

WEEKLY CURRENT AFFAIRS MAGAZINE for



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PUNE Address:
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 Mob.: 91453 39324 / 25

THANE

UPSC **MPSC** **PIONEER ACADEMY** **NDA** **CDS**

THANE Address:
 201/202, 2nd Floor, Lalzer Arcade, Raghoba Shankar Road, Chendani, Thane(W) - 400 601.
 Mob.: 75060 10635

DADAR

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 PUNE | THANE | DADAR | ANDHERI | KALYAN | PIMPRI-CHINCHWAD

DADAR Address:
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 Mob.: 93241 69627 / 91375 41508

ANDHERI

UPSC **MPSC** **PIONEER ACADEMY** **NDA** **CDS**

ANDHERI Address:
 3rd Flr, Syndicate Chamber, Above Vaibhav Restaurant, Near To Better Home Hotel, Opp. Andheri (E) Station, Andheri (E) - 400 601
 Mob. 84518 55673 / 70302 92316

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KALYAN Address:
 2nd Flr, Suyash Plaza, Opp. Railway Station, Near Deepak Hotel, Kalyan (W) - 421 301
 Mob.: 81691 40960

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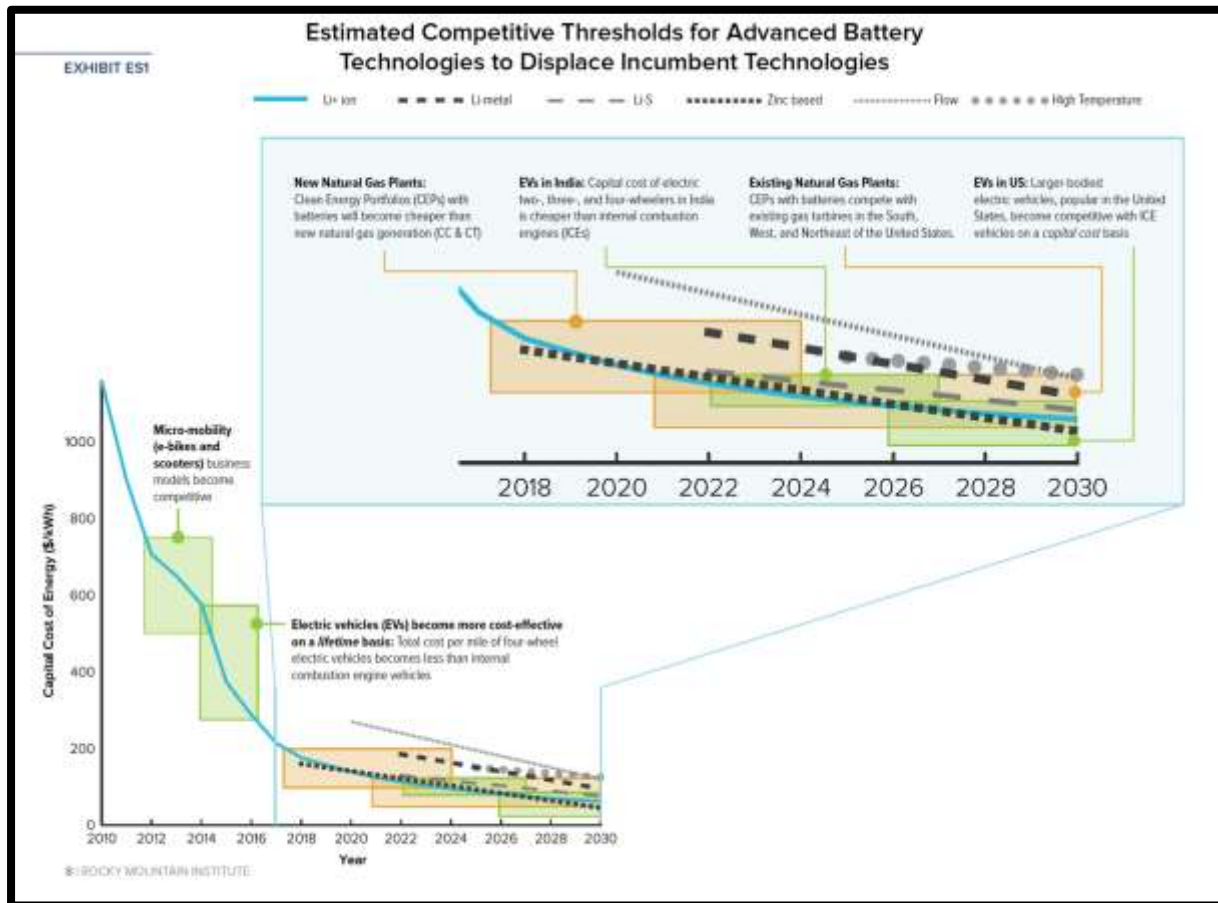
PIMPRI CHINCHWAD Address:
 3rd Flr, Kunal Plaza, Mumbai Pune Road, Chinchwad Station, Chinchwad, Pune - 411019
 Mob.: 9975459324 / 9503459325

Email : pioneeracademypace@gmail.com
 Website: www.pioneeracademypace.com / .in
 Contact : +91 75060 10635

Success is born of action...

Topic 1. BREAKTHROUGH IN BATTERY TECHNOLOGY

Importance for Prelims: Science and Tech



Shareholders of California-based Quantum Scape Corp, a battery startup backed by Volkswagen AG, have approved a multibillion-dollar pay package for Chief Executive Officer Jagdeep Singh, who could receive stock options potentially valued at \$2.3 billion, subject to the company meeting some performance milestones.

- **Quantum Scape’s solid-state battery** — lithium metal with a solid electrolyte separating the two electrodes — is seen as an exceptionally bright prospect in an increasingly crowded space.
- Earlier efforts to build a solid-state separator (electrolyte) capable of working with lithium metal had to compromise on aspects such as the cycle life and operating temperature of the battery, and the issue of excess lithium deposits on the anode.

- Quantum Scape claims to have circumvented this: its use of a solid state separator technology eliminates the side reaction between the liquid electrolyte and the carbon/graphite in the anode of conventional lithium-ion cells.
- Volkswagen plans to have production running for solid-state batteries by 2025 via the partnership with Quantum Scape. Solid-state batteries The energy density of lithium-ion cells used in today's mobile phones and electric vehicles is nearly four times higher than that of older-generation nickel-cadmium batteries.
- Lithium-ion batteries use aqueous electrolyte solutions, where ions transfer to and fro between the anode (negative electrode generally made of graphite) and cathode (positive electrode made of lithium), triggering the recharge and discharge of electrons.
- Despite improvements in technology over the last decade, issues such as long charging times and weak energy density persist. While lithium-ion batteries are seen as sufficiently efficient for phones and laptops, they still lack the range that would make EVs a viable alternative to internal combustion engines.
- One major problem is that lithium metal is extremely reactive.
- The main form of lithium corrosion are dendrites, which are branched lithium structures that grow out from the electrode and can potentially pierce through the separator and on to the other end, short-circuiting the cell.
- In current lithium-ion batteries, in which the electrolyte is a flammable liquid, dendrite formation can trigger a fire.
- Quantum Scape says its solid-state lithium-metal battery replaces the polymer separator used in conventional lithium-ion batteries with a solid-state separator.

- The replacement of the separator enables the use of a lithium-metal anode in place of the traditional carbon/graphite anode.
- The lithium metal anode is more energy-dense than conventional anodes, which allows the battery to store more energy in the same volume, according to the company.
- The Quantum Scape design is supposed to be ‘anode-free’ in that the battery is manufactured in a discharged state, and the negative electrode forms in situ on the first charge.
- Key advantages The advantages of the solid-state battery technology include higher cell energy density (by eliminating the carbon anode), lower charge time (by eliminating the need to have lithium diffuse into the carbon particles in conventional lithium-ion cells), ability to undertake more charging cycles and thereby a longer life, improved safety Lower cost could be a game-changer, given that at 30 per cent of the total cost, battery expenses are a key driver of the vehicle costs.

Topic 2. GST COUNCIL RECONSIDERING RATES ON TEXTILES

Importance for Prelims: Economy

GST Council defers tax rate increase on textiles

- The GST Council in its 45th meeting in September had recommended making certain rate changes for footwear and textiles to correct the inverted duty structure.
- An inverted duty structure arises when the taxes on output or final product is lower than the taxes on inputs, creating an inverse accumulation of input tax credit which in most cases has to be refunded.
- Inverted duty structure has implied a stream of revenue outflow for the government prompting the government to relook the duty structure.
- For footwear, the government refunds around Rs 2,000 crore in a year.
- In November, the Finance Ministry notified a uniform 12% rate for manmade fibre (MMF), yarn, fabrics and apparels, along with a 12% uniform rate for footwear.
- The rate hike was notified to be made effective from January 1.
- At present, tax rate on manmade fibre, yarn and fabrics is 18%, 12% and 5%, respectively.
- Apparel and clothing up to Rs 1,000 per piece currently attracts 5% GST.
- Synthetic and artificial yarn have been changed to 12% but natural yarn like cotton, silk, wool yarn are still in 5% slab.

Topic 3. IMMOVABLE PROPERTY RETURNS FOR IAS, IPS, IFS OFFICIALS

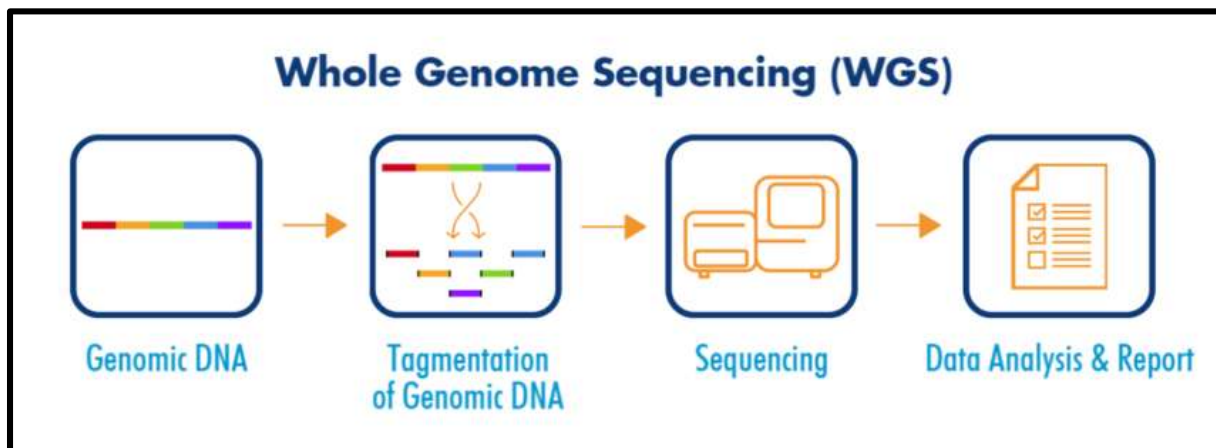
Importance for Prelims: Economy

By Jan 31, IAS, IPS, IFS officials have to file returns on immovable property

- The Centre has prescribed a timeline in pay rules for filing current and pending Immovable Property Returns for Indian Administrative Service, Indian Police Service and Indian Forest Service to get empanelment or appointment to next level.
- Serving and retired bureaucrats say that filing immovable property returns is one of the necessary conditions for empanelment; however, it was not in 'formal rules' creating a lot of miscommunication and litigations.
- According to a notification by the Department of Personnel and Training, a note has been added to the IAS, IPS and IFS pay rules of 2016, and the new rules have been notified.
- The note says members of the three all India services will have to file the returns for the previous year before January 31, for being considered for appointment in the next level of pay in the pay matrix.
- An all-India service officer must file IPR in their cadre State if they are posted there.
- If they are on Central deputation, their filing is to be done there. An officer must send a copy to Centre, in case of State files and to the State, if Centre files.
- However, the process will be completed only when the State concerned sends it to Centre or vice versa.
- Such an act is noted in ACR and also during the time of empanelment appointment to next level of pay in the pay matrix.

