond.

Maharaja Ranjit Singh

- A Statue of Ranjit Singh, who ruled Punjab for almost four decades (1801-39), was recently inaugurated in Lahore.
- He is Known as the Sher-e-Punjab (Lion of Punjab).



- The statue has his favourite horse named Kahar Bahar, a gift from Dost Muhammad Khan, the founder of the Barakzai dynasty.
- Earlier Punjab was ruled by powerful chieftains who had divided the territory into Misls.
- He overthrew the warring Misls and established a unified Sikh empire after he conquered Lahore in 1799.
- He brought unity and welded together warring states.
- He combined the strong points of the traditional Khalsa army with western advances in warfare to raise Asia's most powerful indigenous army of that time.
- The boundaries of his empire went up to Ladakh in the northeast, Khyber pass in the northwest, and up to Panjnad in the south.
- Both Hindus and Muslims were given powerful positions in his darbar.
- He turned Harimandir Sahib at Amritsar into the Golden Temple by covering it with gold.
- His general Hari Singh Nalwa built the Fort of Jamrud at the mouth of the Khyber Pass, the route the foreign rulers took to invade India.
- He amassed huge wealth and was also in possession of the Koh-i-Noor diamond.
- In his will, Ranjit Singh gave it to Jagannath Temple in Puri, which was administered by the East India Company.

100 years of Treaty of Versailles

- The treaty was drafted during the **Paris Peace Conference** in 1919.
- None of the defeated nations had any say in shaping the treaty and it was a dictated "peace treaty"
- The victorious powers of **WW-I** led by the United States, Britain, France and Italy – declared Germany and its allies to be solely responsible for the outbreak of World War I.
- They made Germany accountable for "all losses and damages" incurred.
- The Allies threatened to invade the country which made Germany to sign the notorious treaty.
- It was the most important of the peace treaties that ended the First World War.
- It placed a heavy burden on Germany's burgeoning democracy.
- It forced the country to pay billions in reparations; give up its colonies in Africa, Asia and the Pacific region; and to cede 13% of its territory to other nations.
- Among other things, Alsace-Lorraine became French and most of West Prussia became Polish.
- The most famous legacy of the Treaty of Versailles is that its draconian terms designed to prevent Germany from repeating its military aggression.
- But the treaty made the German economy collapsed, the government lost power, the military became weak, and made the people very angry.
- All of these factors together combined to make a perfect storm in Germany.
- The weak government and German fear made it possible for **Adolf Hitler** to be elected, and finally the German anger and Hitler's mindset led to World War II.

14. GEOGRAPHY

Diamond Formation

- Diamonds are crystals of carbon formed beneath the Earth's crust.
- They are brought to the surface in volcanic eruptions of a special kind of magma called kimberlite.
- Recent study has found that seawater in sediment from the bottom of the ocean reacts to produce the same composition of salts found in diamonds.

- Most diamonds found at the Earth's surface formed in this way according to the researchers, by this it has been found that Diamonds are naturally recycled minerals on the ocean floor.
- Diamonds that are carved into gemstones are mostly pure-carbon in their composition.
- But there is another kind 'fibrous' diamonds. They are cloudy, less appealing and not used in jewelry.
- Instead, they are used for industrial purposes, eg drill bits.
- Fibrous diamonds come with traces of sodium, potassium or other minerals that reveal information about the environment where they formed.
- This salty fluid found in these diamonds provided the base of study for researchers.

Kolleru Lake

- Kolleru Lake is one of the largest freshwater lakes in India located in state of Andhra Pradesh and forms the largest shallow freshwater lake in Asia.
- Kolleru is located between Krishna and Godavari deltas, the lake spans into two districts Krishna and West Godavari.
- The lake is fed directly by water from the seasonal Budameru and Tammileru streams, and is connected to the Krishna and Godavari irrigation systems by over 67 major and minor irrigation canals.
- The lake was an important habitat for an estimated 20 million resident and migratory birds, including the grey or spot-billed pelican (*Pelecanus philippensis*).
- The significant birds migrate here during winter are Siberian crane, ibis, pelicans and painted storks.
- The lake was declared as a wildlife sanctuary in November 1999 under India's Wildlife Protection Act of 1972, and designated a wetland of international importance under the international Ramsar Convention.

Strait of Hormuz

- The Strait of Hormuz lies between Oman and Iran.
- It links the Persian Gulf in the north with Gulf of Oman to the south and Arabian Sea beyond.
- It's a narrow passage with a width of 36.8 nautical miles (68.2 km).
- It provides the only sea passage from the Persian Gulf to the open ocean and is one of the world's most strategically important choke points.
- Saudi Arabia, Iran, UAE, Kuwait and Iraq exports most of their crude through this Strait.
- Almost 20% of total global oil consumption passes through the strait, making it a highly important strategic location for international trade
- Due to this US has stationed its fleet with a task to protect the commercial shipping in the area.



Continental Axis hypothesis

- It states that regions of the earth spread across,
 - a. Latitudinal area (east-west) - more likely to witness greater development
 - b. Longitudinal area (North-South) - comparatively lower development.
- This is because temperatures are largely similar across latitudes, which helps technology and ideas to spread among larger population.
- It also results in more cultural homogeneity.
- It is also known as “Continental orientation hypothesis.”

15. GOVERNMENT INITIATIVES

Jan Shikshan Sansthan

- It is an initiative of Ministry of Human Resources and Development.
- Under this, institutions are established to provide vocational training to non-literate, neo-literate, as well as school drop outs by identifying skills as would have a market in the region of their establishment.
- JSS offers training equivalent to courses designed by the Directorate of Adult education, National Institute of Open Schooling and Director General Employment & Training.

