CURRENT AFFAIRS

JANUARY 2020

INDEX

POLITY AND GOVERNANCE

Paper II: This section is relevant to Polity and Governance Section of GS Paper II

1.1 CENTER STATE DISPUTE: ARTICLE 131

Topic: Issues and challenges pertaining to the Federal Structure (Do read Art 365)

Why in News: Kerala has recently become the first state to challenge the Citizenship (Amendment) Act (CAA) before the Supreme Court. However, the Kerala government has moved the apex court under Article 131 of the Constitution. Besides, the Chhattisgarh government has also filed a suit in the Supreme Court under Article 131, challenging the National Investigation Agency (NIA) Act on the ground that it encroaches upon the state's powers to maintain law and order

❖ **Article 131**

Under Article 131 of the Constitution, the provision under which the Supreme Court has original jurisdiction to deal with any dispute-

a) Between the Government of India and one or more States; or
b) Between the Government of India and any State or States on one side and one or more other States on the other; or
c) Between two or more States, if and in so far as the dispute involves any question (whether of law or fact) on which the existence or extent of a legal right depends.

• **The Supreme Court has three kinds of jurisdictions: original, appellate and advisory.**
   ▪ Under its advisory jurisdiction, the President has the power to seek an opinion from the apex court under Article 143 of the Constitution.
   ▪ Under its appellate jurisdiction, the Supreme Court hears appeals from lower courts.
   ▪ In its extraordinary original jurisdiction, the Supreme Court has exclusive power to adjudicate upon disputes involving elections of the President and the Vice President, those that involve states and the Centre, and cases involving the violation of fundamental rights.

❖ **Criteria**

For a dispute to qualify as a dispute under Article 131, it has to necessarily be between states and the Centre, **and must involve a question of law or fact on which the existence of a legal right of the state or the Centre depends.**

In a 1978 judgment, State of Karnataka v Union of India, Justice P N Bhagwati had said that for the Supreme Court to accept a suit under Article 131, the state need not show that its legal right is violated, but only that the dispute involves a legal question.

Article 131 cannot be used to settle political differences between state and central governments headed by different parties.

- The other petitions challenging the CAA have been filed under Article 32 of the Constitution, which gives the court the power to issue writs when fundamental rights are violated.
- A state government cannot move the court under this provision because only people and citizens can claim fundamental rights.
- Under Article 131, the challenge is made when the rights and power of a state or the Centre are in question. However, the relief that the state (under Article 131) and petitioners under Article 32 have sought in the challenge to the CAA is the same — declaration of the law as being unconstitutional.

Can the Supreme Court declare legislation unconstitutional under Article 131?

- A 2012 dispute between Bihar and Jharkhand that is currently pending for consideration by a larger Bench deals with the issue of liability of Bihar to pay pension to employees of Jharkhand for the period of their employment in the former, undivided Bihar state.
- Although earlier judgments had held that the constitutionality of a law can be examined under Article 131, a 2011 judgment in the case of State of Madhya Pradesh v. Union of India ruled otherwise.
- Since the 2011 case was also by a two-judge Bench and was later in time, the court could not overrule the case. However, the judges did not agree with the ruling.

Can the Centre sue a state under Article 131?

- The Centre has other powers to ensure that its laws are implemented. The Centre can issue directions to a state to implement the laws made by Parliament
- If states do not comply with the directions, the Centre can move the court seeking a permanent injunction against the states to force them to comply with the law.
- Non-compliance of court orders can result in contempt of court, and the court usually hauls up the chief secretaries of the states responsible for implementing laws.

The disputes which Parliament, by law, is authorized to exclude the jurisdiction of the Supreme Court are:

- Disputes relating to water (article 262).
- Matters referred to the Finance Commission.
- Adjustment of certain expenses between the Union and the states under Article 290.
- Disputes specified in the provision to Articles 131 and 363(1).

- Adjustment of expenses between the Union and the states under Articles 257 (4) and 258(3).

1.2 SEXUAL HARRASMENT AT WORKPLACE

Topic: Issues relating to development and Management Human Resources

Why in News: The Group of Ministers (GoM), constituted in the aftermath of the **#MeToo** movement after many women shared their ordeal on social media, has finalized its recommendations.

❖ Background

- **The Group of Ministers (GoM) was constituted first in 2018in the aftermath of the #MeToo movement after many women shared their ordeal on social media.**
- It was reconstituted in July 2019 under Home Minister Amit Shah.
- The other members of the GoM are Finance Minister Nirmala Sitharaman, Human Resource and Development Minister Ramesh Pokhriyal and Women and Child Development Minister Smriti Irani.
- **The GoM also examined the report of the Justice J.S. Verma Committee that was constituted in the wake of the Nirbhaya gang-rape and murder in 2012.**
- The Verma committee had recommended an employment tribunal, instead of an ICC, as dealing with such complaints in-house could discourage women from coming out.

❖ Recommendations

- The recommendations include the addition of new provisions to the Indian Penal Code.
- **The proposed amendments would be largely based on the Vishaka Guidelines laid down by the Supreme Court in 1997, on which the 2013 Act was based.**
- It made the employer responsible to prevent or deter acts of sexual harassment at the workplace.
- The 2013 Act had shortcomings like giving the powers of a civil court to the internal complaints committee (ICC) without specifying if the members need to have a legal background.
- The Act said the employer shall provide assistance to the woman if she chooses to file a complaint under the IPC "against the perpetrator after the conclusion of the enquiry".

❖ Sexual harassment

- Workplace sexual harassment is a form of gender discrimination which violates a woman's fundamental right to equality and right to life, guaranteed under Articles 14, 15 and 21 of the Constitution of India.

- As per the **Sexual Harassment of Women at Workplace (Prevention, Prohibition, and Redressal) Act, 2013,** any of the following circumstances, if it occurs or is present in relation to or connected with any act or behaviour of sexual harassment may amount to sexual harassment:
- implied or explicit promise of preferential treatment in her employment
- implied or explicit threat of detrimental treatment in her employment
- Interferes with her work or creating an intimidating or offensive or hostile work environment for her
- Humiliating treatment likely to affect her health or safety
- **This is further reinforced by the UN Convention on the Elimination of all Forms of Discrimination against Women (CEDAW), which is signed and ratified by India.**

❖ **Statistical Overview of Sexual Harassment:**
- As per the National Crime Records Bureau (NCRB), the number of sexual harassment incidents at work or office premises registered under Section 509 IPC (words, gesture or act to insult the modesty of a woman) was 479 and 401 in the years 2017 and 2018 respectively.
- Among the cities, the highest numbers of such cases were registered in Delhi (28), Bangalore (20), Pune (12) and Mumbai (12) in 2018.
- The total number of sexual harassment incidents in 2018including that in public places, shelter homes and others was 20,962.

❖ **Laws against sexual harassment**

- **India's first legislation specifically addressing the issue of workplace sexual harassment; the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 ("POSH Act") was enacted by the Ministry of Women and Child Development.**
- The Act seeks to cover all women (irrespective of their age or employment status) and protect them against sexual harassment at all workplaces both in public and private sector, whether organized or unorganized.
- It makes it mandatory for all workplaces, including homes, universities, hospitals, government and non-government offices, factories, other formal and informal workplaces to constitute an internal committee for redressal of complaints.
- Section 354A of the Indian Penal Code (IPC) deals with offences related to sexual harassment, which includes physical contact, unwelcome and explicit sexual overtures,

demand or request for sexual favours, showing pornography to a woman against her will and making sexually coloured remarks.

❖ **Vishaka Guidelines**

- The elimination of gender-based discrimination has been one of the fundamentals of the Constitutional edifice of India.
- The principle of gender equality is enshrined in the Constitution, in its Preamble, fundamental rights, fundamental duties and Directive Principles.
- **However, workplace sexual harassment in India was for the very first time recognized by the Supreme Court of India in its landmark judgment of Vishaka v. State of Rajasthan ("Vishaka Judgment").**
- **As per the Vishaka judgment, 'Sexual Harassment' includes such unwelcome sexually determined behaviour (whether directly or by implication) as:**
  - Physical contact and advances
  - A demand or request for sexual favours
  - Sexually coloured remarks
  - Showing pornography
  - Any other unwelcome physical, verbal or nonverbal conduct of sexual nature.
- It proposed that sexual harassment is recognized as a violation of women's fundamental right to equality and that all workplaces/establishments/institutions be made accountable and responsible to uphold these rights.

❖ **International legislative frameworks**

The following standards and frameworks include key contents on promoting equality and addressing sexual harassment:

- Universal Declaration of Human Rights, 1948
- ILO Discrimination (Employment and Occupation) Convention, 1958
- International Covenant on Economic, Social and Cultural Rights, 1966
- United Nations Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), 1979
- ILO Indigenous and Tribal Peoples Convention, 1989
- ILO Decent Work for Domestic Workers Convention, 2011
- UN Declaration on the Elimination of Violence against Women, 1993
- The Beijing Platform of Action, 1995
- ILO HIV and AIDS Recommendation, 2010

❖ **Recent initiatives by Government to control harassment**

- **SHe-Box:** The ministry of women and child development has set up what it calls the Sexual Harassment electronic–Box (SHe-Box), an online complaint system for registration of complaints related to sexual harassment at workplace. This can be used by employees of the government and private sectors.
- **Dedicated committee:** Union Ministry for Women and Child Development announced the formation of a committee consisting of four retired judges to conduct public hearings of cases of arising from the #MeToo movement in 2018.

1.3 ENEMY PROPERTIES

Topic: Functions and Responsibilities of Union

Why in News: The government has notified Group of Ministers (GoM) under Home Minister Amit Shah to oversee the disposal of enemy properties, which the government estimates is worth about Rs 1 lakh crore.

❖ **Enemy property**
- In the wake of the India-Pakistan wars of 1965 and 1971 and India-China war of 1962, there was migration of people from India to Pakistan and China.
- **Under the Defence of India Rules framed under The Defence of India Act, 1962, the Government of India took over the properties and companies of those who took Pakistani and Chinese nationality.**
- The Centre designated these properties as "enemy properties".
- Later the Enemy Property Act, 1968 was passed to vest all such immovable and movable property in the "Custodian" of Enemy Property for India, an office instituted under the central government.
- **The maximum numbers of such properties are in Uttar Pradesh.**

❖ **The Enemy Property (Amendment and Validation) Act, 2017**

- In 2017, Parliament passed The Enemy Property (Amendment and Validation) Bill, 2016, which amended The Enemy Property Act, 1968, and The Public Premises (Eviction of Unauthorised Occupants) Act, 1971.

- The purpose of act is to clarify the 1968 Act that Inheritance law will not be applicable on Enemy Property.

- After the amendment of the Enemy Property (Amendment and Validation) Act 2017 and the Enemy Property (Amendment) Rules, 2018, which ensured that the heirs of those who migrated to Pakistan and China during partition and afterwards will have no claim over the properties left behind in India.
- The government initiated the process of sale of more than 9,400 enemy properties by issuing guidelines and directing the office of the custodian to submit the list of all such movable and immovable assets within three months.
- The Act allows transfer of enemy property from the enemy to other persons. The Bill declares all such transfers as void. This may be arbitrary and in violation of Article 14 of the Constitution.
- The Bill prohibits civil courts from entertaining any disputes with regard to enemy property. It does not provide any alternative judicial remedy (eg. tribunals). Therefore, it limits judicial recourse or access to courts available to aggrieved persons.

1.4 INTERNET SUSPENSION IN J&K

Why in News: The Supreme Court has given its judgment on a petition challenging the suspension of internet in Jammu & Kashmir (J&K) following the abrogation of Article 370. The court passed a series of directions to the government to review its decisions.

- The Supreme Court has ruled that expression of views and carrying out trade through internet are part of the constitutionally guaranteed fundamental right to free speech and that indefinite suspension of internet services is impermissible.
- Holding trade, occupation or commerce dependent on the Internet as a fundamental right under Article 19(1)(g), the court said that in a globalised Indian economy, right of trade through Internet fostered consumerism and availability of choice.
- It however, refused to express any views on whether the very access to the Internet is a fundamental right or not.

❖ **Directives for J&K government by the court:**

- The top court directed the government to review orders suspending Internet services in Jammu and Kashmir instantly and any order suspending the Internet found to violate the law should be revoked at once.
- It further instructed the government to consider restoring government websites, localised/limited e-banking facilities, hospital services and other essential services in areas in the Union Territory, where it was otherwise not thinking to do so immediately.
- It also said repetitive (prohibitive) orders under Section 144 would be an abuse of power and directed authorities to notify all prohibitory orders passed in J&K so as to enable aggrieved persons to challenge it at an appropriate forum.

- ❖ **About government's powers to suspend internet services and the SC judgment**
- **Current procedure followed to suspend Internet services:**
- The Information Technology Act, 2000, the Criminal Procedure Code (CrPC), 1973 and the Telegraph Act, 1885 are the three laws that deal with suspension of Internet services.
- Prior to 2017, Internet suspension orders were issued under Section 144 of the CrPC. In 2017, the central government notified the Temporary Suspension of Telecom Services (Public Emergency or Public Service) Rules under the Telegraph Act to govern suspension of Internet.
- These Rules derive their powers from Section 5(2) of the Indian Telegraph Act, which talks about interception of messages in the "interests of the sovereignty and integrity of India".
- Despite the 2017 rules, the government has often used the powers under Section 144. For example, in the wake of the protests against the Citizenship Amendment Act, Internet services were suspended by the District Magistrate in UP and West Bengal under Section 144.
- The use of Section 144 to suspend mobile internet was challenged before the Gujarat High Court in 2015 but the court upheld the power of the magistrate to issue such orders.
- The SC's directions on procedure to be followed for suspension of Internet services:
- The court recognised that the 2017 Rules are the only procedure to be followed to suspend Internet services in the occurrence of a "public emergency" or for it to be "in the interest of public safety".
- The Supreme Court also highlighted 'gaps' in the current Suspension Rules and tightened the window for 'complete and broad' suspensions, stating they had to be "necessary" and "unavoidable".
- Quoting from the 2017 Rules, the verdict reiterated that the competent authority to issue an order under the Suspension Rules, in ordinary circumstances, would be the Secretary to the Ministry of Home Affairs.

- The Rules also say that in case the confirmation does not come from a competent authority, the orders shall cease to exist within a period of 24 hours.
- Clear reasons for such orders need to be given in writing, and need to be forwarded to a Review Committee by the next working day.
- Further, the confirmation must not be a mere formality, but must indicate independent application of mind by the competent authority to the order passed by the authorised officer, who must also take into account changed circumstances if any.

❖ **Court's stand on the duration of suspension**

- The court held that suspending internet services indefinitely is impermissible under the Temporary Suspension of Telecom Services Rules, 2017 and suspension could be utilised for temporary duration only.
- The court pointed out that the government was able to continue with the suspension of Internet services because the 2017 Rules did not define word "temporary" and that no time-limit was prescribed in the rules.
- Hence, the court asked the legislature to repair this lacuna and till then, any order of Internet suspension under the rules would be reviewed within a week of its issuance.

❖ **Publication of orders shutting down Internet services**

- By directing the government to mandatorily publish all orders permitting Internet shutdowns, the Supreme Court has for the first time set the stage for challenging suspension orders before courts.
- Although the Temporary Suspension of Telecom Services Rules, 2017, does not provide for publication or notification of the order suspending Internet, the apex court mandated that such orders must be made available to the public.
- While suspension orders were always subject to judicial review, lack of availability of such orders in public domain prevented such challenges before courts.
- The court declared that it is a settled principle of law, and of natural justice that requires publication of such orders, particularly one that affects lives, liberty and property of people.
- The court also ruled that the government cannot refuse to publish such orders citing logistical inconvenience.

❖ **About Section 144 and the SC judgment**

Section 144

- In theory, Section 144 embodies very noble ideas and is a manifestation of the idea that exceptional times call for exceptional measures.
- Section 144 CrPC, empowers a district magistrate, a sub-divisional magistrate or any other executive magistrate empowered by the state government to issue orders to prevent and address urgent cases of apprehended danger or nuisance.
- The magistrate has to pass a written order which may be directed against a particular individual, or to persons residing in a particular place or area, or to the public generally when frequenting a particular place or area. In emergency cases, the magistrate can pass these orders without prior notice to the individual against whom the order is directed.

What powers does the administration have under the provision?

- The magistrate can direct any person to abstain from a certain act or to take a certain order with respect to certain property in his possession or under his management.
- This usually includes restrictions on movement, carrying arms and from assembling unlawfully.
- It is generally believed that assembly of three or more people is prohibited under Section 144. However, it can be used to restrict even a single individual.
- Such an order is passed when the magistrate considers that it is likely to prevent danger to human life, health or safety, or a disturbance of the public tranquility, or a riot.
- However, no order passed under Section 144 can remain in force for more than two months from the date of the order, unless the state government considers it necessary. Even then, the total period cannot extend to more than six months.

❖ Criticisms of Section 144
- The criticism is that it is too broad and the words of the section are wide enough to give absolute power to a magistrate that may be exercised unjustifiably.
- The only check placed upon the officer before passing any order under Section 144 is whether or not it satisfied his conscience, about there being a need for such orders.
- And even though there are powers to challenge such orders in appeal or in a writ before constitutional courts, even they cannot substitute their appreciation of the facts for what the officer himself thought.
- At best, they can make sure that the procedure was correctly followed, but they cannot substitute their judgment for that of the officer on the ground.
- Furthermore, fears exist that before the High Court intervenes, the rights could already have been infringed.

- Thus, absence of any narrow tailoring of wide executive powers with specific objectives, coupled with very limited judicial oversight over the executive branch, makes it ripe for abuse and misuse.

❖ **Past challenges against Section 144 in the court**

- The first major challenge to the law was made in **1961 in Babulal Parate vs State of Maharashtra and Others.** A five-judge Bench of the Supreme Court refused to strike down the law.
- It was challenged again by Dr Ram Manohar Lohiya in 1967 and was once again rejected, with the court saying "no democracy can exist if 'public order' is freely allowed to be disturbed by a section of the citizens".
- In another challenge in 1970 **(Madhu Limaye vs Sub-Divisional Magistrate),** the Bench said the power of a magistrate under Section 144 "is not an ordinary power flowing from administration but a power used in a judicial manner and which can stand further judicial scrutiny".
- The court, however, upheld the constitutionality of the law and said that it cannot be held to be violative of the right to freedom of speech and expression, which is a fundamental right because it falls under the reasonable restrictions.
- The court further said that the fact that the law may be abused is no reason to strike it down.

❖ **Court's decision on Section 144 in the current case:**

- As per the SC, the orders of restriction issued under Section 144 could not be used as a tool to suppress legitimate expressions, opinions and grievances in a democracy.
- The power can be used not only to deal with an existing danger but also in situations when there is apprehension of danger.
- However, the "danger" should be qualified to be an emergency and must be likely to result in "obstruction and annoyance or injury to any person lawfully employed".
- The bench said the use of the provision was subject to judicial review and, hence, should be resorted to reasonably and on the basis of material facts. Moreover, the court mandated that the restrictions could not be excessive in nature or duration.
- While exercising the power under Section 144 CrPC, the magistrate is duty bound to balance rights and restrictions based on the principles of proportionality and apply the least intrusive measure.