Topic 4. WHOLE GENOME SEQUENCING (WGS)

Importance for Prelims: Science and Tech



More Omicron cases detected in TN; fresh curbs imposed

- Whole genome sequencing is the process of determining the complete DNA sequence of an organism's genome at a single time.
- This entails sequencing all of an organism's chromosomal DNA as well as DNA contained in the mitochondria and, for plants, in the chloroplast.
- In practice, genome sequences that are nearly complete are also called whole genome sequences.
- The whole genome sequencing relies on new technologies that allow rapid sequencing of the entire genome in a matter of a few days.
- **Genome Sequencing:** Genome Sequencing means deciphering the exact order of base pairs in an individual.
- In this particular piece of DNA, an adenine (A) is followed by a guanine (G), which is followed by a thymine (T), which in turn is followed by a cytosine (C), another cytosine (C), and so on.

Topic 5. FLOATING RATE BOND (FRB)

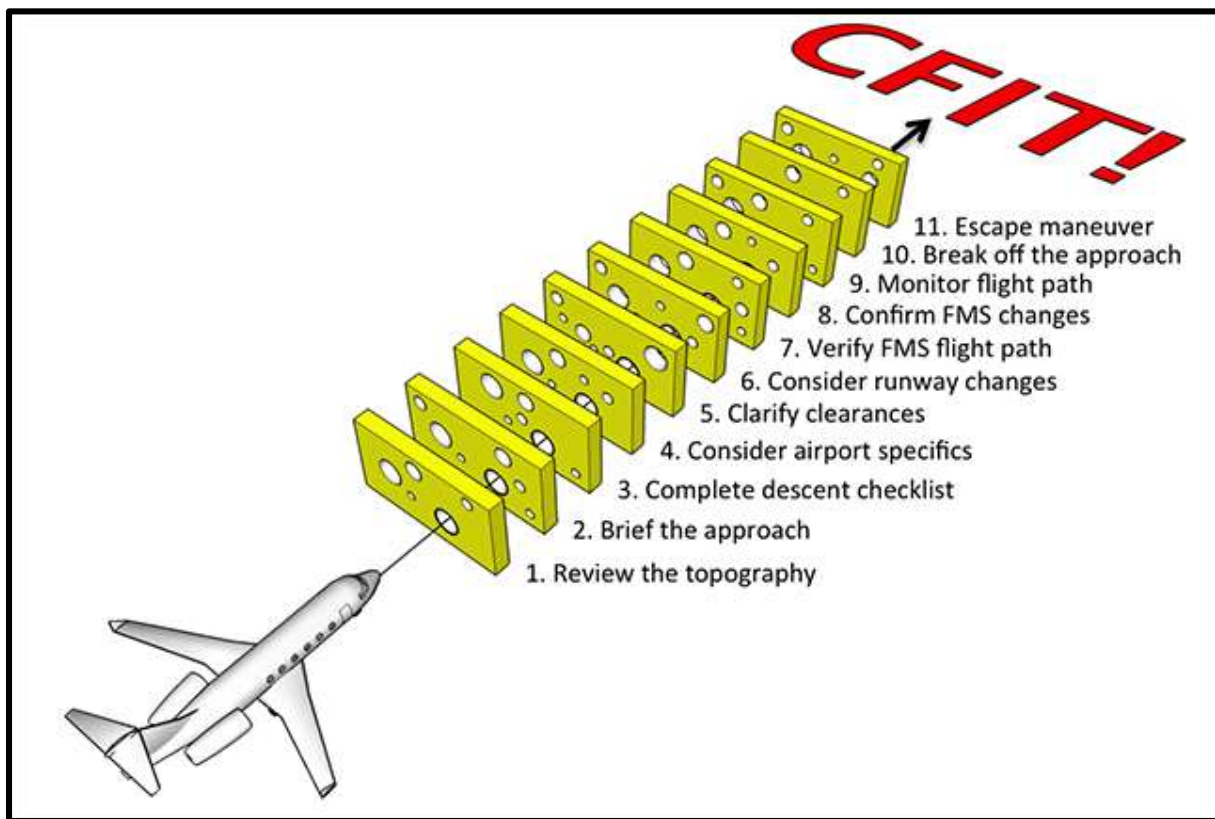
Importance for Prelims: Economy

RBI rejects all bids for 10-year G-Sec, FRB

- A floating rate bond is a debt instrument that does not have a fixed coupon rate, but its interest rate fluctuates based on the benchmark the bond is drawn.
- Benchmarks are market instruments that influence the overall economy.
- For example, repo rate or reverse repo rate can be set as benchmarks for a floating rate bond.
- FRBs were first issued in September 1995 in India.
- The rate of interest of a floating rate bond is linked to a benchmark rate and is reset at a regular interval.
- Interest rate risk is largely mitigated as these bonds will pay higher return when prevailing rates are high.
- There is no certainty of the future stream of income when investing in a floating rate bond.
- The best time to buy floating rate bonds is when rates are low and are expected to rise.

Topic 6. “CONTROLLED FLIGHT INTO TERRAIN” (CFIT)

Importance for Prelims: Defence and Security



Disorientation of crew in poor weather likely cause of crash

- CFIT means that the pilot is in full control of the aircraft but due to faulty situational awareness, the aircraft strikes the terrain.
- A CFIT means the helicopter was fully serviceable and instruments are in order.
- The U.S. Federal Aviation Administration (FAA) defines CFIT as an unintentional collision with terrain (the ground, a mountain, a body of water, or an obstacle) while an aircraft is under positive control.
- Most often, the pilot or crew is unaware of the looming disaster until it is too late.
- CFIT most commonly occurs in the approach or landing phase of flight. Accidents where the aircraft is out of control at the time of impact, because of mechanical failure or pilot error, are not considered CFIT (they are known as uncontrolled flight into terrain or UFIT), nor are incidents

resulting from the deliberate action of the person at the controls, such as acts of terrorism or suicide by pilot.

Topic 7. INDIA APPEALS AGAINST WTO DISPUTE PANEL RULING

Importance for Prelims: Economy

India appeals against WTO dispute panel ruling on sugar export subsidies at appellate body

- India has appealed against a ruling of the World Trade Organization's (WTO) trade dispute settlement panel which ruled that the country's domestic support measures for sugar and sugarcane are inconsistent with global trade norms.
- The appeal was filed by India in the WTO's Appellate Body, which is the final authority on such trade disputes.
- The panel in its ruling on December 14, 2021 recommended India to withdraw its alleged prohibited subsidies under the Production Assistance, the Buffer Stock, and the Marketing and Transportation Schemes within 120 days from the adoption of this report.
- Ruling in favour of Brazil, Australia and Guatemala in their trade dispute against India over New Delhi's sugar subsidies, the WTO panel has stated that the support measures are inconsistent with WTO trade rules.
- In 2019, Brazil, Australia and Guatemala dragged India into the WTO's dispute settlement mechanism alleging that New Delhi's domestic support measures to producers of sugarcane and sugar and export subsidies are inconsistent with global trade rules including various provisions of the WTO's Agreement on Agriculture, Agreement on Subsidies and Countervailing Measures, and the General Agreement on Trade and Tariffs (GATT).
- Brazil is the largest producer and exporter of sugar in the world. India is the world's second largest sugar producer after Brazil.
- According to WTO rules, a WTO member or members can file a case in the Geneva-based multilateral body if they feel that a particular trade measure is against the norms of the WTO.

- Bilateral consultation is the first step to resolve a dispute.
- If both the sides are not able to resolve the matter through consultation, either can approach for the establishment of a dispute settlement panel.
- The panel's ruling or report can be challenged at the World Trade Organization's Appellate Body.
- WTO Dispute Settlement WTO is an international body that also deals in Dispute Settlements.
- The member country will approach the WTO's dispute settlement body when a country fails to comply with WTO rules.
- All the members are encouraged to settle the disputes through consultation or a panel if the consultation fails.
- The constituted panel will circulate the verdict of the dispute settlement amongst WTO members who can decide to reject the ruling.
- If the ruling is approved, the member country that violated the rules must change rules in line with the WTO Agreement.
- In the case of failure to do so, the complaining country and the violating country may determine a mutually-acceptable compensation, failing which, the complaining country may retaliate suitably.
- WTO's Appellate Body Appeals against the orders of DSB is taken to WTO Appellate Body.
- The Appellate Body, set up in 1995, is a standing committee of seven members that presides over appeals against judgments passed in trade-related disputes brought by WTO members.
- Countries involved in a dispute over measures purported to break a WTO agreement or obligation can approach the Appellate Body if they feel the report of the panel set up to examine the issue needs to be reviewed on points of law.

- However, existing evidence is not re-examined but legal interpretations are reviewed.
- The Appellate Body can uphold, modify, or reverse the legal findings of the panel that heard the dispute.
- Countries on either or both sides of the dispute can appeal.
- The Appellate Body has so far issued 152 reports.
- The reports, once adopted by the WTO's dispute settlement body, are final and binding on the parties.

Topic 8. PM-KISAN

Importance for Prelims: Agriculture

Prime Minister Narendra Modi on Saturday released over ₹20,900 crores to more than 10.09 crore farmers across India as the 10th installment of financial aid under the PM-KISAN scheme

- It is a Central Sector Scheme with 100% funding from the Government of India.
- It is being implemented by the Ministry of Agriculture and Farmers Welfare.
- The entire responsibility of identification of beneficiary farmer families rests with the State / UT Governments. Under the Pradhan Mantri Kisan Samman Nidhi (PM-KISAN) scheme, a financial benefit of ₹6,000 a year is provided to the eligible farmer families, payable in three equal instalments of ₹2,000.
- The money is transferred directly to the bank account of the beneficiaries. PM -KISAN scheme was announced in the February 2019 Budget.
- Objective With a view to providing income support to all landholding eligible farmer families, the Government has launched PM-KISAN.
- The scheme aims to supplement the financial needs of the farmers in procuring various inputs to ensure proper crop health and appropriate yields, commensurate with the anticipated farm income.
- Benefits and Eligibility conditions All land-holding eligible farmer families (subject to the prevalent exclusion criteria) are to avail of the benefits under this scheme, as per the cabinet decision taken during May 2019.
- Exclusion Categories The following categories of beneficiaries of higher economic status shall not be eligible for benefit under the scheme: All Institutional Land holders.