Bimal Jalan Committee - Transfer of RBI funds to Govt.

- The committee was constituted to suggest appropriate reserves that **RBI** should maintain and dividends it should pay to the government.
- Its **mandate** was to review global best practices followed by the central banks in making assessment and provisions.
- Most of the committee members favours reducing the RBI's excess reserves in a phased manner, without any substantial transfer to the government.
- The majority of the members also favors the past reserves of the RBI, especially unrealized gains, in gold and currency revaluation accounts, should not be touched, while future transfers should be guided by the new policy.
- Government nominee on the Committee has expressed differences on key recommendations of the panel.
- As per **Section 47 of the RBI Act**, profits of the RBI are to be transferred to the government, after making various contingency provisions.
- The Finance Ministry had internally estimated RBI's excess reserves at Rs 3.6 lakh crore.
- For the year ending June 2018, **RBI had total reserves of Rs 9.59 lakh crore**, comprising mainly currency and gold revaluation account (Rs 6.91 lakh crore) and contingency fund (Rs 2.32 lakh crore).
- If the committee recommends a significant chunk of past excess reserves that can be transferred to the government, it will put the Centre into a much better fiscal situation.
- It will also enable government to deploy the money for capitalizing the public sector banks and to support economic growth.
- At the same time, RBI needs adequate capital reserves for monetary policy operations, currency fluctuations, possible fall in the value of bonds and other risks from an increase in its expenditure.
- The panel is supposed to submit its report later this week.

PM Kisan Samman Nidhi Scheme

- **PM Kisan** was announced in 2019 interim budget guaranteeing **direct income support** for farmers.
- This is to help them meet farm input and other costs during the crop season.
- Earlier, the vulnerable landholding farmer families, having cultivable land **upto 2 hectares**, to be provided direct income support at the rate of **Rs. 6,000 per year**.
- Now the **eligibility** for PM Kisan Samman Nidhi Scheme **is extended to All landholder farmers' families** in the country **except**,
 1. All Institutional Land holders.
 2. Farmer families in which one or more of its members belong to following categories,
 - Former and present holders of constitutional post.
 - Former and present - Ministers/ State Ministers, M.Ps (Lok sabha & Rajya Sabha), MLAs (SLA & SLC)
 - Former and present Mayors of Municipal Corporations, Chairpersons of District Panchayats.



- All serving or retired officers and employees of Central/ State Government Ministries /Offices/Departments and its field units Central or State PSEs and Attached offices /Autonomous Institutions under Government as well as regular employees of the Local Bodies.
 - All superannuated/retired pensioners whose monthly pension is Rs.10,000/-or more (Excluding Multi Tasking Staff / Class IV/Group D employees)
 - All Persons who paid Income Tax in last assessment year.
 - Professionals like Doctors, Engineers, Lawyers, Chartered Accountants, and Architects registered with Professional bodies and carrying out profession by undertaking practices.
- The **Ministry for Agriculture & Farmers Welfare** has uploaded data of farmers on the PM-Kisan Portal to enable it to release the benefits to the beneficiary farmers.

Economic Census

- Economic Census is the complete insight into geographical spread/clusters of economic activities, ownership pattern, persons engaged, etc. of all economic establishments in the country.
- Economic Census will cover all establishments including household enterprises, engaged in production or distribution of goods/services (other than for the sole purpose of own consumption) in non-farm agricultural and non-agricultural sector will be counted.
- The information collected during Economic Census are useful for socio-economic developmental planning at state and district levels.
- Economic Census is being conducted by Ministry of Statistics and Programme Implementation (MoSPI).

Pradhanmantri Jan Vikas Karykram.

- Pradhan Mantri Jan VikasKaryakram (PMJVK) seeks to provide better socio economic infrastructure facilities to the minority communities.
- The scheme particularly concentrates in the field of education, health & skill development which would further lead to lessening of the gap between the national average and the minority communities with regard to backwardness parameters.
- The erstwhile Multi-sectoral Development Programme (MsDP) has been restructured and renamed as Pradhan Mantri Jan VikasKaryakram for effective implementation.
- The restructured scheme is to be implemented during the remaining period of the 14th Finance Commission ie. March 31, 2020.

Waqf Properties

- A Waqf property, is an inalienable charitable endowment under Islamic law, which typically involves donating a building, plot of land or other assets for Muslim religious or charitable purposes with no intention of reclaiming the assets
- Union government has launched a Geo tagging and digitalizationprogramme of Waqf properties across the country to ensure these properties can be utilized for welfare of the society.
- For the first time since Independence, Government has decided to provide 100 per cent funding to develop schools, colleges, ITIs, polytechnics, hospitals, multi-purpose community hall "SadbhavMandap" on Waqf land under Pradhanmantri Jan VikasKarykram (PMJVK).

Emission Trading Scheme

- Gujarat has launched India's first Emission Trading Scheme to combat particulate air pollution.
- The programme is a market-based system where the government sets a cap on emissions and allows industries to buy and sell permits to stay below the cap.
- Under the cap and trade system, the regulator first defines the total mass of pollution that can be put into the air over a defined period by all factories put together.