- It also cautioned against too much stress on the "proportionality doctrine" to temper restrictions in cases relating to the security, sovereignty and integrity of India and noted that imposition of the section over a larger area and longer duration required a higher threshold.

1.5 STATE REGULATION OF MINORITY INSTITUTIONS

Why in News: In an important judgment, the Supreme Court held that government-aided minority educational institutions cannot claim to have absolute right in deciding appointment of teachers and it can be regulated by a government to ensure excellence in imparting education.

❖ Background of the Case:
- The case concerned the validity of West Bengal Madrasah Service Commission Act 2008, which constituted a commission to appoint teachers in madrasas.
- The Act mandated that the process of appointment of teachers in aided madrasahs, recognised as minority institutions, would be done by a Commission, whose decision would be binding.

Calcutta HC Judgment:

- In 2015, the managing committee of various madrasas moved the Calcutta high court against the law.
- The Calcutta High Court declared the Act unconstitutional saying it is violative of Article 30 which says all minorities shall have the right to establish and administer educational institutions of their choice.

Appeals in Supreme Court:

The HC verdict was thereafter challenged in SC by teachers who were appointed under the new law.

❖ Constitutional Provisions
- Article 30 of the Constitution of India gives linguistic and religious minorities a fundamental right to establish and administer educational institutions of their choice.
- It also says: "The State shall not, in granting aid to educational institutions, discriminate against any educational institution on the ground that it is under the management of a minority, whether based on religion or language".

❖ Judgment

- In the latest judgment, the Supreme Court held that government-aided minority educational institutions cannot claim to have absolute right in deciding appointment of teachers and it can be regulated by a government to ensure excellence in imparting education.
- The verdict was given on whether the right of minority institutions including madrasas to appoint teachers could be taken away by the government by adopting a legislative procedure, like one that aims to uplift the status of the community.

- **The verdict upheld the constitutional validity of West Bengal Madrasah Service Commission Act, 2008, under which the appointment of teachers in madrasas was to be decided by a commission.**
- **It set aside Calcutta high court verdict declaring various provision of the law unconstitutional for being violative of Article 30.**
- The SC bench also stated the essence of Article 30(1) – to ensure equal treatment between the majority and the minority institutions and that rules and regulations would apply equally to the majority institutions as well as to the minority institutions.
- Referring to 11-Judge bench verdict by SC in TMA Pai Foundation case, the bench said so long as the principles laid down therein are satisfied, it is permissible if any regulations seek to ensure the standard of excellence of the institutions while preserving the right of the minorities to establish and administer their educational institutions.
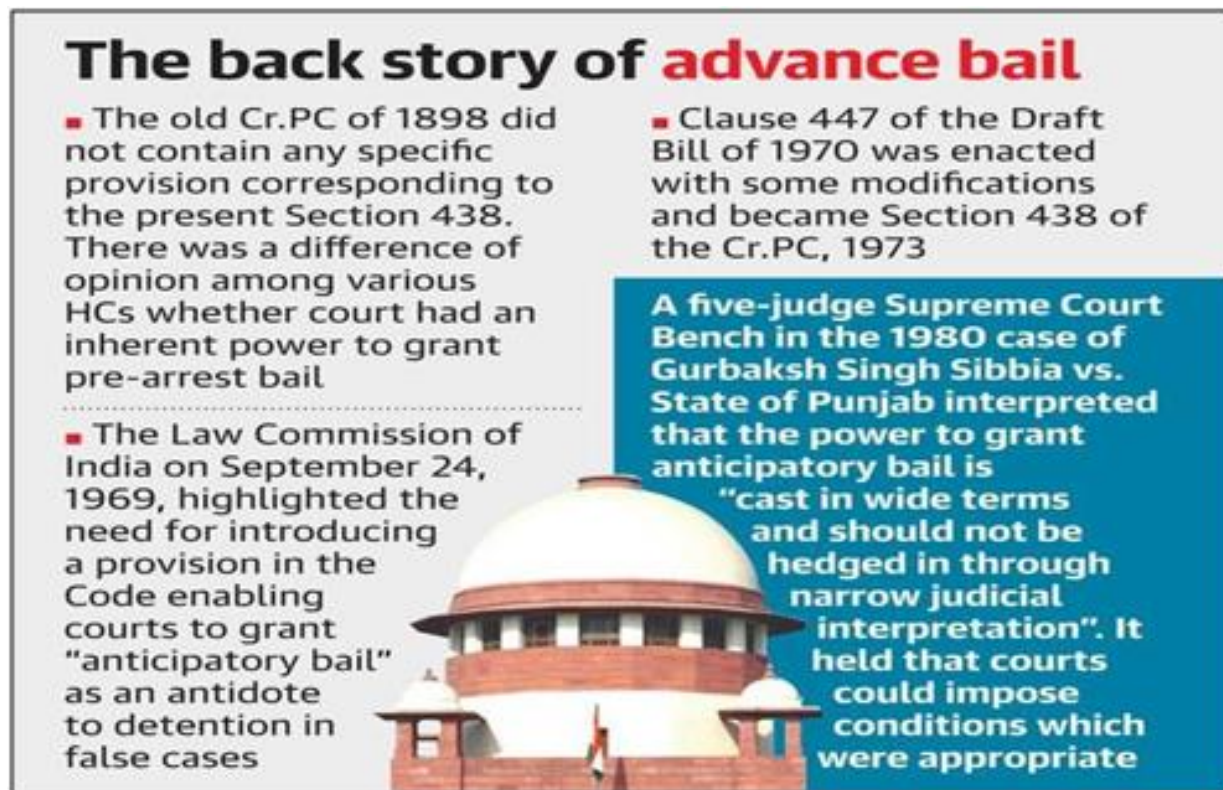
1.6 ANTICIPATORY BAIL

Why in News: The Supreme Court has ruled that an anticipatory bail cannot be limited to a fixed time period and can continue till the end of the trial.

❖ Anticipatory bail

- Provision: Section 438 of the Code of Criminal Procedure (CrPC) provides for grant of anticipatory bail.
- The provision of anticipatory bail under Section 438 was introduced when CrPC was amended in 1973.
- **Anticipatory bail means that an individual can seek or request to get bail in anticipation or in expectation of being named or accused of having committed a non-bailable offence.**
- Anticipatory bail helps thwart influential powers from implicating their rivals in false cases.

- It protects people from the ignominy of detention in jail for days on end and disgrace to their reputation.
- *The questions referred to the Constitution Bench were two-fold:*
  - whether the protection granted to a person under Section 438 should be limited to a fixed period till the accused surrenders in court, and
  - Whether the life of anticipatory bail should end when the accused is summoned by the court.

The back story of advance bail

- The old Cr.PC of 1898 did not contain any specific provision corresponding to the present Section 438. There was a difference of opinion among various HCs whether court had an inherent power to grant pre-arrest bail

- The Law Commission of India on September 24, 1969, highlighted the need for introducing a provision in the Code enabling courts to grant "anticipatory bail" as an antidote to detention in false cases

- Clause 447 of the Draft Bill of 1970 was enacted with some modifications and became Section 438 of the Cr.PC, 1973

A five-judge Supreme Court Bench in the 1980 case of Gurbaksh Singh Sibbia vs. State of Punjab interpreted that the power to grant anticipatory bail is "cast in wide terms and should not be hedged in through narrow judicial interpretation". It held that courts could impose conditions which were appropriate

- The SC bench held that the duration of an anticipatory bail order does not end normally at the time and stage when the accused is summoned by the court, or when charges are framed, but can continue till the end of the trial.
- The bench said that limiting time frame or fixing period for protection of anticipatory or pre-arrest bail amounts to deprivation of the fundamental right to personal liberty.
- However, the bench kept it open for a court to impose appropriate conditions for grant of anticipatory bail if the specific facts or the features of the offence involved demand it.
- Also, it held that a plea for anticipatory bail can be filed even before the registration of FIR as long as there is reasonable basis for apprehension of arrest and clarity of facts.

1.7 STAR CAMPAIGNERS

Why in News: The Election Commission (EC) removed two BJP leaders from the party's list of star campaigners for the upcoming Delhi elections.

❖ **Star Campaigner**
- While there's no limit on poll campaign expenditure of political parties, candidates have expenditure limits. For example, a candidate can spend a maximum of Rs 28 lakh in Delhi assembly polls.
- However, the expenditure incurred on campaigning by the star campaigners is exempt from being added to the election expenditure of a candidate.
- A recognised political party can have 40 star campaigners and an unrecognized (but registered) political party can have 20.
- The list of star campaigners has to be communicated to the Chief Electoral Officer and Election Commission within a week from the date of notification of an election.
- A star campaigner's expenditure is not added to candidate's expenditure only when he/she does a general campaign for the political party, and not a specific candidate.
- If a candidate or her election agent shares the stage with a star campaigner at a rally, then the entire expenditure on that rally, other than the travel expenses of the star campaigner, is added to the candidate's expenses.
- Even if the candidate is not present at the star campaigner's rally, but there are posters with her photographs or her name on display, the entire expenditure will be added to the candidate's account.
- This applies even if the star campaigner mentions the candidate's name during the event.
- When more than one candidate shares the stage, or there are posters with their photographs, then the expenses of such rally/meeting are equally divided between all such candidates.

INTERNATIONAL RELATIONS

❖ **Paper II (GS): All the Articles of this section are relevant to the following topics:**

• **India and its Neighbourhood – Relations**
• **Bilateral, Regional and Global Groupings and Agreements involving India and / or affecting India's Interests**

❖ **Prelims Oriented Questions and Places in News for Maps/ Matching**

2.1 IRAN NUCLEAR DEAL

Why in News: In the wake of national outrage over the US' assassination of one of the Iran's top officials, General Qassem Soleimani, Iran has declared that it will no longer abide by any of the restrictions imposed by the 2015 nuclear deal.

❖ **Background**
- Iran has always insisted its nuclear program is peaceful.
- But suspicions it was being used as a cover to develop a nuclear bomb prompted the UN Security Council, US and EU to impose crippling sanctions from 2010.

❖ **Joint Comprehensive Plan of Action (JCPOA)**

- **In 2015, Joint Comprehensive Plan of Action (JCPOA) was signed between Iran and the P5 (China, France, Russia, the United Kingdom, and the United States), plus Germany and the EU, which aimed at curbing Iran's nuclear program. The deal restricted Iran's enrichment of uranium, which is used to make reactor fuel but also nuclear weapons.**
- It was also required to redesign a heavy-water reactor being built, whose spent fuel contain plutonium suitable for a bomb, and allow international inspections.

The Iran Nuclear Deal: Blocking Iran's Path to the Bomb
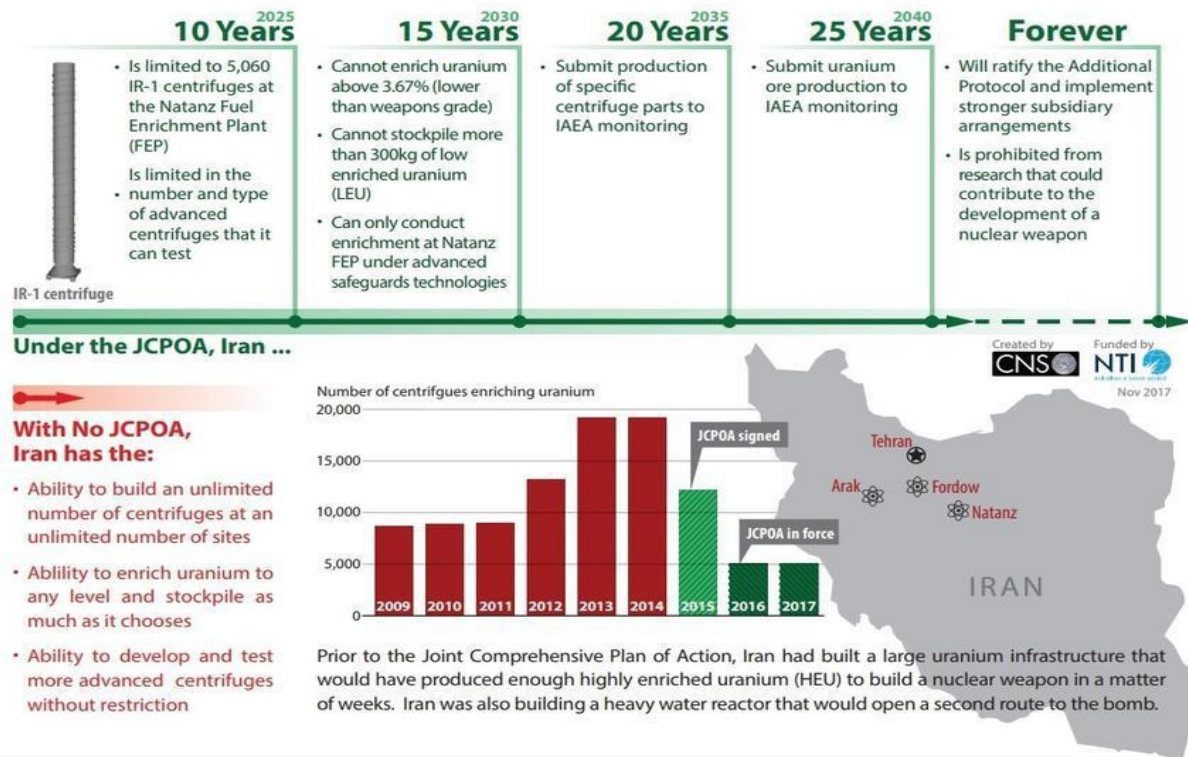
- **Significance of JCPOA deal**
- The JCPOA agreement constrained Iran's nuclear program for a set period in a largely verifiable way.
- Its greatest significance is that it helped to avert an imminent war between U.S and Iran.
- Note: Before it was signed, there was mounting concern about Tehran's nuclear activities and every chance that Israel (or possibly Israel and the US in tandem) might attack Iran's nuclear facilities.

- **Events leading to collapse of the deal**

- **US pulling out of the deal and reimposing sanctions:** In 2018, United States withdrew from the agreement and reimposed sanctions on Iran's oil sector, citing the following reasons:
    - The deal did not target Iran's ballistic missile program.
    - It does not focus on Iran's nuclear activities beyond 2025.
    - It also leaves out Iran's role in conflicts in Yemen and Syria.
    - The 'one-sided deal' did not bring calm and peace to the region.

- The U.S. continued to impose more sanctions targeting Iran's ability to trade and acquire currency and its oil exports in efforts to pressure Iran to negotiate a new deal that would also curb Iran's ballistic missile program and its involvement in regional conflicts.
- In 2019, US also blacklisted Iran's elite Revolutionary Guard Corps as "terrorists".
- The other parties to the 2015 deal - the UK, France, Germany, China and Russia - tried to keep the agreement alive after the US withdrew in 2018 but failed to effectively combat the US' sanctions.

AFTER TRUMP DECISION: WHAT CHANGES, WHAT REMAINS

	BEFORE 2015 DEAL	UNDER THE ACCORD	AFTER US PULLOUT
US sanctions	No Iranian goods and services imports, virtually no trade and investment by Americans in Iran	Billions of dollars of Iran funds held in foreign banks unfrozen, nuclear-related sanctions lifted	Nuclear-related punitive sanctions will be restored, President Donald Trump has announced
N-programme	Iran had capability to build weapons; may have needed only a few months to make bomb fuel	Iran's ability to secretly build nuclear weapons was severely compromised or eliminated	All restrictions remain in place
Inspections	Some monitoring under NPT requirements, but it was far less intrusive than under the deal	International monitoring of uranium mines, centrifuge production	For now, inspections will continue
EU sanctions	Extensive international sanctions, including oil embargo and limits on banking, isolated Iran	UN sanctions tied to Iran's nuclear work terminated, EU ended an oil embargo	EU sanctions remain suspended or terminated

❖ **Retaliations by Iran**

- Iran refused and saw the value of its currency plummet and its inflation rate soar as the sanctions took effect.
- When the sanctions were tightened in May 2019, Iran stopped abiding by some commitments in the deal.
- Iran also retaliated by bombing oil tankers, shooting down a US military drone, and slowly ramping up its missile activities, among other moves.
- To deter Iranian attack plans, US forces killed Qasem Soleimani, the commander of the Iranian Revolutionary Guards Corps (IRGC), in a drone strike at the Baghdad International Airport in Iraq in January 2020.
- In an atmosphere of escalating tensions, Iran declared it would no longer abide by any of the restrictions imposed by the deal - including limitations on its enrichment of uranium.
- Iran has declared that it would no longer observe limitations on uranium enrichment, stockpiles of enriched uranium or nuclear research and development. However, Iran will continue to allow the International Atomic Energy Agency (IAEA), the international nuclear

watchdog organization, to review its nuclear research, and would be willing to rejoin the agreement if sanctions against it are removed.

- Iran's nuclear program will have no limitations in production including enrichment capacity and percentage and number of enriched uranium and research and expansion

2.1 INDIA-BRAZIL

Why in News: Brazilian President Jair Bolsonaro was on an official visit to India.

- The Indian Prime Minister and the visiting Brazilian President outlined efforts to further deepen ties between the two countries.
- The two countries concluded 15 agreements and a Memorandum of Understanding (MoU) including on investment cooperation and facilitation treaty, mutual legal assistance in criminal matters, bio energy and cyber security.
- **More importantly, India and Brazil have concluded an Action Plan to deepen the strategic partnership.**

❖ **Strategic Action Plan to deepen strategic partnership**

- **Bilateral relations between the two countries were elevated to a Strategic Partnership in 2006, heralding a new phase in India-Brazil relations.**
- **The new Strategic Partnership Action Plan announced will serve as an "umbrella agreement", for plans between the two countries to increase defence cooperation, technology sharing and a logistics agreement.**
- It will also strengthen the existing strategic partnership by dealing in various areas from political and strategic coordination to trade and commerce, agriculture and energy to consular and legal issues.
- Further, it would also help in deepening the relationship between the two countries by 2023, which marks the platinum jubilee of the diplomatic ties established in 1948.
- The India-Brazil Joint Commission on Political, Economic, Scientific, Technological and Cultural Cooperation – set up in 2002 and chaired by foreign ministers – will be the main forum for monitoring the implementation of the Action Plan and will convene every two years.

❖ **Other areas discussed between India and Brazil**

- Besides the comprehensive action plan, the two sides also signed pacts and announced 15 agreements in areas such as oil and gas, mineral resources, traditional medicine, animal

husbandry, bio-energy and trade and investment, cultural exchange program, women and child development etc.

- The two countries are also focussing on new ways to promote defence industrial co-operation and are looking for a broader partnership in security. In this regard, Brazil will have a large delegation at the DefExpo in Lucknow in February 2019.
- Both the countries have decided to significantly expand bilateral cooperation in key sectors such as energy and mining and set a target of USD 15 billion in bilateral trade by 2022.
- The two leaders also vowed to work closely at the global anti-terror watchdog FATF to effectively confront challenges of terror financing and state-sponsored terrorism.