- Farmer families in which one or more of its members belong to following categories Former and present holders of constitutional posts Former and present Ministers/ State Ministers and former/present Members of Lok Sabha/ Rajya Sabha/ State Legislative Assemblies/ State Legislative Councils, former and present Mayors of Municipal Corporations, former and present Chairpersons of District Panchayats.
- All serving or retired officers and employees of Central/ State Government Ministries /Offices/Departments and its field units Central or State PSEs and Attached offices /Autonomous Institutions under Government as well as regular employees of the Local Bodies (Excluding Multi-Tasking Staff /Class IV/Group D employees)
- All superannuated/retired pensioners whose monthly pension is Rs.10,000/-or more (Excluding Multi-Tasking Staff / Class IV/Group D employees) of above category All Persons who paid Income Tax in last assessment year Professionals like Doctors, Engineers, Lawyers, Chartered Accountants, and Architects registered with Professional bodies and carrying out profession by undertaking practices.
- PM-KISAN Mobile App the PM-KISAN Mobile App developed and designed by the National Informatics Centre in collaboration with the Ministry of Electronics and Information Technology has been launched.
- The farmers can view the status of their application, update or carry out corrections of their Aadhaar cards and also check the history of credits to their bank accounts.

Topic 9. SUNDERBANS TIGER RESERVE (STR)

Importance for Prelims: Environment



On New Year, the fourth incident of a tiger straying into the islands

- Sundarban is the largest deltaic region of the world and encompasses hundreds of islands (105), with a maze of innumerable rivers, rivulets, and creeks.
- The name ‘Sundarban’ means “beautiful forest” and it is believed to be derived from a mangrove tree species ‘Sundari’ (Heritiera fomes).
- The Indian Sundarban is the southernmost part of the estuarine delta formed by the River Ganges and Brahmaputra, bordering the Bay of Bengal.
- It is located little south of the Tropic of Cancer.
- The Dampier-Hodges line separates the Sundarbans from the rest of West Bengal.
- On the eastern boundary lies Bangladesh separated by the rivers Kalindi, Raimangal, and Harinbhanga. Sundarban National Park The Sundarban

National Park is located in the southeast of Calcutta in the District of West Bengal and forms part of the Gangetic Delta.

- The Sundarbans mangrove forest, one of the largest such forests in the world, lies across India and Bangladesh on the delta of the Ganges, Brahmaputra, and Meghna rivers on the Bay of Bengal.
- It is adjacent to the border of India's Sundarbans World Heritage site inscribed in 1987.
- The site is intersected by a complex network of tidal waterways, mudflats, and small islands of salt-tolerant mangrove forests, and presents an excellent example of ongoing ecological processes.
- The area is known for its wide range of fauna, including 260 bird species, the Bengal tiger, and other threatened species such as the estuarine crocodile and the Indian python.
- It is home to many rare and globally threatened wildlife species such as the estuarine crocodile, Royal Bengal Tiger, Water monitor lizard, Gangetic dolphin, and olive ridley turtles.
- Sundarbans Wetland, India was recognized as the 'Wetland of International Importance under the Ramsar Convention in January 2019.
- The Sundarbans Delta is the only mangrove forest in the world inhabited by tigers.

Topic 10. DOMESTIC SUPPORT IN AGRICULTURE: THE BOXES

Importance for Prelims: Economy



India appeals against WTO dispute panel ruling on sugar export subsidies at appellate body

- In WTO terminology, subsidies, in general, are identified by “boxes” which are given the Colour of traffic lights: green (permitted), amber (slow down — i.e. need to be reduced), red (forbidden).
- The Agriculture Agreement has no red box, although domestic support exceeding the reduction commitment levels in the amber box is prohibited; and there is a blue box for subsidies that are tied to programs that limit production.
- There are also exemptions for developing countries (sometimes called an “S&D box” or “development box“, including provisions in Article 6.2 of the Agreement).
- Amber box Nearly all domestic support measures considered to distort production and trade (with some exceptions) fall into the amber box, which

is defined in Article 6 of the Agriculture Agreement as to all domestic supports except those in the blue and green boxes.

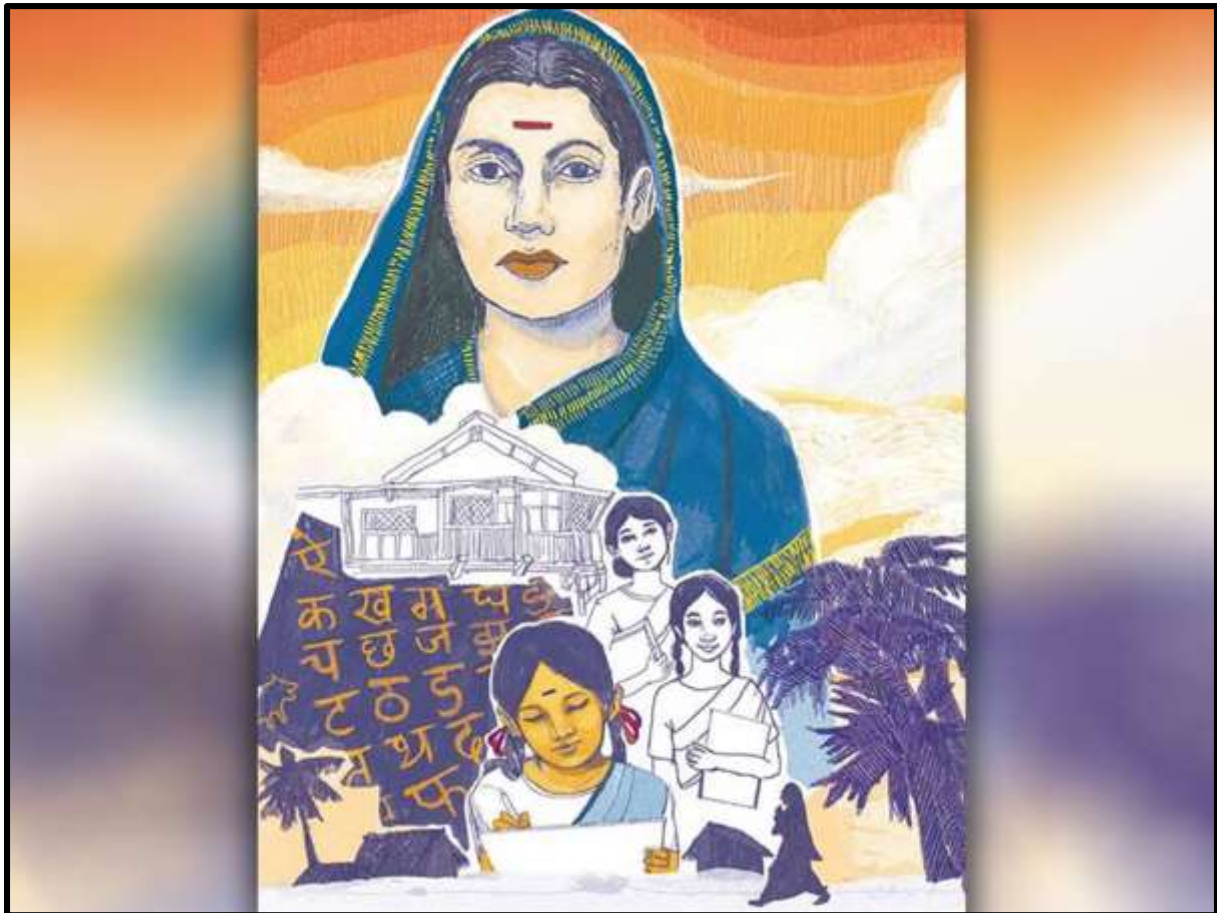
- These include measures to support prices, or subsidies directly related to production quantities.
- These supports are subject to limits. “De Minimis” minimal supports for both product-specific and non-product-specific support are allowed, defined as a share of the value of agricultural production.
- This threshold is generally 5% of the value of agricultural production for developed countries, 10% for most developing countries — although some WTO members agreed to a different level when they negotiated to join the WTO.
- Furthermore, 32 WTO members with larger subsidies than the de minimis levels at the beginning of the post-Uruguay Round reform period committed to reducing these support levels.
- The reduction commitments are expressed in terms of a “Total Aggregate Measurement of Support” (Total AMS) which includes all supports for specified products together with supports that are not for specific products, in one single figure.
- In the Agriculture Agreement, AMS is defined in Article 1 and Annexes 3 and 4.
- Blue box this is the “amber box with conditions” — conditions designed to reduce distortion.
- Any support that would normally be in the amber box, is placed in the blue box if the support also requires farmers to limit production (details set out in Paragraph 5 of Article 6 of the Agriculture Agreement).
- At present there are no limits on spending on blue box subsidies. Green box the green box is defined in Annex 2 of the Agriculture Agreement.

- In order to qualify, green box subsidies must not distort trade, or at most cause minimal distortion.
- They have to be government-funded (not by charging consumers higher prices) and must not involve price support.
- They tend to be programs that are not targeted at particular products, and include direct income supports for farmers that are not related to (are “decoupled” from) current production levels or prices.
- They also include environmental protection and regional development programs
- “Green box” subsidies are therefore allowed without limits, provided they comply with the policy-specific criteria set out in Annex 2.
- Development Box Article 6.2 of the Agriculture Agreement allows developing countries additional flexibilities in providing domestic support. The type of support that fits into the developmental category are measures of assistance, whether direct or indirect, designed to encourage agricultural and rural development and that are an integral part of the development programs of developing countries.
- They include investment subsidies which are generally available to agriculture in developing country members, agricultural input subsidies generally available to low income or resource-poor producers in developing country members, and domestic support to producers in developing country members to encourage diversification from growing illicit narcotic crops.
- De Minimis The World Trade Organisation (WTO) defines de minimis as the “minimal amounts of domestic support that are allowed even though they distort trade — up to 5% of the value of production for developed countries, 10% for developing”.

- Agreement on Subsidies and Countervailing Measures (SCM) The WTO Agreement on Subsidies and Countervailing Measures disciplines the use of subsidies, and it regulates the actions countries can take to counter the effects of subsidies.
- Under the agreement, a country can use the WTO's dispute-settlement procedure to seek the withdrawal of the subsidy or the removal of its adverse effects.
- Or the country can launch its own investigation and ultimately charge extra duty ("countervailing duty") on subsidized imports that are found to be hurting domestic producers.
- All countries that become members of the WTO will automatically be subject to the Subsidies Agreement.

