

Importance for NDA Prelims: WEEKLY CURRENT AFFAIRS MAGAZINE for



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THANE Address:

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Success is born of action...

Topic 1. INTERNATIONAL DAY OF RURAL WOMEN

Importance for Prelims: Agriculture



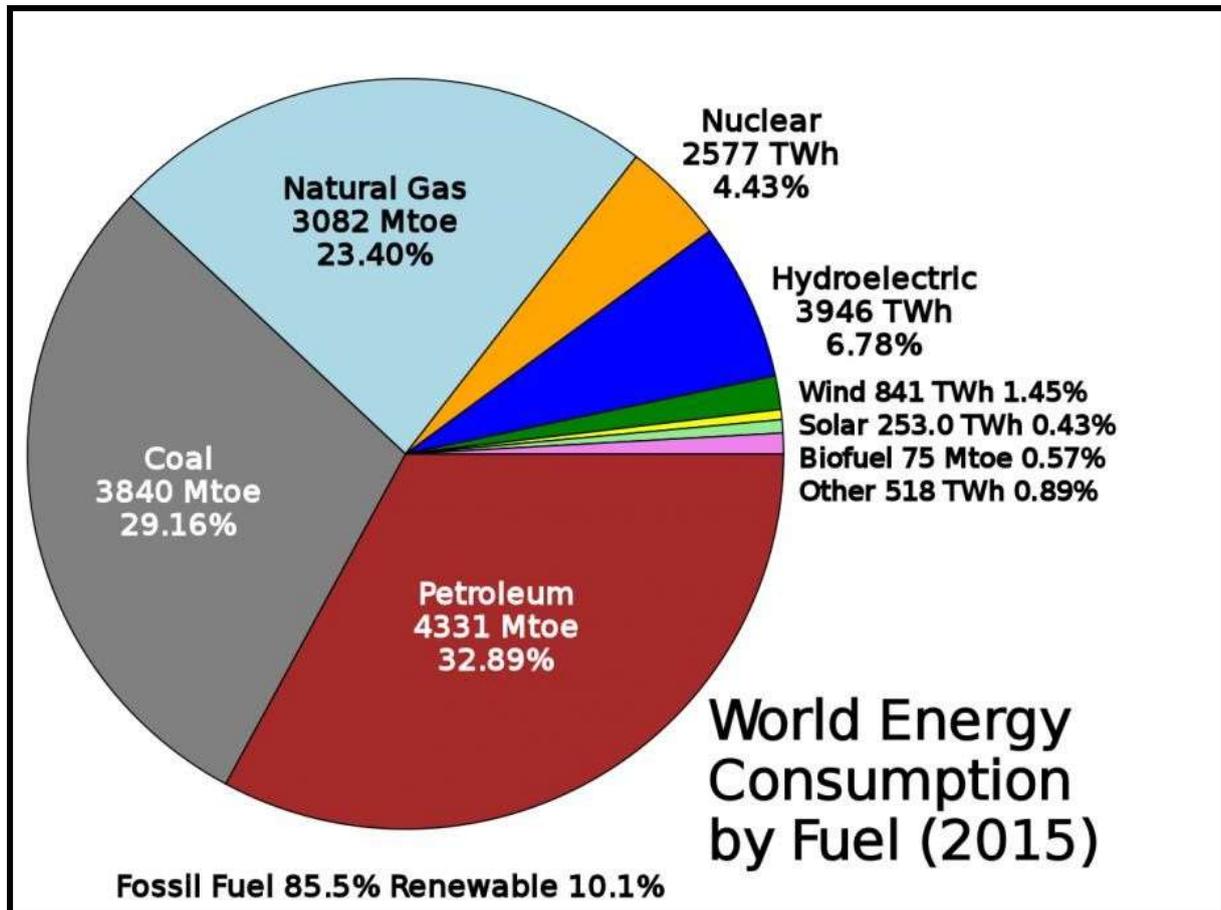
International Day of Rural Women – October 15

- Over 70 per cent of rural women in India are engaged in agriculture. Women carry out a large portion of the farm paintings as cultivators and agricultural labourers.
- Yet, in most instances, they are not even counted and recognised as farmers. Millions of rural Indian girls additionally shoulder the domestic paintings burden, a activity that is undervalued and unrecognised economically.
- The contributions of those girls, often left out, play a pivotal role in creating food safety that sustains rural groups.

- The International Maize and Wheat Improvement Center's (CIMMYT) CSISA project (Cereal Systems Initiative for South Asia) facilitated maize cultivation for farmers.
- The goal was for them to make most use of the land all 12 months-spherical and to move past personal consumption towards industrial production.
- CIMMYT's CSISA project began its sustainable intensification programme in some parts of Odisha's plateau region in early 2012.
- During the initial phase, maize stood out as an alternative crop with a high level of acceptance, particularly among women farmers.

Topic 2. NON POWER CONSUMPTION OF COAL

Importance for Prelims: Economy



Coal's now only for power and profits

- State-owned Coal India has asked its subsidiaries not to auction coal, except for the power sector.
- “In view of the contemporary low inventory position at the powerhouse give up, deliver of coal is being prioritized to the strength area to fill up the dwindling stock...coal agencies are recommended to chorus from engaging in of any further e-auctions of coal aside from special forward e-auction for the electricity sector, till the scenario stabilises,” Coal India stated in a recent letter to its arms.
- Non-energy consumers, which account for approximately a quarter of India's general coal consumption, consist of metal flora, aluminium smelters and cement manufacturers.

- Supplies to non-power sectors during the first half of FY22 at little over 62 million tonnes (MT) was 10% higher than last year.
- The coal ministry said it is diverting the output from captive coal mines, to enhance fuel deliver to the electricity region.
- Captive mines are those who produce coal or mineral for distinct use through the organization that owns the blocks.
- Mines and Minerals (Development and Regulation) Act, 1957 empowered central to reserve any mine for the particular end-use. These were the captive mines.
- Now, the Mines and Minerals (Development and Regulation) Amendment Bill, 2021 removed the distinction.
- Now captive mines may also be able to sell their inventory.
- The earnings Private strength manufacturers and some country transmission utilities appear like making a killing with the aid of promoting power on the exchanges in which fees have tripled because of decrease generation as a result of coal shortage.
- Data from the electricity exchanges for October 13 display manufacturers and country transmission agencies selling strength at Rs 16-18 consistent with unit in opposition to the same old charge of Rs four-6 commonplace before the coal shortage hit generation units.

Topic 3. COAL STOCKING NORMS FOR POWER PLANTS

Importance for Prelims: Economy

Secure Future

India to
simplify
coal
stocking
norms



Ensure
power plants
stock adequate
coal, avert
coal crisis

Officials say
present norms
are flawed

To calculate
daily coal
stock require-
ment on plant
load factor



Presently,
calculated
as avg of
last 7 days

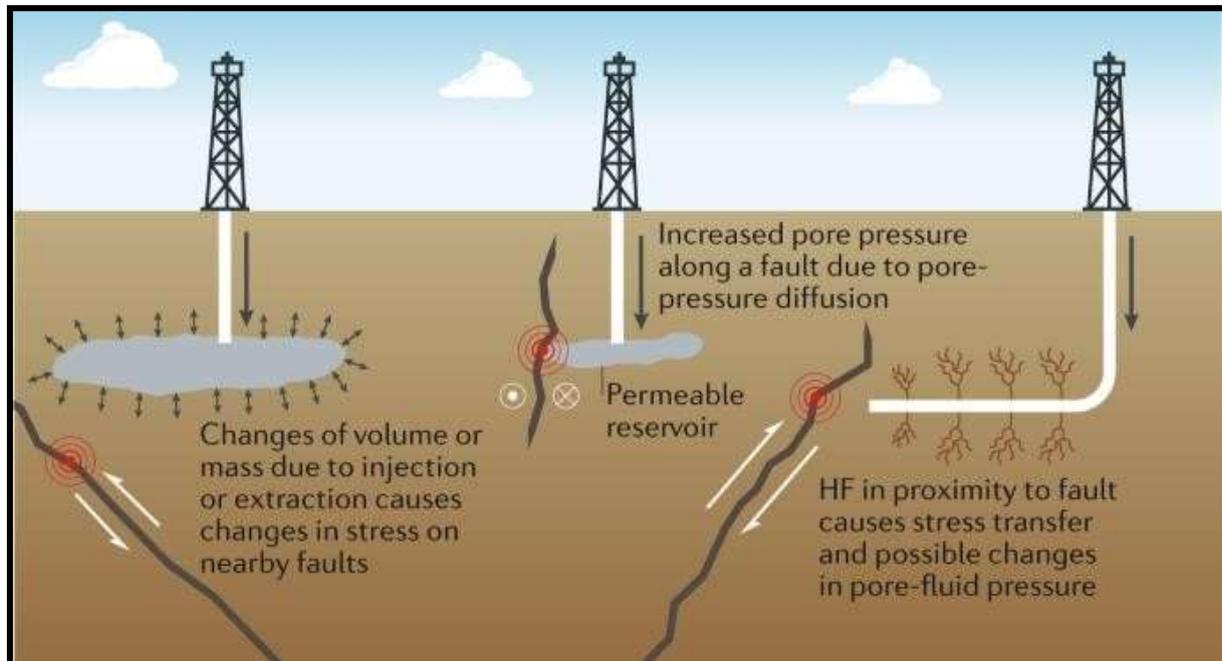
Coal stocking norms for power plants to be eased to avert crisis

- India has decided to simplify its coal stocking regulations for thermal power plants, mandating them to maintain fuel inventories based on a specified plant load factor to avert the Annual crisis the usa faces during top energy call for seasons

- At present, the policies are primarily based at the last seven-day average coal intake.
- Pithead vegetation should hold 15 days' stock even as for other generators, this can go as much as 30 days relying on the space between the plant and the coal supplying mine.
- The government is also considering reducing these categories and the number of days for stock requirement.
- The current rules are seen as defective because in case power demand rises suddenly and more coal is consumed, a plant would see its stock deplete fast and run out of coal before the supply is replenished.
- The new norms will be based on plant load factor, which means the stock has to be delivered for the plant to be operated at a certain level of capacity.
- This will ensure the power plants maintain the mandated coal inventories.
- In case the power demand is less, the stocking requirement would still remain the same.
- The stocking rules of the CEA were last modified in 2017.
- The proposal is aimed at simplifying the calculation and eliminating chances of manipulation and complacency on the part of power project operators.
- A better requirement could increase their running capital charges.
- Power organizations welcomed the thought to revise coal stocking recommendations.

Topic 4. HYDRO-SEISMICITY

Importance for Prelims: Geography



‘Micro-tremors in North Karnataka, a phenomenon called hydro-seismicity’

- The series of tremors in Bidar and Kalaburagi districts in North Karnataka had been probable because of hydro-seismicity, which occur put up monsoon.
- Their preliminary observations indicated that the micro tremors of this nature normally occur during the post monsoon period.
- It is related to a phenomenon called hydro-seismicity after a heavy rainfall.
- A natural increase in hydraulic head due to the elevation of the water table in recharge areas of groundwater basins increases the stress in earth.
- This triggers micro tremors and in some instances it's far observed by sound.
- These are due to shallow earthquakes that generate high-frequency surface waves.
- This type of seismic activity is very common and nothing to worry about, since it may not cascade into a large devastating earthquake.

Topic 5. HYDROELECTRIC POWER PLANTS IN INDIA

Importance for Prelims: Geography



Centre asks Kerala to increase generation at hydel stations

- India has 197 Hydro Power plants.
- The end of the 19th century saw the development of power in India.

- Hydro power projects are classified as large and small hydro projects based on their sizes.
- Different countries have different size criteria to classify small hydro power project capacity ranging from 10MW to 50 MW.
- In India, hydro power plants of 25MW or below capacity are classified as small hydro, which have further been classified into micro (100kW or below), mini (101kW-2MW) and small hydro (2-25MW) segments.
- Hydro Power was being looked after by Ministry of Power prior to 1989 especially with the assist of State Electricity Boards.
- In 1989, plant capability as much as 3MW and below turned into transferred to the Ministry of New and Renewable Energy (MNRE) and as such sixty-three MW mixture set up the capability of 3MW and under hydro tasks got here within the jurisdiction of MNRE.

Topic 6. E-SHRAM PORTAL

Importance for Prelims: Economy

E-shram portal for unorganised sector to be linked to 3 welfare schemes by year-end

- After launching the primary-ever countrywide database of unorganised employees, the labour ministry is now looking at linking welfare schemes with the e- Shram portal to make certain the employees are capable of claim blessings with the click of a mouse.
- The first scheme that the ministry will be linking with the portal is the Pradhan Mantri Suraksha BimaYojana, which will be done in the next fortnight.
- This scheme presents aRs 2 lakh unintentional insurance cowl to the own family of the insured.
- In the event of accidental death of an unorganised sector worker, his family can log on to the online portal and claim the insurance, after uploading proof of their identity.
- They won't have to run around.
- The concept is to make the entire system clean and problem-loose to claim advantages.
- Earlier, as an incentive to register on the e-Shram portal, the labour ministry had decided to waive the annual Rs 12 premium on the accidental insurance cover scheme.
- By the year end, the government also plans to link two other schemes — PM Shram Yogi Maandhan and PM JeevanJyotiBimaYojana — with the portal.
- Under the PM Shram Yogi Maandhan, unorganised sector employees with a monthly profits of as much as Rs 15,000 are entitled to an assured pension of Rs 3,000 when they retire.