❖ **India - Brazil bilateral relations**

- India and Brazil share a very close and multifaceted relationship at bilateral level as well as in plurilateral fora such as BRICS, BASIC, G-20, G-4, IBSA, International Solar Alliance, Biofuture Platform and in the larger multilateral bodies such as the UN, WTO, UNESCO and WIPO.
- The bilateral strategic partnership, which opened a new phase for India-Brazil relations in 2006, is based on a common global vision, shared democratic values, and a commitment to foster economic growth with social inclusion for the welfare of the people of both countries.

- **Commercial Relations:**
  - Brazil is one of the most important trading partners of India in the entire LAC (Latin America and Caribbean) region.
  - India-Brazil bilateral trade has increased substantially in the last two decades. However, the global drop in commodity prices and the economic recession in Brazil started in 2015 affected Brazil's overall trade.
  - However, with slight recovery in Brazilian economy in year 2018, the bilateral trade between India and Brazil rose to USD 7.57 Billion. In 2018 India was the 11th biggest exporter to Brazil and 10th biggest importer from Brazil.
- **Defence Relations:**
  - Brazil and India signed an agreement in 2003 for defence cooperation which was ratified by Brazil in 2006. The agreement calls for cooperation in defence related matters, especially in the field of Research and Development, acquisition and logistic support between the two countries.
  - Subsequently, Defence Wing was established in the Embassy of India, Brasilia in 2007 and Brazil opened its Defence Wing in the Embassy of Brazil, New Delhi in 2009.

- **Cultural Relations:**
  - In Brazil, there is enormous interest in India's culture, religion, performing arts and philosophy and the first forms of Indian Culture to reach Brazil were related to spirituality, philosophy and religion.
  - Brazil has a strong community of Yoga and Ayurveda practitioners. The Brazilian Association of Ayurveda (ABRA) is a non-profit association with offices in 9 states of Brazil and has members all over Brazil.
  - Further, Mahatma Gandhi is highly regarded in Brazil and the government and NGOs are trying to inculcate the philosophy of non-violence among students, youth and police. Statues of Mahatma Gandhi have been installed in Rio de Janeiro, Sao Paulo and Londrina.

2.3 INTERNATIONAL COURT OF JUSTICE

Why in News: The International Court of Justice (ICJ) has ordered Myanmar to take urgent measures to protect its Rohingya population from genocide, a ruling cheered by refugees as their first major legal victory since being forced from their homes.

❖ **Background**
- An estimated 3 lakh Rohingya have fled to Bangladesh since 2017 when the Myanmar military launched a brutal crackdown on Rohingya villages in the country's coastal Rakhine state.
- In August 2019, the UN investigators had concluded that the military campaign had been executed with "genocidal intent".

Finding safe haven in Bangladesh
Hundreds of thousands of Rohingya have left their ethnic homeland of Rakhine State for the district of Cox's Bazar in Chittagong, Bangladesh.

❖ Gambia's intervention:

- In November 2019, the Republic of the Gambia moved the ICJ against Myanmar over alleged violations of the Convention on the Prevention and Punishment of the Crime of Genocide.
- Gambia was backed by the 57-member Organisation for Islamic Cooperation (OIC), which Gambia is a member of.
- Both Gambia and Myanmar are parties to the Genocide Convention that allows a party to move the ICJ for violations.
- Gambia urged the ICJ to direct Myanmar to stop the genocide, ensure that persons committing genocide are punished, and allow the safe and dignified return of forcibly displaced Rohingya.

❖ Myanmar's response

- Myanmar had asked the ICJ to remove the case from its list, citing lack of jurisdiction of the court.

- It further alleged that the proceedings before the court were instituted by the Gambia, not on its own behalf, but rather as a "proxy" and "on behalf of" the Organisation of Islamic Cooperation (OIC).
- Myanmar has denied that its military or paramilitary has participated in genocide of Rohingya and said the Gambia did not point to specific violations of the Genocide Convention.

❖ **ICJ's Judgement**
- The case was argued at ICJ by some of the world's top human rights lawyers, with Myanmar's civilian leader Aung San Suu Kyi personally leading her country's defence against the charges of carrying out a genocide against the Rohingya
- The court found that it is sufficient at this stage "to establish prima facie the existence of a dispute between the Parties relating to the interpretation, application or fulfillment of the Genocide Convention".
- The ICJ granted "provisional measures", and said that for this purpose the court is not required to ascertain whether Myanmar violated the Genocide Convention.
- It directed Myanmar to use its influence over its military and other armed groups to prevent violence against Rohingyas and to ensure the preservation of evidence related to allegations of acts of genocide.
- It further asked Myanmar to submit a report to the ICJ on all measures taken to give effect to the order within four months, and thereafter every six months, until a final decision is passed.

❖ **Only provisional measures:**
- The current ICJ directions are "provisional measures" until the ICJ can finally decide if Myanmar has been committing an ongoing genocide against the Rohingyas.
- Provisional measures are essentially a restraining order against a state when a case is pending and can be seen as, at most, a censure. They are final and binding upon the state and cannot be challenged.

❖ **International Court of Justice**
- The International Court of Justice (ICJ), sometimes called the World Court, is the principal judicial organ of the United Nations (UN).
- The ICJ is the successor of the Permanent Court of International Justice (PCIJ), which was established by the League of Nations in 1920. After the Second World War, both the League and the PCIJ were succeeded by the United Nations and ICJ, respectively.

- The ICJ settles disputes between states and gives advisory opinions on international legal issues referred to it by the UN. Through its opinions and rulings, it serves as a source of international law.
- The ICJ comprises a panel of 15 judges elected by the General Assembly and Security Council for nine-year terms.
- The court is seated in the Peace Palace in The Hague, Netherlands, making it the only principal U.N. organ not located in New York City. Its official working languages are English and French.

2.4 INTERPOL NOTICES

Why in News: The Interpol has issued a blue corner notice to locate the controversial Godman Nithyananda, who fled the country amid allegations of rape and wrongful confinement of children. The police are now working on getting a red corner notice issued against Nithyananda.

❖ Notices Issued by Interpol
- Notices are international requests for cooperation or alerts allowing police in member countries to share critical crime-related information.
- Notices are published by the General Secretariat at the request of a National Central Bureau and are made available to all our member countries.
- There are seven types of notices — Red Notice, Yellow Notice, Blue Notice, Black Notice, Green Notice, Orange Notice, and Purple Notice.

❖ Blue Corner Notice
- A Blue Corner Notice/ B series notice is issued by the international police cooperation body to collect additional information from its member countries about a person's identity, location or activities in relation to a crime. These are also called as enquiry notices.
- Blue Corner Notice is issued to the country the criminal belongs to and to track the suspect to be in other countries.
- This notice, if issued, makes it mandatory for member countries to share the whereabouts of a person.
- The Interpol can issue a blue corner notice against more than one person at a time.

❖ Red Corner Notice
- A red corner notice requests law enforcement agency across the world to provisionally detain the person named in the notice and inform the country that has sought the notice.

- Interpol cannot pressurise any member country to arrest an individual who is served a Red corner Notice.
- An RCN is a request to locate individual who is convicted in a criminal case. However, the individual may not mean to be guilty after RCN is issued against him, he should be proven guilty by the court.

❖ **Difference between Red Corner Notice and Blue Corner Notice:**

While a Blue corner notice is issued seeking whereabouts of a person, a Red Corner Notice is issued to seek the arrest or provisional arrest of wanted criminals with the intention of extradition.

- **Other types of notices of Interpol**

- **Yellow Notice:** This helps locate missing persons, often minors, or to help identify persons who are unable to identify themselves. This notice is issued with details of various body marks on the person to be identified. Black Notice is issued by Interpol to seek information on unidentified bodies.
- **Green Notice** is issued to provide warnings and intelligence about persons who have committed criminal offences and are likely to repeat these crimes in other countries. Many serial sex offenders are recipients of such notices.
- **Orange Notice** is issued to warn of an event, a person, an object or a process representing a serious and imminent threat to public safety. In a recent event, a "miracle diet pill" was issued an orange notice by Interpol, on request by French health authorities.
- **Interpol-United Nations Security Council Special Notice** is issued for groups and individuals who are the targets of UN Security Council Sanctions Committees.
- **Purple Notice** is issued to seek or provide information on modus operandi, objects, devices and concealment methods used by criminals. This category aids Interpol's efforts to tackle environmental criminals.

2.5 PASSPORT INDEX

Why in News: The latest Henley Passport Index ranks India at 84. The index ranks passports based on their power and mobility.

Henley Passport Index

- The index, ranking all the world's passports, is prepared by Henley and Partners, a London-based global citizenship and residence advisory firm.
- The Index lists the world's passports "according to the number of destinations their holders can access without a prior visa".
- The index covers 227 destinations and 199 passports, and is updated in real time according to countries' visa policy changes.
- Each passport is attributed with a score and a rank. For instance for 2019, India's score is 58 and it ranks 86 in the list.

How the Index is calculated

- The score is the sum of the number of countries accessible by that passport holder without requiring pre-departure government approval for various visa-types (including a visitor's permit, visa on arrival or an electronic travel authority).
- India has a score of 58. That is the number of destinations an Indian passport holder can travel to today, without pre-departure government approval.
- According to the 2020 index, Japan's citizens are able to access 191 destinations without having to obtain a visa in advance.

- **The Henley Passport Index is not the only index available on passport rankings.**
- **Others include the Arton Passport Index, which uses a three-tier approach to rank passports, attributing scores and using the UNDP's Human Development Index 2018 in its methodology.**
- **It is powered by Arton Capital, a global financial advisory.**

SECURITY AND DEFENCE

❖ **Paper III: This section is relevant to the following topics:**

- **Linkages between development and spread of extremism.**
- **Role of external state and non-state actors in creating challenges to internal security.**
- **Challenges to internal security through communication networks, role of media and social networking sites in internal security challenges, basics of cyber security; money-laundering and its prevention**
- **Security challenges and their management in border areas; linkages of organized crime with terrorism**
- **Various Security forces and agencies and their mandate**

❖ **Prelims Oriented Questions**

3.1 BODO GROUP ACCORD

Why in News: The government signed a peace accord with all factions of the Bodo militant group National Democratic Front of Bodoland (NDFB) and All Bodo Students' Union (ABSU), paving the way for political and economic benefits for the Bodo community.

❖ The Bodos

- The Bodos are an ethno linguistic group in the state of Assam. They are a part of the greater Bodo-Kachari family of ethno linguistic groups and are spread across northeastern India and clustered strongly in Assam, along the eastern Duars.
- Bodos are the single largest tribal community in Assam, making up over 5-6 per cent of the state's population and they have controlled large parts of Assam in the past.
- The Bodo people speak the Bodo language, a Tibeto-Burman language recognized as one of twenty-two scheduled languages in the Indian Constitution.
- **The four districts in Assam: Kokrajhar, Baksa, Udalguri and Chirang — that constitute the Bodo Territorial Area District (BTAD), are home to several ethnic groups.**

❖ The Bodoland Dispute

- The Bodos have had a long history of separatist demands, marked by armed struggle. In 1966-67, the demand for a separate state called Bodoland was raised under the banner of the Plains Tribals Council of Assam (PTCA), a political outfit.
- In 1987, the All Bodo Students Union (ABSU) renewed the demand, wherein, a call of "Divide Assam fifty-fifty", was given by the ABSU's then leader, Upendranath Brahma.
- The unrest was fallout of the Assam Movement (1979-85), which culminated into the Assam Accord.
- The Assam Accord addressed the demands of protection and safeguards for the "Assamese people", which led the Bodos to launch a movement to protect their own identity.

❖ The NDFB

- Alongside political movements, armed groups have also sought to create a separate Bodo state.
- One of the most prominent armed groups was the Bodo Security Force (BdSF), formed under the leadership of Ranjan Daimary in 1986.
- The BdSF subsequently renamed itself as the National Democratic Front of Bodoland (NDFB), an organisation that is known to be involved in attacks, killings, and extortions. In the 1990s, Indian security forces launched extensive operations against the group, causing the latter to flee to bordering Bhutan.
- Bhutan used to be the base of the unified NDFB until December 2003 when a joint India-Bhutan military operation flushed their cadre out, along with those of the United Liberation Front of Asom (ULFA) and Kamtapur Liberation Organisation (KLO).

❖ NDFB factions, their activities and peace agreements:

- In 2008, bomb attacks in Assam carried out by the NDFB killed 90 people. In early 2019, 10 operatives, including founder Ranjan Daimary, were convicted for their role in the attacks.
- After the blasts, the NDFB was divided into two factions — the NDFB (Progressive), led by Gobinda Basumatary, and the NDFB (RD), led by Ranjan Daimary. The Progressive faction started talks with the central government in 2009.
- In 2010, Daimary was arrested and handed over to India by Bangladesh, and was granted bail in 2013. The NDFB (RD) faction too then began peace talks with the government.
- In 2012, IngtiKathar Songbijit broke away from the NDFB (RD) and formed his own faction, the NDFB (S).This faction is said to be behind the December 2014 massacre of 66 adivasis in Assam.

- In 2015, Songbijit was removed as the chief of the group and B Saoraigwra took over. Songbijit, himself a Karbi and not a Bodo, started his own Karbi militant group - People's Democratic Council of KarbiLongri (PDCK).
- NDFB(S) was active in Myanmar along with other North-East insurgent groups. They had formed a joint platform — the United National Liberation Front of Western South East Asia — along with NSCN-K and the ULFA faction headed by Paresh Baruah.
- In January 2020, NDFB (S), including its chief B Saoraigwra and some key members, signed a peace agreement with the Central government and the Assam government.
- This means that the last faction of the National Democratic Front of Boroland (NDFB) has also called a truce.

    - The Central government signed a tripartite Memorandum of Settlement (MoS) with the Assam government and different Bodo groups, including four factions of the NDFB, for a "permanent" solution to the Bodo issue.
    - The agreement will also address concerns of Bodos living outside the BTC area.
    - The signing of the agreement ends the 50-year-old Bodo crisis, while retaining the territorial integrity of Assam.
- **The Memorandum of Settlement (MoS) with Bodo groups**
- **Reorganisation of the Bodoland Territorial Area District (BTAD) in Assam:**

- It is currently spread over four districts of Kokrajhar, Chirang, Baksa and Udalguri.
- As per the agreement, villages dominated by Bodos that were presently outside the BTAD would be included and those with non-Bodo population would be excluded.
- A committee will decide the exclusion and inclusion of new areas in the BTAD.
- BTAD will then be renamed as the Bodoland Territorial Region (BTR).
- Earlier, the BTAD and other areas mentioned under the Sixth Schedule of the Constitution have been exempted from the Citizenship (Amendment) Act, 2019.
- **Rehabilitate surrendered militants of NDFB:**
- The NDFB factions will leave the path of violence, surrender their weapons and disband their armed organisations within a month of signing the deal.
- Around 1500 cadres of NDFB(P), NDFB(RD) and NDFB(S) will be rehabilitated by Centre and Assam Government.
- They will be assimilated in the mainstream and will surrender on January 30 on Bapu's death anniversary.
- Criminal cases registered against members of the NDFB factions for "non-heinous" crimes shall be withdrawn by the Assam government and in cases of heinous crimes it will be reviewed.

3.2 CHIEF OF DEFENCE STAFF

Why in News: General Bipin Rawat was recently appointed the first Chief of Defence Staff (CDS).The office of CDS was newly created to enhance the quality of military advice to the political leadership through integration of service inputs.

❖ **Chief of Defence Staff (CDS)**
❖ **Role:**
- **The Chief of Defence Staff is termed as a dual role:**
    - One as the permanent Chairman of the Chiefs of Staff Committee, which has the three service chiefs as members
    - The other as the head of the newly created Department of Military Affairs (DMA) in the ministry
    - The first is a military role while the second is a role in the government
    - It is as the head of DMA that his major responsibilities within the ministry will be discharged.
    - Work exclusively pertaining to military matters will fall within the purview of the DMA while the Department of Defence will deal with larger issues pertaining to defence of the country.
    - To give an illustrative example, this means that while tri-service military training institutions will fall under the DMA, organisations like IDSA and NDC whose remit is broader than military matters will fall under the Department of Defence.

❖ **Areas not under the ambit of CDS:**
- The CDS will neither command the three service chiefs nor will be the single point adviser to the government. He will act as the Principal Military Adviser to the Defence Minister only on tri-services matters.
- In fact, the three service chiefs will continue to advise the Defence Minister, as done so far, on matters exclusively concerning their respective services.
- The government has also made it explicitly clear that the CDS will not exercise any military command, including over the three service chiefs. But the service chiefs will be members of the Chiefs of Staff Committee, which will be headed by the CDS.
- Further, the Department of Defence — headed by the Defence secretary and not the CDS, will be responsible for the defence of India and every part thereof.

❖ **Impact on the structure and powers of service chiefs**

- None of the powers of the service chiefs, including of advising the government, has been curtailed and transferred to the CDS.
- However, the Chairman of the Chiefs of Staff Committee, which used to be headed by the senior-most chief by rotation, has been shelved. The CDS will now be the permanent Chairman of the Chiefs of Staff Committee, where he will be supported by the Headquarters Integrated Defence Staff.
- Further, the CDS has a time-bound task, to be done within three years, to bring about jointness in operations, logistics, training, support services and communications, which will eventually lead to shedding of responsibilities by the service headquarters.
- As the head of the DMA, the CDS has to also facilitate restructuring of military commands for optimal utilisation of resources by bringing about jointness in operations, including through establishment of joint/ theatre commands.
- This is a far-reaching move, which will potentially impinge on the remit of the service chiefs.

❖ **Structure of Defence Ministry**
- **The ministry has four departments:**
  - Department of Defence
  - Department of Defence Production
  - Department of Defence Research and Development
  - Department of Ex-servicemen Welfare
- Each of them is headed by a Secretary.
- The Department of Defence is the nerve centre of the ministry, looking after all issues pertaining to the armed forces, defence policy and procurement.

❖ **Changes in the structure with the constitution of CDS**
- The charter of duties designated for the newly created Department of Military Affairs (DMA) was so far looked after by the Department of Defence, which is headed by the Defence Secretary.
- These duties will now fall under the ambit of DMA, and will have an appropriate mix of civilian and military officers at every level.

❖ **CDS and Similar Posts in Other Countries**
- **United States: Chairman of the Joint Chiefs of Staff:**

- The chairman of the Joint Chiefs of Staff (CJCS) is US' highest-ranking military officer and the principal military adviser to the President, the Secretary of Defence (equivalent to Minister for Defence in India) and the National Security Council.
- The CJCS is part of, and heads, a high-ranking body called the Joint Chiefs of Staff (JCS). The JCS has no executive authority to command combatant forces, and is mainly in charge of ensuring personnel readiness, policy, planning and training of the respective military services.