Topic 11. SAVITRIBAI PHULE

Importance for Prelims: History



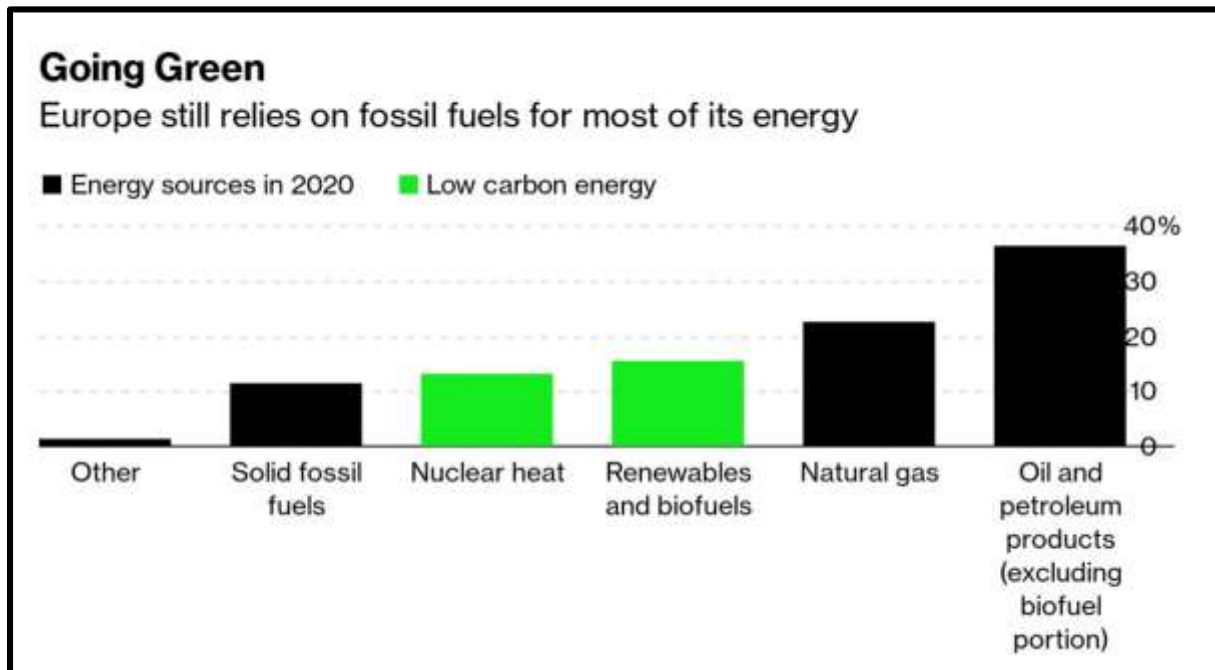
Birth Anniversary on 3 January 1831

- Savitribai Phule (3 January 1831 – 10 March 1897) was an Indian social reformer, educationalist, and poet from Maharashtra. She is regarded as the first female teacher of India.
- Along with her husband, Jyotirao Phule, she played an important and vital role in improving women's rights in India.
- She is regarded as the mother of Indian feminism. Savitribai and her husband founded one of the first Indian girls' schools in Pune, at Bhidewada in 1848.

- It was the country's first school for women started by Indians. She worked to abolish the discrimination and unfair treatment of people based on caste and gender.
- In the 1850s, the Phule couple initiated two educational trusts—the Native Female School, Pune, and The Society for Promoting the Education of Mahars, Mangs, and Etceteras—which came to have many schools under them. She published Kavya Phule in 1854 and Bavan Kashi Sunbath Ratnakar in 1892.
- In her poem, Go, Get Education, she urges the oppressed communities to get an education and break free from the chains of oppression.
- In 1852, Savitribai started the MahilaSeva Mandal to raise awareness about women's rights.
- She simultaneously campaigned against child marriage, while supporting widow remarriage.

Topic 12. NATURAL GAS AND NUCLEAR ENERGY PROJECTS AS 'GREEN' INVESTMENTS

Importance for Prelims: IR



EU drafts plan to label gas and nuclear investments as green

- The European Union has drawn up plans to label some natural gas and nuclear energy projects as “green” investments after a year-long battle between governments over which investments are truly climate-friendly.
- The European Commission is expected to propose rules in January deciding whether gas and nuclear projects will be included in the EU “sustainable finance taxonomy”.
- This is a list of economic activities and the environmental criteria they must meet to be labeled as green investments.
- By restricting the “green” label to truly climate-friendly projects, the system aims to make those investments more attractive to private capital,

and stop “greenwashing”, where companies or investors overstate their eco-friendly credentials.

- A draft of the Commission’s proposal, would label nuclear power plant investments as green if the project has a plan, funds, and a site to safely dispose of radioactive waste.
- To be deemed green, new nuclear plants must receive construction permits before 2045.
- Investments in natural gas power plants would also be deemed green if they produce emissions below 270g of CO₂ equivalent per kilowatt-hour (kWh), replace a more polluting fossil fuel plant, receive a construction permit by Dec. 31, 2030, and plan to switch to low-carbon gases by the end of 2035.
- Gas and nuclear power generation would be labeled green on the grounds that they are “transitional” activities – defined as those that are not fully sustainable, but which have emissions below industry average and do not lock in polluting assets. Natural gas emits roughly half the CO₂ emissions of coal when burned in power plants, but the gas infrastructure is also associated with leaks of methane, a potent planet-warming gas.

Topic 13. TWO PLANT SPECIES DISCOVERED IN KERALA

Importance for Prelims: Environment



Two plant species discovered in Kerala

- Researchers have reported two new plant species from the biodiversity-rich Western Ghats regions in the Thiruvananthapuram and Wayanad districts of Kerala.
- They have been christened *Fimbristylissunilii* and *Neanotisprabhuii*. *Fimbristylissunilii* Collected from the grasslands of Ponmudi hills, Thiruvananthapuram, *Fimbristylissunilii* has been named after plant taxonomist C.N. Sunil, retired professor and research guide of Botany, SNM College.
- A perennial plant of the Cyperaceae family, it stands 20-59 cm tall and was collected from an elevation of 1,100 meters. *Fimbristylissunilii* has been

provisionally assessed as data deficient (DD) under the IUCN Red List categories.

- Neanotisprabhuii Neanotisprabhuii is a prostrate perennial herb named after K.M. Prabhukumar, Senior Scientist at CSIRNBRI, Lucknow, in recognition of his research on flowering plants of the Western Ghats.
- Discovered in the Chembra Peak grasslands of Wayanad, it hails from the family Rubiaceae and grows on high-altitude grasslands.
- Neanotisprabhuii grows up to 70 cm in length and is many-flowered with the petals pale pink in colour.

Topic 14. PRADHAN MANTRI MATRU VANDANA YOJANA

Importance for Prelims: Government Schemes

Saaf Niyat
Sahi Vikas

Government of India
Ministry of Women and Child Development

**PRADHAN MANTRI
MATRU VANDANA YOJANA**

Pregnant Women and Lactating Mothers
to get upto **₹ 6,000**

Over **26 lakh** beneficiaries

₹ 440 Crore released to **17.4 lakh** beneficiaries

PMMVY-Common Application Software (PMMVY-CAS) launched on 1st September 2017

Pan-India expansion of Maternity Benefit Programme Since 1st January 2017

5 YEARS 2014-2018

(as on 31.03.18)

wcd.nic.in | f/PMOIndia | f/MinistryWCD | @Manekagandhibip | f/ManekaGandhiOfficial

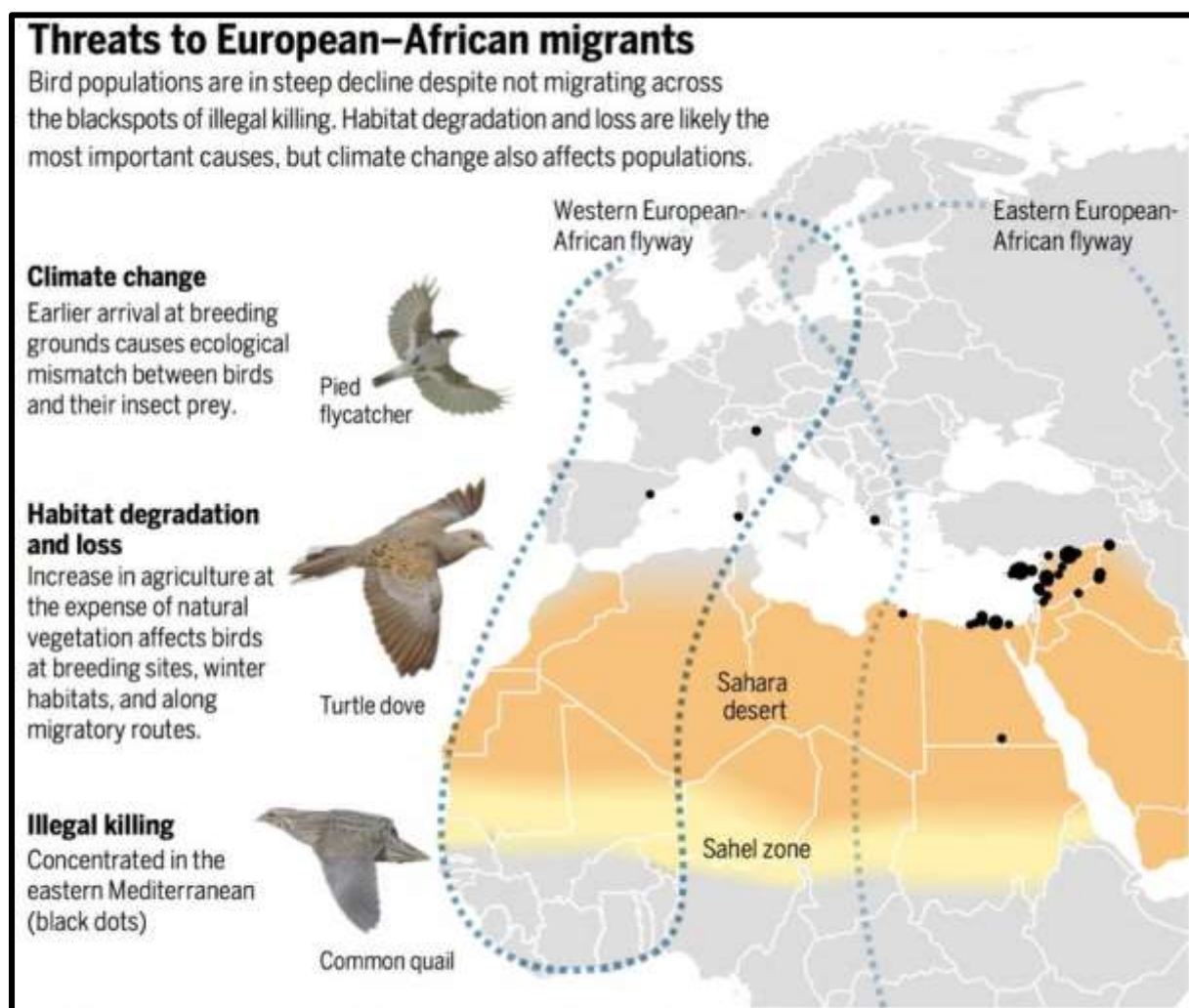
Five years since its introduction, there is vast scope for improvement in the Pradhan MantriMatruVandanaYojana

- Pradhan MantriMatruVandanaYojana (PMMVY) is a maternity benefit program being implemented in all districts of the country with effect from 1st January 2017.

- It is a centrally sponsored scheme being executed by the Ministry of Women and Child Development.
- **Direct Benefit Transfer Scheme:** Cash benefits are provided to pregnant women in their bank account directly to meet enhanced nutritional needs and partially compensate for wage loss.
- **Target Beneficiaries:** All Pregnant Women and Lactating Mothers (PW&LM), excluding those who are in regular employment with the Central Government or the State Governments or PSUs or those who are in receipt of similar benefits under any law for the time being in force.
- All eligible Pregnant Women and Lactating Mothers who have their pregnancy on or after 1st January 2017 for the first child in the family.
- Benefits under the Scheme: Beneficiaries receive a cash benefit of Rs. 5,000 in three installments on fulfilling the following conditions: Early registration of pregnancy Ante-natal check-up Registration of the birth of the child and completion of the first cycle of vaccination for the first living child of the family.
- The eligible beneficiaries also receive cash incentives under Janani Suraksha Yojana (JSY).
- Thus, on average, a woman gets Rs.6,000, Distinctive Feature: Implementation of the scheme is closely monitored by the central and state governments through the Pradhan MantriMatruVandanaYojana – Common Application Software (PMMVY-CAS).
- PMMVY-CAS is a web-based software application that enables tracking the status of each beneficiary under the scheme, resulting in expedited, accountable and better grievance redressal.