- The PM JeevanJyotiBimaYojana promises Rs 2 lakh risk coverage in case of death of an insured worker due to any reason.
- The premium is Rs 330 per annum under the scheme, which is auto debited in one installment from the subscriber's bank account.
- Once these schemes are related, registered people may be capable of log into the portal and observe for on line transfer of price range, doing away with the want to run from pillar to post.
- These three schemes put together will give the workers some amount of social security.
- Pradhan Mantri Suraksha BimaYojana (PMSBY)- Pradhan Mantri Suraksha BimaYojana is a government scheme launched in 2015.
- **Eligibility:** Available to people in age group 18 to 70 years with bank account.
- **Premium:** Rs 12 per annum. Payment Mode: The annual top class gets immediately automobile-debited by the financial institution from the subscriber's account.
- **Risk Coverage:** For accidental death and full disability – Rs 2 Lakh and for partial disability – Rs 1 Lakh.
- **Eligibility:** Any person with bank a bank account and Aadhaar number linked to the bank account can apply by just submitting the form to the bank every year before 1st of June.
- Nominee name to be given in the form at the time of applying.
- **Terms of Risk Coverage:** A individual has to choose the scheme each 12 months. He can also opt to provide a long-time period alternative of continuing wherein case his account could be car-debited every 12 months by means of the bank.
- **Who will implement this Scheme:** The scheme may be presented with the aid of all Public Sector General Insurance Companies and all different insurers who are inclined to sign up for the scheme and tie-up with banks for this purpose.

- The premium paid will be tax-free under section 80C and also the proceeds amount will get tax-exemption u/s 10(10D).
- But if the proceeds from insurance policy exceed Rs.1 lakh ,TDS at the rate of 2% from the total proceeds if no Form 15G or Form 15H is submitted to the insurer.

PM JeevanJyotiBimaYojana Eligibility – Available to humans in the age group of 18 to 50 and having a bank account.

People who be a part of the scheme before completing 50 years can, however, keep having the threat of lifestyles cover up to the age of fifty five years difficulty to charge of top class.

Premium – Rs.330 per annum.

It will be autodebited in one instalment. Payment Mode – The fee of premium could be without delay auto-debited by using the financial institution from the subscribers account.

Risk Coverage – Rs.2 Lakh in case of death for any reason.

- Terms of Risk Coverage – A person has to opt for the scheme every year. He can also prefer to deliver an extended-time period alternative of continuing, wherein case his account might be auto-debited every 12 months through the bank.

Who will implement this Scheme?

- The scheme may be provided by means of Life Insurance Corporation and all different existence insurers who're willing to enroll in the scheme and tie-up with banks for this motive.
- Government Contribution Various other Ministries can co-make a contribution top rate for various classes in their beneficiaries out in their price range or out of Public Welfare Fund created in this price range out of unclaimed money.
- This will be decided separately during the year. Common Publicity Expenditure will be borne by Government.

(UPSC/MPSC/CDS/NDA) (Contact No.-75060 10635)

- PM Shram Yogi Maandhan Pradhan Mantri Shram Yogi Maan-dhan is a crucial government scheme supposed for vintage age safety and social protection of Unorganised Workers (UW).
- Eligibility Criteria Should be an unorganized worker (UW) Entry age among 18 and 40 years Monthly Income Rs 15000 or underneath Should now not be engaged in Organized Sector (membership of EPF/NPS/ESIC) an income tax payer covered under New Pension Scheme (NPS), Employees' State Insurance Corporation (ESIC) scheme or Employees' Provident Fund Organisation (EPFO).
- He/ She ought to own Aadhar card Savings Bank Account / Jan Dhan account wide variety with IFSC.
- PM-SYM is a Central Sector Scheme administered by way of the Ministry of Labour and Employment and carried out thru Life Insurance Corporation of India and Community Service Centers (CSCs).
- LIC could be the Pension Fund Manager and accountable for Pension payout.
- **Minimum Assured Pension:** Each subscriber shall receive minimum assured pension of Rs 3000/- per month after attaining the age of 60 years.
- **Family Pension:** During the receipt of pension, if the subscriber dies, the spouse of the beneficiary shall be entitled to receive 50% of the pension received by the beneficiary as family pension.
- Family pension is applicable only to spouse.
- If a beneficiary has given regular contribution and died due to any cause (before age of 60 years), his/her spouse will be entitled to join and continue the scheme Finally by using price of everyday contribution or go out the scheme as in keeping with provisions of exit and withdrawal.
- **Contribution:** The subscriber's contributions will be made thru the 'vehicle- debit' facility from his/ her financial savings bank account/ Jan-Dhan account.

- PM-SYM functions on a 50:50 basis where prescribed age-specific contribution shall be made by the beneficiary and the matching contribution by the Central Government.

Topic 7. COP26 CLIMATE CONFERENCE

Importance for Prelims: Environment



The UK will host the COP 26 UN Climate Change Conference from October 31 to November 12

- This year marks the 26th Conference of Parties (thus the name COP26) and will be held in the Scottish Event Campus in Glasgow.
- The conference comes months after the Intergovernmental Panel on Climate Change (IPCC) posted its evaluation document on Earth’s climate, highlighting warmness waves, droughts, severe rainfall and sea-degree rise in the coming many years.
- Formation of COP The Conference of Parties comes below the United Nations Climate Change Framework Convention (UNFCCC) which become fashioned in 1994.
- The UNFCCC became established to work closer to “stabilisation of greenhouse gasoline concentrations in the atmosphere.”
- It laid out a list of responsibilities for the member states which included: Formulating measures to mitigate climate change Cooperating in preparing

for adaptation to the impact of climate change Promoting education, training and public awareness related to climate change.

- COP1 to COP25 COP members have been meeting every year since 1995.
- The UNFCCC has 198 events which include India, China and the USA.
- The first conference (COP1) was held in 1995 in Berlin.
- At COP3 held in Kyoto, Japan, in 1997, the famous Kyoto Protocol was adopted.
- It commits the member states to pursue hassle or reduction of greenhouse gas emissions.
- It entered into force on 16 February 2005 and there are 192 Parties in the Kyoto Protocol.
- India hosted the eighth COP from October 23 to November 1, 2002 in New Delhi.
- One of the most important conferences, COP21 took place from November 30 to December 11, 2015, in Paris, France.
- Member countries agreed to work together to ‘limit global warming to well below 2, preferably to 1.5 degrees Celsius, compared to pre-industrial levels.’ COP Place Year Major Highlight COP 1 Berlin 1995
- The signatories agree to meet annually to maintain control over global warming and see the need to reduce emissions of polluting gases.
- COP 3 Kyoto. 1997 The Kyoto Protocol is adopted with the commitment to reduce emissions of greenhouse gases in industrialized countries.
- Lays the foundation of the carbon market.
- COP 8 New Delhi The convention laid out seven measures such as, ‘strengthening of technology switch... in all relevant sectors, consisting of electricity, delivery...and the advertising of technological advances through research and development...and the strengthening of institutions for sustainable development.’

- COP 13 Bali 2007 The Bali Roadmap sets a timetable for negotiations for a new international agreement to replace the Kyoto Protocol and include all countries, not only the developed ones.
- COP 15 Copenhagen 2009 The goal of maintaining international warming beneath 2 °C is tested and developed international locations decide to finance developing international locations within the long term.
- COP16 Cancun 2010 The Cancun Agreements, which formalizes the commitments set out in Copenhagen, are written and the Green Climate Fund is created especially for weather movements in developing countries. COP17.
- Durban 2011 his time, all international locations agree to start reducing emissions, along with america and rising nations (Brazil, China, India and South Africa).
- It was decided to negotiate a global agreement that would come into force in 2020. COP18 Doha 2012
- It is decided to extend the Kyoto Protocol until 2020.
- Countries like the US, China, Russia and Canada did not support the extension. COP20 Lima 2014
- For the first time, all countries agree to develop and share their commitment to reducing emissions of greenhouse gases.
- COP21 Paris 2015 After 20 years of negotiations, the Paris Agreement was unanimously adopted to keep global warming below 2 °C above pre-industrial and continue efforts to limit it to 1.5 °C.
- COP22 Marrakesh 2016 Against all expectations, the Paris Agreement got here into pressure a few days earlier than the Summit, after being ratified by means of maximum international locations.
- The end result of the negotiations at this assembly turned into encapsulated in three files: the Marrakesh Action Proclamation, a strong political message assisting the Paris Agreement at a time when the change in the White

House was generating uncertainty; the Marrakesh Partnership to strengthen climate collaboration for the period up to 2020, and; the first meeting of the CMA, the decision-making body for the Paris Agreement COP23 Bonn 2017 At this Climate Summit, progress was made on the Rulebook to detail how the Paris Agreement will work in practice (Paris Rulebook), with the aim of concluding it in 2018.

- Facilitative Dialogues, called the Talanoa Dialogue, have been additionally created, a method permitting international locations to proportion reviews and precise practices which will reap the Agreement objectives.
- The Talanoa Dialogue Platform was launched to promote the participation and dialogue of local and indigenous communities.
- A Gender Action Plan was adopted to ensure the role of women in decision-making related to climate change.
- COP24 Katowice 2018 Little over two months before the Summit began, the IPCC published its report analyzing the impacts of a 1.5°C global temperature increase, which focused debate on A want for extra urgency in lowering polluting emissions.
- Nevertheless, although this was mentioned, it was not considered to be a guide for action in the texts agreed.
- Meanwhile, the Talanoa Dialogue ended, the next step being to review the 2020 climate plans to align them with the set objective of limiting global warming.
- Finally, one of the most essential articles of the negotiation become left unresolved: Article 6 allowing the development of carbon markets.
- COP25 Madrid 2019 COP26 goals According to the UNFCCC, COP26 will work towards four goals:
 1. Secure global net-zero by mid-century and keep 1.5 degrees within reach. The UK has already dedicated to bringing seventy eight% emission discounts by way of

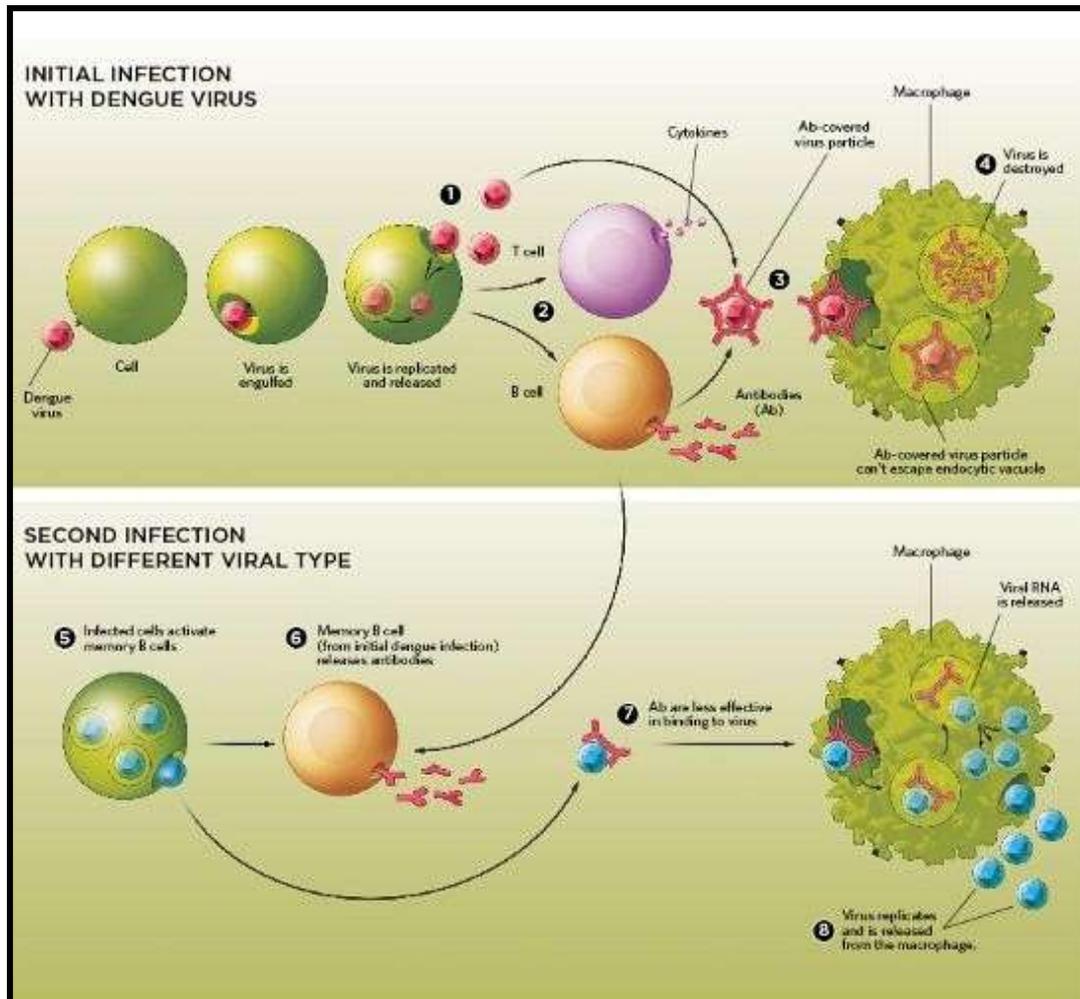
2035 and is on the road to internet-0 by way of 2050. India has also taken important steps with its 450 giga Watt renewables target and countrywide hydrogen venture. Different countries will have different pathways, and we recognise the principle of common but differentiated responsibilities.” The UNFCCC recommends that countries ‘accelerate the phase-out of coal, curtail deforestation, speed Up the transfer to electric motors and encourage funding in renewables’ to satisfy this aim.