❖ **United Kingdom: Chief of the Defence Staff**
- The Chief of the Defence Staff (CDS) is the professional head of the Armed Forces and principal military adviser to the Secretary of State for Defence (equivalent to Minister for Defence in India) and the government.
- The CDS is the main military voice on the Defence Board and as the military strategic commander; CDS is responsible for how operations are carried out.
- The responsibilities of the CDS include leading defence (with the Permanent Secretary), setting strategy for defence, including future development of the Armed Forces, the conduct of current operations (as strategic commander), and leading relationships with other countries' Armed Forces.

❖ **Australia: Chief of the Defence Force**
- Australia has a diarchy system, under which the Chief of the Defence Force (CDF) and the Secretary for the Department of Defence jointly manage the Defence organisation.
- The CDF has the primary responsibility for the command of the Australian Defence Force (ADF), and acts under the direction of the Minister of Defence.
- The CDF is the principal military adviser to the Minister and provides advice on matters that relate to military activity, including military operations.

3.3 LCA TEJAS

Why in News: In a significant development, the naval version of India's indigenous Light Combat Aircraft (LCA)-Mk1 Tejas, made its first arrested landing on the deck of India's aircraft carrier INS Vikramaditya.

❖ **Light Combat Aircraft**
- A Light combat aircraft is a light multirole jet military aircraft, most coming from advanced trainers that have been modified or designed for engaging in light combat missions, either in light strike or attack missions, reconnaissance or interdiction roles.

- They are also slower than their bigger counterparts and most are only capable of subsonic speeds though some are capable of reaching mach 1+.

- Although equipped with either guns or short range air-to-air missiles it is usually for self-defense purpose or anti-hostile aircraft/helicopter missions not for air defense as lightweight fighters do. However, they can still be used to patrol the skies and implement border patrol or air policing.

❖ LCA Tejas:
- HAL Tejas is an Indian single-engine, multirole light fighter designed by the Aeronautical Development Agency (ADA) and Hindustan Aeronautics Limited (HAL) for the Indian Air Force and Indian Navy.
- It came from the Light Combat Aircraft (LCA) program, which began in the 1980s to replace India's ageing MiG-21 fighters and was officially named Tejas in 2003.
- It is the smallest and lightest in its class of contemporary supersonic combat aircraft, and is developed in both fighter and trainer versions.
- It integrates technologies such as relaxed static stability, fly-by-wire flight control system, multi-mode radar, integrated digital avionics system and composite material structures.

❖ Naval LCA:
- The naval version of the LCA took its first flight in April 2012 and two prototypes have been flying as part of the development. The first prototype (NP1) of the Naval LCA made a successful first flight from the SBTF in 2014.
- Naval LCA is designed with stronger landing gears to absorb forces exerted by the ski jump ramp during take-off, to be airborne within 200 m and land within 100 m as against 1000 m required for normal runways.

❖ INS Vikramaditya
- INS Vikramaditya meaning Brave as the Sun is a modified Kiev-class aircraft carrier and the flagship of the Indian Navy, which was purchased by India in 2004 and entered into service in 2013.
- Originally built as Baku and commissioned in 1987, the carrier served with the Soviet Navy and later with the Russian Navy (as Admiral Gorshkov) before being decommissioned in 1996.
- It is the Indian Navy's only operational aircraft carrier at present and has an overall length of about 284 meters (930 ft) and a maximum beam of about 60 meters (196 ft).

- With a displacement of 45,000 tones, the warship is capable of carrying over 30 aircraft and helicopters. Featuring a total of 22 decks, the carrier has the capacity to accommodate more than 1,600 personnel on board.

ECONOMY

❖ **Paper III: The articles in this section are relevant to the following topics:**

- **Indian Economy and issues relating to planning, mobilization of resources, growth, development and employment.**
- **Inclusive growth and issues arising from it.**
- **Government Budgeting.**
- **Effects of liberalization on the economy, changes in industrial policy and their effects on industrial growth.**
- **Infrastructure: Energy, Ports, Roads, Airports, Railways etc.**
- **Investment models.**

4.1   OPEN ACREAGE LICENSING POLICY

Why in News: State-owned Oil and Natural Gas Corporation (ONGC) won all the seven oil and gas blocks on offer in the latest bid round. These seven on-land blocks were on offer in the fourth round of Open Acreage Licensing Policy (OALP).

❖ **Open Acreage Licensing Policy (OALP)**

The OALP was introduced in 2016 as a part of new Hydrocarbon Exploration and Licensing Policy (HELP). **It was primarily introduced to:**

- ▪ **Increase the domestic oil and gas production**
- ▪ **Reduce import dependence**
- The OALP adopts all features of HELP - reduced royalty rates, no Oil Cess, uniform licensing system, marketing and pricing freedom, Revenue Sharing Model, Exploration rights on all retained area for full contract life etc.

❖ **Hydrocarbon Exploration and Licensing Policy (HELP)**

- Oil and gas plays a predominant role in energy security of India contributing about 45% of the total energy needs.
- Currently, India imports about 83% of oil and gas.
- India has set a goal to reduce its oil import bill by 10% by 2022.
- As a result, the Hydrocarbon Vision 2025 identifies achievement of self-reliance through increased domestic production of oil and gas.
- The first step is to achieve 100% exploration of sedimentary basins of India in order to tap its hydrocarbon potential.
- In this direction, Hydrocarbon Exploration Licensing Policy was adopted in 2016 to overcome the issues in hydrocarbon exploration policy of India. (NELP)

❖ **Features**

❖ **Uniform Licensing**

- HELP introduced single license system to include exploration of both conventional and unconventional oil and gas resources.
- This includes a uniform license for exploration and production of oil, gas, coal bed methane, shale gas, gas hydrates etc (shale was included in July 2018).

- Open Acreage Licensing Policy

- Revenue sharing model

❖ **Reasons for HELP**
- Under the old exploration policy (NELP), profit sharing model was adopted.
- Under this the oil companies shared profit with the government after recovering the cost of exploration and production.
- This often led to exaggeration of cost by the companies and led to delays and disputes.

❖ **Advantages**
- The HELP adopted revenue sharing model under which the companies share a part of the gross revenue from the sale of hydrocarbon.
- This reduces delays an disputes in the projects
- Brings in 'ease of doing business'
- Freedom in Pricing and Marketing of oil prices: Freedom in Pricing and Marketing of oil prices makes it attractive for private and foreign players to invest in hydrocarbon sector thereby increasing domestic production.

❖ **Potential Impact of HELP**
- It is expected to bring about 2.8 million sq km of unexplored area in the country under exploration.
- Increased domestic production of oil and gas
- Low cost to consumers
- Reduced crude oil import bill easing India's current account deficit
- Contribution towards achieving energy security

4.2   SMALL FINANCE BANK

Why in News: Shivalik Mercantile Co-operative Bank has become the first Co-operative Bank to get permission from the RBI to convert into a small finance bank (SFB). The permission has been granted under the 'Scheme on voluntary transition of urban co-operative bank into a small finance bank' issued in September, 2018.

- The 'in-principle' approval granted will be valid for 18 months to enable the applicant to comply with the requirements under the scheme and fulfil other conditions as stipulated by the RBI.

- On being satisfied that the applicant has complied with the requisite conditions, the RBI would consider granting it a license for commencement of banking business under the Banking Regulation Act, 1949 as an SFB.
- Initially, only microfinance companies could convert into SFBs, however, in December 2019, the RBI came out with guidelines allowing co-operatives also to convert.

❖ Small Finance banks

- SFBs are like corporate entities limited by shares and they have much more flexibility in raising finances from the banking system. The main purpose behind having small finance banks is to expand access to financial services in rural and semi-urban areas.
- These banks can do almost everything that a normal commercial bank can do, but at a much smaller scale.
- It can offer basic banking services, accept deposits and lend to underserved sections of customers, including small business units, small and marginal farmers, micro and small industries, and even entities in the unorganized sector.
- SFBs are required to give 75% of their total credit to priority sector, which includes those working in agriculture, and small enterprises and low-income earners.
- SFBS also have to ensure that 50% of their loan portfolio constitutes advances of up to 25 lakh. Further, these banks are also allowed to distribute third-party products such as mutual funds, insurance and pension products.

❖ Supervisory Action Framework

- The supervisory action framework was introduced in 2012, to better manage stressed urban cooperative banks.
- It is similar to the Prompt Corrective Action that was already in place for Scheduled Commercial Banks.
- The guidelines of the Supervisory Action Framework includes, threshold limits for capital adequacy, profitability and asset quality.

❖ Revision of Supervisory Action Framework

- The RBI has also decided to rationalize the supervisory action framework (SAF) to make it more effective in bringing about the desired improvement in urban cooperative banks (UCBs) and to expedite resolution of UCBs experiencing financial stress.
- Along with it, the RBI will continue to monitor asset quality, profitability and capital/net worth of UCBs under the revised SAF.
- Under the revised rules, an urban cooperative bank may be placed under the framework, if it meets any one of the three conditions set by the RBI.

- Net non-performing asset ratio exceeds 6 percent of net advances
- Two consecutive years of losses or accumulated losses on their balance sheets
- Capital adequacy ratio falls below 9 percent. Action can be also taken if there are serious governance issues.

❖ **Scheme on voluntary transition of urban co-operative bank into a small finance bank**

- In keeping with the fast paced changes in the banking space a scheme for voluntary transition of UCBs into SFBs was introduced in order to facilitate growth, by way of transfer of assets and liabilities.
- As per the scheme, UCBs with a minimum net worth of Rs 50 crore and maintaining capital to risk (weighted) assets ratio of 9% and above are eligible to apply for voluntary transition to SFB under this scheme.
- Also, the promoters are required to be Indian residents, with 10 years of experience in banking and finance.
- Promoter or promoter groups should also conform to the definition of the SEBI (Issue of Capital & Disclosure Requirements) Regulations, 2009 and RBI guidelines on fit and proper.
- The fit and proper status of the applicants is assessed on the basis of their past record of sound credentials and integrity; financial soundness and successful track record of professional experience or of running their businesses.

4.3 COAL MINING BIDING

Why in News: In a bid to open up the coal mining sector to attract global bidders for auctions, the Union Cabinet has recently approved the promulgation of Mineral Laws (Amendment) Ordinance 2020, which would boost FDI in mining and remove end user restrictions.

❖ **Coal Mining**
- Coal is the most important and abundant fossil fuel in India.
- It accounts for 55% of the country's energy need and India's industrial heritage was built upon indigenous coal.
- Commercial primary energy consumption in India has grown by about 700% in the last four decades.
- The current per capita commercial primary energy consumption in India is about 350 kg/year which is well below that of developed countries.
- Driven by the rising population, expanding economy and a quest for improved quality of life, energy usage in India is expected to rise.

- Indian coal offers a unique eco-friendly fuel source to domestic energy market for the next century and beyond.
- The lignite reserves stand at a level around 36 billion tonnes, of which 90 % occur in the southern State of Tamil Nadu.
- India has the world's fourth-largest coal reserves, yet it imported 235 million tonnes of coal for Rs 1.71 lakh crore last fiscal.

❖ Relevant constitutional provisions
- The Union List in the Seventh Schedule of the Constitution, however, rests the power of regulation and development of oilfields and mineral oil resources, mines and mineral with the Centre under entry 53 and 54.
- Mines and mineral development are part of the State List as well but here they are subject to the powers conferred on the Centre.
- Therefore, though both coal and petroleum exploration and production rights are given out by the Centre, it is the state governments which issue the mining leases.

- India's coal sector was nationalised in 1973.
- In February 2018, the government opened up commercial coal mining to private sector.
- In October 2018, government allowed captive coal miners to sell 25% of their output in the open market.

❖ Present situation in mining
- Mines and Minerals (Development and Regulation) Act 1957 provides that the central government can auction coal and lignite mining licences only to companies engaged in iron and steel, power and coal washing sectors.
- The companies also needed prior experience of mining in India to bid for the blocks.
- The Coal Mines Special Provisions (CMSP) Act 2015 provides for end-use restrictions for the 204 coal blocks that were auctioned after the Supreme Court cancelled their allotment in 2014.
- The end-use restriction led to "comparatively less" participation in the coal block auctions.

- The Mineral Laws (Amendment) Ordinance 2020 amended the Mines and Minerals (Development and Regulation) Act 1957 and Coal Mines Special Provisions (CMSP), Act 2015.
- To promote foreign direct investment in the coal mining sector, government has passed the ordinance removing restrictions and eligibility criteria for participation in coal block auctions

- The ordinance allows coal mining by any company present in sectors other than steel and power, and does away with the captive end-use criteria

❖ Significance of the move

- Creating an efficient energy market
- Usher in competition by increasing private sector participation in auction of coal blocks for commercial mining.
- It will boost both production and mining efficiency besides substituting import of coal worth Rs 30,000 crore
- Ending the monopoly of state-owned Coal India Ltd.
- This will speed up the process of implementation of projects and boost the ease of doing business.
- It will help India gain access to high-end technology for underground mining used by global miners.
- It will also lead to easier rules for auctioning blocks for commercial mining.
- Allowing commercial mining of coal will ensure assured coal supply, accountable allocation of coal and affordable fuel leading to affordable electricity prices for consumers
- The reform will make the domestic steel industry globally more competitive (as inputs will be cheaper)

4.4 RETAIL INFLATION & CPI

Why in News: Retail inflation soared to a five and a half year high of 7.35% in December 2019, with the shortage of onions driving the surge.
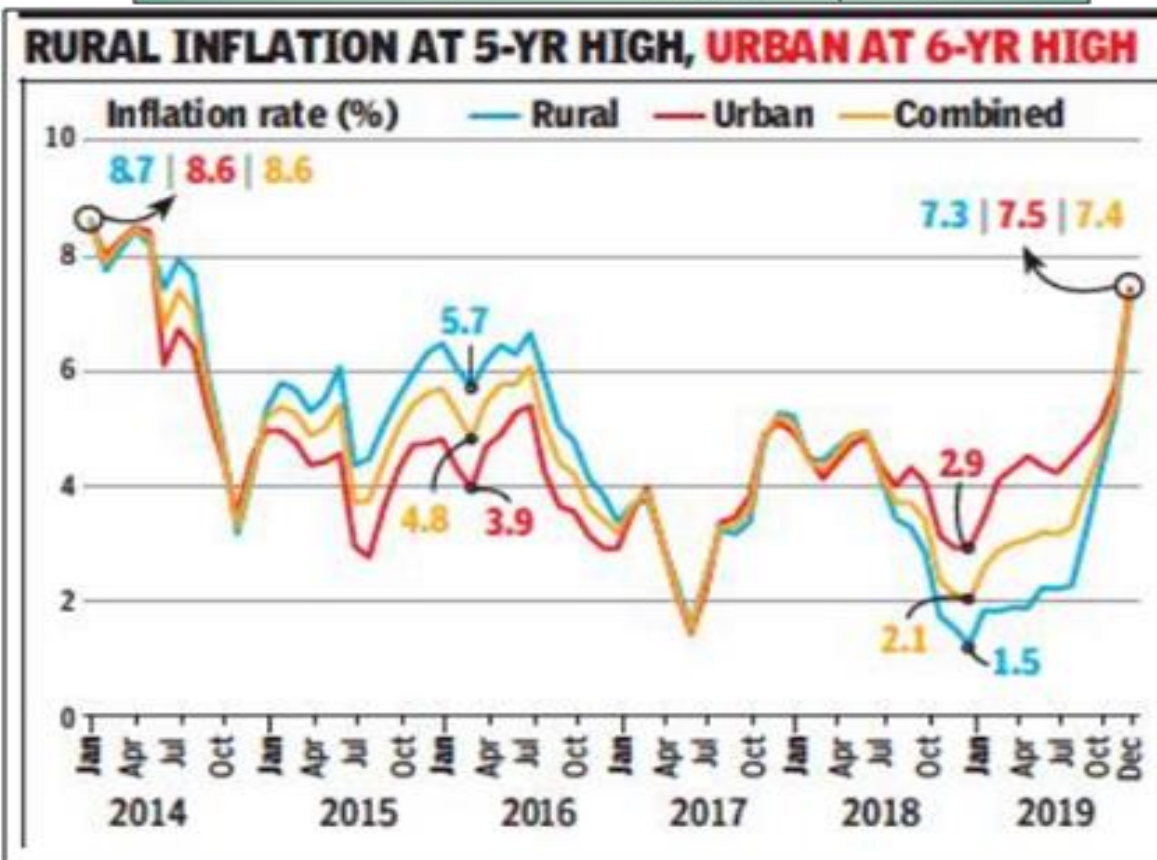
❖ Consumer Price Index
- The Consumer Price Index is a comprehensive measure used for estimation of price changes in a basket of goods and services representative of consumption expenditure in an economy.
- The percentage change in this index over a period of time gives the amount of inflation over that specific period, i.e. the increase in prices of a representative basket of goods consumed.
- It is one of the most important statistics for an economy.
- CPI numbers are widely used as a macroeconomic indicator of inflation, as a tool by governments and central banks for inflation targeting and for monitoring price stability, and as deflators in the national accounts.

- CPI is also used for indexing dearness allowance to employees for increase in prices.
- Various categories and sub-categories have been made for classifying consumption items and on the basis of consumer categories - like urban or rural CPI.

❖ **Compilation of CPI**

- **The National Statistical Office (NSO), Ministry of Statistics and Program Implementation released the CPI (Rural, Urban, and Combined).**
- **The Base for CPI calculated by NSO is 2012**
- The NSO also released the Consumer Food Price Index (CFPI) for all India Rural, Urban and Combined.

- According to information released by the National Statistical Office, retail inflation based on the Consumer Price Index in December rose to its highest since July 2014 to 7.35%.
- Inflation in rural areas was at a 5-year high of 7.3% during December while in urban centers it was at a 6-year high of 7.5%.
- Core inflation, which is minus food and fuel, too rose marginally to 3.7% in December, compared with 3.5% in the previous month.
- In comparison, retail inflation was only 2.11% in December 2018 and 5.54% in November 2019.
- The last time retail inflation was this high was the 7.39% recorded in July 2014.