- Then, a set of permits is created, each of which allows a certain amount of pollution, and the total is equal to the cap.
- These permits are the quantity that is bought and sold, each factory is allocated a share of these permits (this could be equal or based on size or some other rule).
- After this, plants can trade permits with each other, just like any other commodity on the National Commodity and Derivatives Exchange Limited (NCDEX).
- The reason for trading is that in a cap and trade market, the regulator will measure pollution over a period of time and industries must own enough permits to cover their total emissions.
- Factories who find it very expensive to reduce pollution, will seek to buy more permits.
- Those who can easily reduce pollution are encouraged to do so because then they have excess permits to sell.
- Globally, cap-and-trade systems have been used to reduce other forms of pollution, such as programmes that have successfully reduced Sulphur dioxide (SO₂) and nitrogen oxides (NO_x) in the United States.
- But the Gujarat programme is the first in the world to regulate particulate air pollution.

RODRA Website

- Manpower Planning (MP) Directorate has launched a website called Retired Officers Digital Records Archive (RODRA, rodra.gov.in) to overcome lack of digitization and non-availability of latest address and contact details of veterans.
- Manpower Planning (MP) Directorate is responsible for custody and maintenance of approximately 1.2 Lakh service records of serving and retired officers of the Indian Army.
- Some of the facilities extended to veterans through website are updating of records, Registration and tracking of documents/ pension related grievances.

PVTG

- Particularly Vulnerable Tribal Group (PVTG) are more vulnerable among the tribal groups.
- In India, there are 75 PVTGs out of 705 Scheduled Tribes, spread over 18 states and one Union Territory (A&N Islands).
- Among the 75 listed PVTG's the highest number are found in Odisha (13), followed by Andhra Pradesh (12).
- The Ministry of Tribal Affairs implements the Scheme of "Development of Particularly Vulnerable Tribal Groups (PVTGs)" exclusively for them.
- The criteria followed for determination of PVTGs are as under:
 1. A pre-agriculture level of technology.
 2. A stagnant or declining population.
 3. Extremely low literacy.
 4. A subsistence level of economy.
- The Forest Rights Act ensures, that the District Level Committee should play a pro-active role in ensuring that all PTGs receive habitat rights in consultation with the concerned PTGs' traditional institutions of these groups, after filing claims before the gram sabha.
- Habitat is defined under the act as, "the area comprising the customary habitat and such other habitats in reserved forests and protected forests of primitive tribal groups and pre-agricultural communities and other forest dwelling Scheduled Tribes."

Abujh Marias Tribes

- Abujh Marias are Particularly Vulnerable Tribal Group (PVTG) community living in Abujhmarh forest, Bastar region of Chhattisgarh.
- Abujh Marias have their own governance structure.



- Since Abujh Marias is a PVTG community, they are entitled to the habitat rights under the Forest Rights Act (FRA).
- Recently Chhattisgarh government has initiated the processing of habitat rights for Abujh Marias, a (PVTG).

16. NATIONAL INSTITUTIONS

National Statistical Office

- Union government has announced that the National Sample Survey Office (NSSO) will be merged with the Central Statistics Office to form the National Statistical Office (NSO).
- The NSO will be headed by the secretary of the Ministry of Statistics and Programme Implementation (MOSPI).
- The move is taken as the Statistical agencies like the Central Statistics Office (CSO) and the National Sample Survey Organization (NSSO) face numerous problems in collecting data from State and Central government departments.
- National Statistical office would lay special emphasis on ensuring collection of unbiased data so as to restore public trust in the figures released by the Government.

National Centre for Good Governance (NCGG)

- NCGG is an autonomous institute under the aegis of Department of Administrative Reforms and Public Grievances, Government of India.
- Its head office is at New Delhi and registered office at Mussoorie.
- The NCGG has been set up to assist in bringing about governance reforms through studies, training, knowledge sharing and promotion of good ideas.
- It seeks to curate training courses for civil servants from India and other developing countries.
- The National Centre for Good Governance traces its origin to the National Institute of Administrative Research (NIAR).
- NIAR was subsequently rechristened with an expanded mandate, as National Centre for Good Governance, which was inaugurated in 2014.

Maritime Heritage Museum

- India and Portugal has agreed to establish a maritime heritage museum at Lothal in Gujarat.
- It is likely to come up on the lines of a similar museum at Lisbon, which is administered by the Portuguese Navy
- The Indian Navy is keen to be a stakeholder in the project and will administer the maritime museum.
- The project is being implemented by the Ministry of Shipping through its Sagarmala programme, with the involvement of the Archaeological Survey of India (ASI).

National Data Warehouse

- Ministry of Statistical Programme and Implementation has proposed to setup National Data Warehouse.
- National Data Warehouse will leverage big data analytical tools to further improve the quality of macro-economic aggregates.

Defense Space Research Agency

- Cabinet Committee on Security has approved to setup new agency called Defense Space Research Agency (DSRO).
- The agency will be entrusted with the task of creating space warfare weapon systems and technologies.

- The agency would be providing the research and development support to the Defense Space Agency (DSA) which comprises members of the three services.
- The DSA has been created to help the country fight wars in the space.
- The Defense Space Agency is being set up in Bengaluru under an Air Vice Marshal-rank officer and will gradually take over the space-related capabilities of the three forces.

17. INTERNATIONAL ISSUES AND EVENTS

Asia Pacific Group

- In 1995 an Asia-Pacific regional office called the "FATF-Asia Secretariat" was established and funded by the government of Australia.
- It worked with countries in the Asia-Pacific to generate wide regional commitment to implement anti-money laundering policies.
- In 1997, the Asia/Pacific Group on Money Laundering (APG) was officially established as an autonomous regional anti-money laundering body.
- It was set up by unanimous agreement among 13 original founding members.
- A new secretariat was also established to serve as the focal point for APG activities, in Sydney, Australia.