What India could do to reach its targets?

- i. It is time for India to update its Nationally Determined Contributions or NDCs. (NDCs detail the diverse efforts taken by every united states of america to reduce the country wide emissions)
 - ii. Sector by sector plans are needed to bring about development. We need to decarbonise the power, transport sector and begin looking at carbon consistent with passenger mile.
 - iii. Aggressively figure out how to transition our coal sector
 - iv. India also needs to ramp up the legal and institutional framework of climate change.
2. Adapt to defend communities and natural habitats Countries will work collectively to ‘guard and repair ecosystems and build defences, caution systems and resilient infrastructure and agriculture to avoid loss of homes, livelihoods and even lives.’
 3. Mobilise finance “To deliver on our first two goals, developed countries must make good on their promise to mobilise at least \$100bn in climate finance per year by 2020,” notes the UNFCCC.
 4. Work collectively to deliver Another vital mission on the COP26 is to ‘finalise the Paris Rulebook’. Leaders will paintings collectively to border a listing of unique regulations a good way to assist fulfil the Paris Agreement.

Topic 8. ANTIBODIES PRODUCED DURING DENGUE

Importance for Prelims: Science and Tech



Antibodies produced during dengue lead to massive destruction of platelets:
Doctor

- In dengue, the drop in platelet number is because of the following reasons: # Platelet count in dengue decreases because it suppresses bone marrow, which is the platelet-generating place.
- # Platelet count in dengue decreases because of blood cells affected by the disease.
- # Antibodies that are produced during this period lead to massive destruction of platelets in dengue.

What is a normal platelet count in a body?

- In the normal human frame, the platelet be counted in dengue degrees from 1.5 lakh to four lakh.

How does a drop in platelet count in cases of dengue manifest?

What are the complications?

- Patient may be asymptomatic or can also have bleeding manifestations, such as:
Bleeding from gums or nose # Blood in urine, stools or vomit # Bleeding beneath the pores and skin, which may appear like bruising # Major internal organ bleeds in few cases.

When is a platelet transfusion required?

- In instances in which platelets drop to under 10,000, platelet transfusion is required however in case of bleeding manifestations, platelet transfusions may even be given at extra than the reduce-off value of 10,000 too.
- There are many requests for donation of platelets.

Who can donate platelets?

And what are the key points to be kept in mind, considering platelets last only for five days?

Donor eligibility standards are the identical for both platelet and entire blood donors. Any healthy adult who clears the screening process of the blood bank for platelet donation can donate the platelets.

- Do eat a regular meal and drink plenty of fluids one to two hours before donating platelets.
- Do not take aspirin or merchandise containing aspirin for as a minimum 72 hours before platelet donation.
- Dengue is transmitted by several species of mosquitoes within the genus Aedes.
- Symptoms include fever, headache, muscle, and joint pain, and a characteristic pores and skin rash that is similar to measles.

- There are four types of dengue strains, and type II and IV are considered to be more severe and normally require hospitalisation.
- According to experts, the aedes mosquito breeds in clean stagnant water.
- Meanwhile, cases of malaria, chikungunya and viral fever are also rampant during monsoon.

Topic 9. JACKIE CHAN GECKO

Importance for Prelims: Environment

A gecko named Jackie Chan in the Western Ghats

- A new revision of *Cnemaspis* geckos (day gecko) within the Western Ghats has described 12 new species, together with ones named, among others, after Jackie Chan and dragons from Game of Thrones and Lord of the Rings.
- Of the 12 species, 10 were found in southern Western Ghats.
- The paper, ‘Diversifying on the Ark: more than one new endemic lineages of dwarf geckos from the Western Ghats provide insights into the systematics and biogeography of South Asian *Cnemaspis* (Reptilia: Squamata)’.
- At present, there are eighty-five known species within SA, despite the fact that the quantity keeps to boom swiftly with targeted surveys and rigorous taxonomic work,” the paper says, adding but that most research lack sufficient sampling within the Western Ghats (WG), wherein the genus has its finest range. Historically, species were described on the premise of morphology for hundreds of years.
- “However, inside the ultimate couple of a long time, genetic statistics has proven that morphology might not inform the entire tale i.E., some species might be deeply genetically separated without looking any different from each other.
- Hence, these days we try and use a combination of genetic facts, geographical separation, and morphological uniqueness to decide whether or not something is a new species.”
- “Typically, species are named for a morphological character, a geographical location or after someone well known in the field (such as *Cnemaspis wallacei*, after Alfred Russel Wallace).
- However, sometimes its also fun to name them after cultural or musical icons.

- The researchers have pointed out that despite being one of the world's “hottest biodiversity hotspots”, the Western Ghats have undergone substantial habitat loss and degradation due to changes in land use patterns, and it has been suggested that significant parts of it will be urbanised by 2030 due to population expansion and development.

Topic 10. MOLNUPIRAVIR

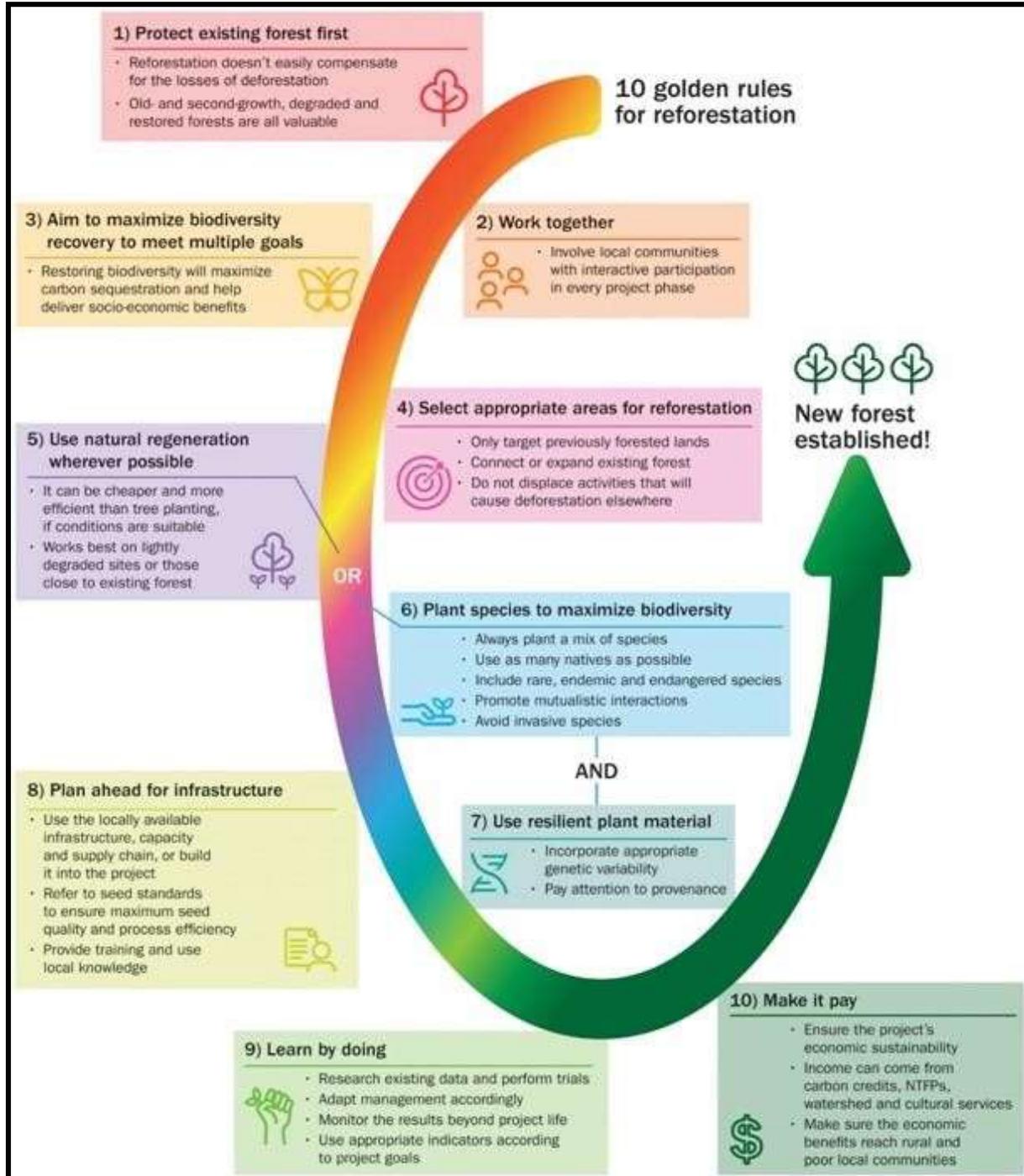
Importance for Prelims: Science and Tech

‘Virus less likely to develop resistance to molnupiravir’

- The anti-viral drug molnupiravir can reduce risk of hospitalisation or death by 50% in non-hospitalised adult patients with mild-to-moderate COVID-19 disease.
- That molnupiravir is an oral drug is a prime benefit in treating patients as it might not require hospitalisation. Molnupiravir is a pro-drug, which means that it needs to undergo processing in the body to become energetic.
- It is metabolised to a ribonucleoside analog, which is essentially a sugar molecule linked to a molecule that resembles a nucleic acid.
- Nucleic acids are had to make RNA, and if molnupiravir is used, the viral enzyme in preference to the usage of actual cytidine or uridine uses a molecule this is generated via metabolism of molnupiravir called NHC-TP.
- The virus has a proof-reading mechanism but the viral ex-nuclease which is responsible for removing mistakes does not recognize NHC-TP as an error, so that when the viral RNA polymerase is making copies of RNA that contains molnupiravir, then it randomly replaces cytidine or uridine.
- This causes more mutations that can be survived by means of the virus or it becomes not able to copy — this is called deadly mutagenesis or error disaster
- The drug has achieved well against influenza in animal research and became set to go into phase-1 trials in 2020. It has additionally labored well towards Ebola and Chikungunya.
- If multiple antivirals are available then using a combination that targets different steps in the replication of the virus is the best way to delay the development of resistance.
- Both remdesivir and molnupiravir goal the equal enzyme however in special approaches

Topic 11. KEW DECLARATION

Importance for Prelims: Environment



'Kew Declaration' unites experts on reforestation, aims at policymakers ahead of COP26

- The statement, spearheaded via Royal Botanic Gardens, Kew (RBG Kew), and Botanic Gardens Conservation International (BGCI), changed into signed through

(UPSC/MPSC/CDS/NDA) (Contact No.-75060 10635)

- more than 2, six hundred individuals from 113 nations, which includes scientists, foresters, financiers, coverage experts, and representatives of botanical gardens, NGOs, and tree nurseries.
- The announcement expresses the co-signatory's subject over big-scale tree plantations of single species and/or non-local timber, which could harm biodiversity and capture less carbon than native forests.
- It proposes that forests be planted to mirror the diversity of herbal ecosystems.
- The declaration was borne out of discussions and research presented at the Reforestation for Biodiversity, Carbon Capture and Livelihoods conference in February 2021 as well as the “Ten Golden Rules for Reforestation to Optimise Carbon Sequestration, Biodiversity Recovery and Livelihood Benefits” posted by way of RBG Kew and partners in January 2021.
- The announcement mainly calls upon “policymakers, financiers and practitioners in international locations which have made reforestation pledges” to stick to the Ten Golden Rules, work with Indigenous and neighborhood human beings and admire their land tenure rights, make certain that any habitats lost are replicable, shield threatened species, preserve to steward and reveal projects, and “learn from past mistakes.”
- The declaration also requires subsidies and “fine financial incentives” to aid recovery.
- Afforestation, or planting trees on lands that do not historically have trees (such as savannas or moorlands), can actually release carbon from the ground and be destructive to the ecosystem, so selecting the appropriate areas and species for reforestation is critical.
- When human beings plant the incorrect timber in the incorrect location, it is able to cause appreciably extra harm than benefits, failing to help people or nature.

- One of the promising processes mentioned is agroforestry, an alternative to intensive agriculture, which makes use of forest-based merchandise and has the introduced benefits of “carbon sequestration, soil shape and fertility, shade, tree products and other ecosystem services,” the declaration states.
- The United Nations Decade on Ecosystem Restoration: 2021-2030.