Surging prices

At 7.35%, India's retail Inflation rate soared to a 65-month high in December 2019, significantly breaching the upper-limit of 6% set by the RBI

7.35%

Item	Inflation (%)
Vegetables	60.5
Pulses & products	15.44
Meat & fish	9.57
Egg	8.79
Personal care & effects	6.28
Spices	5.76

RURAL INFLATION AT 5-YR HIGH, URBAN AT 6-YR HIGH

Inflation rate (%) — Rural — Urban — Combined

8.7 | 8.6 | 8.6

7.3 | 7.5 | 7.4
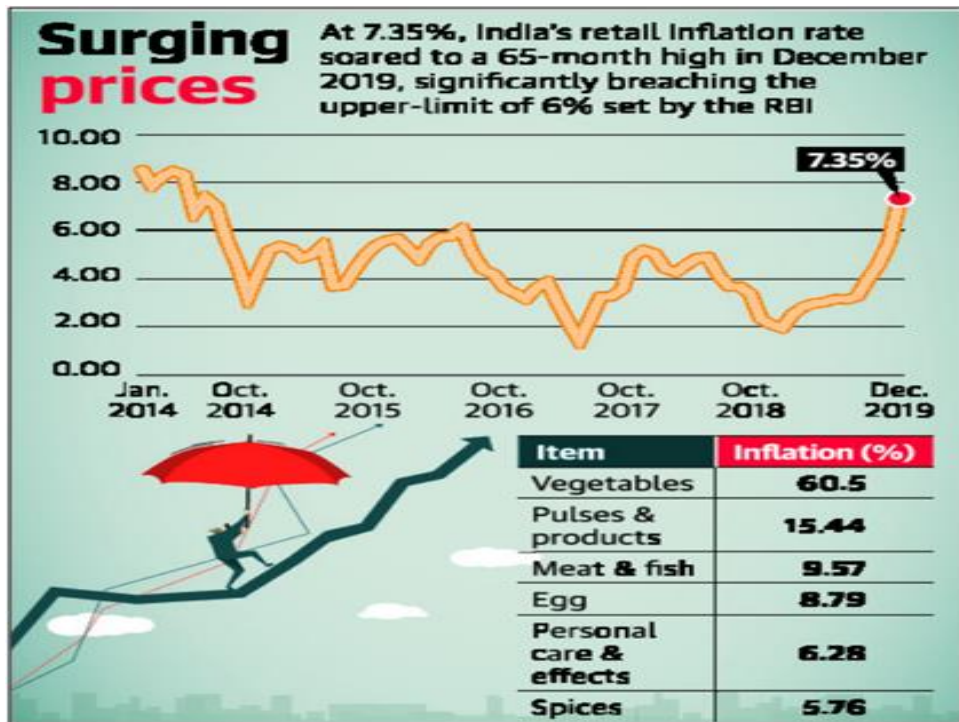
❖ **Retail inflation being driven by high food inflation:**

- Retail inflation reached a high on the back of soaring vegetable prices as food inflation hit an over six-year peak.
- The consumer food price inflation reached 14.12 per cent year-on-year in December 2019, the highest after it touched 17.89 per cent reached more than six years ago in November 2013.
- The hike in inflation in the 'vegetables' category was at 60.5% in December 2019 in comparison to December 2018.
- Along with vegetables, high prices of pulses, meat and fish also contributed to last month's spike.

4.5 FDI; UNCTAD

Why in News: The Global Investment Trend Monitor report was recently released by the United Nations Conference on Trade and Development (UNCTAD). The report focuses on trends in foreign direct investment (FDI) worldwide, at the regional and country levels and emerging measures to improve its contribution to development. It is based on FDI inflows for 150 economies for which data was available for at least part of 2019, as of 17 January 2020. These countries account for 98% of global FDI flows.

❖ **Findings of the report**
- **FDI flows:**
  - The global FDI remained flat in 2019 at $1.39 trillion; a 1% decline from a revised $1.41 trillion in 2018. This is against the backdrop of weaker macroeconomic performance and policy uncertainty for investors, including trade tensions.
  - Developing economies continue to absorb more than half of global FDI flows, with South Asia recording a 10% increase in FDI to $60 billion.
  - India was among the top 10 recipients of foreign direct investment (FDI) in 2019, attracting $49 billion in inflows — a 16% increase from the previous year — driving FDI growth in South Asia.
- **Performance of developed economies**
  - The FDI flows to developed countries remained at a historically low level, decreasing by a further 6% to an estimated $643 billion.
  - The FDI to the European Union (EU) fell by 15% to $305 billion, while there was zero-growth of flows to US, which received $251 billion FDI in 2019, as compared to $254 billion in 2018.

- Despite this, the US remained the largest recipient of FDI, followed by China with flows of $140 billion and Singapore with $110 billion. China also witnessed zero-growth in FDI inflows as its inflows in 2018 were $139 billion.
- Further, with the protracted unfolding of the Brexit, the FDI inflow in UK was down by 6%.

❖ UNCTAD

- UNCTAD was established by the United Nations General Assembly in 1964, as a permanent intergovernmental body.
- With a permanent secretariat in Geneva, the UNCTAD reports to the UN General Assembly and United Nations Economic and Social Council.
- The creation of UNCTAD was based on concerns of developing countries over the international market, multi-national corporations, and great disparity between developed nations and developing nations.
- It was established to provide a forum where the developing countries could discuss the problems relating to their economic development.
- The primary objective of UNCTAD is to formulate policies relating to all aspects of development including trade, aid, transport, finance and technology.

❖ Generalised System of Preferences

- One of the principal achievements of UNCTAD has been to conceive and implement the Generalised System of Preferences (GSP).
- It was argued in UNCTAD that to promote exports of manufactured goods from developing countries, it would be necessary to offer special tariff concessions to such exports.
- Accepting this argument, the developed countries formulated the GSP scheme under which manufacturers' exports and import of some agricultural goods from the developing countries enter duty-free or at reduced rates in the developed countries.

SCIENCE AND TECHNOLOGY

❖ **Paper III: The articles in this section are relevant to the following topics:**

- **Science and Technology- developments and their applications and effects in everyday life**
- **Achievements of Indians in science & technology; indigenization of technology and developing new technology.**
- **Awareness in the fields of IT, Space, Computers, robotics, Nano-technology, bio-technology and issues relating to intellectual property rights.**

5.1 Generation of Internet (1G-5G)

Topic: Science and Technology – Awareness and developments in Information Technology

❖ Generations of Internet

- The mobile wireless Generation (G) generally refers to a change in the nature of the system, speed, technology, frequency, data capacity, latency etc.
- Each generation has some standards, different capacities, new techniques and new features which differentiate it from the previous one.
- The journey of mobile wireless communication began with 1G followed by 2G, 3G, 4G,and the upcoming generation 5G.

❖ The first generation (1G)

- Used for voice calls only
- Speed - 2.4 kbps
- Allowed voice calls in 1 country
- Used analog signal
- Had poor voice quality
- Offered very low level of spectrum efficiency

❖ The second generation (2G)

- It is a digital technology and supports text messaging.
- Data speed was up to 64kbps.
- Enables services such as text messages, picture messages and MMS (Multimedia message)
- Unable to handle complex data such as videos

❖ The third generation (3G)

- This internet technology provided higher data transmission rate, increased capacity and provides multimedia support.
- Speed 2 Mbps
- It operates at a range of 2100MHz and has a bandwidth of 15-20MHz used for high-speed internet service, video chatting.

❖ Benefits:

- It offers data services, access to television/video, new services like Global Roaming.

- Increased bandwidth and data transfer rates to accommodate web-based applications and audio and video files

- Provides faster communication
- Send/receive large email messages
- High speed web/more security/video conferencing/3D gaming

❖ The fourth generation (4G)

- It integrates 3G with fixed internet to support wireless mobile internet, which is an evolution to mobile technology and it overcome the limitations of 3G.
- It also increases the bandwidth and reduces the cost of resources.
- LTE (Long Term Evolution) is considered as 4G technology
- Peak network data speed: 6-7 Megabits per second (Mbps) in India (25 Mbps in advanced countries)
- **Benefits:**
- High quality streaming video
- Combination of Wi-Fi and Wi-Max
- High security
- Expanded multimedia services
- Low cost per-bit

❖ The fifth generation (5 G)

- It is the next generation cellular technology that will provide faster and more reliable communication with ultra low latency.
- It will offer faster data speed and better reliable Smartphone and other device connections.
- Peak network data speeds: 2-20 Gigabit per second (Gbps).
- The ultra low latency offered by 5G makes the technology desirable for Internet of Things (IoT) and machine to machine communications.
- **Note: Latency is the amount of time data takes to travel between its source and destination.**
- **Note: Even after the entry of 5G into the Indian networks, the earlier generation mobile technologies (2G, 3G and 4G) will continue to remain in use and that it may take 10 or more years to phase them out.**
- **Benefits of 5G:** IoT applications such as autonomous cars, intelligent transport, high-speed gaming etc. require seamless network with low latency. 5G technology, due to its high data rate, reduced end-to-end latency and improved coverage, can act as the backbone of IoT

5.2 CORONAVIRUS

Why in News: The World Health Organization (WHO) has recently declared the outbreak of the new coronavirus spreading quickly across China a public health emergency of international concern, or PHEIC.

❖ **Novel Coronavirus:**
- The 2019-novel coronavirus or 2019-nCoV is a new strain of corona viruses and has not been previously seen in humans.
- Corona viruses form a large family of viruses and the illness they cause can range from common cold to more severe diseases such as the Middle East Respiratory Syndrome (MERS-CoV) and Severe Acute Respiratory Syndrome (SARS-CoV).
- These viruses are zoonotic, which means they are transmitted from animals to humans.
- Symptoms: The World Health Organisation (WHO) has listed the following common signs observed in people infected by 2019-novel coronavirus:
- Fever
- Cough
- Shortness of breath and breathing difficulties
- Pneumonia
- Severe acute respiratory syndrome
- Kidney failure
- Death

Identification of Virus:

- The virus is believed to have originated late last year in a food market in the Chinese city of Wuhan that was illegally selling wildlife.
- Health experts think it may have originated in bats and then passed to humans, possibly via another animal species.
- The World Health Organization (WHO) was alerted to several cases of pneumonia in Wuhan at the end of December. Later, Chinese authorities confirmed identification of a new virus.

❖ **WHO**
- WHO has now declared the outbreak of the novel coronavirus spreading quickly across China, and to other countries, a public health emergency of international concern, or PHEIC.
- The decision came as the number of people diagnosed with the 2019-nCoV virus has increased to more than 8,200.
- There are now 98 cases outside of China in 18 countries, including eight instances of human-to-human transmission in four countries.

- Other countries where confirmed coronavirus cases have been reported include Japan, Vietnam, Singapore, Australia, Thailand, Nepal, Germany, France, the US and Canada.

❖ **Status of Coronavirus in India:**

India has reported its first positive case of the novel coronavirus (nCoV) from Kerala with a student, who was studying in China and had travelled to India, testing positive for the virus.

❖ **Public Health Emergencies of International Concern (PHEIC)**
❖ **Criteria WHO follows to declare PHEIC:**
- **A public health emergency of international concern (PHEIC) is declared by WHO in the event of some "serious public health events" that may endanger international public health.**
- **PHEIV is defined in the International Health Regulations (IHR 2005) as "an extraordinary event"** which is determined, as provided in these Regulations::
- To constitute a public health risk to other States through the international spread of disease; and
- To potentially require a coordinated international response.

Authority deciding if a situation is public health emergency

The responsibility of declaring an event as an emergency lies with the Director-General of the WHO and requires the convening of a committee of members.

Implications of a PHEIC being declared

Declaring a PHEIC may lead to restrictions on travel and trade with host country (like China in this case).

Note: Several countries have already issued advisories to their citizens to avoid traveling to China, while others are airlifting their citizens from it.

5.3 VYOYMITRA

Topic: Science and Technology – Awareness and developments in Information Technology

Why in News: A 'half-humanoid' developed by the Indian Space Research Organisation (ISRO) will be the first to be sent to space in Gaganyaan, India's maiden human spaceflight mission, before the selected astronauts.

- The robot which has been named Vyommitra combining two Sanskrit words — Vyoma (Space) and Mitra (Friend),is under development at a robotics laboratory at the Vikram Sarabhai Space Centre.
- Vyommitra was unveiled at the inaugural session of a symposium organised by the ISRO, International Academy of Astronautics (IAA) and Astronautical Society of India (ASI) on the human spaceflight programme in Bengaluru.

❖ **Humanoid**
- A humanoid is basically a robot with the appearance of a human being. ISRO's Vyommitra is also being called a half-humanoid since she will only have a head, two hands and a torso, and will not have lower limbs.
- Like any robot, a humanoid's functions are determined by the computer systems to which it is connected. With the growth of artificial intelligence and robotics, humanoids are being increasingly used for repetitive jobs, such as that of a waiter at a restaurant.
- The artificial intelligence technologies that power modern systems such as autonomous cars, or voice-operated systems such as Alexa, Siri and Google Assistant are extended in a humanoid to perform simple functions that include walking, moving things, communicating and obeying commands.

❖ **ISRO and Vyommitra**
- SRO plans to send a human into space for the first time by 2022 and is developing a crew module and rocket systems that will ensure the safe travel and return of the Indian astronaut.
- Other countries that have successfully launched humans into space did so after having used animals for conducting tests of their rockets and crew recovery systems, while ISRO will use the humanoid to test the efficacy of its GSLV Mk III rocket to transport a human to space and back.
- ISRO's GSLV Mk III rocket is currently undergoing improvisation to ensure that it is human-rated or, in other words, declared safe to transport a human being to space.
- The crew module system, too, is under development, and ISRO will attempt to carry out several tests over the next few months to launch and recover the module using new test launch rockets, which too are under development.
- Once flown into space, ISRO's half-humanoid will be able to test systems in the crew module meant for the survival and safe travel of the first Indian astronaut in 2022.

❖ **Tasks that Vyommitra will perform in space**

- The Vyommitra humanoid, which will test the ground for the human spaceflight, will be a very basic version of a TARS-type (a central character in the science-fiction film Interstellar), artificial-intelligence-and-robotics system.
- Vyommitra will be able to perform procedures to use equipment on board the spacecraft's crew module such as safety mechanisms and switches, as well as receiving and acting on commands sent from ground stations.
- Attaining launch and orbital postures, responding to the environment, generating warnings, replacing carbon dioxide canisters, monitoring of the crew module, receiving voice commands, responding via speech (bilingual) are other functions listed for the humanoid.
- It can also double up as an artificial buddy to an astronaut — providing audio inputs on aspects like the health of the spacecraft during the launch, landing and orbital phases of the manned mission.
- Vyommitra will also report back to Earth on the changes occurring in the crew module during the spaceflight such as heat radiation levels, to enable ISRO to understand the safety levels required in the crew module that will eventually fly a human being.
- Scientists are further envisaging better features; including developing the robot to take part in life-support operations in events causing danger to astronauts' lives in future missions.

❖ **Humanoids used in other space missions**
- There have been many space missions featuring dummy astronauts and there have also been many featuring humanoid robots like Vyommitra.
- The most recent mission with a dummy astronaut was in March 2019, when a mannequin called Ripley was flown on the Dragon crew capsule, launched on a SpaceX Falcon rocket and sent to the International Space Station.
- Ripley was fitted with sensors to measure forces that act during a space flight as part of SpaceX preparations to send a human into space in 2020 for NASA.
- An artificial intelligence robot ball called CIMON (Crew Interactive Mobile Companion) was deployed on the ISS by Airbus.
- Kirobo, a humanoid robot astronaut built in Japan, was flown to the ISS along with the first Japanese commander of the ISS, to serve as the astronaut's assistant in conducting experiments on the space station.
- Kirobo was equipped with technologies such as speech recognition, facial recognition, language processing and telecommunication capabilities.
- Other examples are Int-ball, a floating camera robot, deployed on the ISS by JAXA space agency and Fedor, a Russian humanoid robot, that was sent to the ISS in 2019 to carry out mechanical functions on the space station.

5.4 Internet of Things

Topic: Science and Technology – Awareness and developments in Information Technology and Daily life

Internet of Things (IoT)

- Increasingly, the connected world also includes physical objects (unlike just the humans networking through social networks). Physical things such as machinery, shipments, infrastructure, and devices are being equipped with networked sensors and actuators.
- More than ten billion devices around the world are currently connected to the Internet, including computers and smart phones, and that number is expected to increase dramatically within the next decade.
- The Internet of Things refers to the use of sensors, actuators, and data communications technology built into physical objects, enabling them to monitor their environment, report their status, receive instructions, and even take action based on the information they receive. The objects can be tracked or controlled across a data network or the Internet.
- **The concept of IoT (Internet of Things) is an intersection of IT (information technology) and OT (operational technology).**

- **Being enabled by faster communication technologies like 5G:**
- IoT applications such as autonomous cars, intelligent transport, high-speed gaming etc. require seamless network with low latency
- 5G technology, due to its high data rate, reduced end-to-end latency and improved coverage, can act as the backbone of IoT (Internet of Things).
- Applications such as smart cities, home automation, digital healthcare and industrial automation, which produce high amounts of data, require a highly capable, secured and reliable 5G network.

❖ Applications:
- The Internet of Things can be used to create value in several ways.
- In addition to improving productivity in current operations, the Internet of Things can enable new types of products and services.
- The widespread adoption of the Internet of Things is expected to happen rapidly thanks to improvements in underlying technologies such as miniature sensors and wireless networks.
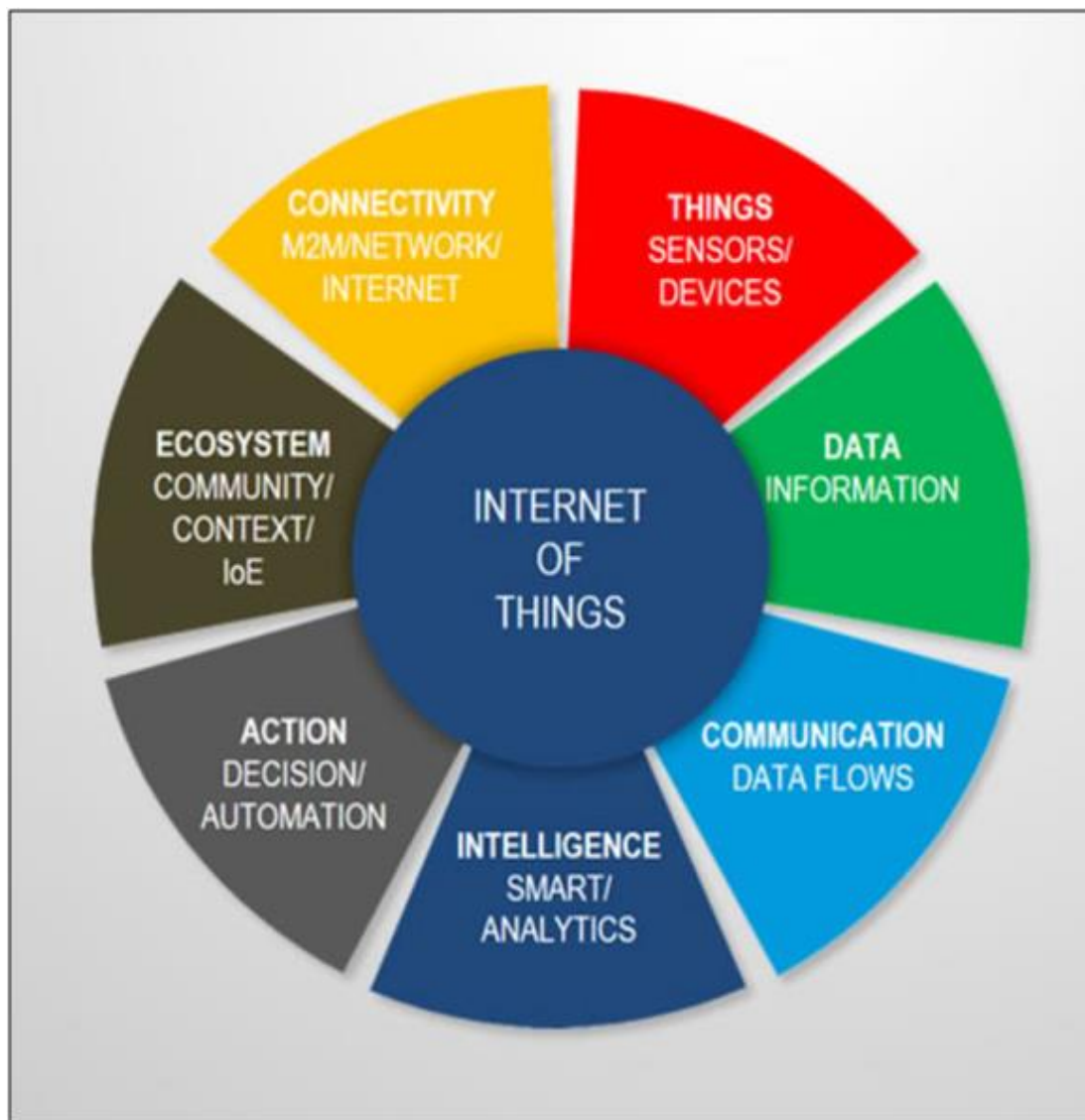
Examples:

- **Manufacturing** is perhaps the sector already furthest ahead in terms of IoT. Machines with embedded actuators in addition to sensors can even be programmed to take action on their own.