Topic 15. IMPORTANCE OF MIGRATORY BIRDS IN AN ERA OF CLIMATE CHANGE

Importance for Prelims: Environment



As many as 1,349 species of birds have been recorded as of 2019, of which 78 are endemic to the country and 212 species are globally threatened

- Migratory birds are seasonal guests with positive impacts. Birds from 29 countries fly to India every year.

- The country witnesses the incoming of large flocks during September-October signifying the beginning of migration.
- As many as 1,349 species of birds have been recorded as of 2019, of which 78 are endemic to the country and 212 species are globally threatened, according to the Government of India.
- Impediments for migratory birds Migratory birds require nesting places and sufficient food for successful broods.
- Accelerated habitat loss during the last decade, including decreased area under water bodies, wetlands, natural grasslands and forests have proved to be major impediments for them.
- Overexploitation, unsustainable use of natural resource, population explosion along with increased weather variabilities and climate change has resulted in loss of biodiversity.
- These factors have also adversely impacted the entire life cycle and survival of migratory birds.
- Central Asian Flyway Migratory bird species are known to be indicators for the flyway region, as they use different biomes and habitats and face different pressures along the migration route.
- The Central Asian Flyway covers 30 countries, including India, at the tail end with huge landmass and habitat variations, especially the wetlands.
- The Central Asian Flyway (CAF), Central Asian-Indian Flyway, or Central Asian-South Asian Flyway is a flyway covering a large continental area of Eurasia between the Arctic Ocean and the Indian Ocean and the associated island chains.
- As daylight shrinks and the food supply dwindles at the breeding sites, the birds take the cue and start migrating towards wintering sites in the South.
- The return journey begins in March or April.

- Migration is also an adaptation mechanism to help birds overcome weather adversities and the unavailability of food in colder regions.
- **Important Sites of migratory birds** – Pallikaranai in Chennai attracts a large number of flamingoes, ducks, and waders. Pulicat Lake on the Tamil Nadu-Andhra border hosts flamingoes; Ducks and waders can be seen in Chilika lagoon in Odisha.
- Other notable sites to see migratory birds are the Keoladeo National Park in Bharatpur in Rajasthan and Khijadia Bird Sanctuary in Jamnagar in Gujarat. Some examples of migratory birds are – Spotted flycatcher Rufous-tailed scrub robin European roller they migrate through a large part of western India and overwinter in Africa.
- Amur Falcons pass through India in December. Siberian Cranes come to India in winter.
- Importance of migratory birds such as birds raising broods to end up acting as pest control agents by devouring insects and other organisms that harm the environment and crops.
- Locust attack is one such disaster that stems from that absence of birds.
- Migratory birds help in the dispersal of seeds, leading to the maintenance of biodiversity along their routes.
- Ducks can transport fish eggs in their guts to new water bodies.
- The droppings of birds, also known as guano, are rich in nitrogen and act as organic fertilizers.
- Eggshells can add calcium and other minerals. Migratory birds from both prey and predator bases in ecosystems seasonally and can, therefore, have an ecological impact.
- Prevalence of migratory birds helps analyze the state of the environment in an area. Convention on the Conservation of Migratory Species of Wild Animals The Convention on the Conservation of Migratory Species of Wild

Animals, also known as the Convention on Migratory Species (CMS) or the Bonn Convention, is an international agreement that aims to conserve migratory species throughout their ranges.

- The Agreement was signed under the auspices of the United Nations Environment Programme and is concerned with the conservation of wildlife and habitats on a global scale.
- Signed in 1979 in Bonn, West Germany, the Convention entered into force in 1983.
- As of September 2020, there are 131 Member States to the Convention. The depositary is the Government of the Federal Republic of Germany.
- The CMS is the only global, and United Nations-based, an intergovernmental organization established exclusively for the conservation and management of terrestrial, aquatic and avian migratory species.
- Under this convention, migratory species threatened with extinction are listed in Appendix I, and Parties strive towards strictly protecting these animals, conserving or restoring the places where they live, mitigating obstacles to migration, and controlling other factors that might endanger them.
- Migratory species that need conservation and management or would significantly benefit from international co-operation are listed in Appendix II of the Convention.
- India and CMS India hosted the 13th Conference of Parties (COP) of the Convention on the Conservation of Migratory Species of Wild Animals (CMS) in February 2020 at Gandhinagar in Gujarat.
- The theme of CMS COP-13 is ‘Migratory species connect the planet and we welcome them home.’

- The mascot for CMS COP-13 is 'Gibe – The Great Indian Bustard'. It is a critically endangered species (according to the IUCN) and has been accorded the highest protection status (listed in Schedule I) under the Wildlife Protection Act, 1972.
- India has signed a non-legally binding Memorandum of Understanding (MoU) with CMS on the conservation and management of Siberian Cranes (1998), Marine Turtles (2007), Dugongs (2008) and Raptors (2016).

Topic 16. SMALL VALUE DIGITAL PAYMENTS IN OFFLINE MODE

Importance for Prelims: Economy

RBI unveils framework to enable small value digital payments in offline mode

- The Reserve Bank of India (RBI) issued a framework to enable small value digital payments in offline mode using any channel or instrument such as cards, wallets, and mobile devices.
- An offline digital payment means a transaction that does not require internet or telecom connectivity.
- Under this new framework, which is applicable with immediate effect, offline payments can be made in face-to-face (proximity) mode only.
- Payment instruments will be enabled for offline transactions by Authorised Payment System Operators and Participants (Banks and Non-banks) based on the explicit consent of the customer.
- Offline transactions using cards will be allowed without a requirement to switch on the contactless transaction channel. Such transactions will not require an Additional Factor of Authentication (AFA).
- Since the transactions are offline, alerts (SMS and/or email) will be received by the customer after a time lag.
- The upper limit of an offline payment transaction will be ₹200.
- The total limit for offline transactions on a payment instrument will be ₹2,000 at any point in time.

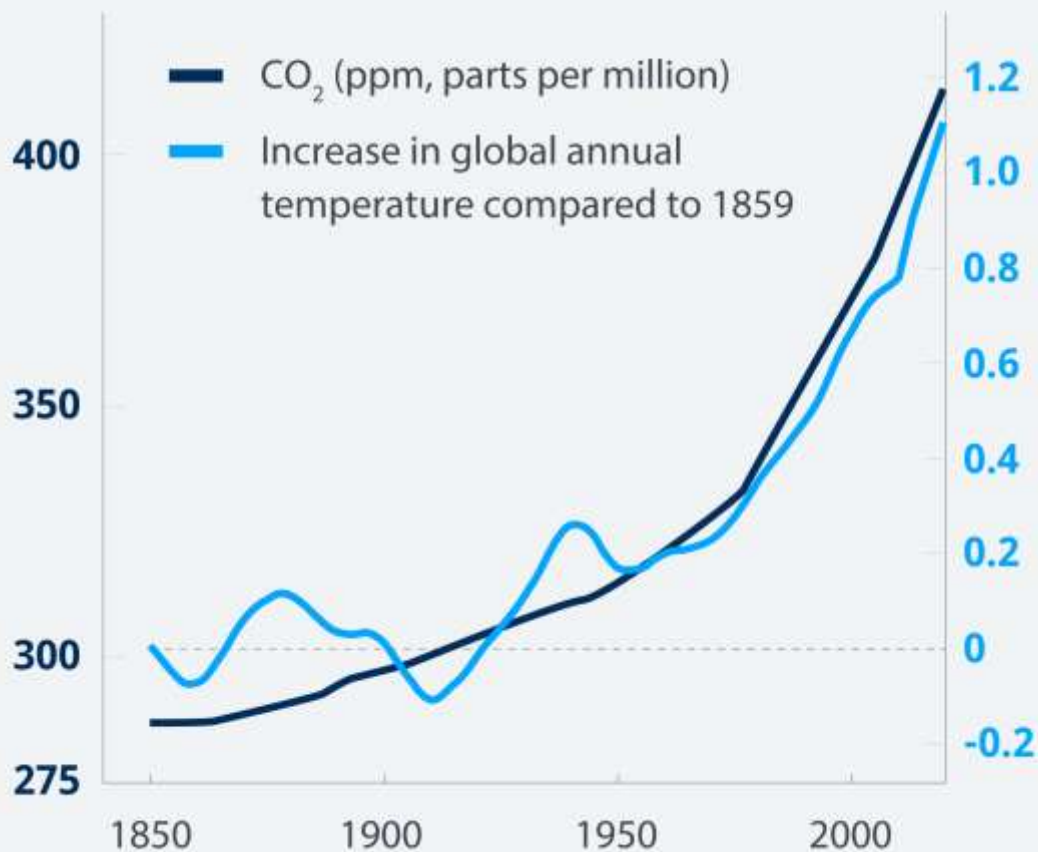
- Replenishment of used limit will be allowed only in online mode with AFA.
- Customers will enjoy protection under the provisions of circulars limiting customer liability issued by RBI (as amended from time to time).
- Further, they also have recourse to the Reserve Bank – Integrated Ombudsman Scheme for grievance redress.
- The acquirer will incur all liabilities arising out of technical or transaction security issues at the merchant's end.
- Additional Factor of Authentication (AFA) Two-step multi-factor authentication or additional factor authentication (AFA) increases the security of a digital account by using two different pieces of information.
- For most online transactions, a One-Time Password (OTP) is generated and sent to your registered cell phone number, which you must enter to complete the transaction.

Topic 17. CARBON CAPTURE AND GLOBAL WARMING

Importance for Prelims: Environment

CO₂ heats the Earth

Temperature rise due to increased CO₂ in the atmosphere



Human activities often result in emissions of carbon dioxide which leads to global warming.

- The emitted carbon dioxide can be ‘captured’, so that the gas doesn’t rise up in the atmosphere and cause (further) global warming. ‘Carbon capture’ refers to the techniques used to gather carbon dioxide emissions and put them away so that they don’t cause harm.
- For example, it is possible to collect the fumes coming out of the chimneys of coal-fired power plants and ‘box’ them up.
- **Working of carbon capture** – There are essentially two ways of approaching carbon capture and storage, or CCS.