Topic 12. HIGHER TARIFF VALUE ON EDIBLE OILS

Importance for Prelims: Economy

Higher tariff value on edible oils to lower benefit of cut in import levies

- After lowering import levies, the Finance Ministry has upped the tariff value for edible oils.
- This means the benefit of lowering duty for retail prices will be less than expected.
- Tariff values talk to the base on which advert valorem (percent of price) responsibility is calculated for an imported true.
- Change or no trade inside the value is notified each fortnight retaining in mind the charges in the global market.
- Sub-segment (2) of Section 14 of the Customs Act 1962 empowers the Central Board of Indirect Taxes & Customs (CBIC) “to restore tariff values for any elegance of imported items or export items and the responsibility shall be chargeable as regards to such tariff price.”
- One of the reasons for converting the tariff fee is to align it to changes in market costs of the underlying commodity.
- For example, the price of locally introduced crude palm oil in Malaysia has improved by means of approximately 18 in line with cent from July to October.
- The World Bank index too shows an increase in the Malaysian palm oil prices Producers’ body feels reducing the import levies and raising the tariff value are giving confusing signals.

Topic 13. OIL SEEDS

Importance for Prelims: Agriculture



Oilseeds take the lead in early rabi sowing; pulses, paddy coverage stagnating

- Oilseeds have taken the lead in early Rabi sowing till the first fortnight of October, while pulses and paddy are stagnating at last year's levels.
- Oilseeds acreage has been mentioned at 2.81 lh, in particular in UP.
- Mustard, the main rabi oilseed, has been sown in 2.81 lh (1.71 lh).

- About Oilseeds Oilseed crops are the second most important determinant of the agricultural economy, next only to cereals within the segment of field crops.
- The self-sufficiency in oilseeds attained through the “Yellow Revolution” during early 1990’s, could not be sustained beyond a short period.
- Oilseed vegetation are in the main grown for the cause of obtaining vegetable oils from them.
- Oil content in them varies from 20% in soybeans to 40% in sunflowers and canola (rapeseed).
- India is able to produce a huge amount of oilseeds because of the favourable environmental conditions.
- Castor seed, sesamum, rapeseed, groundnut, mustard, soyabean, linseed, niger seed, sunflower and safflower are some of the vital oilseeds India is understood to supply.
- Despite being the 5th largest oilseed crop generating united states within the international, India is likewise certainly one of the largest importers of vegetable oils these days.
- India buys more than two-thirds of its total edible oil imports as palm oil. India has a marked position in the world in the production of a large amount of oilseeds.
- After China, India is the second largest producer of groundnut and is third in position in the production of Rapeseed after China and Canada.
- Major Oilseeds Producing Areas in India are: Rajasthan, Gujarat, Tamil Nadu, Madhya Pradesh, Haryana, Maharashtra, Karnataka, Andhra Pradesh.
- The Yellow Revolution The Yellow Revolution was launched to increase the production of Edible oilseeds in the country to meet the domestic demand.

- The revolution launched in 1986- 1987 to increase the production of edible oil, especially mustard and sesame seeds to achieve self-reliance is known as the Yellow Revolution.
- Sam Pitroda is Known as the father of the Yellow Revolution in India. Yellow Revolution targets nine oilseeds that are groundnut, mustard, soybean, safflower, sesame, sunflower, niger, linseed, and castor.

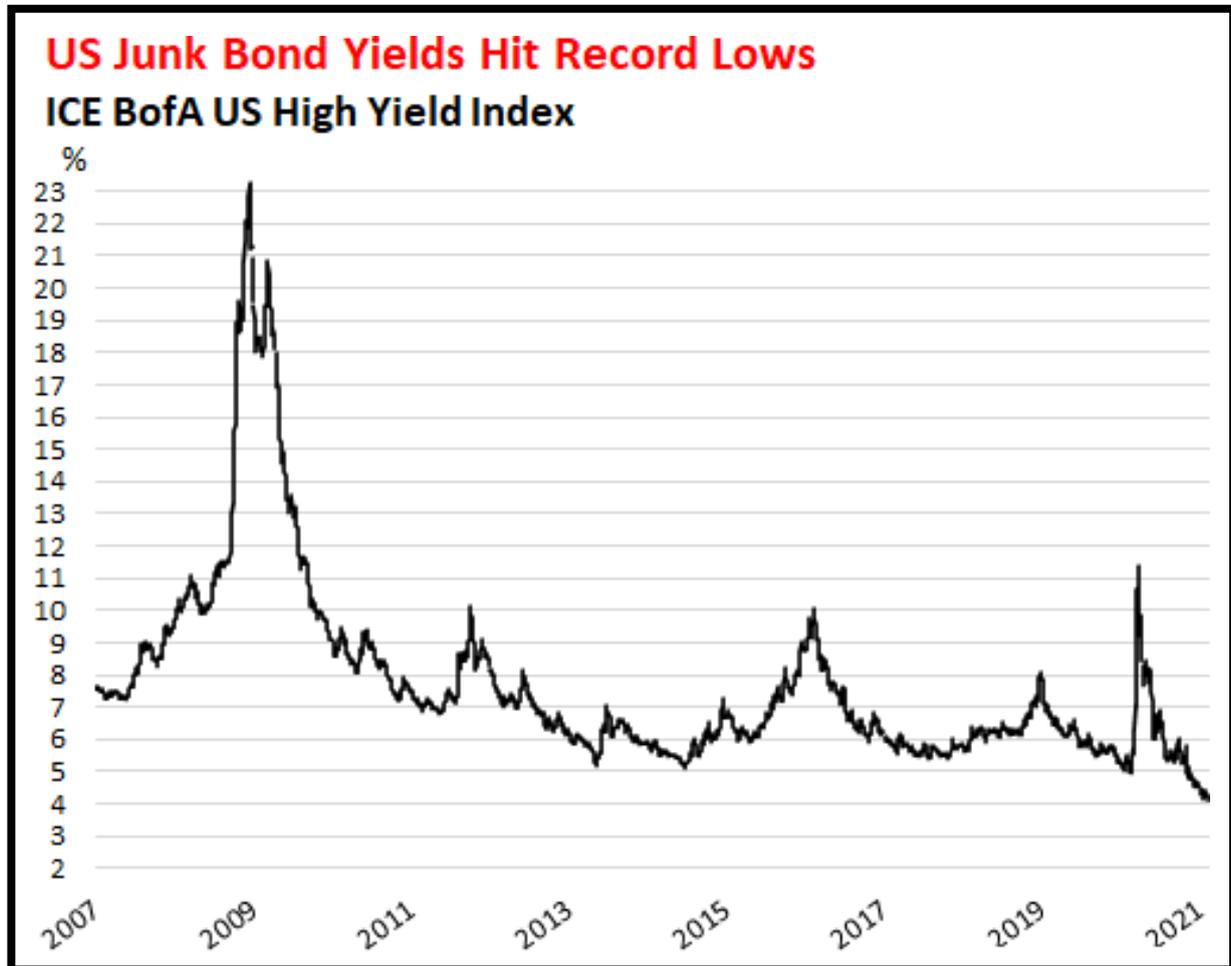
National Food Security Mission (Oil Seeds and Oil Palm) –

- **Objective** – To augment the availability of safe to eat oils and decrease the import of fit to be eaten oils by way of growing the production and productiveness of oilseeds and oil palm.
- Merger of NMOOP under NFSM: National Mission on Oilseeds & Oil Palm (NMOOP) was launched in 2014-15 and continued upto 2017-18.
- From 2018-19 onwards, the NMOOP is being applied under NFSM as NFSM-Oilseeds & Oil palm comprising the sub components NFSM-Oilseeds, NFSM-Oil Palm and NFSM-Tree Borne Oilseeds (TBOs).
- Multi-Pronged Strategy: Increasing Seed Replacement Ratio (SRR) with focus on varietal replacement.
- SRR is the percentage of area sown out of total area of crop planted in the season by using certified/quality seeds other than the farm saved seed.
- Productivity improvement by adoption of proven and climatic resilient technologies like water saving devices (sprinklers/rain gun), zero tillage, intercropping, relay cropping, strategic application of micronutrient and soil ameliorants.
- Area expansion through diversification of low yielding food grains.
- Creation of 36 oilseed hubs with a focus on regional approach for larger availability of quality seeds.
- Post-harvest management at farm and village level. Formation of Farmer Producer Organisations.

- **Funding Pattern:** The cost sharing pattern between Central and State Governments, is in the ratio of 60:40 for general category of States and 90:10 for North Eastern and Himalayan States.
- For few interventions, like purchase of breeder seeds by both State and Central seed producing agencies, supply of seed mini-kits to the farmers, 100% funding is provided by Government of India.

Topic 14. BOND YIELDS TREND HIGHER DESPITE SOFTER INFLATION

Importance for Prelims: Economy



Bond yields trend higher despite softer inflation

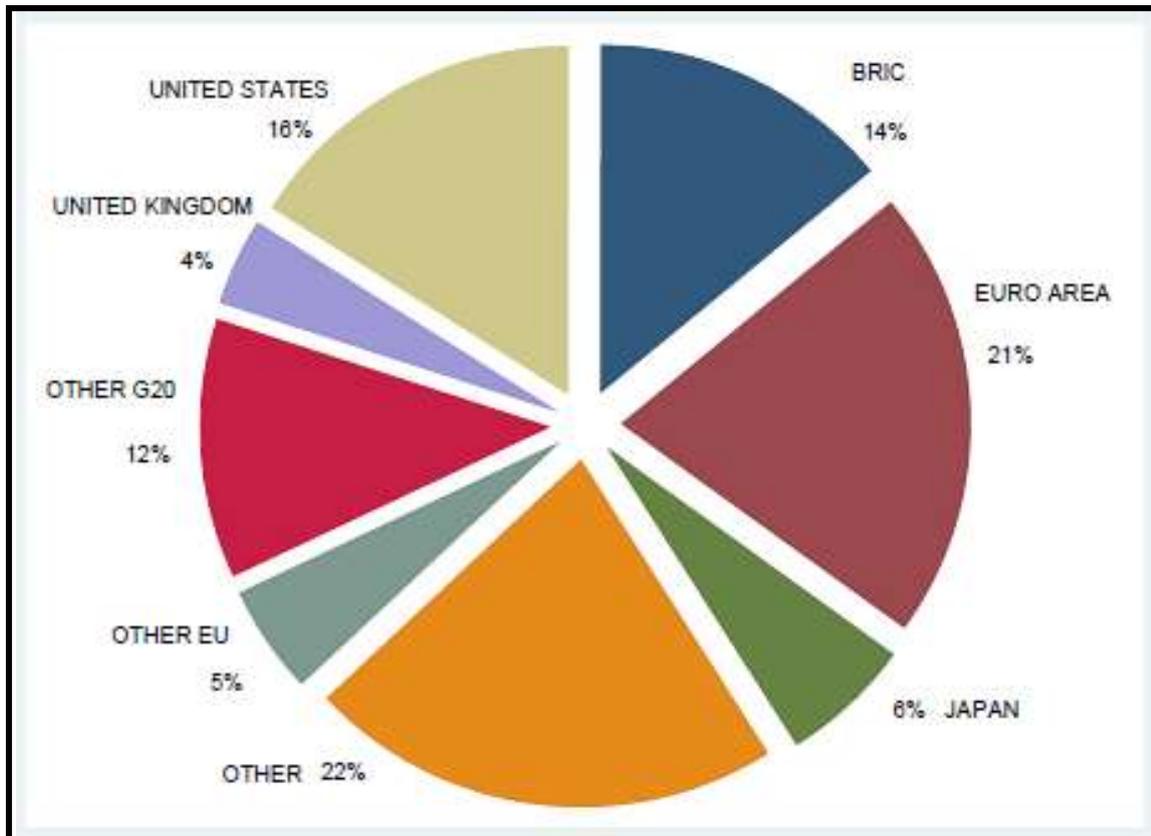
- Benchmark yield closed marginally higher this week despite positive inflation data even as rising crude prices, higher US treasury yields and domestic liquidity factor take precedence.
- During the economic coverage, the Reserve Bank of India halted the G-SAP programme while saying it might growth the quantum of VRRR auctions to ₹6 lakh crore through December.
- The central bank last week conducted an 8-day Variable Rate Reverse Repo auction in which the cut-off yield came in at 3.9 per cent. In

Contrast, the reduce-off for a 7-day VRRR auction had are available in at 3.61 according to cent in the first week of October.

- The growing reduce-off appears to mirror the critical bank's comfort in paying a better charge to get rid of immoderate liquidity.
- The halting of G-SAP comes at a time when crude prices are gaining an upward momentum. Bond dealers say if both the crude and the US treasury yields continue to rise, it could have an impact on the domestic yields.
- "Rising crude expenses and hardening US Treasury yields are the principle factors that are using the G-Sec yields higher.
- Under these adverse global conditions, the withdrawal of G-SAP has exacerbated the upmove.

