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Success is born of action...

Topic 1: Digital Health Mission

Importance for Prelims: Government Schemes



National Digital Health Mission was launched by Prime Minister Narendra Modi on August 15, 2020 while addressing the nation from the Red Fort to mark the occasion of India's 74th Independence Day.

- Under National Digital Health Mission, every Indian will get a **Health ID card** that will **store all medical details of the person** including prescriptions, treatment, diagnostic reports and discharge summaries.
- The citizens will be able to **give their doctors and health providers onetime access to this data** during visits to the hospital for consultation.
- However, access to the confidential medical data will have to be given separately for each visit due to fears over data confidentiality.
- The National Digital Health Mission will allow patients to

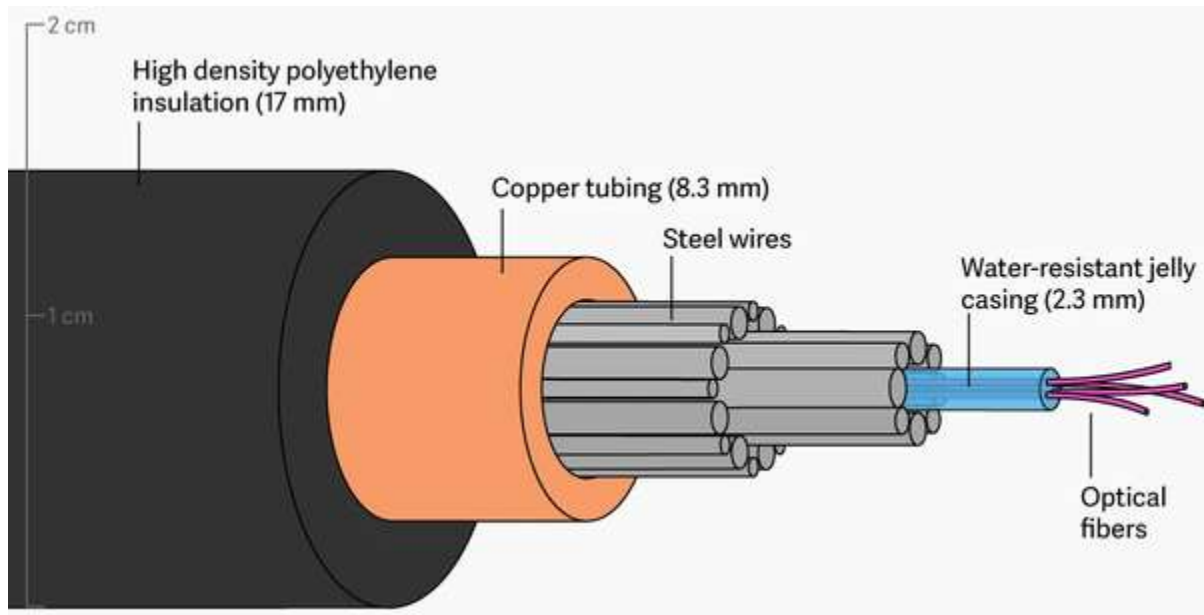
access health services remotely through tele-consultation and e-pharmacies, as well as offer other health-related benefits

- It comes under the **Ayushman Bharat Pradhan Mantri Jan Arogya Yojana** (AB PM-JAY) and implemented by **National Health Authority**.
- The **National Health Policy 2017** had envisaged creation of a **digital health technology eco-system** aiming at developing an integrated health information system that serves the needs of all stakeholders and improves efficiency, transparency and citizens' experience with linkage across public and private healthcare.
- In the context of this, central government's think-tank **NitiAayog, in June 2018**, floated a consultation of a digital backbone for India's health system - **National Health Stack**.

Topic 2: Optical fibre connectivity

Importance for Prelims: Schemes /Science and technology

Importance for Mains: Science and technology



Each village to be connected with optical fibre cable (OFC) connectivity in next 1000 days. It is also announced that in the next 1000 days, Lakshadweep will be connected with submarine optical fibre cable

- Optical fibre is the **technology associated with data transmission using light pulses** travelling along with a **long fibre which is usually made of plastic or glass.**
- Optical fibres are also unaffected by electromagnetic interference.
- The fibre optical cable **uses the application of total internal reflection of light.**
- The fibres are designed such that they **facilitate the**

propagation of light along with the optical fibre depending on the requirement of power and distance of transmission.

- Single-mode fibre is used for long-distance transmission, while multimode fibre is used for shorter distances.
- The outer cladding of these fibres needs better protection than metal wires.

Submarine Optical Fibre Cable :

- It is a cable **laid on the sea bed between land-based stations to carry telecommunication signals** across stretches of ocean and sea.
- The optical fibre elements are typically individually coated with plastic layers and contained in a protective tube suitable for the environment where the cable will be deployed.

Topic 3: Mitakshara School vs Dayabhaga school of law

Importance for Prelims: History



SC has ruled that a Hindu woman's right to be a **joint heir to the ancestral property is by birth** and does not depend on whether her father was alive or not when the law was enacted in 2005.

- The Dayabhaga and The Mitakshara are the two schools of law that **govern the law of succession of the Hindu Undivided Family under Indian Law.**
- The Dayabhaga School of law is observed in Bengal and Assam, in all other parts of India the Mitakshara School of law is observed.
- The Mitakshara School of law is subdivided into the Benares, the Mithila, the Maharashtra and the Dravida schools.
- The two main interpreters who wrote on Mitakshara and Dayabhaga Schools were Vijnaneshwar and Jeemutavahan respectively.
- In the **Mitakshara School**, the allocation of inherited property

was based on the **law of possession by birth** and a man could leave his self-acquired property to which he willed.

- The joint family property went to the group known as **coparceners**, i.e. those who belonged to next three generations and also the joint family property by partition could be, at any time, converted into **separate property**.
- Therefore in Mitakshara School, **Sons had an exclusive right by birth in joint family property**.
- The property is inherited in the Dayabhaga School after the death of the person who was in possession of it. **The doctrine of son's birth right** and the devolution of property by survivorship had **limited space** in Dayabhaga School.
- It is establish that in the **Mitakshara School neither the father nor** any other coparcener could **normally disaffect** the joint family property.
- Under the **Dayabhaga School** there is **no such constraint** and each coparcener has **complete right of separation** of his exclusive share in the joint family property. To put it simply, **Mitakshara** was based on the ‘ **principle of ownership by birth**, and **Dayabagha** on principle of **ownership by death**’.
- In the Dayabhaga Scheme the division of property was very simple. If a man died intestate, his supposed the property was divided uniformly between his sons. If he has share in the common property with the brothers then the property (a share

equal to his own) of the brothers would be put apart and his share would be separated between the sons.

- The law of succession in the Dayabhaga School was based on the **principle of religious value or divine profit**. The law of inheritance in the Mitakshara School was based on the rule of blood-relationship.
- The Mitakshara School did not give complete result to the principle, and restricted it by two supplementary rules:
 - (1) **females are excluded from inheritance**
 - (2) **importance of agnates over cognates .**
- This means that in case of a death of a Hindu man leaving behind a son and a daughter, the latter would be excluded totally and the former would get the entire property. In case he leaves behind a son's son and a daughter's son, the former should succeed to the entire property and the latter would be excluded.
- The Mitakshara school of Hindu **law codified as the Hindu Succession Act, 1956** governed succession and inheritance of property but **only recognised males as legal heirs**. The law applied to everyone who is not a Muslim, Christian, Parsi or Jew by religion.
- Buddhists, Sikhs, Jains and followers of Arya Samaj, BrahmoSamaj are also considered Hindus for the purposes of this law.

Topic 4: NCC

Importance for Prelims: Schemes



In Independence Day speech, Prime Minister spoke about the expansion of the National Cadet Corps (NCC) in coastal and border districts of India.

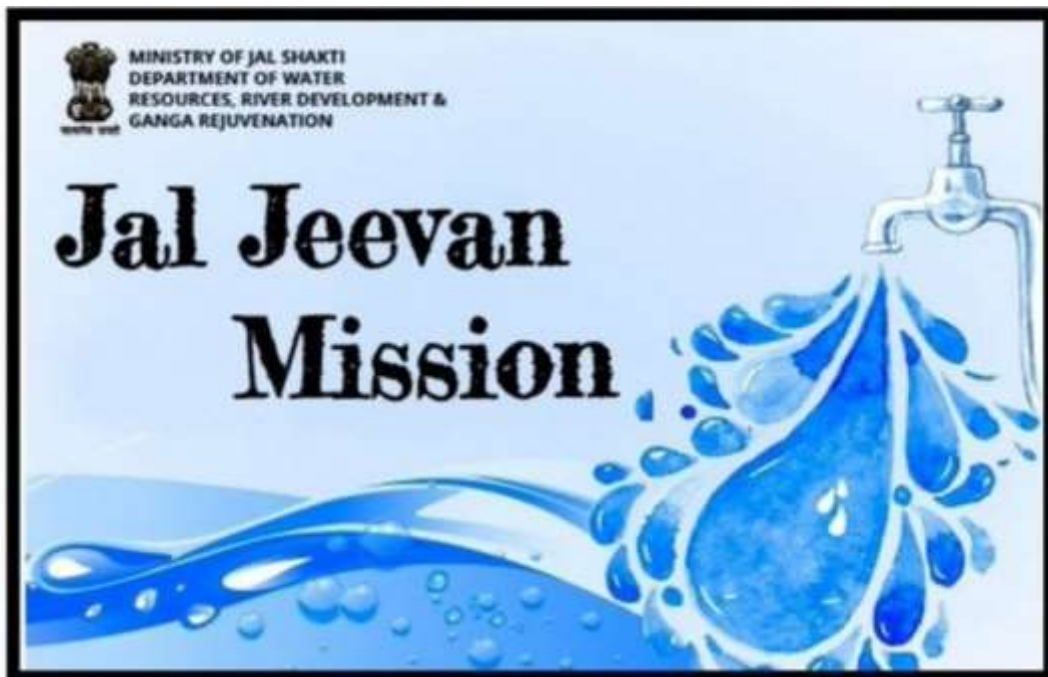
- The NCC, which **was formed in 1948**, has its roots to British era uniformed youth entities like University Corps or University Officer Training Corps.
- Currently the NCC has strength of **around 14 lakh cadets from Army, Navy and Air Force wings.**
- It **enrolls cadets at high school and college level and also awards certificates on completion of various phases.**
- Headed by a Director General of three-star military rank, the NCC falls under the purview of **Ministry of Defence** and is led

by serving officers from the Armed forces at various hierarchical positions.

- The NCC currently has 17 regional directorates which govern the NCC in units in various states or groups of states and union territories.
- The NCC cadets **receive basic military training at various levels and also have academic curriculum basics** related to Armed forces and their functioning.
- Various training camps, adventure activities and military training camps are an important aspect of NCC training.
- NCC cadets have played an **important role over the years in relief efforts** during various emergency situations.

Topic 5: Jal Jeevan Mission

Importance for Prelims: Welfare scheme



Under the Centre's flagship, Jal Jeevan Mission (JJM) more than a lakh rural households are being provided with fresh water taps each day since the beginning of the unlock period starting on 1 June.