International Disability Alliance

- The International Disability Alliance (IDA) was established in 1999 as a network of global and regional organizations of persons with disabilities (DPOs) and their families.
- IDA is a key player in the negotiation of the United Nations Convention on the Rights of Persons with Disabilities (UN CRPD).
- The Alliance aims to promote the effective and full implementation of the UN CRPD worldwide.
- IDA represents the estimated one billion people worldwide living with a disability.
- This is the world's largest and most frequently overlooked minority group.
- IDA is hosting its 2nd Global Disability Summit in Argentina.

New START Treaty

- New START (Strategic Arms Reduction Treaty) is a nuclear arms reduction treaty between the United States and the Russian Federation.
- The formal name of the treaty is Measures for the Further Reduction and Limitation of Strategic Offensive Arms.
- It was signed on 2010 in Prague and entered into force in 2011, it is expected to last at least until 2021.
- New START replaced the Treaty of Moscow (SORT).
- Under terms of the treaty, the number of strategic nuclear missile launchers will be reduced by half.
- A new inspection and verification regime will be established, replacing the SORT mechanism.
- It does not limit the number of operationally inactive stockpiled nuclear warheads that remain in the high thousands in both the Russian and American inventories.

Shanghai Cooperation Organization

- The Shanghai Cooperation Organization (SCO), or Shanghai Pact is a Eurasian political, economic, and security alliance.
- China, Kazakhstan, Kyrgyzstan, Russia, Tajikistan, and Uzbekistan are the founding members of the Shanghai Cooperation Organisation.



- India and Pakistan joined SCO as full members in 2017 at a summit in Astana, Kazakhstan.
- The Heads of State Council (HSC) is the supreme decision-making body in the SCO, it meets once a year and adopts decisions and guidelines on all important matters of the organization.
- Military exercises are also regularly conducted among members to promote cooperation and coordination against terrorism and other external threats, and to maintain regional peace and stability.
- The SCO is widely regarded as the "alliance of the East", due to its growing centrality in Asia-Pacific, and has been the primary security pillar of the region.

Regional Anti-Terror Structure

- Regional Antiterrorism Structure (RATS) was established by SCO member nations in Tashkent, Uzbekistan on 2004.
- RATS aims to fight cross-border crimes like drug trafficking and cyberwarfare under the counter-terrorism rubric.
- India has been participating in tactical drills and counter-terror cooperation with other SCO member countries under the RATS.
- India joined Pakistan in a tactical military exercise under the SCO's RATS in 2018.

ReCAAP

- Regional Cooperation Agreement on Combating Piracy and Armed Robbery against Ships in Asia (ReCAAP) is the first regional Government-to-Government agreement to deal with piracy and armed robbery at sea in Asia.
- The ReCAAP Presently 20 countries are members of ReCAAP.
- Information sharing, capacity building and mutual legal assistance are the three pillars of co-operation under the ReCAAP agreement.
- An ISC has been established at Singapore to collate and disseminate the information among the contracting parties and the maritime community.
- India played an active role in the setting up and functioning of ReCAAPISC along with Japan and Singapore.
- Capacity building workshop is organized annually by the ISC and is co-hosted by one of the contracting parties.
- The main objective of this workshop is to share updated situation of piracy and armed robbery against ships in Asia and best practices of Asian countries.
- The capacity building workshop for 2019 is being held in Delhi, India.

18. ECONOMY

Leverage Ratio

- A leverage ratio is one of several financial measurements that look at how much capital comes in the form of debt (loans) or assesses the ability of a company to meet its financial obligations.
- The leverage ratio category is important because companies rely on a mixture of equity and debt to finance their operations, and knowing the amount of debt held by a company is useful in evaluating whether it can pay its debts off as they come due.
- A leverage ratio may also be used to measure a company's mix of operating expenses to get an idea of how changes in output will affect operating income.
- Common leverage ratios include the debt-equity ratio, equity multiplier, degree of financial leverage, and consumer leverage ratio.
- Banks have regulatory oversight on the level of leverage they are able to have, as measured by leverage ratios.

- The Basel Committee on Banking Supervision (BCBS) has set the minimum requirement for leverage ratio at 3%.
- A lowering of the ratio, with the capital as numerator staying fixed, would imply an expansion of the denominator, or the bank's lending activity.
- Banks have been required to publicly disclose their Basel III leverage ratio on a consolidated basis from 1 April 2015.
- Leverage ratio is one the four indicators under the RBI's prompt corrective action framework, recently RBI has reduced leverage ratio of domestic systematically important Banks (D-SIB).

Base Erosion and Profit Shifting (BEPS)

- BEPS refers to corporate tax planning strategies used by multinationals to "shift" profits from higher tax jurisdictions to lower tax jurisdictions, thus "eroding" the "tax-base" of the higher tax jurisdictions.
- This undermines the fairness and integrity of tax systems because businesses that operate across borders can use BEPS to gain a competitive advantage over enterprises that operate at a domestic level.
- Moreover, when taxpayers see multinational corporations legally avoiding income tax, it undermines voluntary compliance by all taxpayers.
- The Organization for Economic Co-operation and Development (OECD) and G20 has an Inclusive Framework on BEPS, which brings together over 125 countries and jurisdictions to collaborate on the implementation of the BEPS Package.
- The BEPS Package provides 15 Actions that equip governments with the domestic and international instruments needed to tackle tax avoidance.
- Countries now have the tools to ensure that profits are taxed where economic activities generating the profits are performed and where value is created.
- These tools also give businesses greater certainty by reducing disputes over the application of international tax rules and standardizing compliance requirements.