- **Agriculture:** Farmers can use connected sensors to monitor both crops and cattle. Soil sensors can track changes in soil moisture, carbon, nitrogen, and soil temperature. Such

data would help farmers optimize irrigation schedules, avoiding crop damage.

- **Smart Cities:** IoT will be instrumental in the planning of smart cities, and not just for communication networks but also for intelligent transport system, policing, sanitation, healthcare etc. The ability to monitor and control power grids and water systems could have major impacts on energy conservation, greenhouse gas emissions, and water loss.
- **Smart homes:** Smart homes are filled with connected products that know your preferences, anticipate your needs and respond dynamically to your behaviour. A number of IoT products take aim at resource use by tracking and displaying real-time data to users, and by automating the operation of lights, appliances and heating and cooling systems to help reduce consumption.

5.5 GSAT-30

Why in News: India's "high power" communication satellite GSAT-30, was successfully launched onboard Ariane 5 rocket from French Guiana.

❖ **GSAT-30**
- The GSAT-30 was designed and manufactured by the Indian Space Research Organisation.
- It will provide high-quality television, telecommunications and broadcasting services to the mainland and India's islands.
- The satellite will replace INSAT-4A which was launched in 2005 and marks the first mission of the year for Indian Space Research Organisation
- The high-power satellite is equipped with 12 normal C band and 12 Ku band transponders.
- It will provide extended coverage in the C-band, which helps television broadcasters beam their programs across the country, in Australia, Gulf countries and a large number of Asian countries too.
- The satellite also has one Ku-band beacon downlink signal for ground tracking purposes.
- GSAT-30 has a mission life of 15 years, and will be replacing the Insat-4A satellite currently in orbit.
- GSAT-30 will provide DTH Television Services, connectivity to VSATs for ATM, Stock-exchange, Television up linking and Teleport Services, Digital Satellite News Gathering (DSNG) and e-governance applications.
- The satellite will also be used for bulk data transfer for a host of emerging telecommunication applications

❖ **Ariane 5**   Arianespace's Ariane 5 is a heavy-lift launcher that can carry payloads of 10 metric tons to Geostationary Transfer Orbit (GTO) and 20 metric tons into low-Earth orbit

- The satellite was for launched into orbit from the Guiana Space Center in Kourou, French Guiana.
- The launch marked the 107th flight of the Ariane 5 launch vehicle by Arianespace.
- The Ariane 5 also carried a second telecommunication satellite for European space company Eutelsat Konnect.

❖ **French Guiana**
- French Guiana is an overseas territorial collectivity of France.
- It is situated on the northeastern coast of South America.
- French Guiana is bounded by Brazil to the south and east, Suriname to the west, and the Atlantic Ocean to the northeast.

5.6 BLOCKCHAIN TECHNOLOGY

- ❖ **Blockchain Technology**
- It is a platform that allows designing a secure way to record transactions and circulate it among signatories, or any kind of target group with an Internet connection.
- It's a distributed ledger technology that stores information across multiple systems in a secured manner to enable peer-to-peer transactions based on a trustworthy sour.
- At its core, it is an extremely democratic ledger that cannot be arbitrarily manipulated and easily shareable.
- ❖ **Technology**

- Every block in a blockchain is a record of transactions and the more of the latter, the longer the chain.
- There is minimal identifying information and every block is linked to a unique 'digital signature' of the transacting participants.
- Every block is distinguished from another through a unique code which is a string of numbers.
- When a debit or credit card is used to make a transaction, VISA or Mastercard employ their technology to verify the bank account, connect with banks and process a transaction.
- In blockchain applications, this verifying role is outsourced to several computers on a network where each has the exact same copy of the block.
- These computers verify the genuineness of transaction by solving mathematical problems that can only be done in brute-force, energy intensive ways that require a lot of computational power, and therefore electricity.

Applications:

- Financial Services
- Health Sector
- IoT
- Artificial Intelligence
- Education
- Supply Chain

Block by block

A blockchain is a database which is shared across a network of computers. One can add data to it but not change previous data within it. The network runs constant checks to ensure the authenticity of the database. While **the most noted use of blockchain** is in the cryptocurrency Bitcoin, its application in other disciplines is in the pipeline
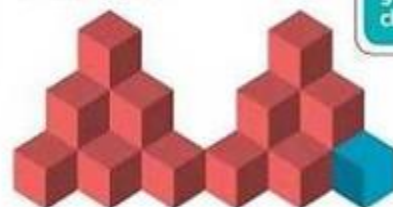
HOW BLOCKCHAIN WORKS

A transaction is initiated. All details of this transaction are recorded

*Hashing is a form of cryptographic security that is very hard to be reversed or decrypted
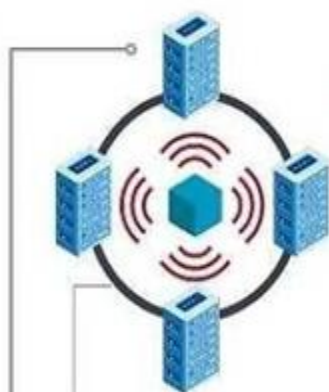
This transaction request is then **broadcast to** a peer-to-peer network to ensure its validity. Every computer in the network is called a 'node'

This block is a part of a chain which contains other such blocks. Along with its own code, it has the hash code of the previous block. The blocks are ordered according to their hash codes

VALIDATION

The network of nodes validates the request and user's status

• Even the smallest change to the original input will generate a new hash.

• For instance, if someone attempted to manipulate a record in a block, a new hash for that block would be generated and the chain would break
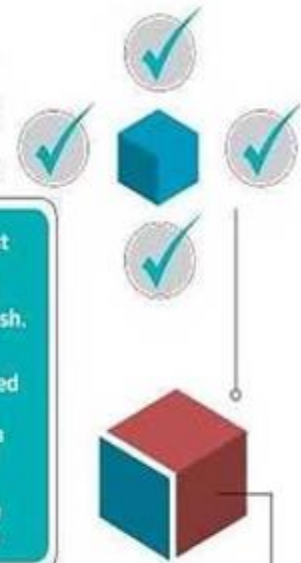
If verified, the record gets added to a block which contains other records. Each block has a unique identifier known as a hash code*. A hash code is a string of numbers and letters of digital information

A consensus mechanism is in place which allows the system to function smoothly. Simply put, it is a set of rules which are agreed upon by the nodes in the network that enables them to work together without having to trust or even know each other

Transaction: Can be any information, a deal or a trade for instance (also known as a 'record')

Peer-to-peer network: A network of computers which share resources and process data without going through a separate server. Each computer acts like a server in such a network

Block: A collection of records which have been validated

Blockchain: A database of blocks ordered in sequence

Blockchain in India: Last year and in the run-up to build Andhra Pradesh's new capital Amaravati, blockchain was used to enable near foolproof digitised land records. It is cited as a case of almost 100% transparency in the end-to-end process

ECOLOGY and ENVIRONMENT

❖ **Paper III: The articles in this section are relevant to the following topics:**

- **Conservation, environmental pollution and degradation, environmental impact assessment**
- **Disaster and disaster management.**

❖ **Prelims Oriented Questions**
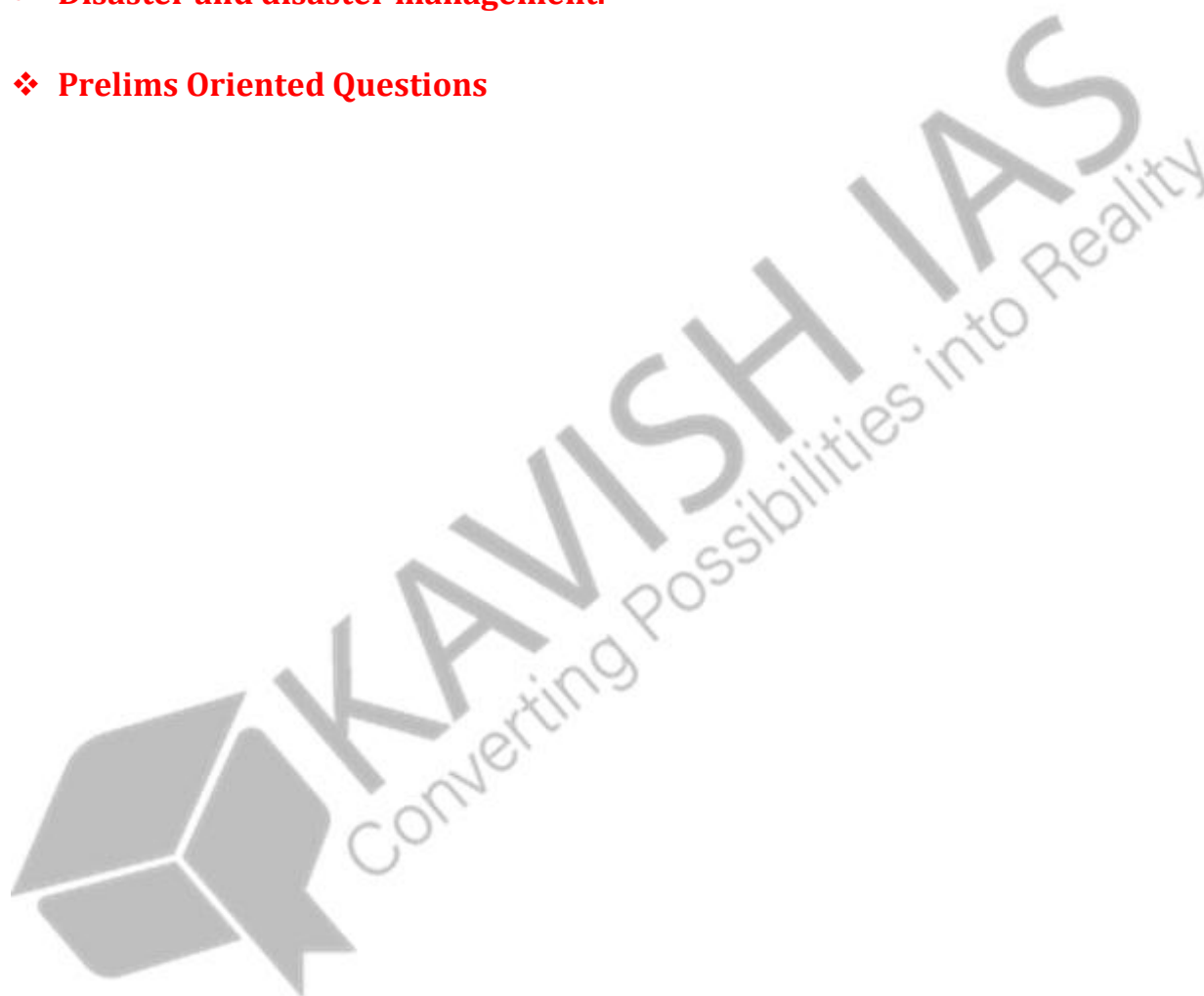
6.1 FOREST COVER

Why in News: The Ministry of Environment, Forest and Climate Change has released the State of Forest Report 2019.In the current SFR, a new chapter 'Forest Types and Biodiversity' has been added, which presents findings of the results of the first ever rapid biodiversity assessment of plant species in the 16 Forest Type Groups.

❖ **State of Forest Report**

- **Every two years, Forest Survey of India (FSI) undertakes assessment of country's forest resources, the results of which are presented as the 'India State of Forest Report (ISFR)'.**
- Since 1987, 15 such assessments have been completed and the current assessment is the 16th in the series.
- Based on the regular nation-wide mapping of forest cover, and the specific studies conducted at the national level, the information presented in the SFR is the primary information on different parameters of the forest resources of the country.
- It is assessed by a wall-to-wall mapping exercise using remote sensing technique.

❖ **Classifications used in the report**

- The country's forest cover includes all patches of land with a tree canopy density of more than 10% and more than 1 ha in area, irrespective of land use, ownership and species of trees.
- The forests are further classified in three canopy density classes:
    - Very Dense Forest with a canopy density more than 70%
    - Moderately Dense Forest with a canopy density between 40-70%
    - Open Forest with a canopy density between 10- 40%
- Tree cover comprises of tree patches of size less than 1 ha occurring outside the recorded forest area and includes trees in all formations including scattered trees.
- Green Wash is the extent of wooded areas generally shown in light green colour.

❖ **Findings of the report**

- **Forest and Tree cover**
    - The total forest cover of the country is 7,12,249 sq km which is 67% of the geographical area of the country.
    - The tree cover of the country is estimated at 95,027 sq km which is 89% of the geographical area.
    - The current assessment shows an increase of 3,976 sq km (0.56%) of forest cover, 1,212 sq km (1.29%) of tree cover and 5,188 sq km (0.65%) of forest and tree cover put together, at the national level as compared to the previous assessment i.e. ISFR 2017.

- India is among the top ten countries in the world to maintain and increase its forest and tree cover. This is very encouraging as it means that India is on the right track to achieve its Paris Agreement commitment of 2.5-3 billion carbon sinks.
- **Area under dense forests**
  - There has been a loss of 2,145 sq km of dense forests that have become non-forests in the past two years and overall, only less than 45% — only 3,26,546 sq km — of India's forestland is densely forested.
  - The conversion of 1,858 sq km of non-forest areas to dense forests since 2017 largely offsets this loss. Some of these are fast-growing species such as bamboo in the north-eastern region and rubber and coconut plantations in the southern states.
  - Unlike natural forests, commercial plantations grow rapidly and show up as dense cover in satellite images. However, a monoculture, cannot substitute natural forests in biodiversity or ecological services.
- **Carbon Stock**
  - In the present assessment, total carbon stock in forest is estimated as 7,124.6 million tonnes, with an increase of 42.6 million tonnes in the carbon stock of the country as compared to the last assessment of 2017.
  - Soil Organic Carbon (SOC), estimated to be 4,004 million tonnes, represents the largest pool of carbon stock in forests and contributes 56% to the total forest carbon stock of the country.

❖ Regional findings

The top five States in terms of increase in forest cover are:

- Karnataka (1,025 sq km)
- Andhra Pradesh (990 sq km)
- Kerala (823 sq km)
- Jammu & Kashmir (371 sq km)
- Himachal Pradesh (334 sq km).

- **Area wise (Increasing to decreasing order):**
  - Madhya Pradesh has the largest forest cover in the country
  - Arunachal Pradesh
  - Chhattisgarh
  - Odisha

- Maharashtra

- **In terms of forest cover as percentage of total geographical area**
    - Mizoram (85.41%)
    - Arunachal Pradesh (79.63%)
    - Meghalaya (76.33%)
    - Manipur (75.46%)
    - Nagaland (75.31%).

6.2 SMOG TOWER

Why in News: The Gautam Gambhir Foundation, an NGO, has installed a smog tower in New Delhi, to deal with the ever increasing problem of pollution. In the recent past, the Supreme Court had also directed the Centre and the Delhi government to prepare a plan to install 'smog towers' across the capital to deal with air pollution.
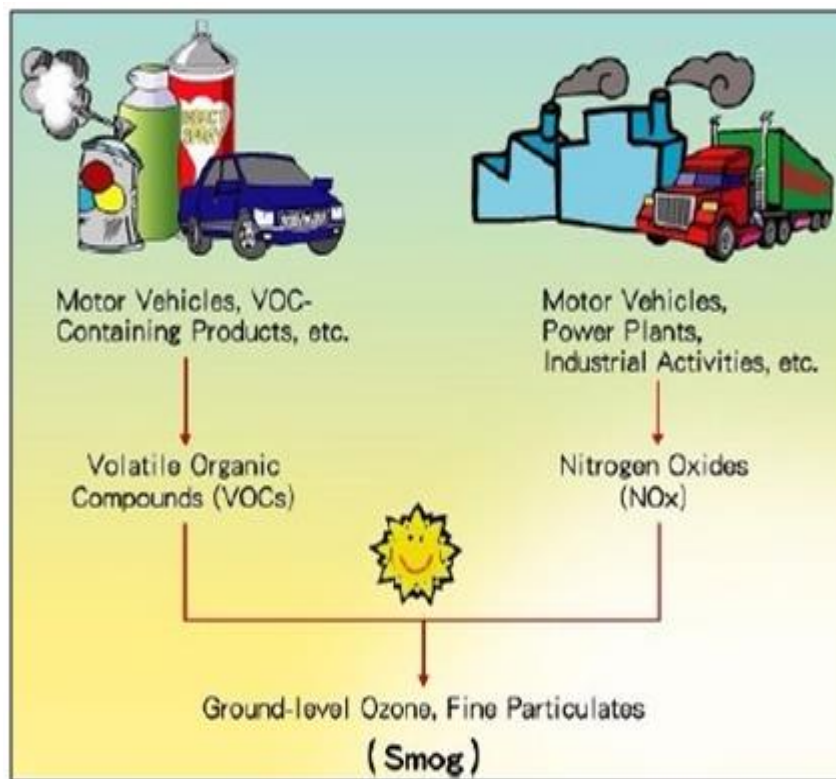
- The word "smog" is an amalgam of the words "smoke" and "fog." Smog is produced by a set of complex photochemical reactions involving volatile organic compounds (VOCs), nitrogen oxides and sunlight.
- The two main components of smog are particulate matter (PM) and ground-level ozone(O_3)

- Ozone can be beneficial or harmful, depending on its location. Ozone in the stratosphere acts as a barrier that protects human health and the environment from excessive amounts of solar radiation, whereas ground-level ozone is the main constituent of smog.
- Ground-level ozone is trapped near the ground by heat inversions or other weather conditions and causes the respiratory distress and burning eyes associated with smog.
- Ironically, smog is often more severe farther away from the sources of pollution. This is because the chemical reactions that cause smog take place in the atmosphere while pollutants are drifting on the wind.
- Smog in Delhi is primarily due to high vehicular and industrial emissions, construction work and crop burning in adjoining states.