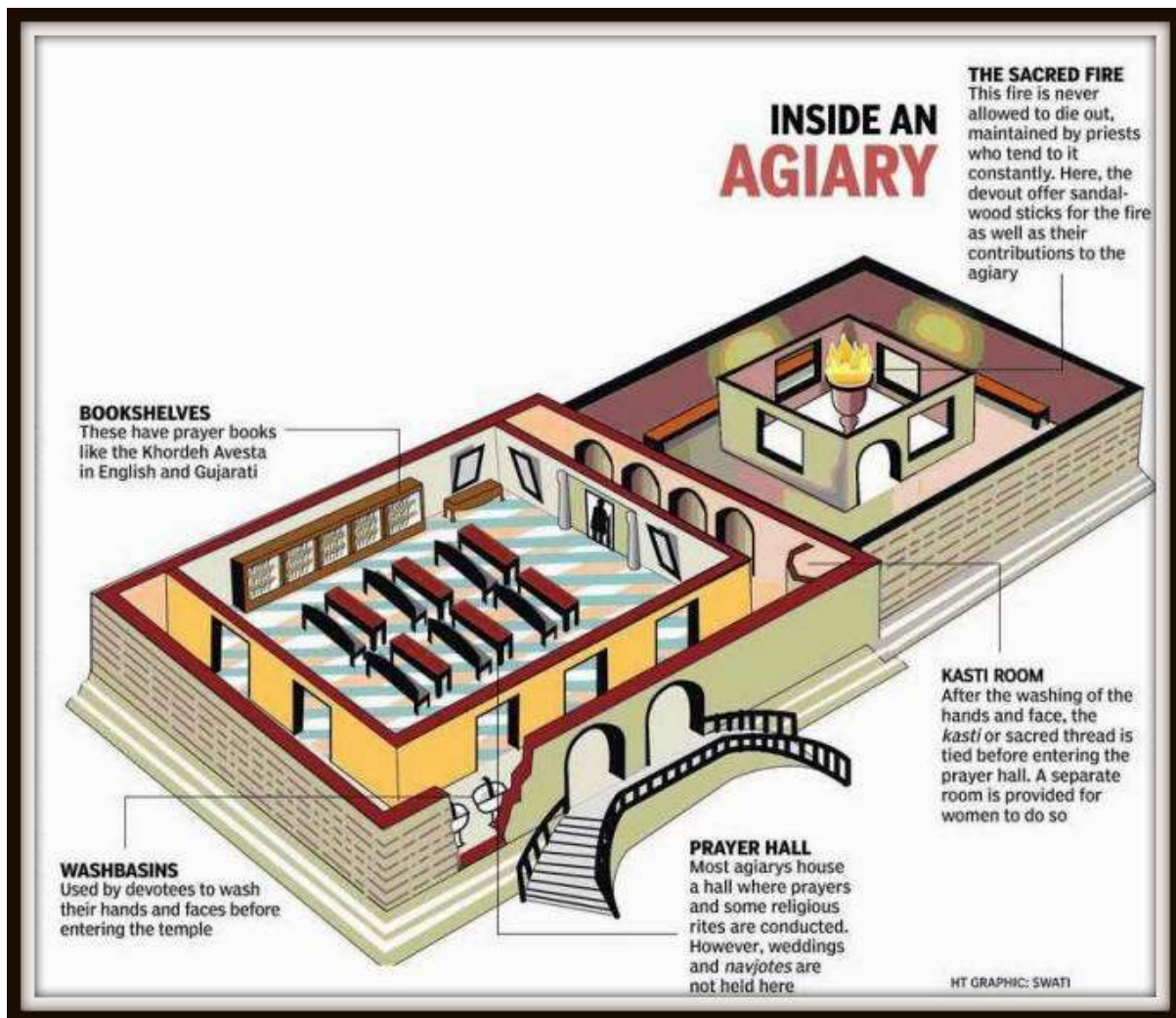
- Jal Jeevan Mission (JJM) envisages supply of **55 litres of water per person per day to every rural household** through Functional Household Tap Connections (FHTC) **by 2024**.
- It comes under **Ministry of Jal Shakti**.
- JJM focuses on integrated demand and supply-side management of water at the local level.
- Creation of **local infrastructure for source sustainability** measures as mandatory elements, like rainwater harvesting, groundwater recharge and management of household

wastewater for reuse, would be undertaken in convergence with other government programmes/schemes.

- The Mission is **based on a community approach to water and includes extensive Information, Education and Communication** as a key component of the mission.
- JJM looks to create a janandolan for water, thereby making it everyone's priority.
- **Funding Pattern:** The fund sharing pattern between the Centre and states is **90:10 for Himalayan and North-Eastern States, 50:50 for other states**, and 100% for Union Territories.
- For the implementation of JJM, following institutional arrangement has been proposed:
 - ✓ National Jal Jeevan Mission (NJJM) at the Central level
 - ✓ State Water and Sanitation Mission (SWSM) at the State level
 - ✓ District Water and Sanitation Mission (DWSM) at District level
 - ✓ Village Water Sanitation Committee (VWSC) at Village level

Topic 6: Navroz festival

Importance for Prelims: Arts and culture



Parsi New Year called ‘Navroz’ or ‘Nowruz’ was celebrated.

- It is believed that **king Jamshed introduced the Parsi calendar** and hence the Parsi New Year is also known as Jamshed-i-Nouroz.
- The holy festival is marked by grand celebrations and the atmosphere is full of positivity and prayers. This year, Navroz is being celebrated on August 16.

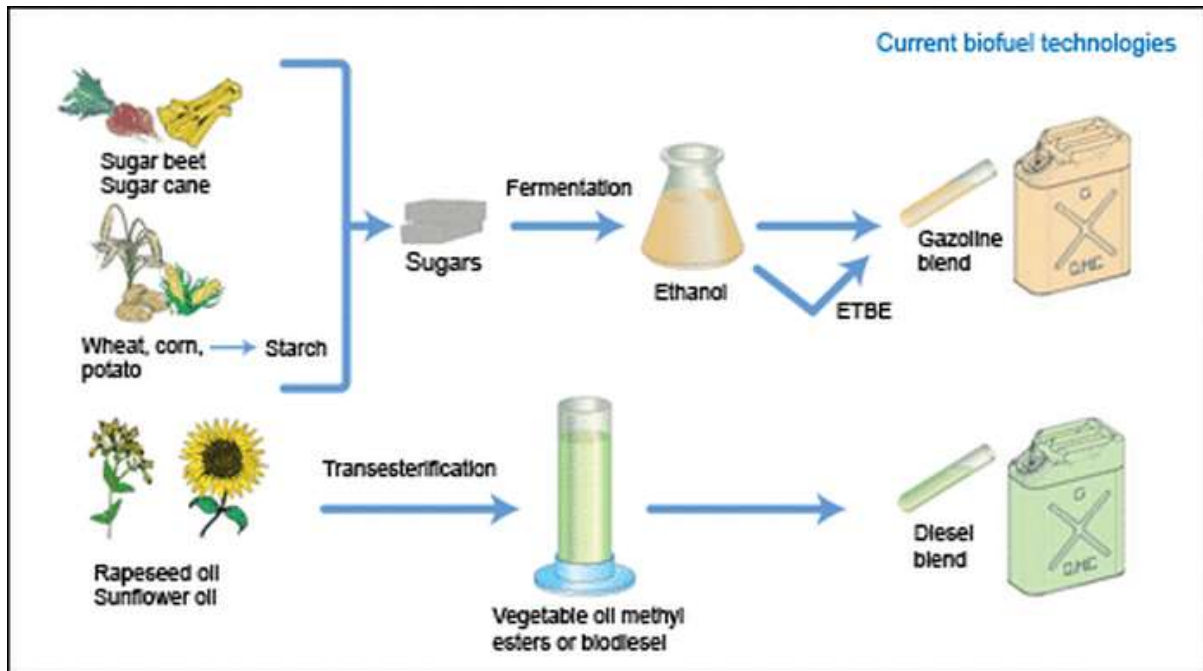
- It is **inscribed in the list of UNESCO Intangible Cultural Heritage of Humanity of India.**

About Parsis in India:

- Parsi community follow Zoroastrianism, **which is one of the world's oldest monotheistic religions.** It was founded by the Prophet Zoroaster (or Zarathustra) in ancient Iran around **the 6th-7th century.**
- Zoroastrians believe in one God called Ahura Mazda (Wise Lord) who created the world. **Their holy scripture is called the Avesta.**
- Zoroastrians **worship communally in a Fire Temple or Agiary.**
- Zoroastrians are not fire-worshippers but believe that the elements are pure and that fire represents God's light or wisdom.

Topic 7: Generation of biofuel and ethanol blending

Importance for Prelims: Environment



The government has set targets of 10 per cent bioethanol blending of petrol by 2022 and to raise it to 20 per cent by 2030 under the ethanol blending programme

- Biofuels are **liquid or gaseous fuels primarily produced from biomass**, and can be used to replace or can be used in addition to diesel, petrol or other fossil fuels for transport, stationary, portable and other applications.
- Crops used to make biofuels are generally **high in sugar** (such as sugarcane, sugarbeet, and sweet sorghum), **starch** (such as maize and tapioca) **or oils** (such as soybean, rapeseed, coconut, sunflower).

Generations of biofuels

- First generation biofuels – First-generation biofuels are **made from sugar, starch, vegetable oil, or animal fats using conventional technology.**
- Common first-generation biofuels include Bio-alcohols, Biodiesel, Vegetable oil, Bio-ethers, Biogas.
- Second generation biofuels – These are **produced from non-food crops**, such as cellulosic biofuels and waste biomass (stalks of wheat and corn, and wood).
- Examples include advanced biofuels like bio-hydrogen, bio-methanol.
- Third generation biofuels – These are produced **from micro-organisms like algae.**
- Four Generation Bio-fuels are aimed at **not only producing sustainable energy but also a way of capturing and storing co₂.** Biomass materials, which have absorbed co₂ while growing, are converted into fuel using the same processes as second generation biofuels. This process differs from second and third generation production as at all stages of production the carbon dioxide is captured using processes such as oxy-fuel combustion

National Policy on Biofuels

- The new National Policy on Biofuels had a target of **20 per cent blending of ethanol in petrol and 5 per cent blending of biodiesel** in diesel by 2030.

- This was to be achieved by **increasing production using second generation bio-refineries and developing new feedstock for biofuels**. It allowed the production of ethanol from damaged food grains like wheat and broken rice, which are unfit for human consumption.
- The new policy **allowed the use of excess food grain for ethanol in a bounty crop year**, so long as the surplus is endorsed by the Union Ministry of Agriculture.
- The **approval for this is to be given by the National Biofuel Coordination Committee**, chaired by the Union Minister Petroleum and Natural Gas.
- It includes representatives from 14 other central departments.

Ethanol blending Programme

- The Ministry of Petroleum & Natural Gas (MoP&NG) vide its notification dated 20th September, 2006 **directed the Oil Marketing Companies (OMCs) to sell 5% Ethanol Blended Petrol** subject to commercial viability as per Bureau of Indian Standards specifications in notified 20 States and 4 UTs with effect from 1st November, 2006.
- At present, this **programme has been extended to whole of India except Union Territories of Andaman Nicobar and Lakshadweep islands** with effect from 01st April, 2019 wherein OMCs sell petrol blended with ethanol up to 10%.

Topic 8: Classical dance

Importance for Prelims: Arts and culture

Importance for Mains: Arts and culture



The **earliest treatise on dance available to us is Bharat Muni's Natyashastra**, the source book of the art of drama, dance and music.

- It is generally accepted that the date of the work is between the 2nd century B.C.E- 2nd century C.E. The **Natyashastra is also known as the fifth veda.**
- According to the author, he has evolved this veda by taking words from the Rigveda, music from the Samaveda, gestures from the Yajurveda and emotions from the Atharvaveda. There is also a legend that Brahma himself wrote the Natyaveda, which has over 36,000 verses.
- Nurtured for centuries, dance in India has evolved in different

parts of the country its own distinct style taking on the culture of that particular region, each acquiring its own flavour.

- Consequently a number of major styles of ‘art’ dance are known to us today, like Bharatnatyam, Kathakali, Kuchipudi, Kathak, Manipuri, Odissi and Sattriya.
- Then, there are regional variations, the dances of rural and tribal areas, which range from simple, joyous celebrations of the seasons, harvest or birth of a child to dances for the propitiation of demons or for invoking spirits.

1) Bharatnatyam, Tamil Nadu

- Bharatanatyam, also known as the mother of all other classical dance styles, is considered as the oldest dance forms in the country India that originated from the temple dancers in Tamil Nadu.
- The dance is a pure amalgam of expressions, music, beat and rhythm.

2) Kathak, Uttar Pradesh

- Another popular and recognised form of classical Indian dance is Kathak that originated from Uttar Pradesh in north India.
- This one is derived from the word katha meaning story, and during the whole dance, the dancers narrate stories through their eyes and expressions.

3) Kathakali, Kerala

- This one is probably one of the most attractive, dramatic and

elaborate forms of classical Indian dance.

- Kathakali originated in the south Indian state of Kerala, also known as God's Own Country during the 17th century.
- The artist performing the dance needs to have detailed make-up, wear heavy costumes and, most importantly, work on their gestures.

4) Kuchipudi, Andhra Pradesh

- Kuchipudi is considered one of the toughest forms of Indian classical dance that originated in the south Indian state of Andhra Pradesh.
- The form is considered the toughest because it requires a whole lot of rituals, from lighting the incense sticks to sprinkling holy water and praying to the lord.

5) Manipuri, Manipur

- Manipuri dance form originated in the northeastern state of Manipur and is a pure spiritual experience.
- This is a theme based classical dance form that depicts Raaslila or the romantic act of the Hindu gods Radha and Krishna. Costumes and makeup plays an important role here.

6) Odissi, Odisha

- Odissi dance form emerged from the east Indian state of Odisha and is mainly derived from the ancient Hindu temples in Odisha.
- The whole dance is based on gestures and movements or mudras. The dance is performed to express the mythical stories

of the Hindu gods, such as Lord Shiva and Surya. It is also considered as the oldest surviving dance forms of India.

7) Sattriya Dance, Assam

- The Sattriya Dance of Assam is living tradition of state and one of the eight major classical Indian dance traditions.
- Sattriya classical dance form is well appreciated and practiced outside the state as well as outside of Indian mainland.

8) Mohiniyattam, Kerala

- Mohiniyattam is another classical dance style from Kerala state and one of the eight principal Indian classical dance.
- The Mohiniyattam is a popular dance form with a drama in dance, performed with subtle gestures and footwork.