Topic 15. IMF QUOTA

Importance for Prelims: Economy



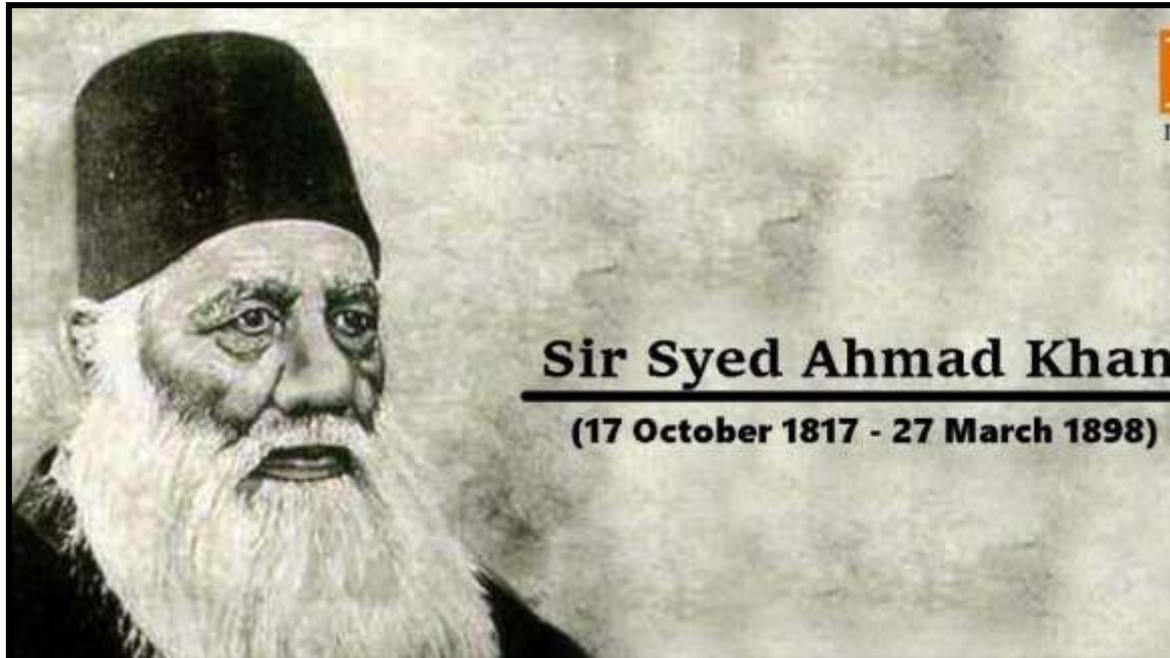
Experts call for review of IMF role, data integrity, completing quota reforms

- The IMF is a quota-based institution.
- Quotas are the building blocks of the IMF's financial and governance structure.
- An person member united states's quota broadly displays its relative function in the global economic system.
- Quotas are denominated in Special Drawing Rights (SDRs), the IMF's unit of account. Multiple roles of quotas General Quota Reviews
- The IMF's Board of Governors conducts general reviews of quotas at regular intervals (no more than five years apart).
- Any modifications in quotas ought to be permitted with the aid of an 85 percent majority of the total vote casting electricity, and a member's very own quota cannot be changed without its consent.

- The two main issues addressed in a general review of quotas are (i) the size of an overall quota increase and (ii) the distribution of the increase among the members.
- Size of overall quota increase – A widespread assessment allows the IMF to evaluate the adequacy of quotas on the subject of each the individuals’ balance of bills financing desires and the Fund’s ability to assist meet the ones desires.
- Distribution of the quota boom among members A popular evaluation allows for realignments in contributors’ quota stocks to mirror modifications of their relative positions within the international economic system.
- In addition, a member may request an ad hoc quota adjustment at any time outside of a general review.
- Quota formula A quota system is used to assist assess members’ relative role within the global economy and it is able to play a role in guiding the distribution of quota will increase.
- The current formula was agreed in 2008.

Topic 16. SIR SYED AHMAD KHAN

Importance for Prelims: History



Aligarh Muslim University (AMU) has completed 100 years

- He was an Islamic pragmatist, Islamic reformer, philosopher, and educationist in nineteenth-century British India.
- Sir Syed Ahmad Khan, an iconic social reformer and founder of the Aligarh Muslim University (AMU), which has completed one hundred years, changed into born on October 17, 1817.
- Mohammedan Anglo-Oriental (MAO) College was the precursor of AMU.
- His distinctiveness lay in the way he used education as a tool for national integration.
- His wish was to unshackle Hindus and Muslims from medieval thinking towards broad-mindedness, reason and progress.
- Sir Syed laid out his vision for Hindu-Muslim unity in a speech in January 1883.
- Sir Syed laid the foundation of comparative religious studies and revived the spirit of Dara Shikoh's philosophy — to bring major communities of

India together by finding commonalities in their religions and assimilate them as a one mighty stream.

- This is why AMU established the Dara Shikoh Centre for Interfaith Understanding. Section 5 (2)(b) of the AMU Act empowers the university to promote the study of religions, civilisation and culture of India. In AMU's 100 years, it has now not best contributed to nation-constructing however additionally performed a function in India's quest for building friendly ties with the Muslim global.
- For this, AMU is recognised as an institution of national importance under the Seventh Schedule of the Constitution.
- Apart from drawing students from 26 other countries, it has students from 31 States and Union Territories and thus represents India's multi-religious, multi-racial and multi-lingual character.
- This is why Prime Minister Narendra Modi, at some stage in the centenary celebrations of AMU in 2020, called the institution a "mini-India".
- Though initially espousing Hindu-Muslim cohesion, he became the pioneer of Muslim nationalism in India and is broadly credited as the father of the 2- country concept, which formed the premise of the Pakistan movement.
- In 1838, Syed Ahmad entered the service of East India Company and went directly to grow to be a judge at a Small Causes Court in 1867, retiring from 1876.
- During the War of Independence of 1857, he remained loyal to the British Raj and became stated for his actions in saving European lives.
- After the rebel, he penned the e-book The Causes of the Indian Mutiny – a daring critique, at the time, of various British policies that he blamed for causing the revolt.
- In 1859, Syed hooked up Gulshan School at Muradabad, Victoria School at Ghazipur in 1863, and a scientific society for Muslims in 1864.

(UPSC/MPSC/CDS/NDA) (Contact No.-75060 10635)

- In 1875, based the Muhammadan Anglo-Oriental College, the primary Muslim college in Southern Asia
- . During his profession, Syed time and again referred to as upon Muslims to loyally serve the British Raj and promoted the adoption of Urdu as the lingua franca of all Indian Muslims.
- Syed criticized the Indian National Congress.
- Syed maintains a strong legacy in Pakistan and among Indian Muslims. He strongly influenced other Muslim leaders which includes Allama Iqbal and Muhammad Ali Jinnah.
- His advocacy of Islam's rationalist tradition, and at broader, radical reinterpretation of the Quran to make it well matched with technology and modernity, keeps to influence the worldwide Islamic reformation.
- His works, in Urdu, included Essays on the Life of Mohammed (1870) and commentaries on the Bible and on the Qur'ān.
- In 1888 he was made a Knight Commander of the Star of India.
- He started an influential journal, Tahdhīb al-Akhlāq ("Social Reform"), for the "uplift and reform of the Muslim."

Topic 17. RASHTRIYA GOKUL MISSION

Importance for Prelims: Agriculture

Improving livestock breeding

- Rashtriya Gokul Mission contains of two additives specifically: The country wide software for bovine breeding and National challenge for bovine productivity
 - **Objectives:** Development and conservation of indigenous breeds in a focused and scientific manner.
 - Undertake breed improvement program for indigenous cattle breeds so as to improve the genetic makeup and increase the stock. Enhance milk production and productivity.
 - Distribute disorder free high genetic advantage bulls for herbal provider.
- Significant initiatives under Rashtriya Gokul
- **Mission:** Awards for encouraging farmers/breeder societies to rear Indigenous breeds of bovines:
 - Gopal Ratna awards: for farmers maintaining the quality herd of Indigenous Breed and working in the direction of quality control practices.
 - Kamdhenu awards: for the best controlled Indigenous herd with the aid of Institutions/Trusts/ NGOs/ Gaushalas or high-quality-managed Breeders' societies.
 - **Gokul Gram:** The RashtriyaGokul Mission envisages the establishment of integrated cattle development centers, 'Gokul Grams' to develop indigenous breeds including up to 40% nondescript breeds (belonging or appearing to Belong to no unique class or kind) with objectives to: Promote indigenous livestock rearing and conservation in a scientific way.
 - Propagate high genetic merit bulls of indigenous breeds. Optimize modern Farm Management practices and promote Common Resource Management. Utilize animal waste in an economical way i.E. Cow Dung, Cow Urine National Kamdhenu Breeding Centre: (NKBC) is being

e Installed as a Centre of Excellence to increase and conserve Indigenous Breeds in a holistic and clinical way.

- **h“E-PashuHaat”- NakulPrajnan Bazaar:** An e-marketplace portal connecting breeders and farmers, for first-rate- sickness-loose bovine germplasm. PashuSanjivni:
- An animal well being program encompassing the availability of animal health playing cards (‘NakulSwasthyaPatra’) together with UID identity and uploading records on National DataBase.
- **Advanced Reproductive Technology:** Including Assisted Reproductive Technique- In-vitro Fertilization (IVF)/ Multiple Ovulation Embryo Transfer (MOET) and intercourse-taken care of semen method to improve the supply of disorder-loose female bovines.National Bovine Genomic Center for Indigenous Breeds (NBGC-IB) will be established for selection of breeding bulls of high genetic merit at a young age using highly precise gene-based technology.
- Implementing Agency RashtriyaGokul Mission will be implemented through the “State Implementing Agency (SIA viz Livestock Development Boards).
- State GausevaAyogs will be given the mandate to sponsor proposals to the SIA’s (LDB’s) and monitor implementation of the sponsored proposal.
- All Agencies having a position in indigenous cattle development might be the “Participating Agencies” like ICAR, Universities, Colleges, NGO’s, Cooperative Societies and Gaushalas.

Why conservation of Indigenous breeds is the need of the hour?

- Indigenous bovines are robust and resilient and are particularly suited to the climate and environment of their respective breeding tracts and productivity of indigenous breeds is less likely to Be impacted by the adversities of climate trade.

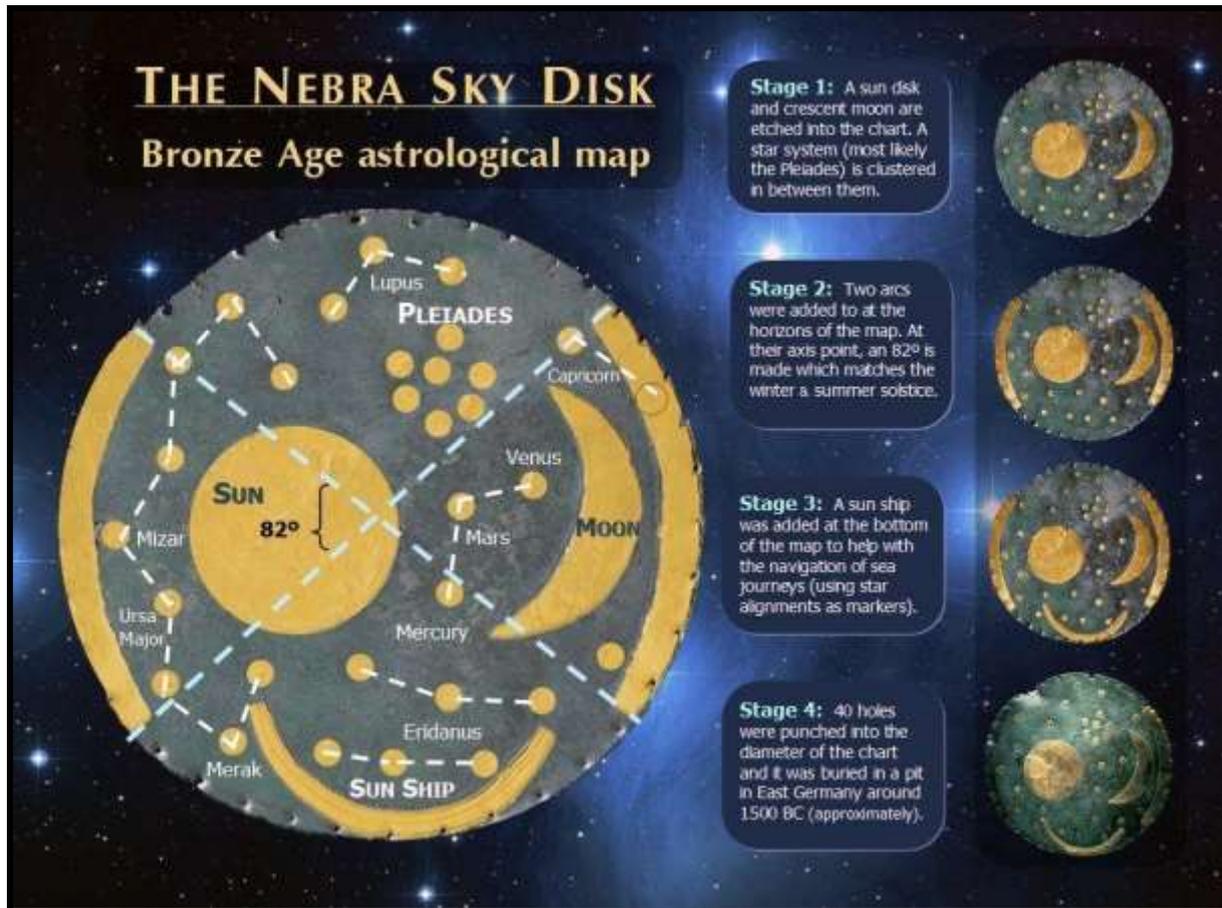
- The milk of indigenous animals is high in fat and SNF content material (The materials in milk apart from butterfat and water inside the shape of casein, lactose, vitamins, and minerals which contribute significantly to the nutritive value of milk)
- Revised version of Rashtriya Gokul Mission – The revised version of the Rashtriya Gokul Mission and National Livestock Mission (NLM) proposes to bring focus on entrepreneurship development and breed Development in livestock, buffalo, fowl, sheep, goat, and piggery by using presenting incentives to character marketers, farmer producer enterprises, farmer cooperatives, joint liability corporations, self-assist agencies, Section eight companies for entrepreneurship development and State governments for breed development infrastructure.
- The breed multiplication farm factor of the Rashtriya Gokul Mission goes to offer for capital subsidy up to ₹two hundred lakh for setting up breeding farm with at least 200 milch cows/ buffalo using latest breeding technology.
- The entrepreneur may be liable for the association of and would be able to sell at the least 116 elite female calves every yr out of this farm from the 0.33 year. The entrepreneur will also begin generating income out of the sale of 15 kg of milk in line with animal in keeping with day for around 180 animals from the first year.
- This breeding farm will break even from the first year of the project after induction of milk in animals.
- Moreover, the strategy of incentivising breed multiplication farm will result in the employment of 1 lakh farmers.
- The grassroots initiatives in this sphere will be further amplified by web applications like e-Gopala that provide real-time information to

(UPSC/MPSC/CDS/NDA) (Contact No.-75060 10635)

Livestock farmers at the availability of disorder-unfastened germplasm in applicable centres, veterinary care, and so forth.