- One, technology-based solutions and, two, nature-based solutions
 1. Technology solutions entail putting up machinery to capture fumes (such as from factories, large engines, etc.) and removing carbon dioxide from them. The next step is, of course, to figure out a way of disposing of carbon dioxide. The most basic way to do this is to bury the gas underground— in pores of sedimentary rock formations, or in dead oilfields, that is, in sands that once held oil or gas, or in underground coal seams. This works if you don't have to transport the carbon dioxide over large distances to the burial ground. The captured carbon dioxide could be injected into living oil and gas wells so as to push out the hydrocarbons. Scientists have also suggested that the carbon dioxide could also be injected into gas hydrates (frozen gas-water mixture), whereupon the carbon dioxide will push out the gas in the hydrate and take its place.
 2. Nature-based solutions do not 'capture' carbon dioxide but offset the emissions by sucking up the gas from the atmosphere. Nature-based solutions essentially involve growing trees. Mangroves are said to have enormous potential to suck up carbon dioxide and are, therefore, in the limelight today is carbon capture happening on the ground? If so, where? The earliest CCS projects are believed to be Sleipner and Snovhit projects in Norway, which have captured and sequestered about 24 million tonnes of carbon dioxide in their 23 years of operations. In 2014, the Boundary Dam project in Canada was built to capture and bury around six million tonnes of carbon dioxide a year, but the project has been experiencing some problems. According to the Global CCS Institute as of 2018, there were 43 large-scale facilities — 18 in commercial operation, five under construction and 20 in various stages of development. Impediments – CCS is costly. Typically, if you want to do CCS in a thermal power project, the process would take away between 6 per cent and 10 per cent of the power

generation for itself. Then, there are capital and maintenance costs. Until now, there was no great urgency to do CCS projects.

Topic 18. MSMEs

Importance for Prelims: Economy



MSMEs: Engines of growth for new India

- Worldwide, MSMEs have been accepted as the engine of economic growth and for promoting equitable development.
- They constitute over 90% of total enterprises in most of the economies and are credited with generating the highest rates of employment growth.
- In July 2020, the Union Cabinet decided to change the criterion to “annual turnover”, which was more in line with the imposition of GST.
- According to the new definition, the limit of micro-unit was increased to Rs.1 crore of investment and Rs.5 crores of turnover, and the limit of the small unit was increased to Rs, 10 crores of investment and Rs,50 crores of turnover. Similarly, the limit of a medium unit was increased to 50 crores of investment and Rs.250 crore of turnover.
- It may be noted that this revision was done after 14 years since the MSME Development Act came into existence in 2006.
- Importance of MSMEs contribute around 30 percent to India’s GDP, employ about 11 crore people, constitute nearly 40 percent of total exports,

and more than half of them are located in rural India, the government is keen to rev up this sector to achieve inclusive growth thereby attaining self-reliance (Atmanirbhar Bharat).

- Schemes to promote MSME Special Credit Linked Capital Subsidy Scheme for the MSMEs the scheme will help in meeting the technology-related requirements of enterprises in the services sector.
- It has a provision of 25% capital subsidy for procurement of plant and machinery and service equipment through institutional credit to the Scheduled Caste – Scheduled Tribe MSMEs without any sector-specific restrictions on technology up-gradation.
- **UdyamiMitraPortal:** launched by SIDBI to improve the accessibility of credit and handholding services to MSMEs.
- **MSME Sambandh:** To monitor the implementation of the public procurement from MSMEs by Central Public Sector Enterprises.
- MSME Samadhaan -MSME Delayed Payment Portal — will empower Micro and Small entrepreneurs across the country to directly register their cases relating to delayed payments by Central Ministries/Departments/CPSEs/State Governments.
- **Digital MSME Scheme:** It involves usage of Cloud Computing where MSMEs use the internet to access common as well as tailor-made IT infrastructure Prime Minister Employment Generation Programme: It is a credit-linked subsidy program under the Ministry of MSME.
- **Revamped Scheme of Fund for Regeneration of Traditional Industries (SFURTI):** organizes traditional industries and artisans into clusters and make them competitive by enhancing their marketability & equipping them with improved skills.
- **A Scheme for Promoting Innovation, Rural Industry & Entrepreneurship (ASPIRE):** creates new jobs & reduce unemployment,

promotes entrepreneurship culture, facilitates innovative business solution etc.

- **National Manufacturing Competitiveness Programme (NMCP):** to develop global competitiveness among Indian MSMEs by improving their processes, designs, technology and market access.
- **Micro & Small Enterprises Cluster Development Programme (MSE-CDP)** – adopts cluster development approach for enhancing the productivity and competitiveness as well as capacity building of MSES.

Topic 19. PANGONG LAKE IN LADAKH

Importance for Prelims: Geography / IR



China constructing bridge on Pangong Lake in Ladakh

- China is constructing a bridge in eastern Ladakh connecting the north and south banks of Pangong Tso (lake), which will significantly bring down the time for the People's Liberation Army (PLA) to move troops and equipment between the two sectors.
- On the north bank, there is a PLA garrison at Karnak fort and on the south bank at Moldo, and the distance between the two is around 200 km.
- The new bridge between the closest points on two banks, which is around 500 m, will bring down the movement time between the two sectors from around 12 hours to three or four hours.
- The construction had been going on for some time and it would reduce the overall distance by 140–150 km.
- The bridge is located around 25 km ahead of the Line of Actual Control (LAC).
- Earlier, the PLA had to take a roundabout crossing Rudock county.
- But now the bridge would provide a direct axis.

- The bridge is in China's territory and the Indian Army would have to now factor this in its operational plans.
- The north bank, which has much higher differences in perception of the LAC than the south bank, was the initial site of the clashes in early May 2020, while tensions on the south bank flared up later in August.
- The Indian Army got a tactical advantage over the PLA on the south bank in August-end by occupying several peaks lying vacant since 1962, gaining a dominating view of the Moldo area.
- On the north bank too, the Indian troops set up posts facing PLA positions on the ridge-lines of Finger About Pangong Tso Lake It is an endorheic lake spanning eastern Ladakh and West Tibet.
- Approximately 50% of the length of the overall lake lies within Tibet China, 40% in Ladakh India, and the rest is disputed and is a de-facto buffer zone between India and China.
- The lake is 5 km (3.1 mi) wide at its broadest point.
- India holds one-third of the 135-km-long boomerang-shaped lake located at an altitude of over 14,000 feet.
- The lake, a glacial melt, has mountain spurs of the Chang Chemo range jutting down, referred to as during winter the lake freezes completely, despite being saline water.
- The lake's water, while crystal clear, is brackish, making it undrinkable.
- It has a land-locked basin separated from the Indus River basin by a small elevated ridge but is believed to have been part of the latter in prehistoric times.
- It is 134 km (83 mi) long and divided into five sub lakes, called Pangong Tso, Tso Nyak, Rum Tso (twin lakes) and Nyak Tso.

- The Karakoram Mountain range, which crosses Tajikistan, Afghanistan, Pakistan, China, and India, with heights of over 6,000 meters including K2, the world's second-highest peak, ends at the north bank of Pangong Tso.
- Its southern bank has high broken mountains sloping towards Spangur Lake in the south.
- Fingers in the lake the barren mountains on the lake's northern bank, called the Chang Chenmo, jut forward in major spurs, which the Army calls "fingers".
- India claims that the LAC is coterminous with Finger 8, but it physically controls area only up to Finger 4.
- Chinese border posts are at Finger 8, while it believes that the LAC passes through Finger 2.

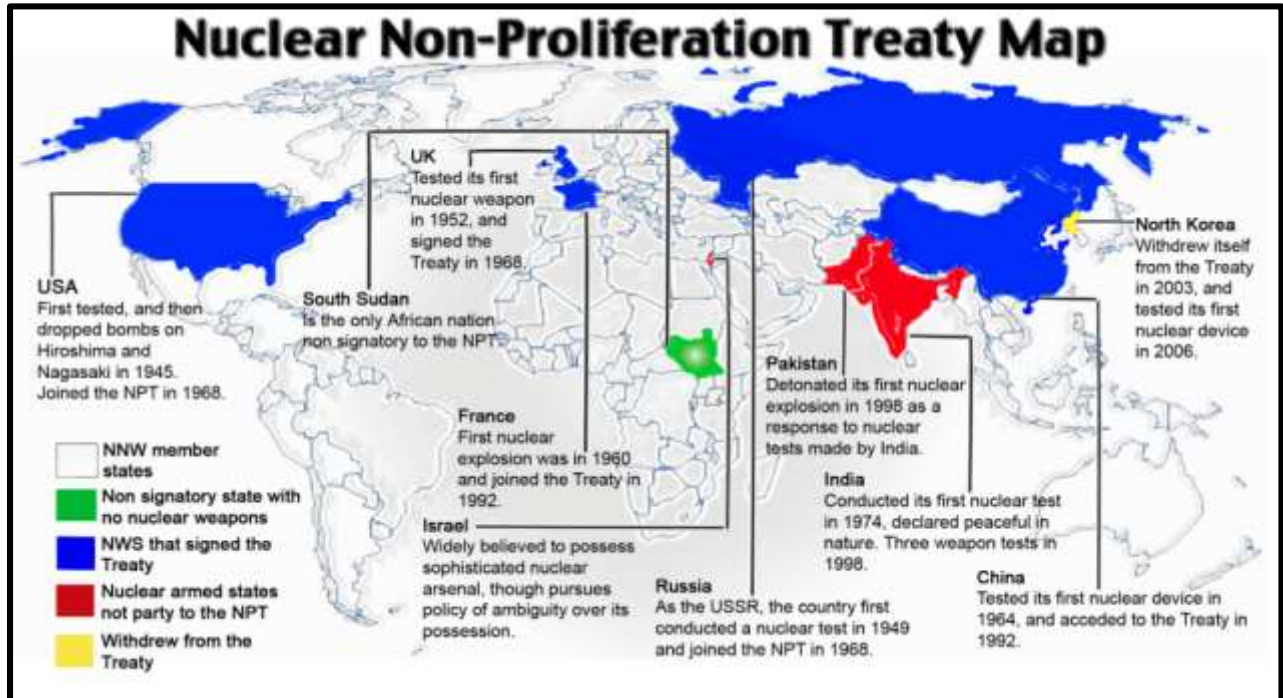
Who controls Pangong Tso?

- Nearly two-thirds of the lake is controlled by China, with just about 45 km under Indian control.
- The LAC, running north-south, cuts the western part of the lake, aligned east-west.
- The Karakoram range of mountains, that crosses Tajikistan, Islamic State of Afghanistan, Pakistan, China, and India, with heights of over half a dozen 000 meters together with K2, the world's second-highest peak, ends at the north bank of Pangong Tso.
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Topic 20. TREATY ON NON-PROLIFERATION OF NUCLEAR WEAPONS (NPT)

Importance for Prelims: IR



World powers vow to stop the spread of nuclear weapons

- The NPT is a multilateral treaty aimed at limiting the spread of nuclear weapons including three elements:
 - (1) non-proliferation,
 - (2) disarmament, and
 - (3) peaceful use of nuclear energy.
- These elements constitute a “grand bargain” between the five nuclear-weapon states and the non-nuclear-weapon states.
- The treaty was signed in 1968 and entered into force in 1970.
- Presently, it has 190 member states.
- It is the only binding commitment in a multilateral treaty to the goal of disarmament by the nuclear-weapon States.