Topic 9: Section 153 of the Representation of the People Act

Importance for Prelims: Polity



Political parties are increasingly voicing concerns over holding elections in Bihar amid a pandemic.

- Election Commission (EC) is mandated under law **to hold elections at any time within six months before the five-year term of the Lok Sabha** or Legislative Assembly expires.
- The polls are timed in a way that the new Assembly or Lok Sabha is in place on the day of the dissolution of the outgoing House.
- In the case of **early dissolution**, EC has to ensure, as far as possible, a new Lok Sabha or Assembly is in place **within six months of the dissolution**.
- An **election once called usually proceeds as per schedule**. However, in some exceptional cases, the process can be postponed or even scrapped after its announcement under extraordinary circumstances.

- Under **Section 153 of the Representation of the People Act**, the poll panel can “**extend the time**” for completing an **election**, but such extension should not go beyond the date of the normal dissolution of the Lok Sabha or the Assembly.
- Powers under **Section 153 can be exercised only after an election schedule has been notified.**
- If the EC wants to postpone Bihar elections, it will have to be done through its extraordinary powers under Article 324.

Topic 10: Garib Kalyan Rozgar Abhiyan

Importance for Prelims: Schemes

PM Modi to Launch Garib Kalyan Rozgar Abhiyaan on 20th June

To empower & provide livelihood opportunities to returnee migrant workers and rural citizens

Focused campaign of **125 days across 116 districts in 6 states** to work in mission mode

Public works worth ₹50,000 crore to be carried out under the scheme

Focused implementation of 25 different types of works to provide employment & to create durable infrastructure

Dated: 18 June, 2020

Indian Railways said that it has generated more than 5.5 lakhs mandays of work under Gareeb Kalyan Rozgar Abhiyan in 6 States

- The livelihood opportunities will come up in **116 districts spread over six states** namely Bihar, Uttar Pradesh, Madhya Pradesh, Rajasthan, Jharkhand and Odisha **who have received substantial numbers of migrants** through the Common Service Centres and Krishi Vigyan Kendras

- This campaign of 125 days, which will work in mission mode, will involve intensified and focused implementation of **25 different types of works to provide employment to the migrant workers** on one hand **and create infrastructure in the rural regions** of the country on the other hand, with a resource envelope of Rs. 50,000 crore.
- The Abhiyaan will be a **coordinated effort between 12 different Ministries/Departments**, namely, Rural Development, Panchayati Raj, Road Transport & Highways, Mines, Drinking Water & Sanitation, Environment, Railways, Petroleum & Natural Gas, New & Renewable Energy, Border Roads, Telecom and Agriculture.

Topic 11: Project lion, project dolphin

Importance for Prelims: Environment



Prime minister in his Independence Day speech had announced the launch of Project Lion and Project Dolphin

Project dolphin

- Project Dolphin will involve **conservation of Dolphins and the aquatic habitat** through use of modern technology especially in enumeration and antipoaching activities.
- The project will **engage the fishermen and other river/ ocean dependent population** and will strive for improving the livelihood of the local communities.
- The conservation of Dolphin will also envisage activities which will also help in the **mitigation of pollution in rivers and in the oceans.**
- It will include **oceanic as well as Gangetic river dolphins**, which were declared a National Aquatic species in 2010.
- **Dolphins are one of the oldest creatures in the world** along

with some species of turtles, crocodiles and sharks.

- Ganges river dolphins once lived in the **Ganges-Brahmaputra-Meghna and Karnaphuli-Sangu river systems of Nepal, India, and Bangladesh**. But the species is extinct from most of its early distribution ranges.
- The Ganges river dolphin can **only live in freshwater and is essentially blind**.
- They hunt by emitting ultrasonic sounds, which bounces off of fish and other prey, enabling them to “see” an image in their mind.

Project lion

- Project Lion will involve **conservation of the Asiatic Lion and its landscape** in a holistic manner.
- The Project Lion will **entail habitat development, engage modern technologies** in Lion management and address the issues of disease in Lion and its associated species through advanced world-class research and veterinary care.
- The project will also **address Human-wildlife conflict and will be inclusive involving local communities** living in the vicinity of Lion landscape and will also provide livelihood opportunities.
- Asiatic lions were **once distributed upto the state of West Bengal in east and Rewa in Madhya Pradesh, in central India**.
- At present **Gir National Park and Wildlife Sanctuary** is the

only abode of the Asiatic lion.

- The last surviving population of the Asiatic lions is a compact tract of dry deciduous forest and open grassy scrublands in southwestern part of Saurashtra region of Gujarat.
- Listed in Schedule I of Wildlife (Protection) Act 1972, in Appendix I of CITES and as **Endangered on IUCN Red List.**

Topic 11: Nagar van scheme

Importance for Prelims: Schemes

200 Urban Forests to be built in next 5 years under 'Nagar van' scheme



Government is focusing on enhancing forest quality and increasing tree cover in the country for maximizing carbon stock. One such is by Nagar van scheme

- The Nagar Van Scheme was announced on World Environment Day 2020 for **creation of 200 Nagar Van**, on forest land by **adopting a collaborative approach**, involving various agencies like forest and other departments, NGOs, Corporate Bodies, Industries etc.
- The primary objective is to **create forested area in cities with Municipal Corporation**, which will act as lungs of the cities.

Topic 12: ARIIA 2020

Importance for Prelims: Education



Atal Rankings of Institutions on Innovation Achievements (ARIIA) 2020 will be announced

- ARIIA is an initiative of Ministry of HRD, **implemented by AICTE** and Ministry's Innovation Cell, Government of India to **systematically rank higher education institutions and universities** in India on indicators related to **Innovation, Startup and Entrepreneurship Development** amongst students and faculty.
- AICTE, highlighted that the world is observing a noteworthy improvement in performance of India in Global Innovation Index ranking.
- In last 5 years, **India has risen 29 spots in Global Innovation Index from 81 in 2014 to 52 in 2019.**
- ARIIA focuses on **quality and quantity of innovations coming**

out of the education institutes and measures the real impact created by these innovations nationally and internationally.

- ARIIA will set tone and direction for institutions for future development and making them globally competitive and in forefront of innovation.

Topic 13: First World Solar Technology Summit

Importance for Prelims: IR



The First World Solar Technology Summit will be organized by International Solar Alliance, ISA on a virtual platform on 8th of September.

- The objective of the event is to **bring the spotlight on state-of-the-art technologies as well as next-generation technologies** which will provide impetus to the efforts towards **harnessing the solar energy** more efficiently.
- The event will hold four technical sessions that would be available to the participants in different languages namely English, Spanish, French & Arabic.
- **Leading companies and research organisations** from across the world will present their work during these sessions and will

deliberate on latest trends in solar technologies.

- **Vision 2030 & Beyond:** The overall context of Photo Voltaic technology development and its future, on its way towards becoming the first source of energy worldwide, with PV technologies supplying 70% of the world's electricity generation.
- **Towards a Decarbonised Grid:** The most recent advances (conversion efficiency improvements and declining costs) regarding key components such as PV modules and storage technologies.
- **Disruptive Solar Technologies:** On-grid applications, whether groundmounted, floating, or integrated in residential and commercial rooftops.
- **Solar Beyond the Power Sector:** Innovative applications where PV is used to move, heat, cool, and drive eco-friendly industrial processes and produce fuels as well as off-grid applications, to provide universal access to energy.

International Solar Alliance

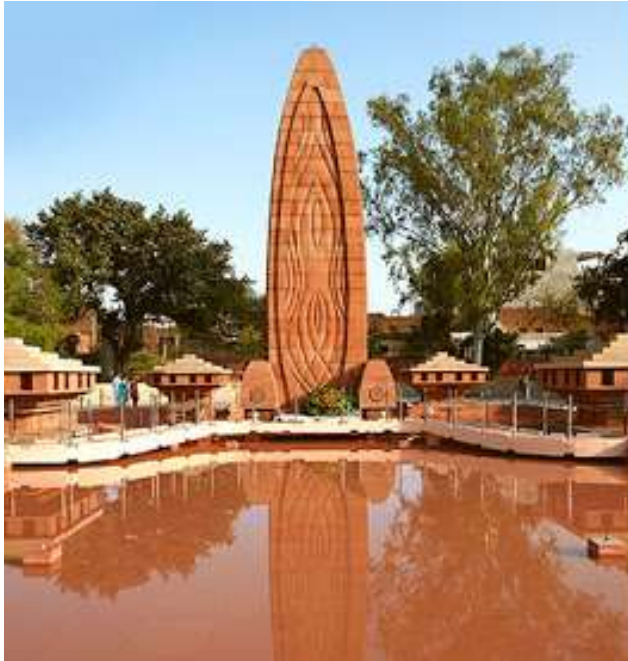
- The ISA, an action-oriented organization, **aims at lowering the cost of technology and finance and thereby facilitate deployment of over 1,000 GW of solar energy** and mobilize more than USD 1,000 billion into solar power by 2030 in Member countries.
- The ISA envisions to enable the **full ecosystem for availability and development of technology, economic resources, and**

development of storage technology, mass manufacturing and innovation. The reduced cost of technology would enable the undertaking of more ambitious solar energy programmes.

- The ISA has 67 countries and has six programmes viz. Solar Applications for Agricultural Use, Affordable Finance at Scale, Mini Grids, and Solar Rooftops and Solar E-mobility & Storage and Large-Scale Solar Parks.

Topic 14: Jallianwala Bagh

Importance for Prelims: History



Ministry of Tourism presents

Dekho Apna Desh

a webinar on

Jallianwala Bagh: A Turning Point in the Freedom Struggle

Incredible India

Ministry of Tourism
Government of India

NEGD

Ministry of Tourism presented **Webinar on “Jallianwala Bagh: A turning point in the Freedom struggle”** under DekhoApnaDesh Series as a run up to the Independence Day Celebrations.

- The **Rowlatt Act or Black Act** which was a **Draconian Act** passed by the British Government which gave powers to the Police to **arrest any person without any reason whatsoever**.
- The purpose of the Act was to curb the growing nationalist upsurge in the country.
- **Gandhi called upon the people to do Satyagraha against such oppressive “Act”**.
- Jallianwala Bagh was then a barren land where people would meet often and use to have peaceful protest. This made the

British nervous as they had never seen any resistance.

- **Saifuddin Kitchlu and Dr. Satyapal were renowned national leaders of the city of Amritsar. They organized Satyagraha against Rowlatt Act.**
- People from all sects participated in peaceful gatherings that happened in Jallianwala Bagh. This led to lot of misconceptions and misunderstanding among the Britishers.
- The British Government **ordered the arrest of Dr. Kitchlu and Dr. Satyapal.** The news of their arrest evoked strong reaction among the people of Amritsar.
- On 9th April 1919, **Mahatma Gandhi was arrested** and people were unable to understand the reason behind the arrest.
- When news of Gandhi's arrest reached Amritsar on the 10th, **a large and angry crowd collected on the streets.** British banks were set on fire and three bank managers murdered. The violence continued through the 10th and 11th April.
- With the police unable to control the crowds, the city was placed under de facto martial law. The Collector handed over charge to Brigadier-General Reginald Dyer, who had come with a contingent of Gurkha and Pathan troops.
- On Sunday, **13 April 1919 Dyer, anticipated that a major insurrection could take place, thus had banned all meetings.**
- This notice was not widely disseminated, and many villagers **gathered in the Bagh to celebrate the Indian festival of**

Baisakhi, and peacefully protest the arrest and deportation of two national leaders, Satyapal and Saifuddin Kitchlew.