Topic 18. NEBRA SKY DISC

Importance for Prelims: Science and Tech



Nebra Sky Disc: The oldest map of stars that will be displayed at British Museum

- The British Museum in London will display an ancient object called the Nebra Sky Disc, which is thought to be the world's oldest concrete depiction of stars.
- The item is being loaned to the museum by way of Germany's State Museum of Prehistory in Halle that owns it and can be showcased as a part of an exhibition on Stonehenge, which will open in February 2022.

What is the Nebra Sky Disc?

- About 3,600 years ago, the disc was ritually buried in conjunction with two swords, axes, two spiral arm-earrings and one bronze chisel near Nebra in Germany.

- The burial of these objects is thought to be made as a dedication to gods. In the past few years, but, the date of origin of the disc has been referred to as into question with the aid of some archaeologists.
- For example, in a paper published remaining yr in the German magazine Archäologische Informationen, archaeologists claimed that the disc is at least 1,000 years younger than thought, because of this it's far from the Iron Age and no longer the Bronze Age.
- The State Museum for Prehistory in Germany subsequently disputed these findings saying that it was out of query for the disc to be from the Iron Age.
- Even so, even as the precise motive of the disc cannot be determined, hypotheses approximately its lifestyles have imagined it as an astronomical clock, a work of art and a non secular image.
- The disc has a fee of about \$eleven million and is thought with the aid of a few to be one part of a couple, with the other part still obtainable, waiting to be observed.
- The Archaeology mag, that's published by way of the Archaeological Institute of America notes that after the disc become buried it had already been in use for over 2 hundred years.
- Further, even as the raw materials to make the disc had been imported from as a ways as Cornwall in England, the know-how required to create the item changed into “absolutely nearby” and was drawn from staring at the heavens from atop the Mittelbergmountain, which is close to the modern-day village of Nebra.

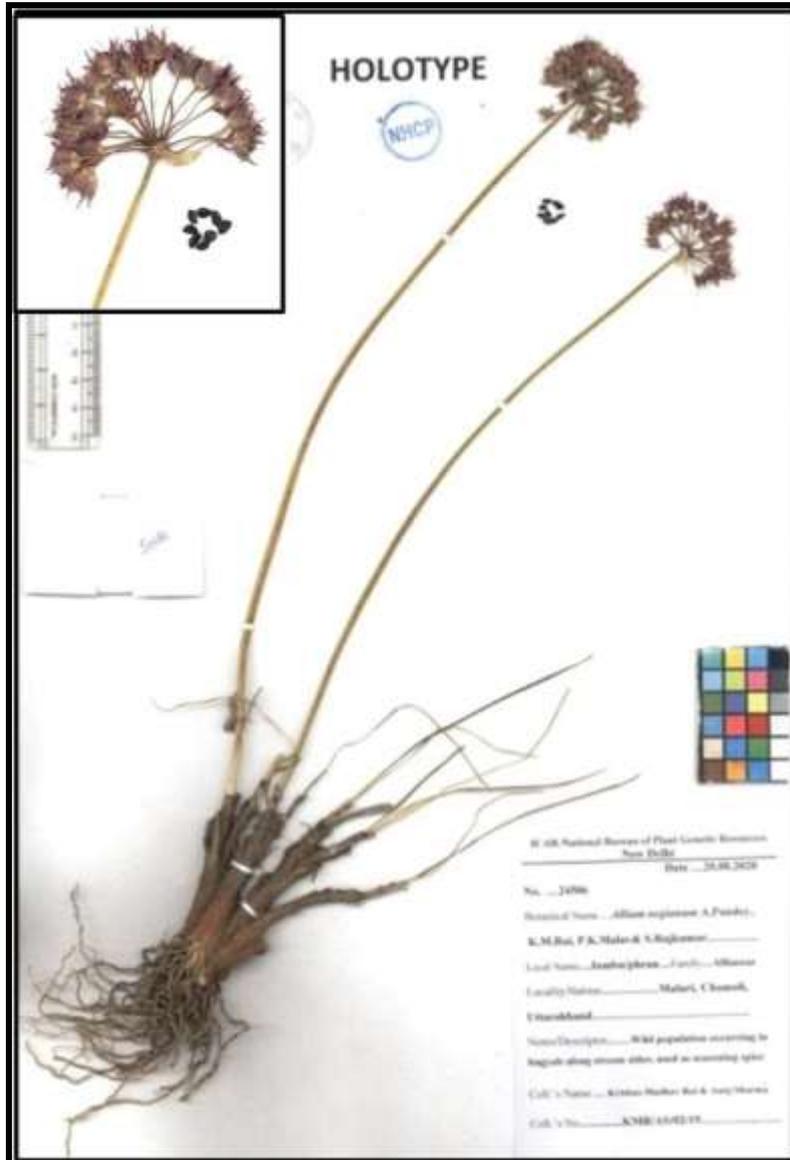
How and when was the Nebra Sky Disc discovered?

- The bronze disc was discovered a little more than two decades ago. In 1999, the discovery become made with the aid of treasure hunters the usage of a metallic detector in Nebra, a town in Germany.
- This excavation was illegal and it was about four years later that the disc was recovered from a black market raid in Switzerland.

- The object, which has a diameter of about 30 cm was found along with some other bronze-age weapons.
- It is thought to be one of the most important archaeological discoveries of the 20th century and has been associated with the Unetice culture that inhabited parts of Europe around 1600 BC.
- The Unetice culture comprised early Bronze Age communities in central Europe including in Bohemia, Bavaria, southeastern Germany and western Poland.
- The Concise Oxford Dictionary of Archaeology notes that one of the distinguishing capabilities of this way of life was its use of tin-bronze metallurgy.
- Some of the metal artefacts made during this time by communities in the Unetice culture include ogival and triangular daggers with metal hilts, flanged axes, halberds, spiral arm-rings, solid bronze bracelets and varieties of pins.

Topic 19. ALLIUM NEGIANUM

Importance for Prelims: Environment



A plant discovered in Uttarakhand in 2019 has been newly confirmed as a new species of Allium

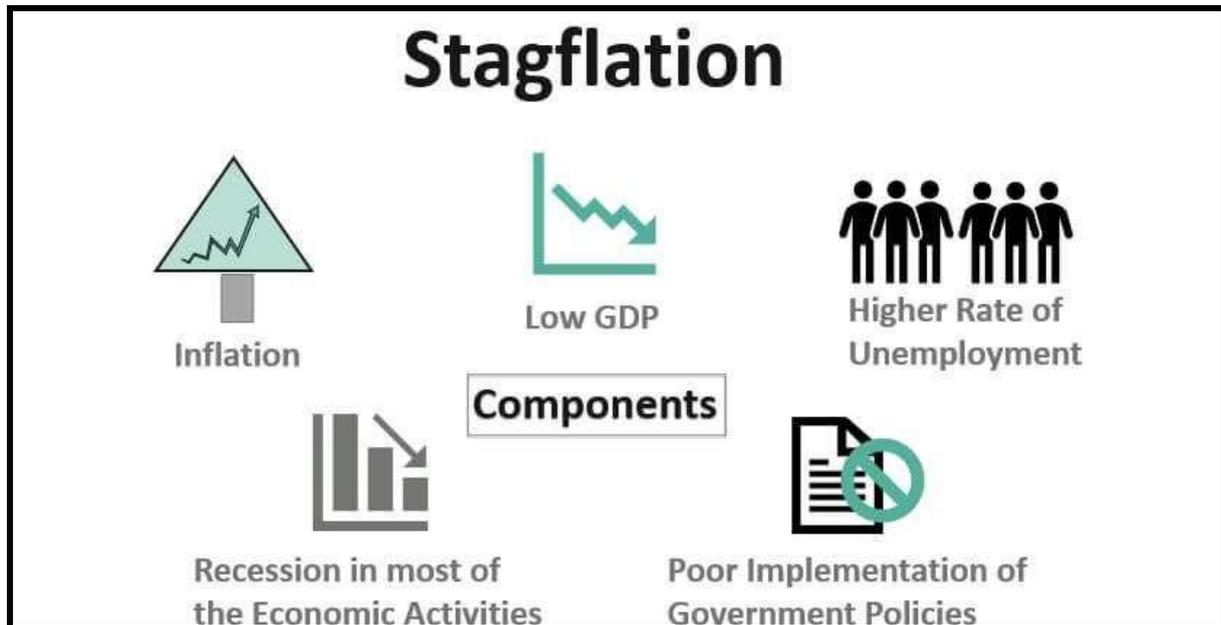
- A plant observed in Uttarakhand in 2019 has been newly showed as a new species of Allium — the genus that includes many staple ingredients inclusive of onion and garlic, among 1,100 species worldwide
- It grows at 3,000 to 4,800 m above sea level and can be found along open grassy meadows, sandy soils along rivers, and streams forming in snow

Pasture lands alongside alpine meadows, wherein the melting snow allows deliver its seeds to greater beneficial areas.

- With a narrow distribution, this newly defined species is limited to the region of western Himalayas and hasn't but been reported from anywhere else in the globe.
- The scientific name *Allium negianum* honours the late Dr Kuldeep Singh Negi, an explorer and *Allium* collector.
- Although new to technology, this species has lengthy been acknowledged underneath home cultivation to nearby communities.
- It said that according to locals, the onion from Niti valley was particularly good, even deemed the best on the market.
- So a ways best known from the western Himalaya area, *Allium negianum* might be under strain from people seeking to taste it.
- The researchers worry that indiscriminate harvest of its leaves and bulbs for seasoning may pose a danger to its wild populations.

Topic 20. STAGFLATION

Importance for Prelims: Economy

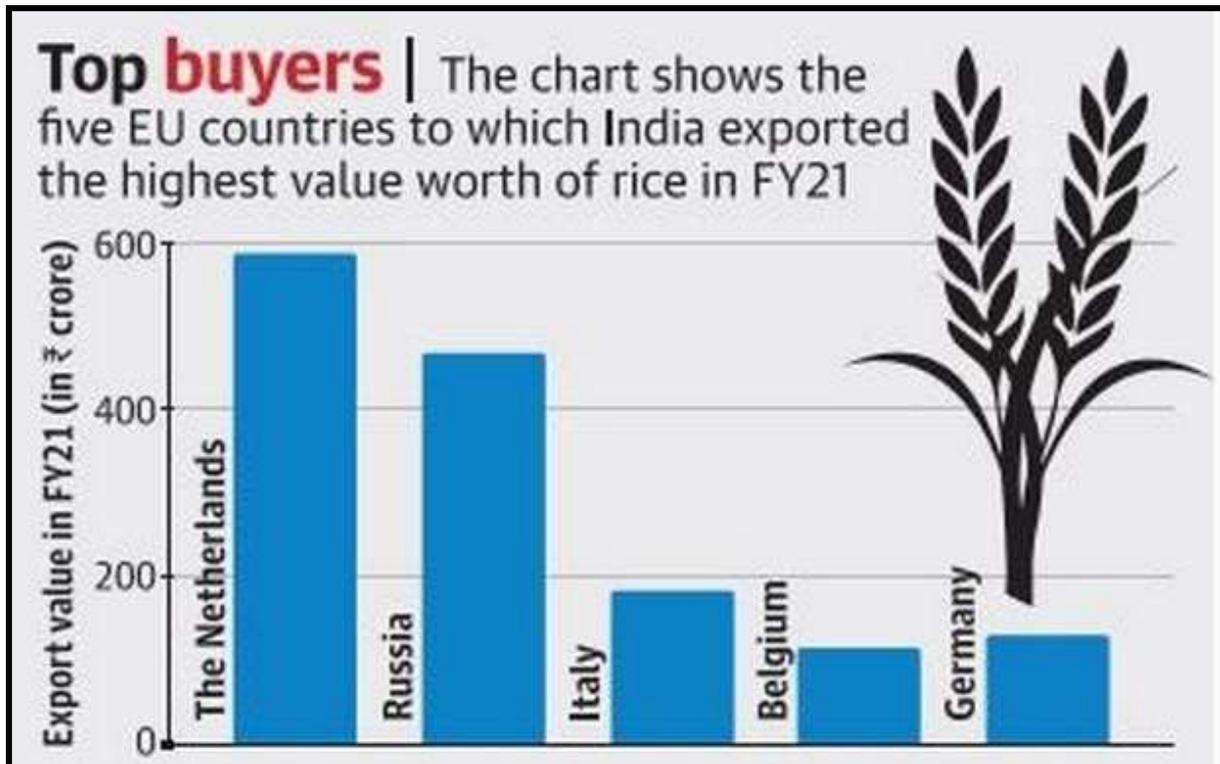


Premature tightening may lead to stagflation: RBI report

- The Reserve Bank of India (RBI) has advised that untimely tightening of the monetary coverage should bring about the stagflation — sluggish boom and excessive degree of unemployment and inflation — that “all worry, quashing boom just as the financial system is recovering”.
- “Consequently, policy support for a sustained and inclusive recovery may be needed for longer,” RBI said in its ‘State of the economy’ report.
- On unwinding of the accommodative financial coverage, RBI Governor Shaktikanta Das had said on October eight, “This method has to be sluggish, calibrated and nondisruptive, while last supportive of the economic recovery.”