19. ENVIRONMENT

U.S. Pentagon emits more greenhouse gases

- The findings showed that if the The U.S. Department of Defense (Pentagon) was listed as a country, its emissions would make it the world's 55th largest contributor of greenhouse gases..
- Pentagon is the largest institutional consumer of fossil fuels in the world.
- It emits more greenhouse gases than Portugal or Sweden.
- It released about 59 million metric tons of carbon dioxide and other greenhouse gases in 2017.
- It consumed between 77% and 80% of all federal government energy consumption since 2001.
- Military weapons and equipment use so much fuel that that is gallons per mile.
- China is the world's largest emitter of carbon dioxide, , followed by the United States.
- Global temperatures are on course for a 3C to 5C rise this century.
- Overshooting a global target of limiting the increase to 2C or less.
- 4C of warming would increase more than five times the influence of climate on conflict.
- Failing to reduce greenhouse gas emissions will make the nightmare scenarios, perhaps even "climate wars" more likely.
- A case for decarbonizing the military - Over the past decade the Defense Department has reduced its fossil fuel consumption through actions that include using renewable energy.
- Cutting Pentagon greenhouse gas emissions will help save lives in the United States and could diminish the risk of climate conflict.

SPECIES IN NEWS

Hoolock Gibbon

- The hoolock gibbons are native to eastern Bangladesh, Northeast India and Southwest China.
- White rings around their eyes and mouths give their faces a mask-like appearance.
- Hoolock Gibbon are categorized vulnerable, as per the International Union for Conservation of Nature (IUCN).
- Estimates of the eastern hoolock gibbon population in India are at 170 most found in Assam and Arunachal Pradesh.
- They are mainly concentrated in the Mishmi Hills, and are now commonly known as Mishmi hills gibbons.
- The animal is protected in Mehao Wildlife Sanctuary located in Lower Dibang Valley district.

Radio-collaring Asiatic lions

- Asiatic lions are slightly smaller than African lions.
- They used to range from Turkey, across Asia, to eastern India.
- At present Gir National Park and Wildlife Sanctuary is the only abode of the Asiatic lion.
- They are estimated to be 523 in the wild.
- Five protected areas currently exist to protect the Asian lion:
 1. Gir Sanctuary,
 2. Gir National Park
 3. Pania Sanctuary together forms the “Gir Conservation Area” (GCA)
 4. The other two are, Mitiyala and
 5. Girnar protected areas within dispersal distance of the Gir Conservation Area.
- The lions face the usual threats of poaching and habitat fragmentation.
- However, recent death of around two dozen lions is attributed to the deadly Canine Distemper Virus (CDV) in Dalkhaniya range of Gir forest division.
- So the Gujarat Forest Department has begun Radio-collaring Asiatic lions in a bid to study their movement patterns, territories and habitat preferences.
- Radio-collars are fitted with small radio transmitter that will beam signals to the satellites at a preset frequency and the satellites, in turn, will relay the signals to a control-room in Sasan.
- The government has set up a high-tech monitoring unit at Sasan which will serve as control-room for the collars.
- This will help the forest department in monitoring of the group's movement, research, knowing the territory of the animal and other details.
- During floods and other calamities and spread of diseases, the radio collars would be a big help for forest teams.
- Conservation Status-
 1. Listed in Schedule I of Wildlife (Protection) Act 1972
 2. Appendix I of CITES
 3. Endangered on IUCN Red List
 4. Asiatic Lion Conservation Project by the MoEFCC

Olive Ridley

- The Olive Ridley sea turtle are the second smallest and most abundant of all sea turtles found in the world.
- This species of sea turtle is found in warm and tropical waters, primarily in the Pacific and Indian Oceans.
- They can also be found in the warm waters of the Atlantic Ocean.
- These turtles, are best known for their unique mass nesting called arribada, where thousands of females come together on the same beach to lay eggs.
- The Gahirmatha marine sanctuary is the largest rookery of the Olive Ridley turtles in India.



Olive Ridley Research Centre

- A proposal has been made to establish a permanent research center near the Rushikulya rookery on the Odisha coast.
- The center will study the mass nesting of Olive Ridley and the environmental factors related to it.
- The center would also carry out a detailed study of the habits and the habitat of the turtles and the coastal flora and fauna.
- Rushikulya River is one of the major rivers in the state of Odisha, which originates from Daringbadi hills of the Eastern Ghats range.
- The place from where the river originates, Daringbadi is called the 'Kashmir of Odisha'.
- The river meets the Bay of Bengal at Puruna Bandha in Ganjam, It has no delta as such at its mouth.

Black Softshell Turtle

- The black softshell turtle or Bostami turtle is a species of freshwater turtle found in India and Bangladesh.
- It is the close relative of Indian peacock softshell turtle, but it is a distinct species.
- As of 2002, the IUCN classified the species as Extinct in the Wild.
- The turtle is originally native to the lower Brahmaputra River.

Asiatic Golden Cat

- The Asian golden cat is a wild cat native to the northeastern Indian subcontinent and Southeast Asia.
- It has been listed as Near Threatened on the IUCN Red List since 2008, and is threatened by hunting pressure and habitat loss.
- Since Southeast Asian forests are undergoing the world's fastest regional deforestation.
- It is found across eastern Nepal through north-eastern India to Indonesia.
- Recently scientists have found that Golden is no longer the only color that the elusive Asiatic golden cat can be associated with, its coat comes in five other shades.
- The wide variation displayed in the cat's coats provides them with several ecological benefits such as occupying different habitats at different elevations from wet tropical lowland forests to alpine scrubs and providing camouflage while preying.