- Dyer and his troops entered the garden, blocking the main entrance behind them, took up position on a raised bank, and with no warning opened fire on the crowd
- The British Government **established a Committee to inquire into the events, and the Hunter Commission Report** includes evidence taken in relation to the events in Amritsar.
- In the final report submitted in March 1920, the Committee unanimously condemned Dyer's actions. However, the Hunter Committee did not impose any penal or disciplinary action against General Dyer.
- **Rabindranath Tagore renounced his knighthood in protest and Mahatma Gandhi gave up the title of Kaiser-i-Hind, bestowed by the British for his work during the Boer War.**

Topic 15: Gothic architecture

Importance for Prelims: Arts and culture



Kerala government took control of Marthoman Jacobite Syrian Cathedral Church at Mulanthuruthy in Ernakulam district, which has been in the focus of a dispute between Jacobite and Orthodox factions of the Malankara Church

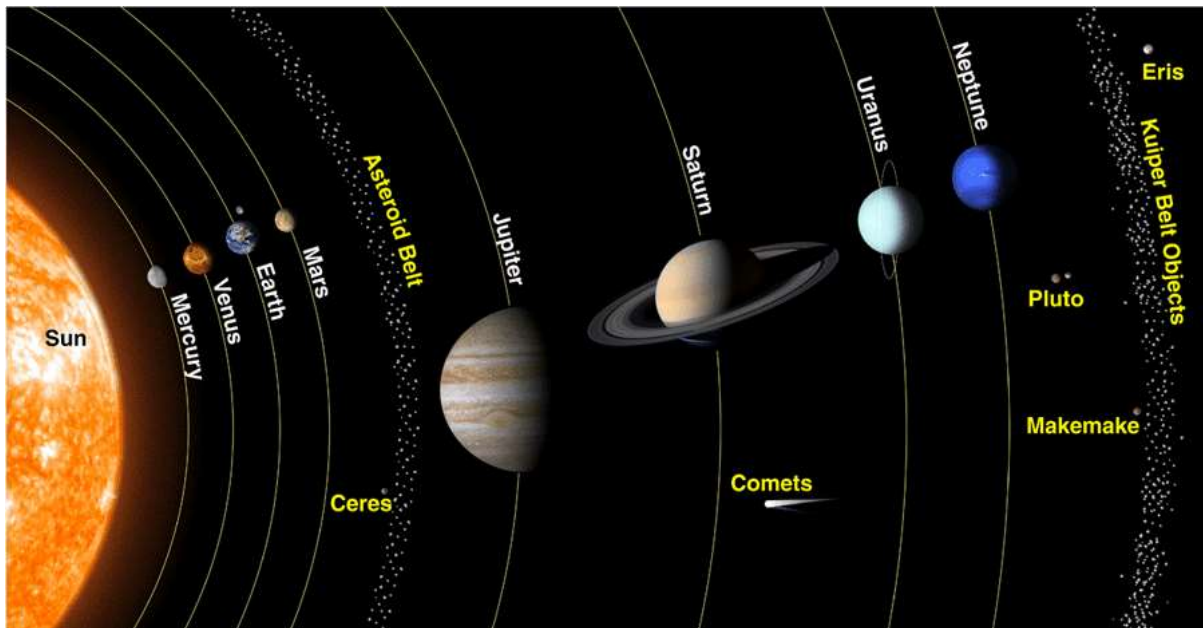
- Gothic architecture, architectural style in Europe that lasted from the mid-12th century to the 16th century
- Gothic architecture is a European style of architecture that **values height and exhibits an intricate and delicate aesthetic.**
- Though its roots are French, the Gothic approach can be **found in churches, cathedrals,** and other similar buildings in Europe and beyond.
- The Gothic style **evolved from Romanesque architecture,** a

medieval aesthetic characterized by arches, vaulted ceilings, and small stained glass windows.

- Gothic architecture adapted these Romanesque elements to **produce a new style of building that featured exaggerated arches, increased vaulting, and enlarged windows.**
- To construct taller, more delicate buildings with thinner walls, Gothic architects **employed flying buttresses for support.** These stone structures allowed architects to create sky-high cathedrals and churches that evoked ethereality and reached toward the heavens.

Topic 16: Dwarf planet Ceres

Importance for Prelims: Science and tech



Researchers have shed new light on the dwarf planet Ceres which now has the **status of an “ocean world”**, after scientists analysed data collected by NASA’s Dawn spacecraft.

- There are officially **five dwarf planets in our Solar System**.
- The most famous is Pluto, downgraded from the status of a planet in 2006.
- The other four, in order of size, are Eris, Makemake, Haumea and Ceres. The sixth claimant for a dwarf planet is Hygiea, which so far has been taken to be an asteroid.
- **Four criteria set by the International Astronomical Union (IAU)** for a celestial body to be called a dwarf planet.
- **The body orbits around the Sun, it is not a moon, has not cleared the neighborhood around its orbit** (which means it is

not the dominant body in its orbit around the Sun and this is what differentiates a planet from a dwarf planet) and has **enough mass for its gravity to pull it into a roughly spherical shape.**

Topic 17: Bhadbhut project

Importance for Prelims: Economy



The Gujarat government recently awarded the contract for a barrage project across Narmada river.

- It is planned to be a 1.7-km causeway-cum-weir barrage with 90 gates, **across the river Narmada**, 5 km from Bhadbhut village, and 25 km from the mouth of the river, where it flows **into the Gulf of Khambhat**.
- The barrage will **stop most of the excess water flowing out of the Sardar Sarovar Dam** from reaching the sea and thus create a “sweet water lake” of 600 mcm (million cubic metres) on the river.
- The main purpose of the project is to **prevent salinity ingress**.

- The sweet water from the reservoir will aim to **meet the residential and industrial water requirements of Bharuch, Ankleshwar and Dahej.**
- The project is **part of the larger Kalpasar Project**, which entails construction of a 30-km dam across the Gulf of Khambhat between Bharuch and Bhavnagar districts.
- The **reservoir is meant to tap the waters of the Narmada, Mahisagar and Sabarmati.**

Topic 18: Trap Door

Importance for Prelims: Science and tech

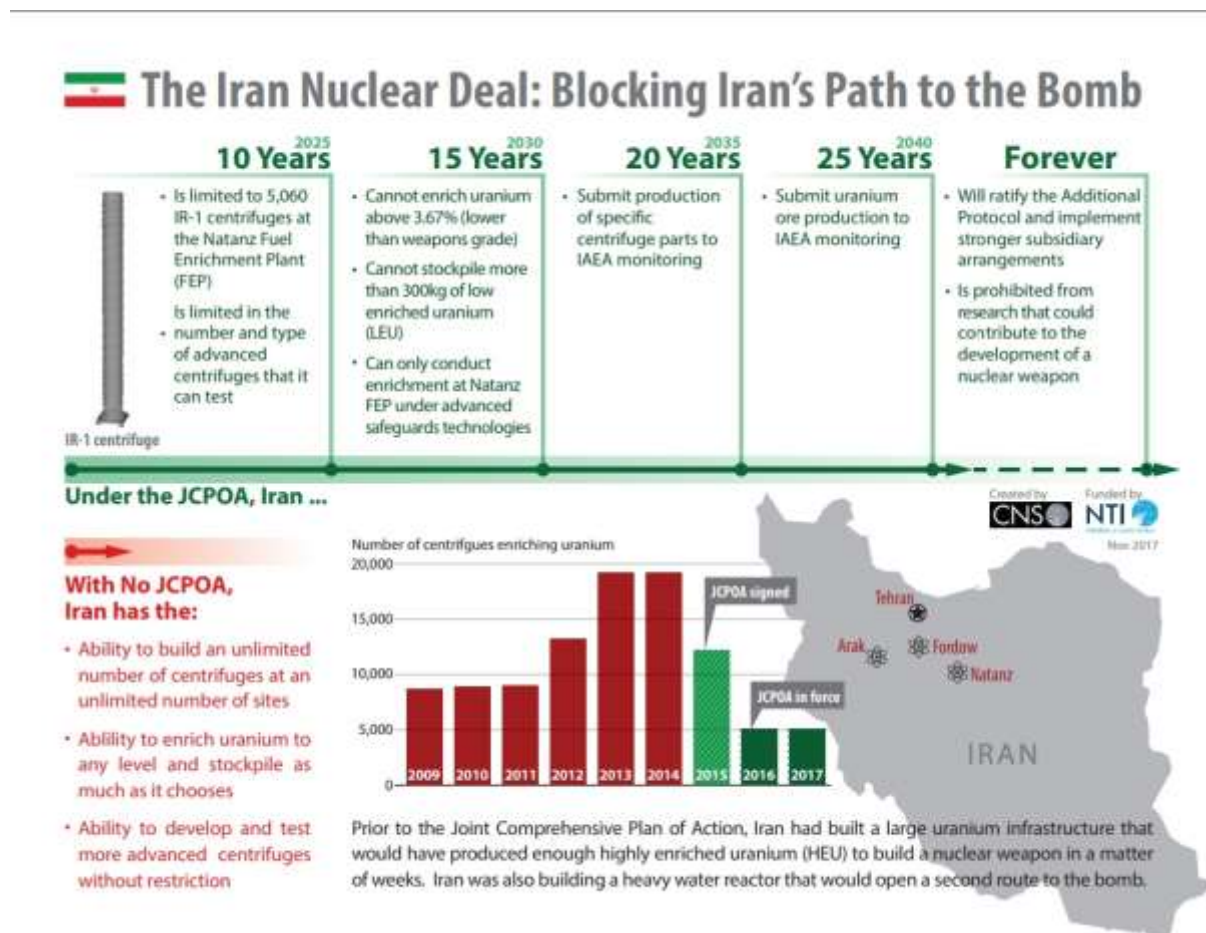


The department of Telecommunications (DoT) is set to **direct all telecom operators to undertake an ‘information security audit’** of their networks and submit the report by October end.

- A ‘backdoor’ or a ‘trap door’ is a **bug installed in the telecom hardware** which allows companies to **listen in or collect data being shared on the network.**

Topic 19: JCPOA

Importance for Prelims: IR



President Donald Trump said US will pursue the “snapback” option in nuclear deal, after the U.S. lost a bid at the UN Security Council to extend the arms embargo on Iran.

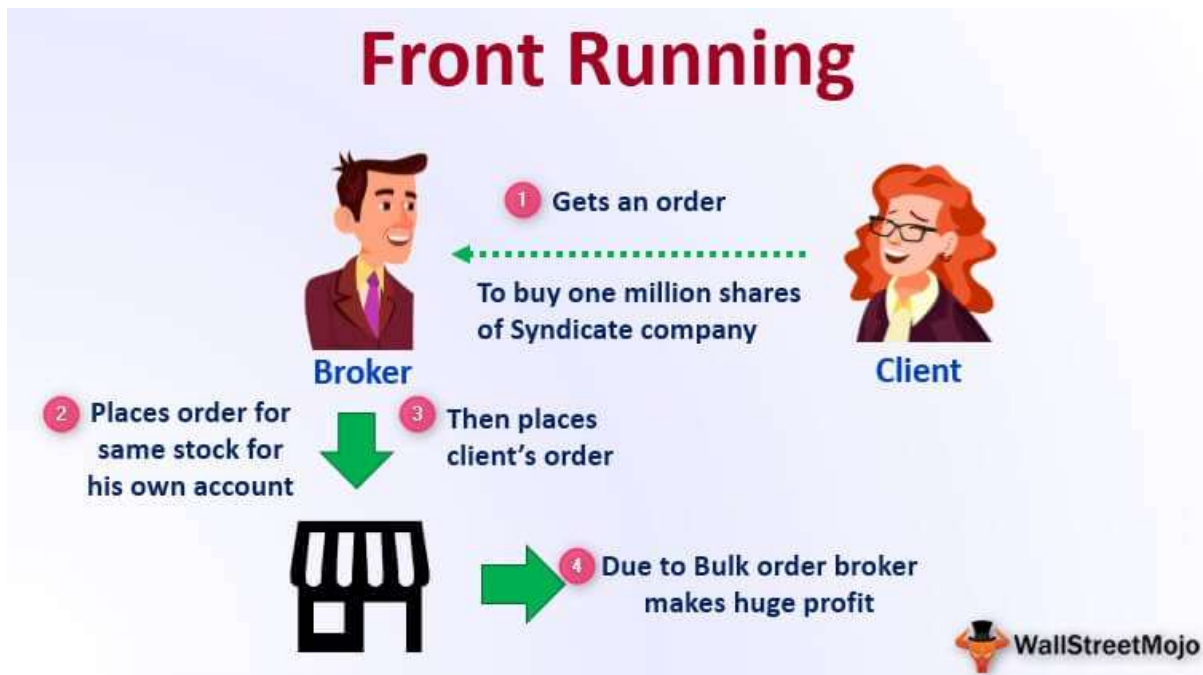
- In July 2015, **Iran and six countries reached a historic agreement** called the Joint Comprehensive Plan of Action (JCPOA), popularly known as the **Iran nuclear deal**.
- The six major powers involved in these negotiations with Iran were known as the P5+1, which stands for the United Nations Security Council’s five permanent members (the US, France, the

UK, China, and Russia) and Germany.