Topic 21. GMO RICE FROM INDIA WITHDRAWN IN EU

Importance for Prelims: Environment



GMO rice from India withdrawn in EU: Indian coalition asks for action

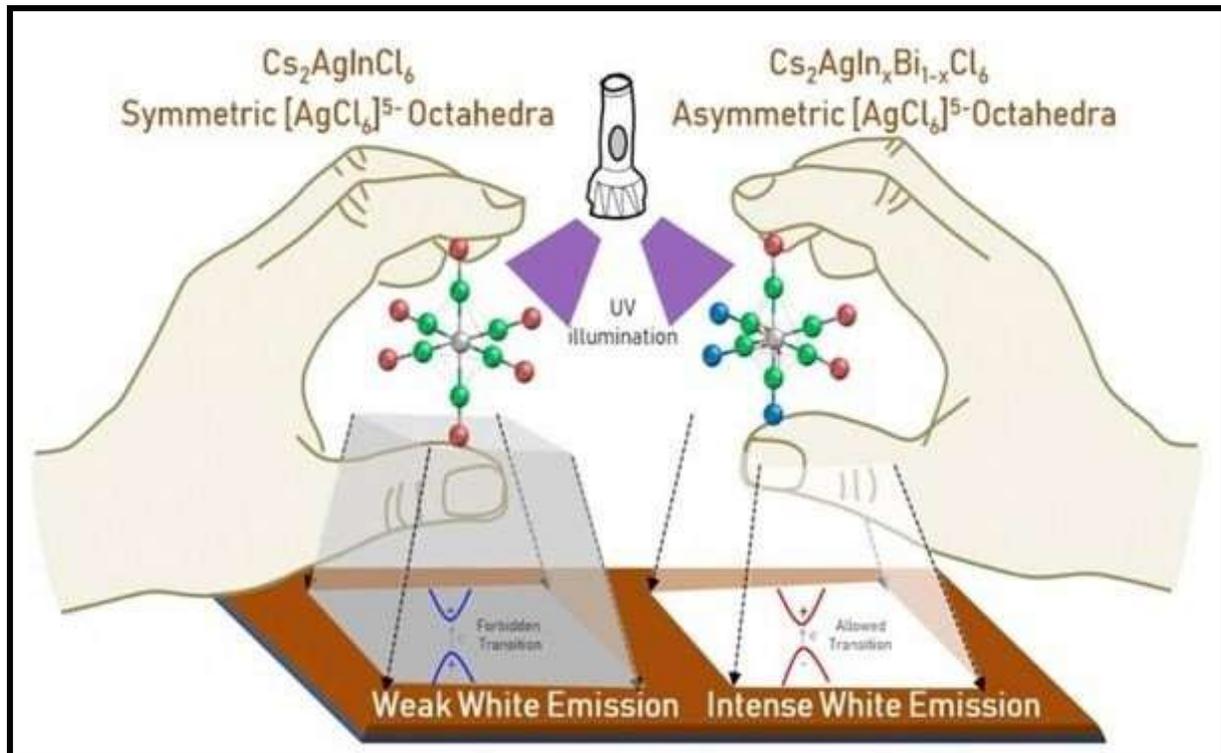
- The discovery of 500 tonnes of genetically modified (GM) rice in a consignment that India exported to the European Union nations in June 2021 has brought about the “loss of popularity of India and its agricultural market”, Coalition for GM Free India said October 19, 2021.
- Several batches of rice flour were advertised in numerous European international locations, in addition to in the United States, Iraq, Mauritius, Qatar, Dubai (United Arab Emirates), Lebanon, Senegal and Turkey.
- They were recalled for use in the EU after European Commission Rapid Alert System for Food and Feed (RASFF) identified illegalities in meals products upon a take a look at.
- The 500 tonnes of damaged Indian white rice imported into Europe changed into converted into rice flour, resold and positioned in the marketplace in lots of European

countries as an ingredient in chocolate sweets from the Mars Inc company (M&M's Crispy) and baked goods.

- GM crops are those that have been modified genetically to enhance their nutrition quotient.
- But in India, numerous civil society agencies have raised fitness- and surroundings-associated concerns.
- India is yet to approve commercial cultivation of a genetically modified food crop.
- It has, however, cultivated multiple GM rice varieties at various stages of confined field trials.
- The Coalition for GM Free India, in its letter, warned that such trials have led to “contamination and leaks” that have made their way to the food chain.
- It also suggested that field trials should be banned to avoid any contamination of food and seed supply chains.
- The letter added – The illegal cultivation of HTBt cotton, Btbrinjal and GM soybean gave us a clear indication that there is a trend of GM crops from field trials ending up in our farms and food.
- It is an unfortunate truth that our regulatory system has been found ineffective in curbing this. It is also shocking that GEAC has failed to take effective action to even identify those behind seed supply... According to news reports, farmers in Maharashtra allegedly started growing Illegal HT cotton no longer cleared for commercial cultivation amid a downturn in agriculture due frequent bouts of drought in 2019.

Topic 22. WHITE LIGHT EMITTERS FOR LED APPLICATIONS

Importance for Prelims: Science and Tech



IIT-Madras researchers design white light emitters for LED applications

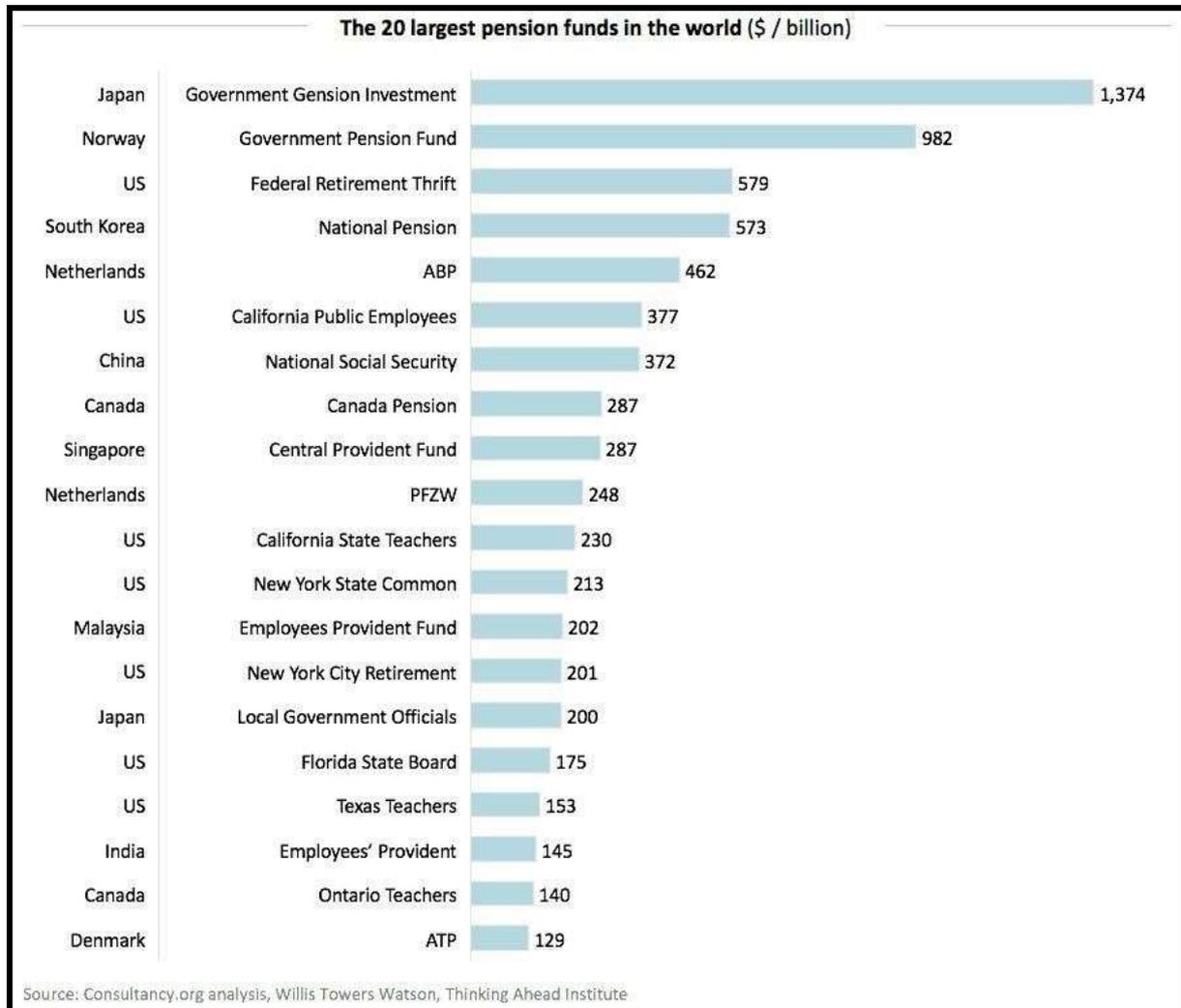
- Conventional LED materials cannot emit white light and specialised techniques such as coating blue LED with yellow phosphor and combining blue, green and red LEDs, have been used to produce white light.
- There has been a worldwide look for substances that could without delay emit white light as opposed to these indirect strategies which could purpose lack of efficiency.
- Researchers at the Indian Institute of Technology (IIT) Madras have successfully developed a white light emitter for use in LEDs.
- The improvement of power-green Light Emitting Diodes or LEDs replaced the electricity-inefficient incandescent lamps in lighting and show applications.
- While LEDs have been available in almost all colours, white LEDs are a more recent development.

(UPSC/MPSC/CDS/NDA) (Contact No.-75060 10635)

- The innovation has been patented by the researchers and became recently granted the Government of India's 'SERB-Technology Translation Award.'
- The Science and Engineering Research Board (SERB) gives economic help to researchers, academic institutions, research and development laboratories, commercial issues, and different organizations.
- The crew proposes to use the provide money of Rs 30 lakh to supply LEDs using their distorted perovskite substances.
- The researchers developed expertise in tuning the material at an atomic level to obtain different properties.
- Through a recent project that included simulation and experimental work, the team distorted the crystal structure of this material to obtain a natural white light emitter.
- The strategic advent of distortion in halide perovskite generated severe light overlaying the complete visible spectrum.
- These materials show at least 8 instances severe white light emission as compared to the traditional Ce:YAG emitters.
- This distorted perovskite can be used independently as a white light emitter or as a phosphor in combination with blue LEDs to produce white light.
- Unlike different currently evolved white LED materials, this distorted perovskite showed extra special balance underneath ambient situations.
- The emission of extreme mild and stability make them useful in lengthy-lasting, energysaving lighting fixtures programs.
- Apart from widespread lighting, white LEDs can doubtlessly be utilized in liquid crystal display backlights, show cell lighting and medical and conversation equipment.

Topic 23. GLOBAL RANKING OF PENSION SYSTEMS

Importance for Prelims: Economy



India fares poorly in global ranking of pension systems

- Old age security is a massive fear for Indians as income at retirement is far from ok for the majority.
- Now, a global study done by Mercer Consulting validates this fear as it reveals that the Indian pension system ranks a lowly 40th in a comparative index of 43 systems.
- The primary goal of this annual survey through the worldwide management consulting firm is to benchmark every retirement income system the usage of greater than 50 indicators.