Circadian Rhythm

- A circadian rhythm is a roughly 24 hour cycle in the physiological processes of living beings, which are important in determining the sleeping and feeding patterns of all animals, including human beings.
- There are clear patterns of brain wave activity, hormone production, cell regeneration and other biological activities linked to this daily cycle.



- In vertebrate animals, including humans, the master clock is a group of about 20,000 nerve cells (neurons) that form a structure called the Supra Chiasmatic nucleus, or SCN.
- The SCN is located in a part of the brain called the hypothalamus and receives direct input from the eyes.
- In mammals, in addition to the master clock present in the brain, peripheral circadian clocks too operate, which means that the cells and tissues throughout human body have their own individual clocks.
- This peripheral circadian clock can be affected by temperature changes but our master clock in the brain is resistant to temperature changes.
- Human brain has evolved to even override the peripheral circadian clock, so temperature changes (unless very extreme) cannot affect human body clock.

20. SCIENCE AND TECHNOLOGY

SPACE

Components of Chandrayaan-2

- Chandrayaan-2 is ISRO's upcoming Lander and Rover mission to Moon.
- Chandrayaan-2 consists of an Orbiter, Lander and Rover, all equipped with scientific instruments to study the moon.
- **Orbiter** - The Orbiter will 100 km away from the moon, which will observe lunar surface and relay communication between Earth and the Lander.
- The orbiter is equipped with different kinds of camera to take create high-resolution three-dimensional maps of the surface, would remain in orbit for a year.
- **Vikram Lander** - Lander module Vikram was named after Vikram Sarabhai.
- It is the first time that ISRO is attempting to soft-land a module in extra-terrestrial space.
- The main challenge is in controlling its speed as it approaches the surface.
- Once the Lander and the Rover, enter the Moon's gravity, they would be in a state of free fall.
- To enable a smooth landing, the speed of the Lander just ahead of touchdown should be 1 m/s (3.6 km/h) or less.
- The Lander will mainly study the moon's atmosphere and look out for seismic activity.
- **Pragyaan Rover** - Rover module Pragyaan means wisdom.
- The 6-wheeled, AI Solar powered rover was designed, developed and build indigenously by ISRO.
- The rover will be landed in be landed closer to the Moon's equator to receive more sun light.
- Its primary objective will be to study the composition of the surface near the lunar landing site, and determine its abundance of various elements.
- Both the Lander and Rover are designed to work for only 14 days (1 lunar day).

Landing Site on the Moon

- Chandrayaan-2 will make a landing at a site where no earlier mission has gone, near the south pole of the Moon.
- The unexplored territory offers an opportunity for the mission to discover something new.
- Incidentally, the crash-landing of the MIP from Chandrayaan-1 had happened in the same region of the Moon.
- The south pole of the Moon holds possibility of presence of water.
- In addition, this area is also supposed to have ancient rocks and craters that can offer indications of history of the Moon, and also contain clues to the fossil records of early solar system.
- Recently, China landed a lander and rover on the Moon's far side (not facing the Earth).

- This was the first time any landing had taken place on that side.
- The Chinese mission, Chang'e 4, was designed to function for three lunar days but has already entered its fifth lunar night.

Europa

- Europa, a frozen moon around Jupiter, is believed to be one of the most habitable worlds in the solar system.
- It was first imaged in detail by the NASA's Voyager 1 probe in 1979, revealing a surface almost devoid of large craters.
- Europa is also criss-crossed with long troughs, folds and ridges, potentially made of icebergs floating around in melt-water or slush.
- In 1990's The Galileo mission found evidence that it had a sub-surface liquid salt water ocean.
- Recent studies shows it may well be normal table salt (sodium chloride), just like on Earth.
- This has important implications for the potential existence of life in Europa's hidden depths.
- Scientists believe that hydrothermal circulation within the ocean, possibly driven by hydrothermal vents might naturally enrich the ocean in sodium chloride, via chemical reactions between the ocean and rock.
- On Earth, hydrothermal vents are thought to be a source of life, such as bacteria.
- Like our moon and Earth, Europa is tidally locked to Jupiter, meaning that it always presents the same side to the giant planet.
- Salt, specifically the sodium ions in table salt, is also crucial for a whole range of metabolic processes in plant and animal life.

Gaganyaan Project

- Gaganyaan is the India's first Human Space Flight Programme set for 2022.
- The programme will make India the fourth nation in the world to launch a Human Spaceflight Mission, only after the USA, Russia and China.
- It is being operating under a newly formed Centre, Human Space Flight Centre (HSFC).
- Objectives of Gaganyaan Mission-
 1. Enhance of science and technology levels in the country,
 2. Serve as national project involving several institutes,
 3. Inspire youth,
 4. Develop technology for social benefits and
 5. Improve international collaboration
 6. Improve of industrial growth.
- The spacecraft is being developed by ISRO.
- It consists of a Service module and a Crew module, collectively known as the Orbital Module.
- ISRO's GSLV Mk III, the three-stage heavy-lift launch vehicle, will be used to launch Gaganyaan.
- It will circle the Earth at a low-earth-orbit at an altitude of 300-400 km from earth for 5-7 days.
- The space suits were developed at Vikram Sarabhai Space Centre, Thiruvananthapuram.
- Critical Technologies for Human Space Flight (HSF)-
 1. Orbital Module
 2. Crew Escape System
 3. Integration facility
 4. Crew Module



5. Deep Space Network
 6. Re-entry and Recovery system
- ISRO successfully demonstrated the re-entry technology 'Crew Module Atmospheric Re-entry Experiment' (CARE).
 - ISRO will receive assistance from the French space agency CNES, with respect to training of Flight surgeons and long term activities on bioastronautics, combined development and experiments in space medicine area.
 - Discussions are in with Russia in the areas of environmental control and life support system and part of the crew selection and training.