- The deal came together after two years of intense discussions and **aimed to restrict Iran's ability to develop nuclear weapons in exchange for lifting economic sanctions against Tehran.**
- As part of the deal, Iran agreed to reduce its number of centrifuges – tube-shaped machines that help enrich uranium – by two-thirds. It also agreed to reduce its stockpile of enriched uranium by 98% and limit uranium enrichment to 3.67%.
- Iran **agreed to give access to inspectors from the International Atomic Energy Agency (IAEA)** to its nuclear facilities, among other facilities. The IAEA has repeatedly found Iran to be complying with the terms of the pact

Topic 20: Front Running

Importance for Prelims: Economy

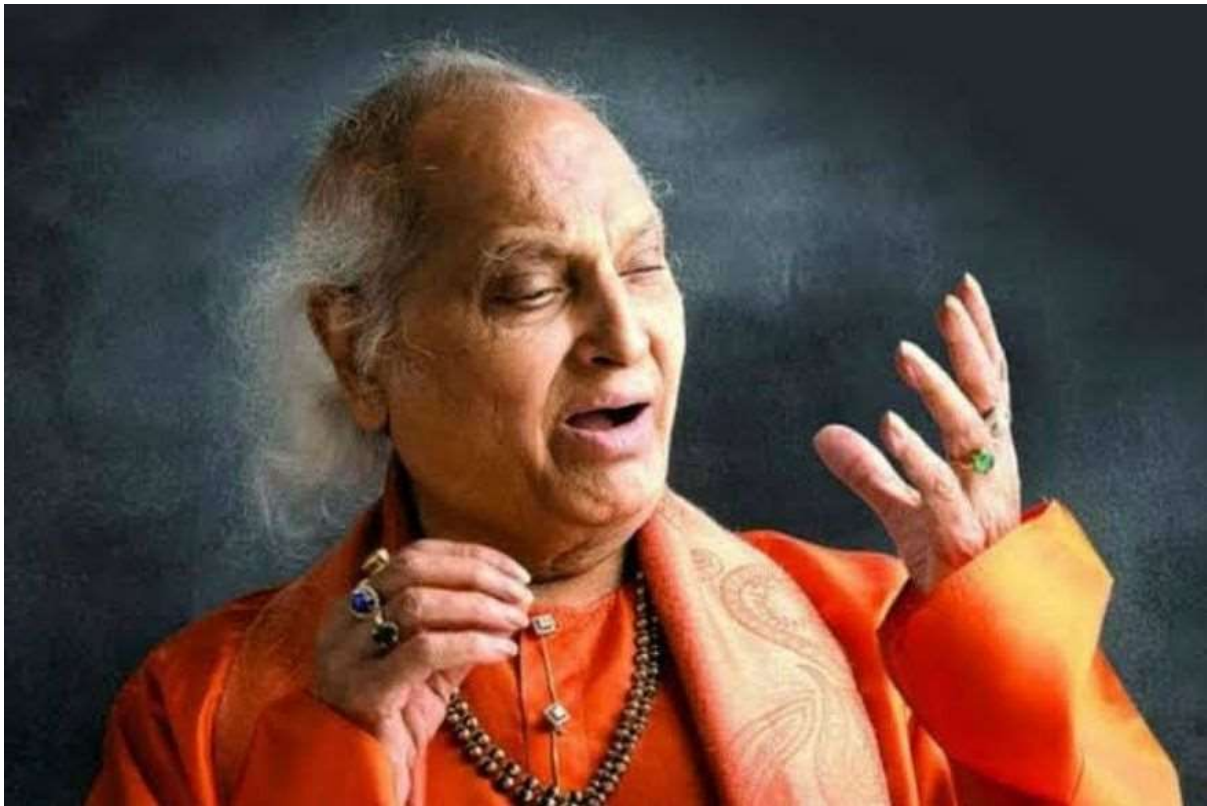


Securities and Exchange Board of India (SEBI) sought to **bar 27 entities from the capital market** for being connected to a case of front running.

- Front running is the **illegal practice of purchasing a security based on advance non-public information** regarding an expected large transaction that will affect the price of a security.
- Front running is considered as **a form of market manipulation and insider trading** because a person who commits a front running activity expects security's price movements based on the non-public information.

Topic 21: Classical music

Importance for Prelims: Arts and culture



Indian classical vocalist Pandit Jasraj passed away . He belonged to Mewati Gharana.

- Throughout the ages, man has sought to express the stirrings of his soul, the search for something beyond the mundane through the medium of the arts.
- The evolution of poetry, painting and other visual arts has been preserved on stone, leaves and paper but music being auditory, no such evidence exists. As such it is not possible to listen today to the music of the ancient times.
- In spite of such a variety of cultural interactions, our music has

remained essentially melodic. In melody, one note follows the other, making for a continued unity of effect, whereas in harmony musical sounds are superimposed on one another. Our classical music has retained its melodic quality.

- Today we recognise two systems of classical music: **the Hindustani** and the **Carnatic**. **Carnatic music is confined to Karnataka, Andhra Pradesh, Tamil Nadu and Kerala.** **The classical music of the rest of the country goes under the name, Hindustani Classical Music.** Of course, there are some areas in Karnataka and Andhra where the Hindustani Classical system is also practiced.
- Karnataka has given us in the recent past some very distinguished musicians of the Hindustani style.
- It is generally believed that the music of India was more or less uniform before the 13th century. Later it bifurcated into the two musical systems.
- The present Indian music has grown from ancient times. Almost every tribe or people have lent their own share in this growth. What therefore, we now call a *raga* might have started as a tribal or folk tune.
- Hindustani Music is the one among the two distinct varieties of Indian Classical Music.
- The other variety of Indian classical music is Carnatic Music. While the former belongs to the Northern part of the country,

the latter is south Indian.

- This music became popular during the Mughal Empire. Some Persian and Arabic elements have been assimilated in this music system. There are 10 forms or styles of singing and composition. Among them, Dhrupad, Khayal, Tappa and Thumri are the most popular.

Dhrupad

- This is the oldest and grandest form of Hindustani music. It is essentially poetic and it is presented in a style marked with precise and orderly elaboration of Raga. Exposition proceedings composed verses is called Alap.

Khayal

- Khayal means imagination. This is the most prominent style in hindustani depicting romantic style of singing. It largely depends on the imagination and improvisation of the performer. It is also composed of particular raga and tala. It ranges from praise of kings description of seasons and pranks of Lord Sri Krishna.

Thumri

- Thumri originated in the eastern part of Uttar Pradesh. It is influenced by hori, kajri, Dadra. Thumri is supposed to be romantic and erotic style of singing and is also called “lyric of Indian classical music”. The song composition mainly on love and devotion.

Tappa

- Tappa developed around the 18th century. It means jump in Persian, it is developed on folk songs of camel riders.

Gharanas

- Gharanas in Indian Classical Music is an age-old tradition. All the Gharanas have distinctive styles and manner in which they sing the notes. There are different Gharanas based in different regions, and their styles are also highly influenced by the creative style invented by one master that goes on to be emulated by his students. This Guru-Shishya concept is called ‘Gharanas’ in Hindustani Classical Music. They also devised new style by improvising on the existing musical structures, and giving it new form through different approach and interpretation.

Gharanas in Hindustani Classical Music are divided in two major categories- ‘**Khyal**’ and ‘**Thumri**’, based on the singing style or known as ‘Gayaki’ in Hindustani Classical Music.

Reasons for emergence of Gharans

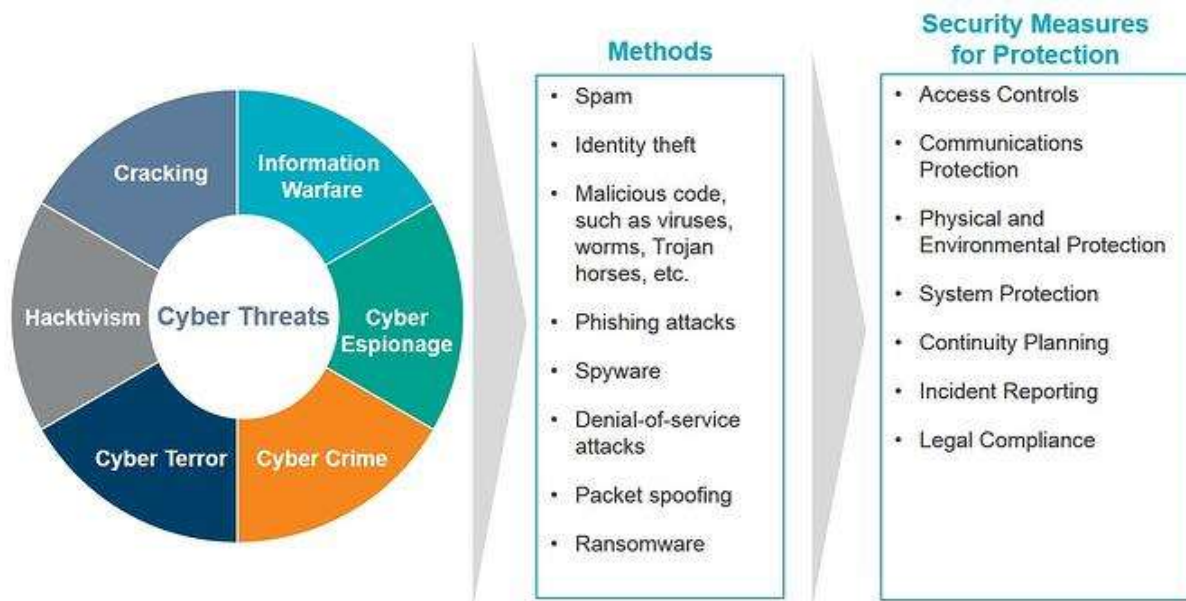
- The gharana concept gained currency only in the nineteenth century when the royal patronage enjoyed by performers weakened. Performers were then compelled to move to urban centres.
- To retain their respective identities, they fell back on the names of the regions they hailed from. Therefore, even today, the

names of many gharanas refer to places. Some of the gharanas well known for singing khayals are : Agra, Gwalior, Patiala, Kirana, Indore, Mewati, Sahaswan, Bhendibazar and Jaipur.

- Gharanas in Dhrupad singing too came into existence several centuries after their birth. It moved from the temples to concentrate in the royal courts of the north, and finally, in the 18th century, when its popularity began to wane, dhrupad singers dispersed to places like Mathura, Rampur, Jaipur, Varanasi, Darbhanga, Betia, Vishnupur etc.
- There are also gharanas for thumris – like Banaras. Lucknow, Patiala though another school of thought opines that thumris are devoid of gharana divisions and are only to be associated with certain styles or Baj.
- The concept of hereditary musicians was not confined to vocal music alone. Hence there are also gharanas in instrumental music – sitar, sarode, tabla etc.

Topic 22: Information Security Audit

Importance for Prelims: Science and tech



Department of Telecommunications (DoT) is all set to direct telecom companies to undertake an “information security audit” of their networks and submit the report by October end

- An information security audit is a **step-by-step assessment of the complete network infrastructure** which checks for the equipment installed and the latest upgrades done in order to prevent any data leakages.
- The auditors also check the **data storage and security policies of the company** and check whether all sections of the company adhere to the norms set by the company itself.
- Apart from that, some auditing agencies also launch a controlled bug into the network of the company to **check for ‘Backdoor and Trapdoor’ vulnerabilities**, and see what all systems are being impacted.

- DoT is likely to suggest to the companies that the external audit should be done only by an agency empanelled with Cert-IN

Backdoor and Trapdoor

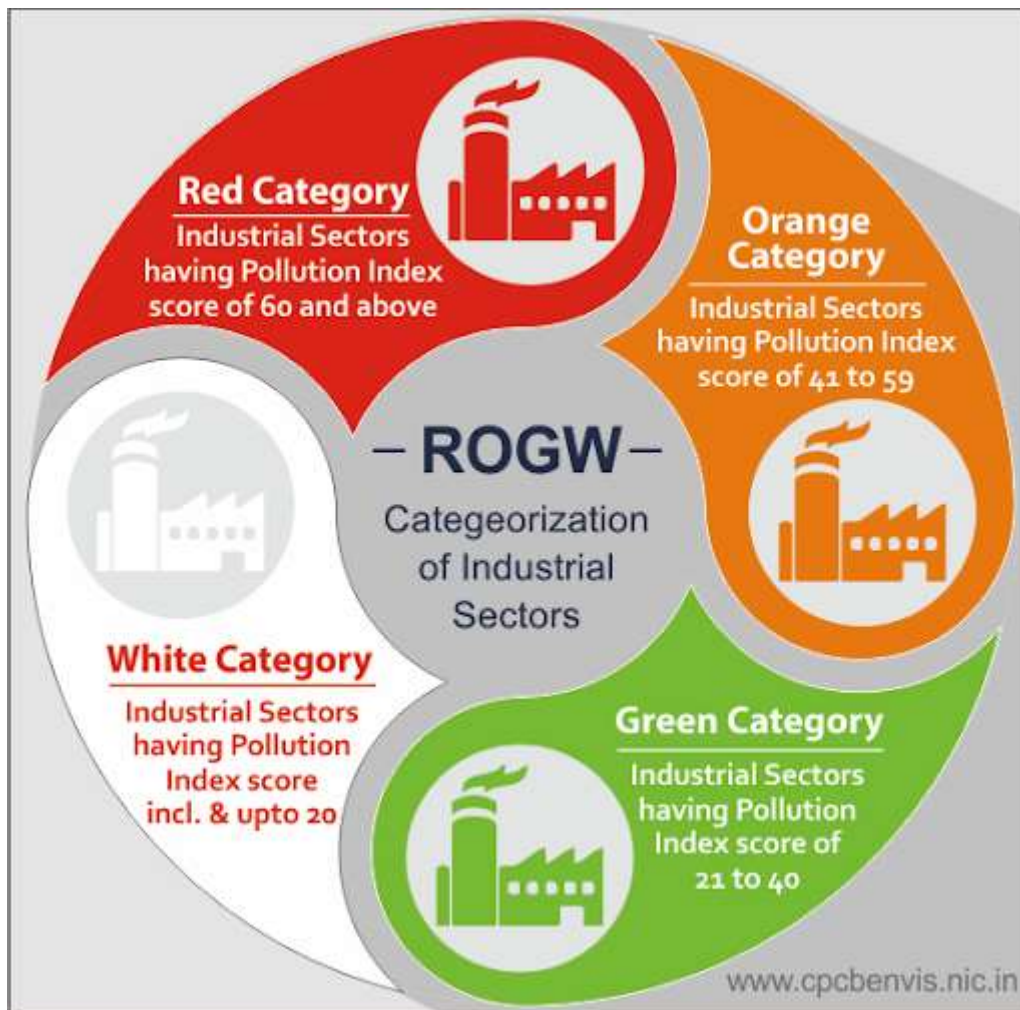
- A ‘backdoor’ or a ‘trap door’ is a bug installed in the telecom hardware which allows companies to listen in or collect data being shared on the network.