- Year 2020 marked the 50th anniversary of the entry-into-force of the Treaty on the Non-Proliferation of Nuclear Weapons (NPT), a legal instrument treated as the cornerstone of the global nuclear non-proliferation regime.
- Four UN member states have never accepted the NPT, three of which possess or are thought to possess nuclear weapons: India, Israel, and Pakistan.
- **Key provisions:** The Treaty defines nuclear weapon states (NWS) as those that had manufactured and detonated a nuclear explosive device prior to 1 January 1967.
- All the other states are therefore considered non-nuclear-weapon states (NNWS).
- The five nuclear-weapon states are China, France, Russia, the United Kingdom, and the United States.
- The Treaty does not affect the right of state parties to develop, produce, and use nuclear energy for peaceful purposes.
- **Role of States:** Nuclear weapon states are not to transfer to any recipient whatsoever nuclear weapons and not to assist, encourage, or induce any NNWS to manufacture or otherwise acquire them.
- Non-nuclear weapons states are not to receive nuclear weapons from any transferor and are not to manufacture or acquire them.
- NNWS must accept the International Atomic Energy Agency (IAEA) safeguards on all nuclear materials on their territories or under their control.
- India's Stand on NPT India is one of the only five countries that either did not sign the NPT or signed but withdrew, thus becoming part of a list that includes Pakistan, Israel, North Korea, and South Sudan.
- India always considered the NPT as discriminatory and had refused to sign it.

- India has opposed the international treaties aimed at non-proliferation since they were selectively applicable to the non-nuclear powers and legitimized the monopoly of the five nuclear weapons powers.
- **Error on 3 January 2022 Anchor Investors** – Anchor investor is a concept launched by the Securities Exchange Board of India (SEBI) in 2009.
- Anchor investors are institutional investors who are invited to subscribe to the shares before the Initial Public Offers (IPOs) open so that it jazzes up the popularity of the issue.
- As the name denotes, the anchor investors are required to take up the share at a fixed price to make other investors confident and improve the demand of the share.
- This process also helps to improve the investment opportunity for retail investors with the company.
- Each anchor investor needs to invest a minimum of Rs,10 crore in the issue.

Topic 21. BLIZZARD

Importance for Prelims: Geography

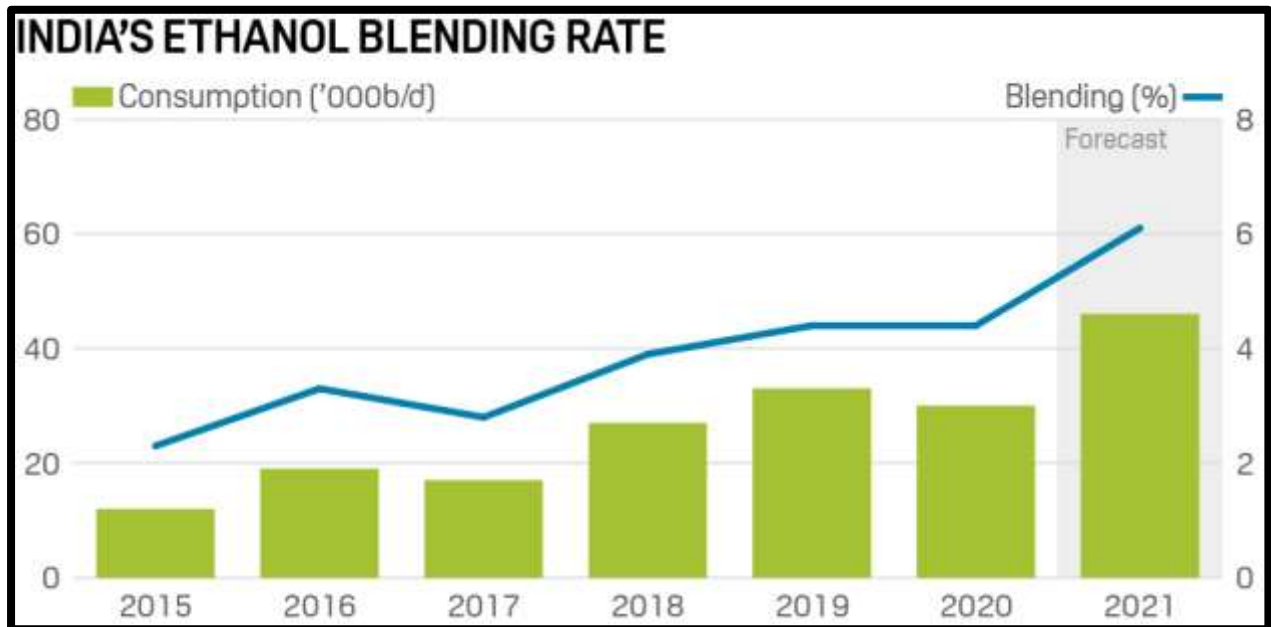
Winter storm pounds Washington; federal offices shut down, schools delay resumption

- A blizzard is a dangerous weather event, bringing with it frigid temperatures, howling winds, and decreased visibility.
- Blizzards can be deadly, which is why it is important that meteorologists accurately measure atmospheric conditions and provide the public with timely warnings.
- Blizzards are not just bad snowstorms; they are specific types of snowstorms that consist of large amounts of snow lasting more than three hours, winds of at least 56 kilometers (35 miles) per hour, and visibility of fewer than 0.4 kilometers (0.25 miles) away.
- A ground blizzard is a weather condition where snow is not falling but loose snow on the ground is lifted and blown by strong winds.
- Blizzards can have immense size and usually stretch to hundreds or thousands of kilometers.
- Snowstorm and Severe blizzard The United States National Weather Service's winter weather advisory, watch, or warning system helps meteorologists determine whether atmospheric conditions should be classified as typical winter weather, a snowstorm, or a severe blizzard.
- Snowstorm Blizzard The air temperature high in the atmosphere and near the ground must be below 0°C (32°F).
- There also needs to be enough water vapour in the air to form snowflake crystals.
- While snowstorms do not typically last very long (less than a few hours), they can bring high snow accumulations, which can be hazardous.

- The storm must last for at least three hours and produce a large amount of falling snow.
- Blizzards also have winds measuring over 56 kilometers (35 miles) per hour.
- These winds cause a large volume of snow to blow around in the air and near the ground, decreasing visibility.
- Meteorologists will declare blizzard conditions if the snow limits visibility to the point where it is difficult to see an object more than 0.4 kilometers (0.25 miles) away.

Topic 22. INDIA TO SURPASS CHINA AS 3RD LARGEST USER OF ETHANOL

Importance for Prelims: Environment



India to surpass China as 3rd largest user of Ethanol

- India is on course to race past China as the world's third largest ethanol consumer by 2026 as it accelerates the transformation towards a clean energy ecosystem.
- Ethanol demand in India tripled between 2017 and 2021 with consumption expected at 3 crore litres in the last calendar year, the International Energy Agency (IEA) said.
- In January 2021, India brought forward its target of 20 per cent ethanol blending of gasoline to 2025 from 2030, and is aiming to start selling 20 per cent blends in 2023.
- IEA added that the country is supporting ethanol as it helps reduce oil imports, cut down air pollution and offers economic and employment opportunities for farmers. Lifting ethanol demand is also aligned with its net zero pathway.

- India, the world's third largest oil importer and consumer, imported petroleum products worth more than ₹1.09-lakh crore in FY21.
- At present, public sector oil marketing companies are selling 10 per cent ethanol blended petrol.
- Similarly 5 per cent biodiesel is blended as per availability.

Topic 23. SIKH TAKHTS

Importance for Prelims: Art and Culture



PM to lay the foundation stone for ₹42,750-cr projects in UP. The Greenfield expressway will connect key Sikh religious sites at Sultanpur Lodhi, Goindwal Sahib, Khadoor Sahib, Tarn Taran, and the holy Hindu shrine of Vaishno Devi in Katra.

- Takht is a Persian word that means imperial throne.
- At present Sikhs recognise five places as takhts. Three are in Punjab — Akal Takht (Amritsar); Takht Keshgarh Sahib (Anandpur Sahib); Takht Damdama Sahib (Talwandi Sabo) — and the other two are Takht Patna Sahib (Bihar) and Takht Hazur Sahib (Nanded, Maharashtra).

- Akal Takht Akal Takht (Throne of the Timeless One) is the oldest of the takhts, and considered supreme among the five.
- It was set up in 1606 by Guru Hargobind, whose succession as the sixth Guru after the execution of his father, Guru Arjan Dev, is considered a turning point in Sikh history.
- The Akal Takht, a raised platform that he built in front of the causeway leading to the sanctum sanctorum of the Harmandir Sahib (Golden Temple), symbolized the coming together of the temporal authority and the political sovereignty of the Sikh community (Miri) with the spiritual authority (Piri).
- It is seen as the first marker of Sikh nationalism.
- The Akal Takht is a five-story building today; the first story houses the Guru Granth Sahib.
- The other four takes are linked to Guru Gobind Singh, the tenth Guru.
- It was at Keshgarh Sahib that Guru Gobind Singh raised Khalsa, the initiated Sikh warriors, in 1699.
- Patna Sahib is his birthplace, and he spent several months in Damdama Sahib and his final days in Hazur Sahib, where he was cremated in 1708.
- Damdama Sahib Damdama Sahib was the last and the most recent one to be recognized as a Takht, through a resolution of the Shiromani Gurdwara Parbandhak Committee (SGPC) in November 1966, a couple of months after the Reorganisation of States under which Punjab became a separate state. Role of Takhts Takhts is known to issue hukumnamas from time to time on issues that concern the community.
- Akal Takht is supreme because it is the oldest and was created by a Sikh guru himself, say Sikh historians and scholars.
- Any edict or order concerning the entire community is issued only from Akal Takht.

- Also, it is from Akal Takht that Sikhs found to be violating the Sikh doctrine and code of conduct are awarded religious punishment (declared tankhaiya) and even excommunicated, depending on the degree of violation and failure of adherence to directives of the highest temporal seat of Sikhs.
- Scholars say the first hukamnama was issued by Guru Hargobind from Akal Takht.
- A seal believed to have been used by Guru Gobind Singh for his edicts is preserved at Damdama Sahib.
- Today, the Akal Takhtjathedar issues edicts for the community, usually reading them out from the balcony of the Akal Takht building, after deliberations with the chiefs of the other four takhts.

Topic 24. MUD CRAB REOVIRUS (MCRV)

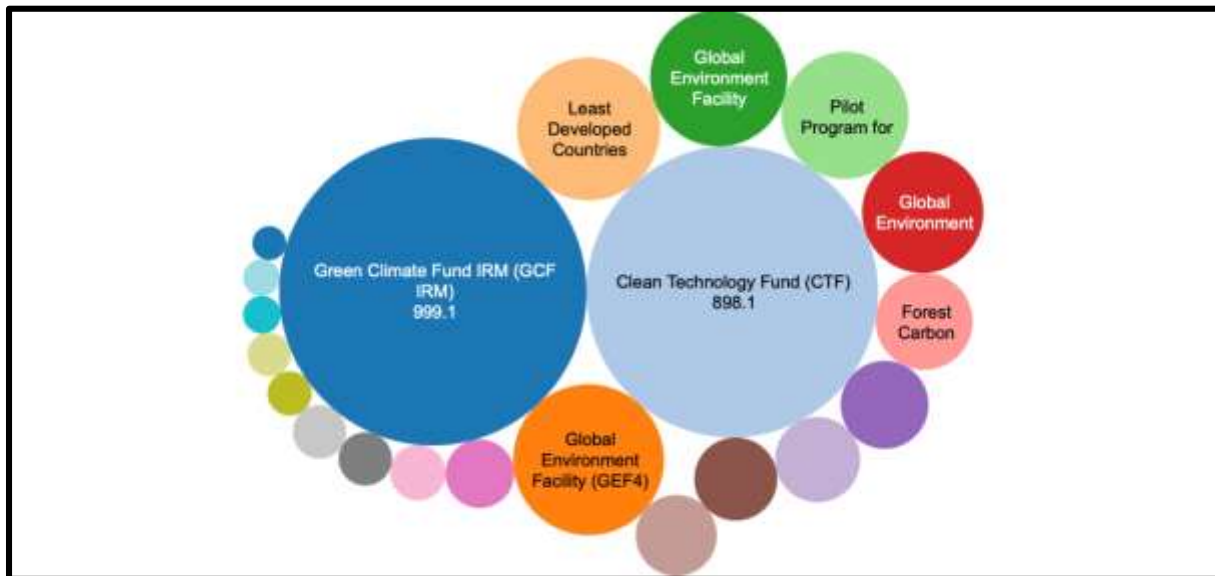
Importance for Prelims: Science and Tech

‘Reovirus’ hits mud crab cultivation in A.P.