India's Space Station

- Indian Space Research Organization (ISRO) has announced to launch India's own space station.
- The space station is an artificial satellite placed in orbit and is used as a long-term base for manned operations in space.
- The proposed Indian space station would be similar to the International Space Station but smaller in size weighing about 20 tones and would take another 5 to 7 seven years to construct.
- India would be the fourth country to launch a space station as the US and Russia have already launched their space stations and China is planning to launch its in 2020.
- The International space station (ISS) is currently the only active space station in the earth's orbit.
- ISS is a joint project between five participating space agencies NASA (USA), Roscosmos (Russia), JAXA (Japan), ESA (Europe), and CSA (Canada).
- The Indian space station would be stationed at an altitude of 400 kilometres from Earth.
- The newly planned Indian space station will conduct microgravity experiments in space where astronauts can stay for 15-20 days.
- This project would be an extension of the Gaganyaan mission, which intends to put two or three Indian astronauts in space for a maximum of a week and is scheduled to be launched by August 2022.

Lunar Evacuation System Assembly

- It is developed by the European Space Agency.
- It is a pyramid-like structure whose purpose is to rescue an astronaut who suffers an injury on the lunar (moon) surface.
- It can be operated by a single astronaut.
- LESA can be transported like a golf caddy and placed close to the fallen astronaut to provide a lifting mechanism
- It enables an astronaut to lift their crewmate onto a mobile stretcher.
- The astronauts can then safely bring their crewmate to the lander.
- This entire process of deploying and securing their crewmate to the stretcher should take less than 10 minutes.
- This is the second version of LESA.
- An earlier prototype was tested during the NEEMO 22 mission.
- NEEMO is a NASA's mission that sends groups of astronauts to live in Aquarius, the world's only undersea research station, for up to three weeks at a time.
- The Aquarius habitat and its surroundings provide a convincing analog for space exploration.



DEFENCE

Varuna

- It is a **Indo-French Joint Naval Exercise**.
- It is held either in the Indian Ocean or Mediterranean sea with the aim of improving Indo-French coordination.
- The Indian Navy is represented by
 - 1) Aircraft carrier INS Vikramaditya,
 - 2) destroyer INS Mumbai,
 - 3) the Teg-class frigate,
 - 4) INS Tarkash,
 - 5) the Shishumar-class submarine INS Shankul, and
 - 6) the Deepak-class fleet tanker INS Deepak.
- It is the largest ever joint exercise undertaken by the two navies.
- The exercise was conducted in two phases with first phase being held in **Goa**.
- The second sea phase is scheduled to be held at the end of May in **Djibouti**, located on the Horn of Africa.
- The exercise underscores the shared interests and commitment of both nations in promoting maritime security.

OTHERS

Gene Editing Tools

- **CRISPR** –Clustered regularly interspaced short palindromic repeats (CRISPR) are unusual but repeated DNA structures.
- CRISPR is a key part of the “immune system”.
- For instance, when a virus enters bacteria, it fights back by cutting up the virus’s DNA, this kills the virus but bacteria store some of the DNA.
- The next time there is an invasion, bacteria produce an enzyme called Cas9 which matches the stored fingerprints with that of the invader’s, If it matches, Cas9 can snip the invading DNA.
- **CRISPR-Cas9** - It is the gene editing tool, which has two components
 1. A short RNA sequence that can bind to a specific target of the DNA
 2. Cas9 enzyme which acts like a molecular scissor to cut the DNA.
- To edit a gene of interest, the short RNA sequence that perfectly matches with the DNA sequence that has to be edited is introduced.
- Once it binds to the DNA, the Cas9 enzyme cuts the DNA at the targeted location where the RNA sequence is bound.
- Once the DNA is cut, the natural DNA repair mechanism is utilized to add or remove genetic material or make changes to the DNA.

Diphtheria

- Diphtheria is an **infectious disease** caused by the **bacterium Corynebacterium diphtheria**.
- The bacteria produce a toxin because they themselves are infected by a certain type of virus called a phage.
- Diphtheria infection spread only among humans.
- The primary infection is in the throat and upper airways.



- It is spread by direct physical contact.
- Specific signs and symptoms of diphtheria are low fever, swollen glands on the neck, Swelling of soft tissue in the neck, fast heart rate.
- It particularly affects children aged 1 to 5 years.
- In 1978, India launched the '**Expanded Programme on Immunisation**' which covers BCG (against TB), DPT (diphtheria, pertussis, tetanus) and cholera.
- In 1985, the programme was converted to the '**Universal Immunisation Programme**' (UIP).
- DPT continues to be a part of UIP.
- As per data from the National Family Health Survey 4, the coverage of diphtheria vaccine is 78.4%.
- This has reduced the mortality and morbidity of diphtheria dramatically.
- However, Vaccine hesitancy is a growing all over the world.
- So cases of Diphtheria have been going up in the last few years.
- During 2005-2014, India reported 41,672 cases with 897 deaths (case fatality ratio 2.2%).
- In some states, majority of the cases were among school-going children and adolescents.
- This reflects low coverage of primary diphtheria vaccination.
- Declining immunity acquired by vaccination or naturally also a cause for the rising recent numbers.