Computer Emergency Response Team – India (CERT-IN)

- It is an organisation of the **Ministry of Electronics and Information Technology** with the objective of securing Indian cyberspace.
- It is the **nodal agency which deals with cyber security threats** like hacking and phishing.
- It collects analyses and disseminates information on cyber incidents, and also issues alert on cybersecurity incidents.
- CERT-IN provides Incident Prevention and Response Services as well as Security Quality Management Services.

Topic 23: Industry Categories (Based on pollution)

Importance for Prelims: Environment



Madras High Court rejected a plea by Vedanta-owned Sterlite Copper seeking permission to reopen its massive copper smelter in the southern port city of Thoothukudi.

- The Ministry of Environment, Forest and Climate Change (MoEFCC) has developed the criteria of categorization of industrial sectors **based on the Pollution Index**.
- Pollution Index is a function of the emissions (air pollutants), effluents (water pollutants), hazardous wastes generated and

consumption of resources.

- The Pollution Index PI of any industrial sector is a number from 0 to 100 and the **increasing value of PI denotes the increasing degree of pollution load from the industrial sector.**
- The following criteria on the range of Pollution Index for the purpose of categorization of industrial sectors are finalized.
- **Red category**– Industrial Sectors having **Pollution Index score of 60 and above.** These are **severe polluting industries.** Total 60 industries including sugar, thermal power plants, paints and others are under in it. No Red category of industries shall normally be permitted in the ecologically fragile area / protected area.
- **Orange category**– Industrial Sectors having Pollution Index score of 41 to 59. They **moderately polluting industries.** Total 83 industries like coal, washeries and automobile servicing are placed under it.
- **Green category**– Industrial Sectors having Pollution Index score of 21 to 40. They are **significantly low polluting industries.** Total 63 industries are under in it.
- **White category** – Industrial Sectors having Pollution Index score including & upto 20. They are **non-polluting industries.** Total 30 industries are under in it. These industries are exempted from requirement of environmental clearance.

Topic 24: Lokayukta

Importance for Prelims: Polity



The Nagaland government has moved the Supreme Court seeking removal of the Nagaland Lokayukta for acts of impropriety.

- The Lokayukta is an **anti-corruption authority constituted at the state level.**
- It investigates **allegations of corruption and mal-administration against public servants** and is tasked with speedy redressal of public grievances.
- The origin of the Lokayukta can be **traced to the Ombudsmen in Scandinavian countries.**
- The Administrative Reforms Commission, (1966-70), had recommended the creation of the Lokpal at the Centre and

Lokayukta in the states.

- The Lokayukta is **created as a statutory authority under Lokpal and Lokayukta Act, 2013 to enable it to discharge its functions independently and impartially.**
- The lokayukta and upalokayukta are **appointed by the governor of the state.**
- While appointing, the governor in most of the states consults (a) the chief justice of the state high court, and (b) the leader of Opposition in the state legislative assembly.
- **Judicial qualifications are prescribed for the lokayukta in the States** of Uttar Pradesh, Himachal Pradesh, Andhra Pradesh, Gujarat, Orissa, Karnataka and Assam. But no specific qualifications are prescribed in the states of Bihar, Maharashtra and Rajasthan.
- In most of the states, **the term of office fixed for lokayukta is of 5 years duration or 65 years of age, whichever is earlier.** He is not eligible for reappointment for a second term.
- The **recommendations made by the lokayukta are only advisory** and not binding on the state government.

Topic 25: Entity for retail payments systems

Importance for Prelims: Economy



Reserve Bank of India has **unveiled the framework for setting up of pan-India Umbrella Entity** for Retail Payments

- The entity will be tasked with **setting up, managing, and operating new payment systems** in the retail space. It may operate as a ‘for-profit’ organisation, the RBI said.
- The entity formed shall be a **company incorporated in India under the Companies Act, 2013**, and may be a ‘for-profit’ or a Section 8 Company as may be decided by it.
- According to the RBI guidelines, the entity will have minimum paid-up capital of Rs 500 crore, with no single promoter group holding over 40 per cent investment in the capital.
- Based on the framework, payments system operators, as well as payments and technology service providers with three years of experience, are eligible to apply.

Topic 26: Asian development bank

Importance for Prelims: IR



Asian Development Bank

Election Commissioner Ashok Lavasa, who was next in line to become the chief election commissioner in 2021 resigned from his post to join the Asian Development Bank.

- ADB was **conceived in the early 1960s** as a **financial institution** that would be **Asian in character and foster economic growth and cooperation** in one of the poorest regions in the world.
- A resolution passed at the first Ministerial Conference on Asian Economic Cooperation held by the United Nations Economic Commission for Asia and the Far East in 1963 set that vision on the way to becoming reality.
- The **Philippines capital of Manila** was chosen to host the new **institution**, which opened on 19 December 1966.
- The Asian Development Bank (ADB) envisions a **prosperous, inclusive, resilient, and sustainable Asia and the Pacific**, while sustaining its efforts to **eradicate extreme poverty in the region**.

- ADB assists its members, and partners, by providing loans, technical assistance, grants, and equity investments to promote social and economic development.
- ADB maximizes the development impact of its assistance by facilitating policy dialogues, providing advisory services, and mobilizing financial resources through co-financing operations that tap official, commercial, and export credit sources.
- From 31 members at its establishment in 1966, ADB has grown to encompass **68 members of which 49 are from within Asia and the Pacific and 19 outside.**

Topic 27: National Cancer Registry Programme Report 2020

Importance for Prelims: Reports



National Cancer Registry Programme Report 2020 has been released by the Indian Council of Medical Research

- It estimates there will be 13.9 lakh cases of cancer in India in 2020, and that this number is likely to rise to 15.7 lakh by 2025.
- According to the data, **tobacco-related cancers will account for 27.1 per cent of India's cancer burden** in 2020, followed by gastrointestinal cancer (19.7 per cent) and cancer of the cervix uteri (5.4 per cent).
- The NCRP was set up by the ICMR in 1982 to “**create evidence on the burden, pattern and distribution of cancer**”, for survival and management of the disease.
- Cancers of the lung, mouth, stomach and oesophagus were the most common among men, while cancers of breast and cervix uteri were the most common among women, finds the report. It also says incidence of breast cancer is on the rise while cervical cancer is on the decline.

Topic 28: Clean Plates Campaign

Importance for Prelims: IR



China's President Xi Jinping called on his country's citizens to drastically **cut down on food waste in a new initiative** called the 'Clean Plates Campaign'.

- The push came as the **Covid-19 pandemic, devastating floods and worsening relations with major international partners** have raised fears about food shortage in the world's most populous country.

Topic 29: Reservations in job

Importance for Prelims: Polity

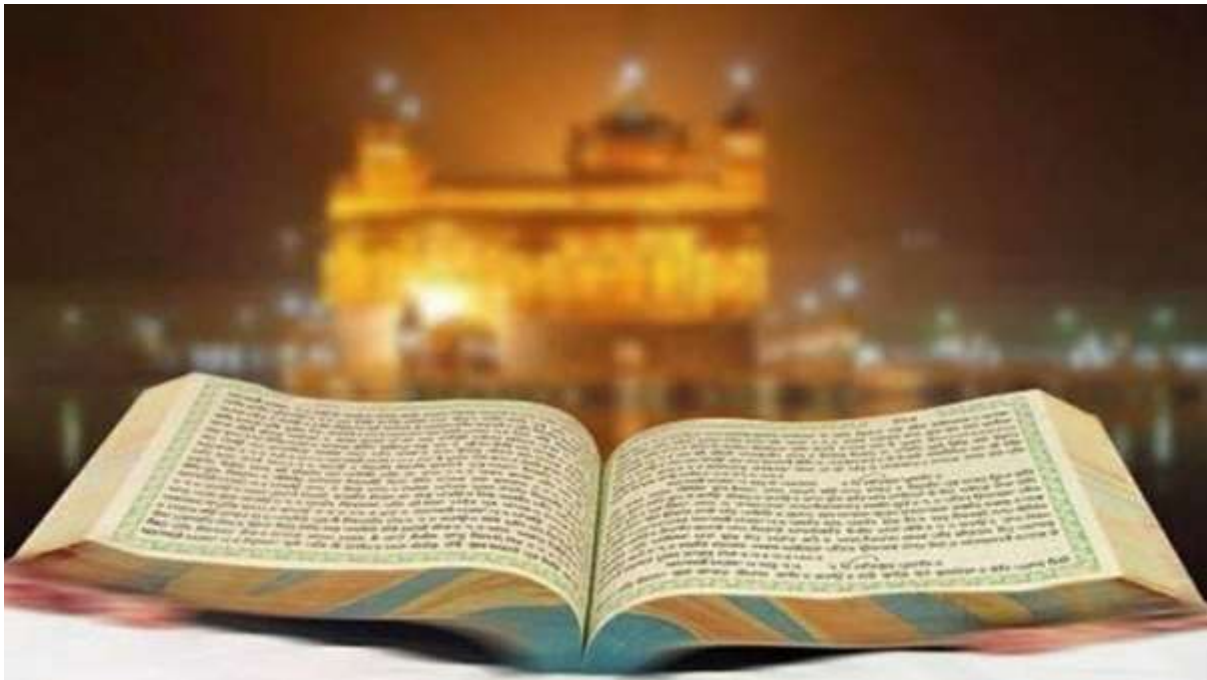


The Madhya Pradesh government's decision to give government jobs only to “children” of the state is likely to trigger a fresh debate on the fundamental right to equality of citizens.

- Article 16(2) of the Constitution states that “ **no citizen shall, on grounds only of religion, race, caste, sex, descent, place of birth, residence or any of them, be ineligible for, or discriminated** against, in respect of any employment or office under the State.”
- The Supreme Court has, in its rulings since 1955, underlined the **distinction between domicile status and place of birth.**
- Domicile or status of residence is a fluid concept that can change from time to time, unlike place of birth. The place of birth is one of several grounds on which domicile status is conferred.

Topic 30: Guru Granth Sahib

Importance for Prelims: Arts and culture



Prime Minister has greeted the people on the auspicious occasion of the first Parkash Purab of the Sri Guru Granth Sahib.

- The Guru Granth Sahib is a **collation of many hymns, poems, shabads** and other writings from many different scholars, including the **Gurus and Hindu and Muslim writers**.
- The Guru Granth Sahib is not just the **holy scripture of Sikhism**. It is also considered as the **living Guru**.
- Before Guru Gobind Singh died, he declared that there would be **no more human Gurus and that the Guru Granth Sahib would be the Eternal Guru**

Significance of the Guru Granth Sahib

- It contains the words spoken by the Gurus. This is known as

Gurbani, which means ‘from the Guru’s mouth’.

- It is believed to be the word of God and is therefore infallible.
- It is **written in Gurmukhi**. This is the script the Punjabi language is written in.
- Many of **Guru Nanak’s** hymns and prayers were preserved and **compiled by Guru Angad and Guru Arjan**. This collection became known as the **Adi Granth**.
- The Adi Granth also included writings from Hindu and Muslim writers who believed in the oneness of God. Some of these writers were from lower castes, which show the inclusiveness of Sikhism.
- The **Guru Granth Sahib was completed in 1604 and installed in the Golden Temple**. This original copy is written in many different languages, reflecting its many different authors.

Topic 31: National Recruitment Agency

Importance for Prelims: Government organization



Union Cabinet has decided to set up a National Recruitment Agency (NRA).

- The proposed NRA will conduct a common preliminary examination for various recruitments in the central government.
- As of now, aspirants have to take different exams that are conducted by various agencies for central government jobs.
- Initially, NRA will organize a CET to screen/shortlist candidates for the Group B and C (non -technical) posts, which are now being conducted by the Staff Selection Commission (SSC), Railways Recruitment Board (SSC) and Institute of Banking Personnel Selection (IBPS). Later on, more

exams may be brought under it.