- Mud Crab Reovirus (MCRV) has been found to be the reason for the mass mortality of crabs (*Scylla serrate*) in Andhra Pradesh.
- MCRV, also known as the “sleeping disease”, has taken a toll on crabs in every farming method; crab fattening and crab polyculture, in which shrimp and crab are cultured in the same pond, and exclusive mud crab ponds.
- The viral pathogen belongs to the family of ‘Reoviridae’.
- It mainly affects the connective tissue of hepatopancreas, gills, and intestine.
- In 2007, the MCRV paralysed the crab species cultivation in China.
- About wild crab or mud crab Wild Crab are scientifically called as *Scylla serrata*.
- They are ecologically important species of crab and are found in the estuaries and mangroves of Africa, Asia and Australasia.
- The shell colour varies from deep, mottled green to dark brown, In their most common form.

Topic 25. CLIMATE FUNDS

Importance for Prelims: Environment



Climate funds: Developed nations must step up

- In 2009, at the COP15 Summit in Copenhagen, developed countries committed to jointly mobilize \$100 billion a year for climate finance so that developing nations can take effective actions.
- The 2015 Paris Summit extended this goal through 2025. Article 9.4 of the Paris Agreement states that the provision of scaled-up financial resources should aim to balance adaptation and mitigation.
- In 2016, the United Nations Environment Programme (UNEP), in its Adaptation Gap Report, estimated the annual climate adaptation costs and financing needs at \$140- 300 billion by 2030 and \$280-500 billion by 2050.
- Climate mitigation projects are investable, which attract private financiers.
- On the contrary, adaptation sectors find it difficult to attract funds, especially private capital, due to high project development costs and lack of commercial viability or good investment returns.
- The benefits are also largely confined to the recipient countries.

Topic 26. RESIGNATION OF GOVERNOR

Importance for Prelims: Polity

T.R. Baalu demands resignation of T.N. Governor

- A governor holds office for a term of five years from the date on which he enters upon his office.
- However, this term of five years is subject to the pleasure of the President. Further, he can resign at any time by addressing a resignation letter to the President.
- The President may transfer a Governor appointed to one state to another state for the rest of the term.
- The Supreme Court held that the pleasure of the President is not justifiable.
- The governor has no security of tenure and no fixed term of office.
- He may be removed by the President at any time.
- The Constitution does not lay down any grounds upon which a governor may be removed by the President.
- A governor can hold office beyond his term of five years until his successor assumes charge.
- The underlying idea is that there must be a governor in the state and there cannot be an interregnum.
- **Governor** – The Constitution of India envisages the same pattern of government in the states as that for the Centre, that is, a parliamentary system.
- Articles 153 to 167 in Part VI of the Constitution deal with the state executive.
- The state executive consists of the governor, the chief minister, the council of ministers and the advocate general of the state.
- Thus, there is no office of vice-governor (in the state) like that of Vice-President at the Centre.

- The governor is the chief executive head of the state.
- But, like the president, he is a nominal executive head (titular or constitutional head).
- The governor also acts as an agent of the central government.
- Therefore, the office of governor has a dual role.
- Usually, there is a governor for each state, but the 7th Constitutional Amendment Act of 1956 facilitated the appointment of the same person as a governor for two or more states.

Topic 27. OFFICIAL LANGUAGE IN HIGH COURTS

Importance for Prelims: Polity

English is the language of court, says Gujarat HC

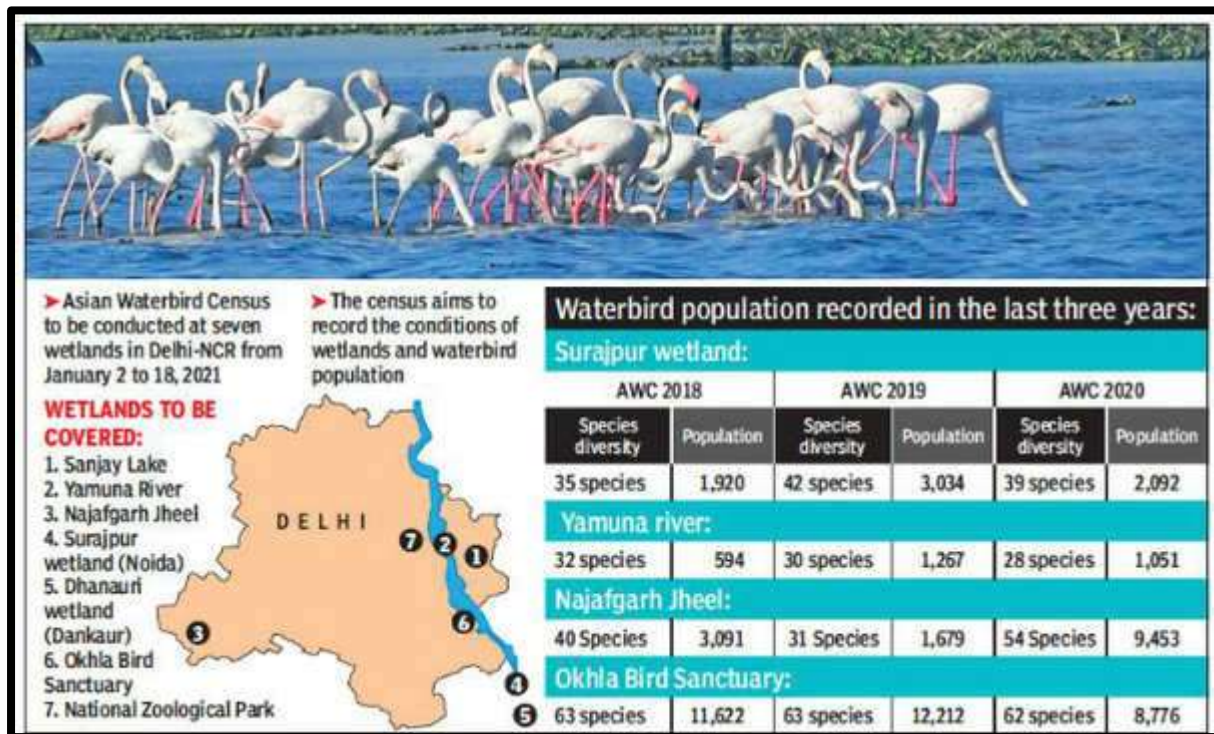
- In the High Court, there is a rule that even if any party does not hire a lawyer and appears in person, he has to speak and argue in English only.
- The Bench also underlined that Article 348 of the Constitution mandates that the language of the High Court would be English.

What does the Constitution say?

- Article 348 (1) of the Constitution of India provides that all proceedings in the Supreme Court and in every High court shall be in English Language until Parliament by law otherwise provides.
- Under Article 348 (2), the Governor of the State may, with the previous consent of the President, authorize the use of the Hindi language or any other language used for any official purpose of the State, in the proceedings of the High Court having its principal seat in that State provided that decrees, judgments or orders passed by such High Courts shall be in English.
- Section 7 of the Official Languages Act, 1963, provides that the use of Hindi or official language of a State in addition to the English language may be authorized, with the consent of the President of India, by the Governor of the State for purpose of judgments etc. made by the High Court for that State.
- The provision of optional use of Hindi in proceedings has already been made in the High Courts of Rajasthan, Uttar Pradesh, Madhya Pradesh and Bihar.

Topic 28. ASIAN WATERBIRD CENSUS

Importance for Prelims: Environment



The Asian Water bird Census (AWC), an annual count of water birds which is under way in parts of Delhi-NCR, has found lower water bird species diversity at East Delhi's Sanjay Lake when compared to the count from the past three years.

- The AWC is conducted in January each year and is coordinated by the Wetlands International South Asia and the Bombay Natural History Society.
- It is part of the International Water bird Census, coordinated by Wetlands International.
- Every January, thousands of volunteers across Asia and Australasia visit wetlands in their country and count water birds.
- This citizen science programme is the Asian Water bird Census (AWC).
- It was initiated in 1987 in the Indian subcontinent and has grown rapidly to cover major regions of Asia, from Afghanistan eastwards to Japan, Southeast Asia, and Australasia.

- The census covers the entire East Asian – Australasian Flyway and a large part of the Central Asian Flyway.
- Asian Waterbird Census (AWC) at Delhi-NCR The Asian Waterbird Census (AWC), an annual count of water birds which is underway in parts of Delhi-NCR, has found lower waterbird species diversity at East Delhi's Sanjay Lake when compared to the count from the past three years.
- The lower species diversity is a sign of degradation of the lake, since water birds are an indicator of its health.
- Sanjay Lake, which spans 17 hectares, is maintained by the Delhi Development Authority.
- It is among the water bodies that the Wetland Authority of Delhi had recently identified for notification as a wetland.
- The two migratory species recorded were the Great Cormorant, which migrates from Southeast Asia, and the Eurasian Coot, which migrates from Temperate Asia.
- The resident species found at the lake include the Common Moorhen, the Indian Cormorant, the White-throated Kingfisher, the White-breasted Waterhen, the Little Grebe, and the Red-wattled Lapwing.
- While the Indian Spot-billed Duck is usually common in such wetlands. The census, which began on January 2 and will conclude on January 16, is being carried out across seven wetlands in the NCR — Hastinapur Wildlife Sanctuary; Dhanauri and Surajpur wetlands in Greater Noida; Delhi Zoo and Sanjay Lake; Okhla Bird Sanctuary; NajafgarhJheel; and the Yamuna River.
- Sanjay Lake Sanjay Lake is an artificial lake developed by Delhi Development Authority (DDA) in Trilokpuri in East Delhi, India, adjoining MayurVihar II residential area.
- The lake attracts some migratory birds and has many indigenous trees.

Topic 29. MAJOR PORTS OF INDIA

Importance for Prelims: Economy



Major ports handle 11 per cent more cargo in April-December

- India has 12 major seaports (11 Government-owned and one private) and 205 notified minor and intermediate ports that handle a huge volume of traffic.
- About 95 percent by volume and 70 percent by value of India's total international trade are carried on through maritime transportation.
- All ports in India are situated in the 9 coastal states of India namely Kerala, Karnataka, Maharashtra, Goa, Gujarat, West Bengal, Odisha, Andhra Pradesh, and Tamil Nadu.
- Mumbai is the largest natural port in India.
- While the Major Ports are under the administrative control of Ministry of Shipping, the non-major ports are under the jurisdiction of respective State Maritime Boards/ State Government.