Optoelectronics

- Optoelectronics is the study and application of electronic devices and systems that source, detect and control light, usually considered a sub-field of photonics.
- In this context, light often includes invisible forms of radiation such as gamma rays, X-rays, ultraviolet and infrared, in addition to visible light.
- Materials such as tungsten diselenide (WSe₂) and molybdenum diselenide are being studied keenly for their opto-electronic properties.
- A key property of these materials is photoluminescence, in which the material absorbs light and re-emits it as a spectrum.
- Photoluminescence properties can be used in various devices such as quantum LEDs which can be used in communication and computation.

BhuvanPortal

- Bhuvan is ISRO's internet portal and an app which provides visualization services and Earth observation data to users in public domain.
- Besides, the portal also services several users for their remote sensing application needs.
- The Government agencies use this platform to share and host their data as per their requirements, enabling specific applications of their choice.
- Some Indian states are using Bhuvan platform for specific applications in Forestry, Tourism, Municipal GIS, Geo-tagging and so on.
- Recently ministry of AYUSH collaborated with Bhuvan portal for a Yoga related app.

Parthenogenesis

- Parthenogenesis is a reproductive strategy that involves development of a female (rarely a male) gamete (sex cell) without fertilization.
- It occurs commonly among lower plants and invertebrate animals particularly rotifers, aphids, ants, wasps and bees and rarely among higher vertebrates.
- A gamete is the egg in females and the sperm in males.



- In animals, parthenogenesis means development of an embryo from an unfertilized egg cell.
- Many species that reproduce through parthenogenesis do not reproduce sexually.
- Parthenogenesis is one of the known means of asexual reproduction. Grafting (of plants) is also a type of asexual reproduction.
- Parthenogenetic offspring tend to be clones of the parent, as there has been no exchange and rearrangement of genetic information with another individual as happens in case of a sexual reproductive process.
- Parthenogenesis is rare in higher vertebrates like snake, but recently a green anaconda in USA had gave birth to a Parthenogenetic offspring.

Shortwave Radio Transmissions

- Shortwave radio is radio transmission using shortwave radio frequencies, the range always includes all of the high frequency band (HF), and generally extends from 3-30 MHz (10 to 100 meters), above the medium frequency band (MF), to the end of the HF band.
- Radio waves in the shortwave band can be reflected or refracted from a layer of electrically charged atoms in the atmosphere called the ionosphere.
- Therefore, short waves directed at an angle into the sky can be reflected back to Earth at great distances, beyond the horizon.
- This is called skywave or "skip" propagation, thus shortwave radio can be used for very long distance communication, in contrast to radio waves of higher frequency which travel in straight lines (line-of-sight propagation) and are limited by the visual horizon, about 64 km (40 miles).
- Shortwave radio is used for broadcasting of voice and music to shortwave listeners over very large areas, sometimes entire continents or beyond.
- It is also used for military over-the-horizon radar, diplomatic communication, and two-way international communication by amateur radio enthusiasts.

Malaria Detection Chromatography

- Paper chromatography is an analytical method used to separate colored chemicals or substances.
- Indian researchers has found simple malaria detection method that uses an instrument when in the lab or a piece of chromatographic paper when in the field.
- The kit can be used to detect Plasmodium parasite, which causes malaria and also specifically detect Plasmodium falciparum, a notorious species.
- This kit has high stability in hot and humid conditions and the paper-based method offers the result rapidly.

Data Localization

- Data localization is the act of storing data on any device that is physically present within the borders of a specific country where the data was generated.
- For securing citizen's data, data privacy, data sovereignty, national security, and economic development of the country.
- Recommendations by the RBI, the committee of experts led by Justice BN Srikrishna, the draft ecommerce policy and the draft report of the cloud policy panel show signs of data localization.
- The extensive data collection by technology companies, has allowed them to process and monetize Indian users' data outside the country.
- Therefore, to curtail the perils of unregulated and arbitrary use of personal data, data localization is necessary.



21. INDEX AND REPORT

Indian State of Forest Report

- Forest Survey of India (FSI) has been assessing the forest and tree resources of our country on a biennial basis since 1987.
- The results of the assessment are published in its biennial report titled “India State of Forest Report (ISFR)”.
- According to (ISFR) Indian State of Forest Report India has shown an increasing trend in the forest and tree cover, in comparison to the global trend of decreasing forest cover during the last decade.
- India is ranked 10th in the world, with 24.4% of land area under forest and tree cover.
- Madhya Pradesh has the largest forest cover of 77,414 sq km in the country in terms of area, followed by Arunachal Pradesh with 66,964 sq km and Chhattisgarh (55,547 sq km).
- In terms of percentage of forest cover with respect to the total geographical area, Lakshadweep with (90.33 per cent) has the highest forest cover, followed by Mizoram (86.27 per cent) and Andaman & Nicobar Island (81.73 per cent).

Global Economic Prospects (GEP) Report

- Recently World Bank has released the Global Economic Prospects (GEP) Report.
- The other reports released by World Bank are as follows
 1. Ease of Doing Business
 2. World Development Report
 3. Remittance Report
 4. Ease of Living Index
 5. India Development Update
 6. Universal Health Coverage Index
 7. The Service Trade Restriction Index.