Smog Towers

Smog towers are structures designed to work as large-scale air purifiers. They are usually fitted with multiple layers of air filters, which clean the air of pollutants as it passes through them.

- **Functioning of the smog tower installed in New Delhi**
    - The smog tower is fitted with exhaust fans to suck in polluted air with the help of a big inlet point.
    - A machine with filters fitted inside the tower then removes nearly 80% of the particulate matter i.e. PM 2.5 and PM 10. This helps to bring down the pollution levels, as it releases clean air through four outlet units near the ground.
    - The filters installed in the tower use carbon nano fibres as a major component and will be fitted along its peripheries.
    - It is capable of treating 6,00,000 cubic metres of air per day and will purify the air within a circumference area of up to 750 metres.

Other examples in the world

- China, which has been battling air pollution for years, has two smog towers — in its capital Beijing and in the northern city of Xi'an.
- The Xi'an tower is said to be the world's largest, and has reportedly brought down PM 2.5 by 19% in an area of around 6 sq km in its vicinity.

- The 100-metre (328 feet) high tower has produced 10 million cubic metres of clean air every day since its launch, and on severely polluted days, is able to bring down smog close to moderate levels.
- The tower in Beijing, has also been able to compress the carbon waste generated during purification to produce gemstones, wherein, upon compression for 30 minutes, the smog particles turn into dark gems, which are used for rings and cufflinks.

4 Purified air is released into the atmosphere from the top of the tower

3 The hot air is filtered at multiple levels as it rises through the height of the tower

2 Greenhouses use solar energy to heat up this air

1 Polluted air is sucked up by a cluster of greenhouses at the base of the tower

*ARTIST'S IMPRESSION
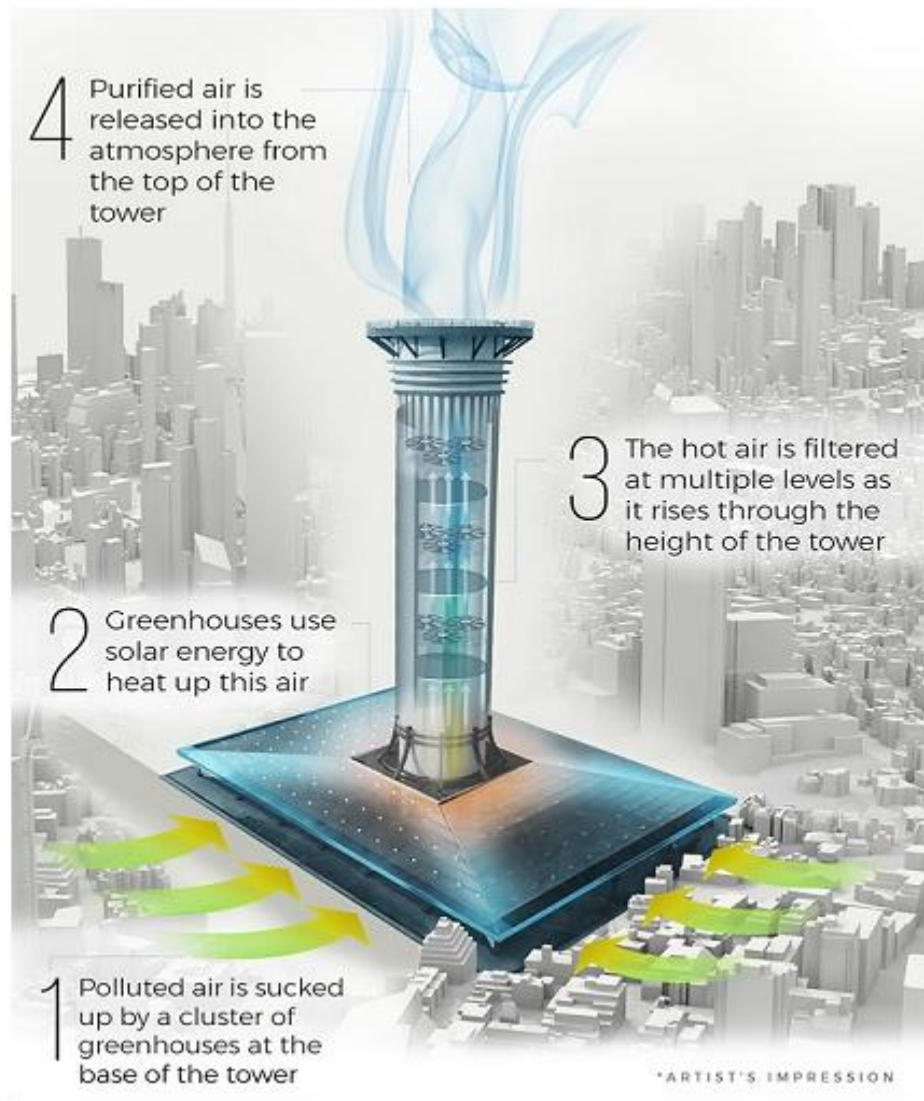
6.2 BLUE FLAG PROGRAM

Why in News: The Environment Ministry has relaxed Coastal Regulation Zone (CRZ) rules that restrict construction near beaches to help States construct infrastructure and enable them to receive 'Blue Flag' certification. The 'Blue Flag' certification is an international recognition conferred on beaches that meet certain criteria of cleanliness and environmental propriety.

❖ **Blue Flag Program**

- The Blue Flag Program for beaches is run by the Copenhagen-based Foundation for Environmental Education (FEE).
- It started in France in 1985 and has been implemented in Europe since 1987. The campaign spread outside Europe, to South Africa, in 2001.
- It aims to promote sustainable development in freshwater and marine areas. The program also awards certification to marinas and boats.
- Globally, there are over 4,000 Blue Flag beaches. Spain tops the list with 566 such beaches, Greece and France follow with 515 and 395, respectively.

❖ **Criteria**

- It challenges local authorities to achieve high standards in the four broad categories of water quality, environmental management, environmental education and safety.
- There are nearly 33 criteria under four major heads for the beaches, that is,
- Environmental Education and Information
- Bathing Water Quality
- Environment Management and Conservation
- Safety and Services
- Among these heads are criteria such as water quality standards, waste disposal facilities, disabled- friendliness etc.
- Some criteria are voluntary and some compulsory.
- If a Blue Flag beach does not comply with the criteria for accreditation, the flag may be permanently or temporarily withdrawn.

❖ **Mission**

- Promote and participate in environmental education program for the users of beaches, marinas and boating operators.
- Implement sound safety and environmental management systems.
- Monitor environmental conditions to reduce the impact of human activity at the beaches, marinas and boating operators.

- Commit to partnerships and collaborative action to promote the sustainable development of tourism.

❖ Foundation for Environmental Education

- The Foundation for Environmental Education (FEE) is a non-governmental, non-profit organisation promoting sustainable development through environmental education.

- It was established in 1981 as the Foundation for Environmental Education in Europe (FEEE).
- However, at its 20th anniversary general assembly, held in Copenhagen in 2001, the organisation decided, because of growing interest from outside Europe, to become more global and dropped Europe from its name, to become the Foundation for Environmental Education (FEE).
- With members in 77 countries it is the world's largest environmental education organisation
- It is recognised by UNESCO and UNEP as a world-leader within the fields of Environmental Education and Education for Sustainable Development.

6.3 SINKHOLES

Why in News: Recently a sinkhole opened up and swallowed a bus in China, killing several people.

- **Sinkholes**
  - Sinkholes are depressions formed in the ground when layers of the Earth's surface start collapsing into caverns.
  - They can occur suddenly and without warning, because the land under the surface of the Earth can stay intact for a period of time until the spaces get too big.
  - Sinkholes can vary from a few feet to hundreds of acres and from less than 1 to more than 100 feet deep.
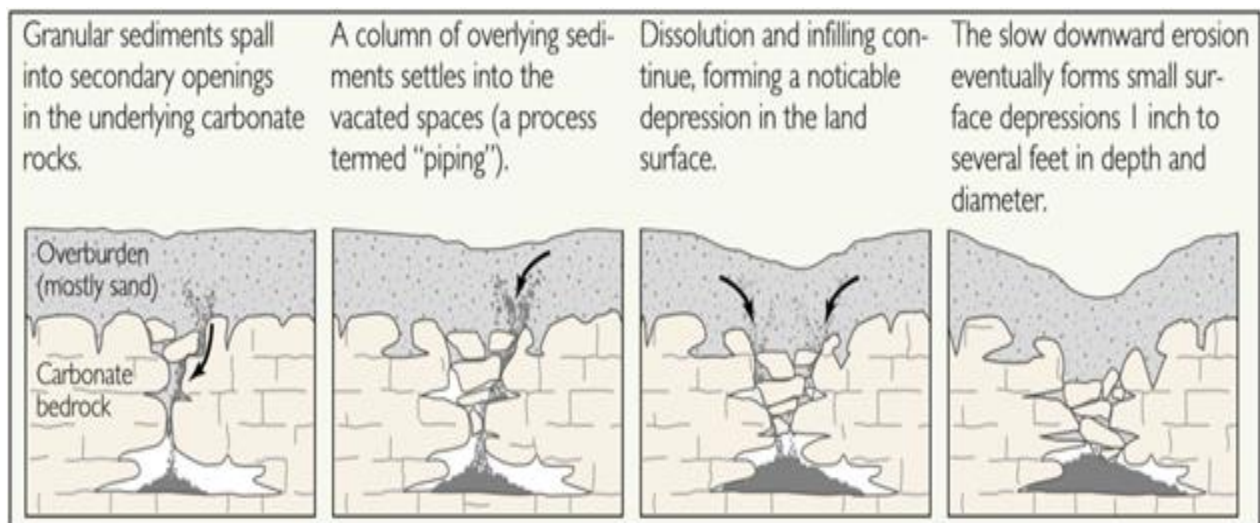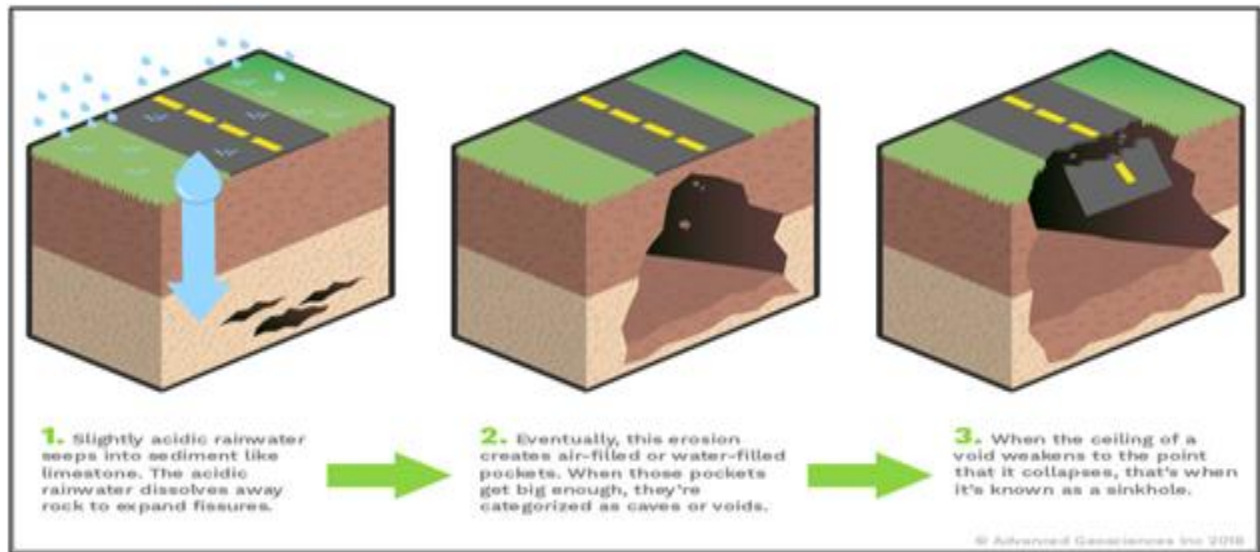
- **Formation of Sinkholes**
  - A sinkhole forms when the surface of the ground is no longer supported by whatever is under it.
  - Their formation can be caused due to natural processes or human activity.

- **Sinkholes formation due to Natural Processes**
  - Natural sinkholes occur due to erosion or underground water. They start developing long time before it actually appears.

- Typically, sinkholes form in areas of "Karst" terrains, where the rock below the surface of the Earth can be easily dissolved by groundwater.
- Note: Karst terrains are most commonly found in areas with limestone, gypsum or carbonate rocks and their formation is dependent on geology and climate.

1. Slightly acidic rainwater seeps into sediment like limestone. The acidic rainwater dissolves away rock to expand fissures.

2. Eventually, this erosion creates air-filled or water-filled pockets. When those pockets get big enough, they're categorized as caves or voids.

3. When the ceiling of a void weakens to the point that it collapses, that's when it's known as a sinkhole.

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Granular sediments spall into secondary openings in the underlying carbonate rocks.

A column of overlying sediments settles into the vacated spaces (a process termed "piping").

Dissolution and infilling continue, forming a noticable depression in the land surface.

The slow downward erosion eventually forms small surface depressions 1 inch to several feet in depth and diameter.

Overburden (mostly sand)

Carbonate bedrock

.

Sediments spall into a cavity. | As spalling continues, the cohesive covering sediments form a structural arch. | The cavity migrates upward by progressive roof collapse. | The cavity eventually breaches the ground surface, creating sudden and dramatic sinkholes.

6.4 IRRAWADDY DOLPHINS; CHILIKA LAKE

Why in News: Odisha Forest Department officials, wildlife experts and researchers recently sighted 146 endangered Irrawaddy dolphins in Chilika Lake. The wildlife wing of the State Forest and Environment Department would provide a more precise number of the adult and calf population of Irrawaddy dolphins after detailed analysis.

Irrawady Dolphins

- The Irrawaddy dolphin is a euryhaline species of oceanic dolphin found near sea coasts, in estuaries and rivers in parts of the Bay of Bengal and Southeast Asia.
- Euryhaline organisms are able to adapt to a wide range of salinities and can live in fresh water, brackish water or salt water.
- The total population of these aquatic mammals in the world is estimated to be less than 7,500. Of these, more than 6,000 Irrawaddy dolphins have been reported from Bangladesh, while the dolphin distribution in Chilika is considered to be the highest single lagoon population.
- It has established subpopulations in freshwater rivers, including the Ganges and the Mekong, as well as the Irrawaddy River from which it takes its name.
- Its range extends from the Bay of Bengal to New Guinea and the Philippines although they do not appear to venture off shore.

❖ Threats

- Irrawaddy dolphins are more susceptible to human conflict than most other dolphins who live farther out in the ocean.

- Entanglement in fishnets and degradation of habitats are the main threats to Irrawaddy dolphins. Another identified threat towards the Irrawaddy dolphins is the noise pollution from high speed vessels.
- Conservation efforts are being made at international and national levels to alleviate these threats but the Irrawaddy dolphin's proximity to developing communities makes the effort for conservation difficult.

Protection Status

- Irrawaday Dolphins are classified as an Endangered species as per the International Union for Conservation of Nature and Natural Resources (IUCN).
- Further, as per the Wildlife Protection Act, 1972 they are classified under Schedule I, which provides absolute protection.
- **Chilika Lake**
- Chilika Lake is a brackish water lagoon, spread over the Puri, Khurda and Ganjam districts of Odisha state on the east coast of India, at the mouth of the Daya River, flowing into the Bay of Bengal.
- It is the largest coastal lagoon in India and the second largest brackish water lagoon in the world after The New Caledonian barrier reef.
- It is the largest wintering ground for migratory birds on the Indian sub-continent and is home to a number of threatened species of plants and animals.
- Birds from as far as the Caspian Sea, Lake Baikal, Aral Sea and other remote parts of Russia, Kirghiz steppes of Kazakhstan, Central and southeast Asia, Ladakh and Himalayas come to Chilika lake.
- In 1981, Chilika Lake was designated the first Indian wetland of international importance under the Ramsar Convention.

SOCIAL ISSUES

❖ **Paper I: The articles in this section are relevant to the following topics:**

- **Salient features of Indian Society, Diversity of India.**
- **Role of women and women's organization, population and associated issues, poverty and developmental issues, urbanization, their problems and their remedies.**
- **Effects of globalization on Indian society**
- **Social empowerment, communalism, regionalism & secularism.**

7.1 UJJWALA SCHEME

Why in News: The usage pattern of LPG cylinders by Pradhan Mantri Ujjwala Yojana (PMUY) beneficiaries shows a steadily declining trend.

Pradhan Mantri Ujjwala Yojana (PMUY)

In order to provide clean cooking fuel to BPL households in the country, the Government has launched "Pradhan Mantri Ujjwala Yojana"(PMUY) scheme in March 2016 to provide free LPG connections.

Beneficiaries

- The intent of the scheme at the time of launch was to provide 5 crore free LPG connections to women belonging to the Below Poverty Line (BPL) families.
- The BPL woman applicant must be minimum 18 years of age as on 1st May 2016, and her house should not already have owned an LPG connection.

Benefits

- Each beneficiary was given monetary support of Rs. 1600 to get a cooking gas connection.
- 74% beneficiaries under the scheme, who could not afford to make upfront payment for purchase of gas stove and first refill, were provided loan facility by the OMCs.

Success of the scheme

- The initial target of 5 crore connections was achieved well before the target i.e. 31st March, 2019.
- The target was subsequently increased to 8 Crore connections, to be achieved by March 2020, with a budgetary allocation of Rs. 12,800 crore.
- The Petroleum Ministry has said that it has provided 8 crore deposit-free LPG connections to women belonging to poor families, achieving the target of 8 crore on September 7, 2019, seven months ahead of the target date.
- The maximum beneficiaries of the scheme are from under-privileged sections of the society and the implementation of PMUY has led to an increase in national LPG coverage to 96.5 per cent.
- PMUY implementation has been appreciated by the World Health Organization (WHO) and termed it as a decisive intervention to check the indoor health pollution being faced by the women of the country.

7.2 SDG INDEX

Why in News: NITI Aayog has released its latest SDG India Index 2019, which assesses each state and Union Territory's achievement on 16 sustainable development goals (SDG).