- The **agency will have representatives from SSC, IBPS and RRB**. The test will be conducted for three levels: graduate, higher secondary (12th pass) and the matriculate (10th pass) candidates.
- However, the **present recruitment agencies– IBPS, RRB and SCC will remain in place**.
- Based on the screening done at the CET score level, final selection for recruitment shall be made through separate specialized Tiers (II, III, etc.) of examination which shall be conducted by the respective recruitment agencies. The curriculum for CET would be common.
- The CET score of a candidate shall be valid for a period of three years from the date of declaration of the result.

Topic 32: Fair and Remunerative Price and MSP

Importance for Prelims: Agriculture

THE CHANGE

Kharif MSP of major crops for 2020-21
(in ₹/quintal)

	FY20	FY21	%chg
Paddy (common)	1,815	1,868	2.92
Paddy (Grade 'A')	1,835	1,888	2.89
Jowar (Hybrid)	2,550	2,620	2.75
Bajra	2,000	2,150	7.50
Ragi	3,150	3,295	4.60
Maize	1,760	1,850	5.11
Arhar(Tur)	5,800	6,000	3.45
Moong	7,050	7,196	2.07
Urad	5,700	6,000	5.26
Groundnut	5,090	5,275	3.63
Soybean (yellow)	3,710	3,880	4.58
Cotton (medium staple)	5,255	5,515	4.95
Cotton (long staple)	5,550	5,825	4.95

Source: Ministry of Agriculture

Cabinet Committee on Economic Affairs has approved the Fair and Remunerative Price (FRP) of sugarcane payable by sugar mills for 2020-21 sugar season (October-September) Tamil Nadu Chief Minister urges Centre to hike minimum support price for milling copra to ₹125 a kg

Minimum support price

- MSP is the **minimum price paid to the farmer for procuring food crops.**
- It offers an assurance to farmers that their realisation for the agricultural produce will not fall below the stated price.
- The government uses the MSP as a **market intervention tool to incentivise production of a specific food crop** which is in short supply.
- It also protects farmers from any sharp fall in the market price of a commodity.
- MSPs are usually **announced at the beginning of the sowing season and this helps farmers make informed decisions on the crops they must plant.**
- MSP is computed on **the basis of the recommendations made by the Commission for Agricultural Costs and Prices (CACP).**
- It considers factors such as the cost of production, change in input prices, market price trends, demand and supply, and a reasonable margin for farmers.
- The Centre has increased the MSP of kharif crops for 2020-21 crop year in line with the **principle of fixing MSPs at a level which is at 1.5 times the cost of production** that was announced in Union Budget 2018-19.
- **Concerted efforts were made over the last few years to realign the MSPs in favour of oilseeds, pulses and coarse**

cereals to encourage farmers shift to larger area under these crops and adopt best technologies and farm practices, **to correct demand – supply imbalance.**

- The added focus on nutri-rich nutri-cereals is to incentivize its production in the areas where rice-wheat cannot be grown without long term adverse implications for groundwater table.
- Crops covered under MSP: **Paddy, Jowar, Bajra, Ragi, Maize, Tur, Moong, Urad, groundnut, sunflower seed, soyabean, nigerseed, Cotton and sesamum**
- Besides, the **Umbrella Scheme “PradhanMantriAnnadataAaySanraksHanAbhiyan” (PM-AASHA)** announced by the government in 2018 will aid in **providing remunerative return to farmers for their produce.**
- The Umbrella Scheme consists of three sub-schemes i.e. Price Support Scheme (PSS) Price Deficiency Payment Scheme (PDPS) Private Procurement & Stockist Scheme (PPSS) on a pilot basis.

Fair and remunerative price (FRP)

- **Fair and remunerative price (FRP)** is the minimum price at which rate sugarcane is to be purchased by sugar mills from farmers.
- The FRP is **fixed by Union government** on the basis of recommendations of Commission for Agricultural Costs and Prices (CACP). The ‘FRP’ of sugarcane is **determined under**

Sugarcane (Control) Order, 1966.

- Recommended FRP is arrived at by taking into account various factors such as cost of production, demand-supply situation, domestic & international prices, inter-crop price parity etc.
- This will be **uniformly applicable all over the country**.
- Besides FRP, some states such as Punjab, Haryana, Uttarakhand, UP and TN announce a State Advised Price, which is generally higher than the FRP.
- The price fixed by the **central government is the ‘minimum price’ and the one fixed by state government is the ‘advised price’** which is always higher than the ‘minimum price’ fixed by the center.

Topic 33: CAMPA

Importance for Prelims: Environment

ABOUT CAMPA FUND

➤ The Campa fund is a national-level corpus fund where the compensation amount collected from user agencies like industries when forestland is diverted for non-forest purposes is deposited



➤ Fund is to be utilized for compensatory afforestation activities, protection of forests, forest-related infrastructure development, assisted natural regeneration of forests, etc.

Aiming to maximize forest carbon stock by more tree plantation, Union Environment Minister urged the states to use CAMPA funds exclusively for afforestation and not for payment of salaries.

- Whenever forest land is diverted for non-forest purposes, it is **mandatory under the Forest (Conservation) Act, 1980 that an equivalent area of non forest land has to be taken up for compensatory afforestation.**
- In addition to this, funds for raising the forest are also to be imposed on whomsoever is undertaking the diversion. The land chosen for afforestation, if viable, must be in close proximity of reserved or protected forest for ease of management by forest department.
- In 2002, the **Supreme Court (SC) ordered that a Compensatory Afforestation Fund** had to be created in which

all the contributions towards **compensatory afforestation and net present value of land had to be deposited.**

- In April 2004, Ministry of Environment and Forests **constituted Compensatory Afforestation Fund Management and Planning Authority (CAMPA)** to overlook and manage the Compensatory Afforestation Fund (CAF) as directed by the SC. The authority was termed as the ‘custodian’ of the fund.
- Further in 2009, the government ordered that **State CAMPAs had to be set up** to boost compensatory afforestation at state level and also manage Green India Fund.
- Despite all these efforts, CAG report in 2013 revealed that the **CAMPA funds remained unutilised.** The report stated that between 2006 and 2012, CAF with ad hoc CAMPA grew from ₹ 1,200 crores to ₹ 23,607 crores.

Statutory backing

- **Compensatory Afforestation Fund Act, 2016 came into force from 2018.**
- The Act established a **National Compensatory Afforestation Fund** under the **Public Account of India** and State Compensatory Afforestation Fund under the Public Account of each state.
- The payments made for compensatory afforestation, net present value and others related to the project will be deposited in the fund.

- The **State Funds** will receive **90%** of the payments while **National Fund** will receive remaining **10%**. These funds will be regulated by State and National CAMPA.
- The Ministry also stressed that the **fund had to be used for important needs such as Compensatory Afforestation, Catchment Area Treatment, Wildlife Management**, Assisted Natural Regeneration, **Forest Fire Prevention** and Control Operations, Soil and Moisture Conservation Works in the forest, Improvement of Wildlife Habitat, Management of Biological Diversity and Biological Resources, **Research in Forestry and Monitoring of CAMPA works and others.**

Topic 34: Vaccine nationalism

Importance for Prelims: IR

Importance for Mains: IR



Even before the end of final stage human trials or regulatory approval, **several wealthier countries** like Britain, France, Germany and the US have **entered into pre-purchase agreements** with Covid-19 vaccine manufacturers

- When a **country manages to secure doses of vaccines for its own citizens or residents** and prioritises its own domestic markets **before they are made available in other countries** it is known as ‘vaccine nationalism’.
- This is done **through pre-purchase agreements** between a

government and a vaccine manufacturer.

- In order to **bring about equitable and broad access**, WHO, the Coalition for Epidemic Preparedness Innovations, and Gavi have come up with an initiative known as **“Covax Facility”**.
- The facility aims to procure at least two billion doses of Covid-19 vaccines by the end of next year for deployment and **distribution mainly in the low- and middle-income countries**

Topic 35: Carbon neutrality

Importance for Prelims: Environment



Ladakh, Leh and Kargil region will be developed and declared to be a carbon neutral region

- Carbon neutrality means **every ton of anthropogenic CO₂ emitted is compensated with an equivalent amount of CO₂ removed**, according to World Resources Institute.
- In order to **limit global warming to 1.5 degrees Celsius, carbon neutrality by mid-21st century is essential**. This target is also **laid down in the Paris agreement** signed by 195 countries, including the EU.
- Carbon sink is any system that absorbs more carbon than it emits. The main **natural carbon sinks are soil, forests and**

oceans.

- To date, no artificial carbon sinks are able to remove carbon from the atmosphere on the necessary scale to fight global warming.
- **The carbon stored in natural sinks such as forests is released into the atmosphere through forest fires, changes in land use or logging.**
- Another way to reduce emissions and to pursue carbon neutrality is to offset emissions made in one sector by reducing them somewhere else. This can be done through investment in **renewable energy, energy efficiency or other clean, low-carbon technologies.**

Topic 36: National River Conservation Plan

Importance for Prelims: Environment

ACT NOW

- 1** Prepare action plans within two months to make all polluted river stretches fit at least for bathing within six months
- 2** Action plans to be monitored by four-member River Rejuvenation Committee (RRC)
- 3** RRC will have authority to recover the cost of rejuvenation in line with the 'Polluter Pays Principle'
- 4** Identify polluting sources and the status of sewage, effluent, and central effluent treatment plants and solid waste management and processing facilities



TOP 5 STATES WITH MOST POLLUTED RIVER STRETCHES

Maharashtra	53
Assam	44
MP	22
Kerala	21
Gujarat	20

- 5** The chief secretary of the state will be personally accountable for the failure to formulate action plans
- 6** Address issues related to ground water extraction, adopt good irrigation practices, protect and manage Flood Plain Zones (FPZ), harvest rain water, maintain minimum environmental flow of rivers, and plan plantation on both sides of rivers
- 7** Set up biodiversity parks on flood plains by removing encroachments
- 8** Action plans to be routinely scrutinized by CPCB

There is inordinate delay in completion of projects to control pollution in two rivers Tapi and Sabarmathi in Gujarat, which is part of the National River Conservation Plan.

- The river cleaning programme in the country initiated with the launching of the Ganga Action Plan (GAP) in 1985.
- The **Ganga Action Plan was expanded to cover other rivers under National River Conservation Plan (NRCP) in the year 1995.**
- The pollution abatement works are implemented on a **cost sharing basis between the Centre and State Governments.**
- The works include; **collection, transportation and treatment of municipal sewage, River Front Development (RFD), Low**

Cost Sanitation (LCS), Electric Crematoria, Improved Wood Based Crematoria etc.

- Prevention and control of industrial pollution is being addressed by the Central and State Pollution Control Boards/Pollution Control Committee.
- The objective of NRCP is to **improve the water quality of the rivers**, which are the major water sources in the country, through the implementation of pollution abatement works.

Topic 37: Swachh Survekshan 2020

Importance for Prelims: Government scheme

Q1		Q2			
Rank	Cities	Score	Rank	Cities	Score
1	Indore	1632.72	1	Indore	1653.10
2	Bhopal	1523.31	2	Rajkot	1592.62
3	Surat	1497.20	3	Navi Mumbai	1515.65
4	Nashik	1468.85	4	Vadodara	1514.51
5	Rajkot	1713.00	5	Bhopal	1499.23

The results of the fifth edition of the nationwide annual cleanliness survey, ‘Swachh Survekshan 2020,’ are out and Madhya Pradesh’s Indore has yet again made it as India’s cleanest city.

- The **Ministry of Housing and Urban Affairs (MoHUA)** has announced the results of Swachh Survekshan 2020
- The Swachh Survekshan **rank cities across the country in the categories of cleanliness and sanitation** on four parameters — direct observations, citizen feedback, service-level progress and certification with 1,500 marks allotted for each category.
- It was launched as **part of the Swachh Bharat Abhiyan**, which aimed to make India clean and free of open defecation by 2 October 2019.

- The first survey was **undertaken in 2016** and covered 73 cities; by 2019 the survey had grown to cover 4237 cities and was said to be the largest cleanliness survey in the world.
- The surveys are carried out by the **Quality Council of India**.

Topic 38: Science and Technology Indicators (STI), 2018

Importance for Prelims: Reports

Science and Technology Indicators (STI), 2018, a **periodic compendium of the state of scientific research in India** was recently released.

- It is prepared by **National Science and Technology Management Information System**, a division of the Department of Science Technology.
- It is based on data provided by a range of scientific establishments across India.