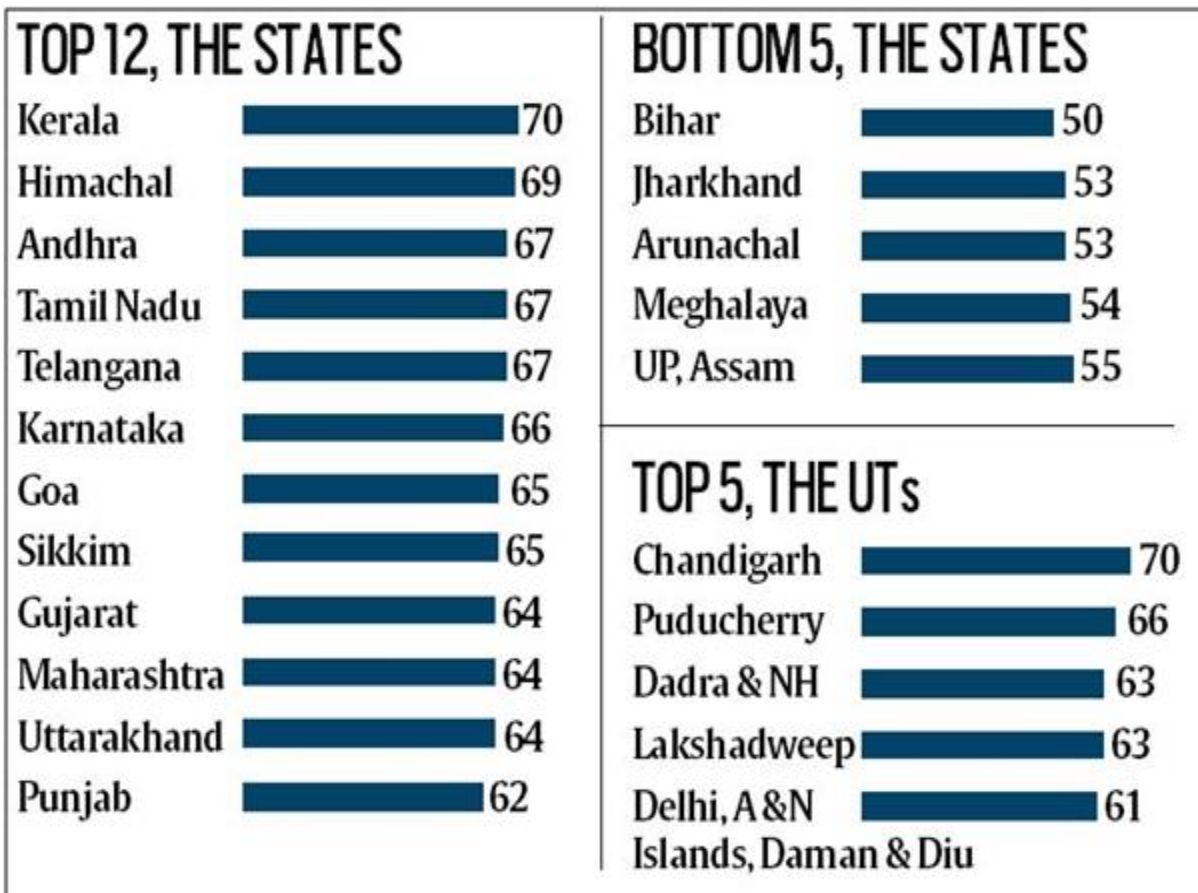- **Sustainable Development Goals (SDGs)**
  - The Sustainable Development Goals (SDGs) are a collection of 17 global goals designed to be a "blueprint to achieve a better and more sustainable future for all".
  - The SDGs were set in 2015 by the United Nations General Assembly.
  - They are intended to be achieved by the year 2030, are part of UN Resolution 70/1, the 2030 Agenda.

- **NITI AAYOG's SDG India Index 2019**
  - The Index has been developed by NITI Aayog, spanning across 16 out of 17 SDGs with a qualitative assessment on SDG 17.
  - The only goal not assessed by NITI is Goal 17, which primarily focuses on partnerships (where National Indicators are not available)
  - It tracks the progress of all the States and Union Territories (UTs) on a set of 100 National Indicators, measuring their progress on the outcomes of interventions and schemes of the Government of India.
  - The SDG India Index 2019-20 is intended to provide a holistic view on the social, economic and environmental status of the country and its States and UTs.
  - The Index will be useful to States/UTs in assessing their progress on the SDGs.

- **The findings**
  - Kerala is in the top slot with a score of 70, while Bihar is at the bottom with 50.
  - Himachal Pradesh took the second spot with a score of 69 while Andhra Pradesh, Tamil Nadu and Telangana shared the third spot with each scoring 67.
  - There are eight states in the highest bracket, called frontrunners, with scores in the range 65-99. These are Kerala, Himachal Pradesh, Andhra Pradesh, Tamil Nadu and Telangana, Karnataka (66), Sikkim (65) and Goa (65).
  - Two UTs, Chandigarh and Puducherry, scored in this range.
  - Among the 16 SDGs, marine ecosystem is for coastal states only, and scores on this one were not counted in the composite total.

TOP 12, THE STATES

State	Value
Kerala	70
Himachal	69
Andhra	67
Tamil Nadu	67
Telangana	67
Karnataka	66
Goa	65
Sikkim	65
Gujarat	64
Maharashtra	64
Uttarakhand	64
Punjab	62

BOTTOM 5, THE STATES

State	Value
Bihar	50
Jharkhand	53
Arunachal	53
Meghalaya	54
UP, Assam	55

TOP 5, THE UTs

UT	Value
Chandigarh	70
Puducherry	66
Dadra & NH	63
Lakshadweep	63
Delhi, A &N Islands, Daman & Diu	61

- **Some SDG specific best performers**
  - Tamil Nadu for 'no poverty'
  - Goa for 'zero hunger'
  - Kerala for 'good health'
  - Himachal Pradesh for 'quality education' and for 'gender equality '
  - Andhra Pradesh for 'clean water and sanitation'
  - Karnataka for 'climate action'

7.3 AYUSHMAN BHARAT

Why in News: The National Anti-Fraud Unit (NAFU) at National Health Authority is conducting medical audits to check violations under Ayushman Bharat Pradhan Mantri Jan Arogya Yojna (AB-Pmjay).

National Health Authority is responsible for implementing government's flagship Ayushman Bharat Pradhan Mantri Jan Arogya Yojna (AB-Pmjay).

- The National Health Authority has de-empanelled 171 hospitals and imposed penalty on several hospitals in nine states for indulging in fraudulent activities.
- The data shows at least 390 hospitals have been served show cause notice/suspended across the country.
- These malpractices have largely occurred in hospitals based in Gujarat, Chhattisgarh, Madhya Pradesh and Punjab.
- The NHA has detected the suspected fraud that uses e-cards on the basis of algorithms developed internally.
- **Ayushman Bharat (AB)**
  - In 2018, the union government announced two major initiatives in health sector , as part of Ayushman Bharat programme.
  - Curative care - Pradhan Mantri Jan Arogya Yojana (PMJAY): for hospitalisation at secondary- and tertiary-level private hospitals.
  - Primary care - Health and Wellness Centres (HWC): to strengthen primary healthcare.

- **Pradhan Mantri Jan Arogya Yojana (PMJAY)**

  - PMJAY will provide a cover of up to Rs. 5 lakhs per family per year to poor and vulnerable people, for secondary and tertiary care hospitalization
  - It was launched on 23rd September, 2018 at Ranchi, Jharkhand by the Prime Minister.
  - The National Health Authority (NHA) is responsible for the implementation of PMJAY.
  - The schemes intend to cover nearly 50 crore people from 10.74 crore 'deprived' families selected on the basis of SECC (socio economic caste census) data.
  - PMJAY will provide cashless and paperless access to services for the beneficiary at the point of service.
  - Each state will be able to choose the implementation mode that suits its needs.
  - The cashless and paperless treatment will be available only if the patients get admission in empanelled under the scheme.

National Health Authority (NHA)

- National Health Agency, an autonomous entity, was originally constituted for focused approach and effective implementation of PM-JAY. Its status was upgraded to National Health Authority as an attached office of the Ministry of Health and Family Welfare with full functional autonomy.
- It will provide overall vision and stewardship for design, roll-out, implementation and management of PM-JAY in alliance with state governments.

- It will play a critical role in fostering linkages as well as convergence of PM-JAY with health and related programs of the Central and State Governments.
- It will lead the development of strategic partnerships and collaborations with Central and State Governments, civil society, financial and insurance agencies, academia, think tanks, national and international organizations and other stakeholders to further the objectives of PM-JAY.
- More than 1,000 hospitals are empanelled with the NHA for cancer care.

Health and Wellness Centers (HWC)

- Ayushman Bharat scheme seeks to upgrade more than 1.5 lakh health facilities like Sub Centres and Primary Health Centres to health and wellness Centres (HWC).
- These centres would deliver Comprehensive Primary Health Care (CPHC) bringing healthcare closer to the homes of people
- The HWCs are to provide preventive, rehabilitative and curative care for an expanded range of services.
- The services here include for reproductive and child health services, communicable diseases, non-communicable diseases, palliative care and elderly care, oral health, ENT care, and basic emergency care.
- The emphasis of health promotion and prevention is designed to bring focus on keeping people healthy by engaging and empowering individuals and communities to choose healthy behaviours and make changes that reduce the risk of developing chronic diseases and morbidities.

7.4 ASER REPORT

Why in News: The latest Annual Status of Education Report (Rural) (ASER 2019) was recently released by the non-profit Pratham Education Foundation.

- **Annual Status of Education Report (ASER)**
- Every year, since 2005, ASER has reported on the schooling status and the ability of students at basic reading and arithmetic tasks for children in the 5-16 age group in rural India.

- Later, ASER switched to an alternate-year cycle in 2016, where basic ASER is conducted every other year (2016, 2018, and next in 2020). In the intervening years, ASER focuses on a different aspect of children's schooling and learning.
- Large sums of money are channeled into various social sector programs including education but lack of information on how these investments translate into outcomes on the ground is a major barrier to evaluating their effectiveness.
- ASER seeks to use simple yet rigorous methods to generate evidence on the outcomes of social sector programs.
- It also aims to strengthen the link between evidence and action by building the capacity of individuals and institutions to design, conduct and understand assessments that focus on key outcome indicators.

- **ASER 2019 Findings**
- In 2019, ASER puts the spotlight on the early years, reporting on the schooling status, as well as on a range of important developmental indicators for young children in the age group of 4-8 years.
- ASER surveyors visited almost 37,000 children between 4 and 8 years in 26 rural districts across 24 States.
- They asked each child to do a variety of tasks testing cognitive skills — sort images by colour and size, recognise patterns, fit together a four-piece animal puzzle — as well as simple literacy and numeracy tests.
- Social and emotional development was tracked through activities using cards with faces showing happiness, sadness, anger and fear.

Findings of ASER 2019

- The report shows that 90% of children in the age group of 4-8 years are enrolled in some type of educational institution with the figure standing at 99.5% for the 8-year-olds.
- Only 16% of children in Class 1 in 26 surveyed rural districts can read text at the prescribed level, while almost 40% cannot even recognise letters and only 41% could recognise two digit numbers.
- The gap between private and government schools: Of six-year olds in Class 1, 5% of those in private schools could read words in comparison to only 19% from government schools. Similarly, 28% of those in government schools could do simple addition as against 47% in private schools.
- This gap increases further by a gender divide: only 39% of girls aged 6-8 are enrolled in private schools in comparison to almost 48% of boys.

- The report also found that a classroom could include students from a range of age-groups, skewing towards younger children in government schools. More than a quarter of Class 1 students in government schools are only 4 or 5 years old, younger than the recommended age.

7.5 PULSE POLIO PROGRAM

Why in News: In a bid to mark the Pulse Polio Program, the Rashtrapati Bhawan recently became the site of a polio vaccination drive as Union Health Ministry launched the campaign to check polio.

Polio

- Poliomyelitis (polio) is a highly infectious viral disease, which mainly affects young children.
- The virus is transmitted by person-to-person spread mainly through the faecal-oral route or, less frequently, by a common vehicle (e.g. contaminated water or food) and multiplies in the intestine, from where it can invade the nervous system and can cause paralysis.
- Initial symptoms of polio: include fever, fatigue, headache, vomiting, stiffness in the neck, and pain in the limbs.
- In a small proportion of cases, the disease causes paralysis, which is often permanent.
- There is no cure for polio, it can only be prevented by immunization.

Pulse Polio Program

- Under the Pulse Polio immunisation programme, children in the age group of 0-5 years are administered polio drops during national and sub-national immunisation rounds (in high-risk areas) every year.
- Under the programme, all states and Union Territories have developed Rapid Response Teams (RRT) to respond to any polio outbreak in the country.
- Emergency Preparedness and Response Plans (EPRP) have also been developed by states, indicating steps to be undertaken in case of detection of a polio case.
- Following a resolution for a global initiative of polio eradication adopted by the World Health Assembly (WHA) in 1988, India launched the Pulse Polio immunisation programme in 1995.
- According to the Ministry of Health, the last polio case in the country was reported from Howrah district of West Bengal in January 2011.

- In 2012, the WHO removed India from the list of countries with active endemic wild polio virus transmission.
- In 2014, the South-East Asia Region of the WHO, of which India is a part, was certified as polio-free.

MISCELLANEOUS and SCHEMES

❖ NO FLY LIST
- Passengers could be put on a no-fly list if they are found to be guilty of any of these offences:
- Level 1 refers to behaviour that is verbally unruly, and calls for debarment up to three months
- Level 2 indicates physical unruliness and can lead to the passenger being debarred from flying for up to six months
- Level 3 indicates life-threatening behaviour for which the debarment would be for a minimum of two years.

- **Rules for putting a flier on the no-fly list:**
  - A complaint of unruly behaviour (among above three levels) needs to be filed by the pilot-in-command.
  Once the pilot-in-command submits his complaint, the airline is bound to refer the complaint to its internal committee (set up by the airline).
  - During the course of the enquiry, the airline can ban the passenger from flying for a maximum period of up to 30 days
  - The committee is to decide the matter within 30 days, and also specify the ban duration

- **Indicative list of actions that may be construed as unruly (issued by DGCA)**
  - Consuming alcohol or drugs resulting in unruly behaviour;
  - Smoking in an aircraft;
  - Using threatening or abusive language towards a member of the crew or other passengers;
  - Intentionally interfering with the performance of the duties of a crew member etc.
  - Note: In addition, the Ministry of Home Affairs provides a list of individuals identified as national security threats to DGCA and to the airlines, for inclusion in the no-fly list.

Structure and decision making of the internal committee:

- Chairman: A retired district and sessions judge
- Other members: representative from a different scheduled airline and a representative from a passenger's association or consumer association as members.
- The internal committee shall give the final decision in 30 days by giving the reasons in writing.
- The decision of the committee shall be binding on the airline concerned.
- In case the committee fails to take a decision in 30 days, the passenger will be free to fly.

❖ **Pradhan Mantri Kisan SAMPADA Yojana**

- Pradhan Mantri Kisan SAMPADA Yojana stands for Scheme for Agro-Marine Processing and Development of Agro-Processing Clusters.
- PM Kisan Samapada was launched as an umbrella scheme for the food processing industry with an allocation of Rs. 6,000 crore for the period 2016-20.
- The scheme aims to create of modern infrastructure with efficient supply chain from farm to retail outlet.
- The scheme will be implemented by Ministry of Food Processing Industries (MoFPI).
- Under PMKSY, capital subsidy in the form of grants-in-aid ranging from 35% to 75% of the eligible project cost subject to maximum specified limit is provided to investors under the various schemes for undertaking infrastructure, logistic projects and setting up of food processing units in the country.

❖ **Arctic Council**
- The Arctic Council is the leading intergovernmental forum promoting cooperation, coordination and interaction among the Arctic States, Arctic indigenous communities and other Arctic inhabitants on common Arctic issues.
- It deals on issues of sustainable development and environmental protection in the Arctic.
- The Arctic Council is a forum and it has no programming budget. All projects or initiatives are sponsored by one or more Arctic States. Some projects also receive support from other entities.
- The Arctic Council's mandate explicitly excludes military security.

Members

The Ottawa Declaration lists the following countries as Members of the Arctic Council:

- Canada

- The Kingdom of Denmark
- Finland
- Iceland
- Norway
- The Russian Federation
- Sweden
- The United States

❖ Global Importance Tag

In a major recognition towards India's effort towards conservation, restoration and rejuvenation of its wetlands, Ramsar has declared 10 more wetland sites from India as sites of international importance.

Ramsar Convention

- Ramsar Convention (signed in 1971) is an intergovernmental treaty which provides the framework for national action and international cooperation for conservation and wise use of wetlands and their resources.
- It is one of the oldest inter-governmental accord signed by members countries to preserve the ecological character of their wetlands of international importance.
- Aim: The aim of the Ramsar list is to develop and maintain an international network of wetlands which are important for the conservation of global biological diversity and for sustaining human life through the maintenance of their ecosystem components, processes and benefits.
- Wetlands declared as Ramsar sites are protected under strict guidelines of the convention.
- Globally, there are over 2,300 Ramsar sites around the world, covering over 2.1 million sq km.

- With the addition of these ten sites, the list of wetlands in India under the Convention has grown to 37 with surface area of over 10,679 sq km, an area nearly the size of Sikkim and Goa put together. **The ten sites include:**
  - **Nandur Madhameshwar bird sanctuary (Maharashtra- first site from Maharashtra);**
  - **Beas conservation reserve, Keshopur-Miani community reserve and Nangal wildlifesanctuary (Punjab);**
  - **Nawabganj bird sanctuary, Parvati Arga bird sanctuary, Saman bird sanctuary, Sarsai Nawar lake, Samaspur bird sanctuary and Sandi bird sanctuary (Uttar Pradesh).**

❖ Integrated Scheme for Development of Silk Industry (ISDSI)

The Ministry of Textiles launched the Central Sector Scheme "Silk Samagra" or the Integrated Scheme for Development of Silk Industry (ISDSI) for three years (2017-18 to 2019-20) for the overall development of silk industry.

It will be implemented through the Central Silk Board (CSB).

Objectives

- To scale up production by improving the quality and productivity
- To maintain Breeders stock, Breed improvement through R&D Projects, Development of mechanized practices, Technology translation through Sericulture Information Linkages and Knowledge System (SILKS) Portal, among other features.
- Maintain & Certify the quality standards set by the R&D units for Silkworm Seed, Cocoon, Raw Silk and Silk products covering the entire Silk value chain
- To achieve self-sufficiency in silk production by 2022
- To empower downtrodden, poor & backward tribal families through various activities of sericulture in the country including women
- Women constitute over 60% of those employed in down-stream activities of sericulture like mulberry garden management, leaf harvesting and silkworm rearing etc. An average of 30% women beneficiaries are being covered under the "Silk Samagra"
- Women SHGs are involved in implementation of beneficiary oriented components under Silk Samagra.
- ❖ Through beneficiary oriented components of the scheme, support has been extended under Tribal Sub Plan (TSP) to take up sericulture activities by tribal for their livelihood.

❖ **WHO Framework Convention on Tobacco Control**

- The WHO Framework Convention on Tobacco Control (WHO FCTC) is the international treaty negotiated under the auspices of WHO.
- It was adopted by the World Health Assembly on 21 May 2003 and entered into force on 27 February 2005.
- The WHO FCTC was developed in response to the globalization of the tobacco epidemic
- It is an evidence-based treaty that reaffirms the right of all people to the highest standard of health.
- The Convention represents a milestone for the promotion of public health and provides new legal dimensions for international health cooperation.
- It provides the foundation for countries to implement and manage tobacco control.

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