Findings:

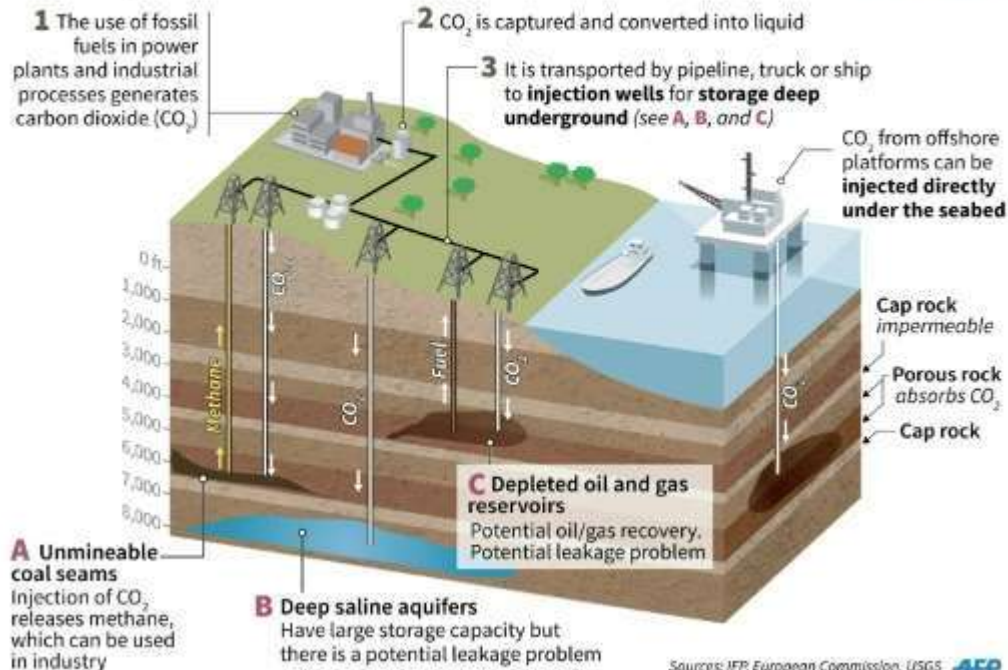
- India's **private sector research companies appear to employ a larger proportion of women in core research and development** activities than government-funded major scientific agencies
- The 2018 indicators **reiterate the historic trend of India's scientists being overwhelmingly men.**

Topic 39: Carbon Capture, Utilisation & Storage

Importance for Prelims: Science and tech

How carbon capture and storage works

Designed to prevent the release into the atmosphere of CO₂ emissions from fossil fuel use



Researchers interested in translational research on Carbon Capture, Utilisation, and Storage (CCUS) have a major opportunity to accelerate and mature their technology and research activities as solutions to the growing problem of global climate change.

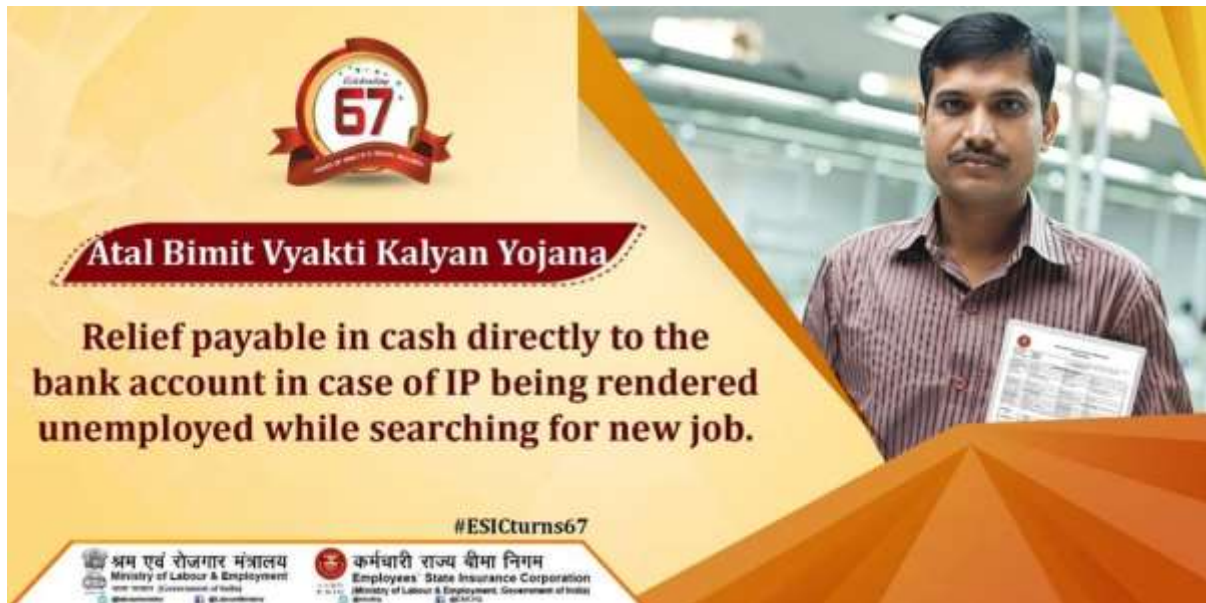
- Carbon capture, utilization and storage (CCUS), also referred to as carbon capture, utilization and sequestration, is a **process that captures carbon dioxide emissions from sources like coal-fired power plants and either reuses or stores it so it will not enter the atmosphere.**
- Carbon dioxide storage in geologic formations includes oil and gas reservoirs, unmineable coal seams and deep saline reservoirs

-structures that have stored crude oil, natural gas, brine and carbon dioxide over millions of years.

- CCUS is one of the identified **innovation challenges in the Mission Innovation (MI) Programme**, a global initiative of 24 countries and the European Union to accelerate the global clean energy innovation in which the Department of Science & Technology (DST) is an active partner.

Topic 40: Atal Bimit Vyakti Kalyan Yojana

Importance for Prelims: Schemes



Atal Bimit Vyakti Kalyan Yojana has been extended by one more year to June 30, 2021 and Centre announced that workers can directly claim 50 per cent of the average wage as against 25 per cent earlier, payable up to 90 days of joblessness

- **The ESI Corporation** has launched a scheme named ‘Atal Bimit Vyakti Kalyan Yojana’ (ABVKY)
- It aims to **financially support those who lost their jobs or rendered jobless** for whatsoever reasons due to changing employment pattern.
- Its **beneficiaries will be insured persons covered under Employees’ State Insurance Act, 1948** for period of two years continuously.
- It provides relief to the **extent of 25% of the average per day**

earning during the previous four contribution periods to **be paid up to maximum 90 days of unemployment once in lifetime of the IP** on submission of claim in form of an Affidavit.

- The Scheme has been made effective from July 2018.

Topic 41: Harit path app

Importance for Prelims: Government initiative



The **National Highways Authority of India (NHAI)**, a public sector undertaking under the Ministry of Road Transport and Highways has developed a **mobile App called 'Harit Path'**

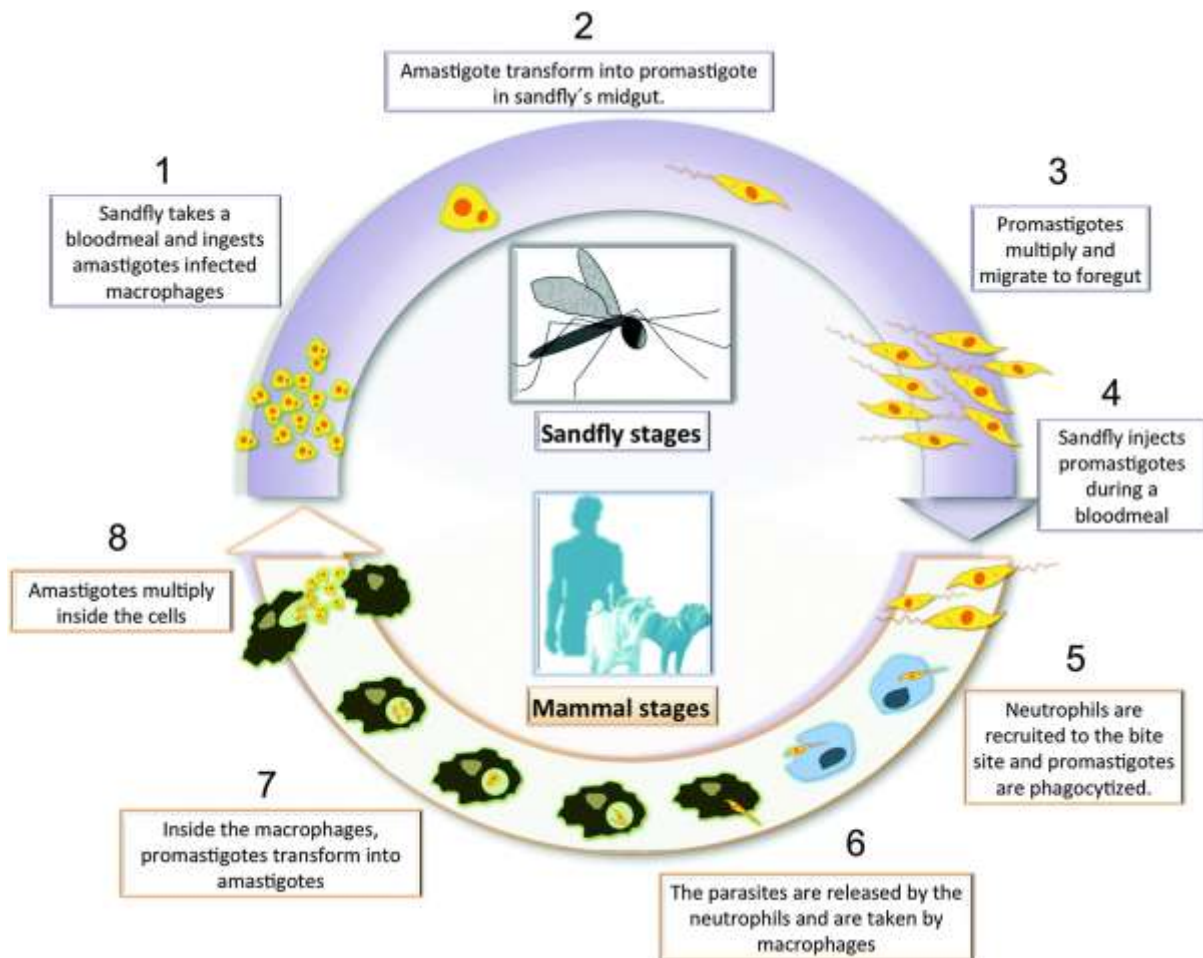
- It is mobile app to **monitor the plantations through geo-tagging and web based GIS** enabled monitoring tools.
- The app has been developed to monitor location, growth, species details, maintenance activities, targets and achievements of each of its field units for each and every plant under all plantation projects.
- To commemorate 25 years of its service to the nation, the National Highways Authority of India has also recently undertaken **'Harit Bharat Sankalp', a nation-wide plantation**

drive which is in line with NHAI's commitment to promote environment protection and sustainability.

- Under this initiative, the NHAI planted over 25 lakh plants in 25 days along the stretches of the national highways between July 21 and August 15, 2020.

Topic 42: Kala- Azar and Nanomedicine

Importance for Prelims: Science and tech



Scientists from the Institute of Nano Science & Technology (INST), Mohali, an autonomous institute of the Department of Science & Technology have developed an oral nanomedicine for combating visceral leishmaniasis.

- Leishmaniasis is a disease caused by any species of **Leishmania parasite**.
- It is **transmitted by the bite of an infected female sandfly**. I
- In most cases, a person who is infected by the parasite has

neither symptoms nor signs of infection and is not considered to have leishmaniasis.

- Although there are some 20 different parasites that cause the disease, there are only three different types of leishmaniasis.
- The most common type (CL) **causes skin lesions**, mainly nodules or painless ulcers.
- The second type (VL, also known as **kala-azar**) is a **life-threatening disease** that causes anaemia (deficiency in the number or quality of red blood cells), fever, enlarged liver, enlarged spleen and significant weight loss.
- The third type (MCL, or **mucosal leishmaniasis** alone) destroys the mucous membranes of the nose, mouth and throat cavities and surrounding tissues.
- It is one of the **most neglected tropical diseases** and around 95 % of cases are reported from Bangladesh, Brazil, China, Ethiopia, India, Kenya, Nepal, Somalia, South Sudan, and Sudan.

Nano-medicine

- Nanomedicine is the **application of nanotechnology**(the engineering of tiny machines) to the prevention and treatment of disease in the human body.
- It uses the **properties developed by a material at its nanometric scale 10 m** which often differ in terms of physics, chemistry or biology from the same material at a bigger scale.

- Moreover, the nanometric size is also the scale of many biological mechanisms in the human body **allowing nanoparticles and nanomaterials to potentially cross natural barriers to access new sites of delivery and to interact with DNA** or small proteins at different levels, in blood or within organs, tissues or cells.
- At the nano-scale, the **surface-to-volume ratio is such that the surface properties are becoming an intrinsic parameter** of the potential actions of a particle or material.
- **Coating of the particles and functionalization of their surfaces** are in this way extremely common to increase the biocompatibility of the particle and its circulation time in the blood, as well as to ensure a highly selective binding to the desired target.
- Nanomedicine has the potential to enable early detection and prevention and to drastically improve diagnosis, treatment and follow-up of many diseases including cancer.