- This year's index edition added four new retirement systems — Iceland, Taiwan, the UAE and Uruguay.
- In its maiden appearance in the Index, Iceland overthrew the Netherlands to receive the highest overall index value of 84.2.
- Thailand had the lowest average index cost at 40.6. According to the survey, India had an overall index price of forty-three. Three most of the countries analyzed.
- The index highlights key strengths of retirement pension structures around 3 sub-indices — adequacy, sustainability, and integrity, where India scored 33. Five, 41.8 and 61.0, respectively.
- The adequacy sub-index represents the adequacy of the benefits which can be being supplied, the sustainability sub-index represents the probability that the modern-day device is capable of providing benefits in the future, while the integrity sub-index includes many legislative requirements that influence the overall governance and operations of the system which affect the level of confidence that citizens have in their system.
- With little social security coverage in the country, the workforce in India has to manage pension savings on its own for the most part.
- The coverage under private pension arrangement is just about 6 per cent in India.
- With over 90 consistent with cent of the overall workforce being inside the unorganised quarter, measures should be taken to get a larger personnel underneath pension savings.
- This would go a long way in improving the adequacy sub index, the report said.
- With the rules beneath new Social Security Code that covers unorganised, gig and platform employees expected to be notified soon, one need to see considerable development in this front in the medium to long term.

Topic 24. PARLIAMENTARY PANEL TO STUDY PETRO PRODUCTS PRICING AND MARKETING

Importance for Prelims: Economy

Agreeing to the demand of Opposition parties, the Parliamentary Standing Committee on Petroleum and Natural Gas has decided to examine the pricing, marketing and supply of petroleum products, including natural gas

- Agreeing to the call for of Opposition parties, the Parliamentary Standing Committee on Petroleum and Natural Gas has determined to take a look at the pricing, advertising and marketing and supply of petroleum merchandise, such as herbal gasoline.
- The panel may even evaluate the Centre's policy on import of crude oil. Some members within the panel are also learnt to have demanded a re-check out the UPA government's "decontrol" market expenses of petrol and diesel based on a report submitted in 2010 by way of an professional group of Planning Commission headed by way of Kirit Parikh.
- The file, A Viable and Sustainable System of Pricing of Petroleum Products, encouraged that petrol and diesel charges need to be market decided each on the refinery gate and on the retail degree.
- The MPs argued that "deregulate" of the market fees has confused the people as oil companies are unwilling to reduce the charges even though global charge of crude oil is low.
- The panel, chaired with the aid of BJP MP Ramesh Bidhuri charted the agenda for the only-12 months term in its meeting.
- People are agitated over the rising prices of petrol, diesel and LPG.
- The increase was due to cess and additional taxes imposed by the Centre.
- The panel has selected 17 subjects for its new term.
- It consists of litigations concerning oil PSUs, contract control and transparency in procurement processes in oil PSUs, strength protection with precise reference to hydrocarbon sources and electric motors, overview

(UPSC/MPSC/CDS/NDA) (Contact No.-75060 10635)

- of overall performance of oil PSUs with precise reference to monetary performance and investments in other sectors, international cooperation in petroleum quarter, opportunity assets of strength and the coverage on import of crude oil.

Topic 25. SUPER-LEGISLATURE

Importance for Prelims: Polity

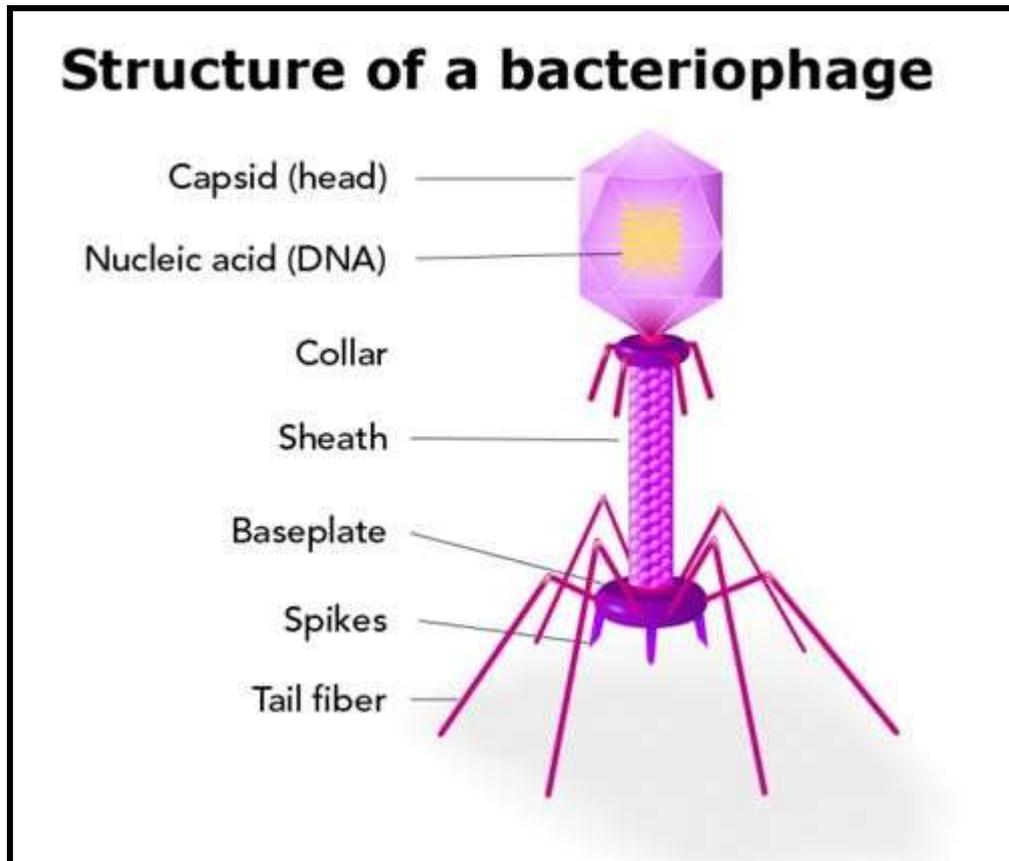
Judiciary should not act as a 'super-legislature', says Centre

- A “distressed” authorities has taken a leaf from former United States President Franklin D Roosevelt’s speech to emphasize that the judiciary ought now not act as a “great-legislature” through entertaining a task to the Tribunal Reforms Act.
- The Centre, in an affidavit within the Supreme Court, stated it become “confused” why the judiciary thinks that the regulation made through Parliament and carried out through the Executive is an attack on judicial independence.
- Some of the provisions of the Act below task include the reduction of the tenure of chairpersons and individuals of key tribunals from five years to 4 and mandates a minimal age to be 50 for appointment.
- The new law additionally said the Appointments Committee of the Cabinet headed by using the Prime Minister may “preferably” make the appointment within three months of the advice through the Search-cum-Selection Committee most effective one call in step with vacant submit can be advocated with a waitlisting.
- The affidavit stated each any such troubles is purely one in every of policy.
- The government said it was the “exclusive right” of the Parliament and the Executive to frame policy and execute it.
- Any reappointment takes place only on the basis of recommendation of the search and selection committee in which the Judiciary is the dominant voice.
- The phrase ‘ideally’ used in Section 3(7) of the Act was a preference of the Parliament and for the court docket to item to it would no longer be conducive to proper governance.

- “The appointments committee has to prioritise the multitude of issues important to the State, thus the need not to have an inflexible three months...
- Even with pressing internal and outside affairs of tremendous importance coming within the way, 3 months may not be sufficient in a few instances,” it justified.
- “Independence of judiciary can't be used as ground for checking out statutes,” the affidavit stated.

Topic 26. BACTERIOPHAGES

Importance for Prelims: Science and Tech



Viruses have a bad reputation. They are responsible for the COVID-19 pandemic and a long list of maladies that have plagued humanity since time immemorial

- Many biologists consider there's, as a minimum for one precise sort of virus — particularly, bacteriophages, or viruses that infect bacteria, there is motive to rejoice approximately virus.
- When the DNA of those viruses is captured by using a cellular, it is able to include commands that allow that cell to perform new hints.
- Bacteriophages, or phages for short, keep bacterial populations in check, both on land and at sea.
- They kill as much as forty per cent of the oceans' microorganism every day, supporting manipulate bacterial blooms and redistribution of organic count.

(UPSC/MPSC/CDS/NDA) (Contact No.-75060 10635)

- Their capacity to selectively kill bacteria also has clinical docs excited. Natural and engineered phages have been efficiently used to deal with bacterial infections that do not respond to antibiotics.
- This manner, known as phage therapy, could help fight antibiotic resistance.
- Recent studies factors to another crucial feature of phages: They may be nature's remaining genetic tinkerers, crafting novel genes that cells can retool to gain new features.
- Phages are the most abundant life form on the planet, with a nonillion — that's a 1 with 31 zeroes after it — of them floating around the world at any moment.
- Like all viruses, phages additionally have excessive replication and mutation fees, meaning they shape many versions with one of a kind traits on every occasion they reproduce.
- Most phages have a rigid shell called a capsid that is full of their genetic fabric.
- In many instances, the shell has more space than the phage wishes to store the DNA crucial for its replication.
- This manner that phages have room to carry greater genetic luggage: Genes that aren't surely essential for the phage's survival that it may regulate at will.
- How bacteria retooled a viral switch Phages come in two main flavours: temperate and virulent.
- Virulent phages, like many other viruses, operate on an invade-replicate-kill programme.
- They enter the cellular, hijack its additives, make copies of themselves and burst out.
- Temperate phages, on the other hand, play the long game.

- They fuse their DNA with the cell's and may lay dormant for years until something triggers their activation.
- Then they revert to virulent behaviour: replicate and burst out.
- Many temperate phages use DNA harm as their trigger.
- It's sort of a "Houston, we have a problem" signal.
- If the cell's DNA is being damaged, that means the DNA of the resident phage is likely to go next, so the phage wisely decides to jump ship.
- The genes that direct phages to replicate and burst out are turned off unless DNA damage is detected.
- Bacterial cells are also interested by knowing if their DNA is getting busted.
- If it is, they activate a set of genes that attempt to repair the DNA.
- This is known as the bacterial SOS response because, if it fails, the cell is toast.
- Bacteria orchestrate the SOS response the use of a transfer-like protein that responds to DNA harm: It activates if there is harm and remains off if there isn't.

Who invented the switch, bacteria or viruses?

- Previous studies and work with the aid of other researchers indicates that phages got there first.
- In recent report, we discovered that the SOS response of Bacteroidetes, a group of bacteria that comprise up to a half of the bacteria living in your gut, is Beneath control of a phage transfer that changed into retooled to put in force the micro organism's very own complex genetic programmes.
- This suggests that bacterial SOS switches are in fact phage switches that got retooled eons ago.
- Beautiful detective work has shown that a bacterial gene wished for cellular department additionally arose via "domestication" of a phage toxin gene.

- And many bacterial attack structures, along with pollution and the genetic weapons used to inject them into cells, as well as the camouflage they use to avoid the immune device, are acknowledged or suspected to have phage origins.

Topic 27. NATIONAL SECURITY STRATEGIES CONFERENCE

Importance for Prelims: Security and Defence

Strategy meet discusses Chinese cyberattacks

- The growing cyberattacks from China on important installations turned into mentioned at the National Security Strategies Conference chaired by Home Minister Amit Shah.
 - The conference, an annual occasion held at the Intelligence Bureau headquarters, turned into attended by using Director General of Police of all States and Directors-General of the Central Armed Police Forces (CAPF).
 - The contributors have been advised that even as the Pakistani cyberattacks targeted on stealing identity and private facts, the Chinese hackers were extra state-of-the-art and they settled down in any network, striking at will.
10. PM Orders drive to cut red tape Prime Minister Narendra Modi has directed all government departments to have a fresh look at all existing processes and scrap unnecessary paperwork and compliances, And compliances, as part of a unique spring- cleansing workout this month To be monitored by means of the Department of Administrative Reforms and Public Grievances (DARPG) within the Ministry of Personnel, Public Grievances and Pensions, this special campaign to run till the end of October is based on the directions of the PM Secretaries have now been asked to monitor the Development on resolving pending problems on a day by day basis and ship a weekly record to the DARPG.
- Asking Departments to weed out documents of “temporary nature”, the Cabinet Secretary has also entreated them to check the duration for which one-of-a-kind statistics are retained.
 - Files must neither be upfront destroyed nor stored for intervals longer than necessary.
 - Further, redundant scrap fabric and obsolete objects may be discarded all through this marketing campaign to enhance cleanliness at work locations.

Topic 28. NEW QUADRILATERAL ECONOMIC FORUM

Importance for Prelims: IR

India, Israel, UAE and U.S. launch quad forum

- India, Israel, the United Arab Emirates and the United States have decided to launch a new quadrilateral economic forum.
- The quad builds on ongoing cooperation between the U.S., Israel and the UAE after the Abraham Accords last year, and the India, Israel and UAE cooperation that was launched since.
- the grouping had decided to establish an international forum for economic cooperation, and specifically discussed “possibilities for joint infrastructure projects. 4 Ministers discussed “expanding economic and political cooperation in the Middle East and Asia, which includes thru alternate, preventing weather alternate, electricity cooperation, and increasing maritime protection,” in addition to ways to counter the COVID-19 pandemic.
- Business groups in India, the UAE and Israel have also been in talks for trilateral cooperation since diplomatic ties were established, and the International Federation of Indo-Israel Chambers of Commerce (IFIIC) has predicted that the capability for agreements sponsored via Israeli innovation, UAE funding and Indian manufacturing, given India’s near ties and strategic partnership with the two other countries could cross \$100 billion by 2030.
- In the primary such undertaking, a UAE project for robot sun panel cleansing generation changed into signed through Israeli business enterprise Ecoppia that has a production base in India.

Topic 29. BHASKARABDA

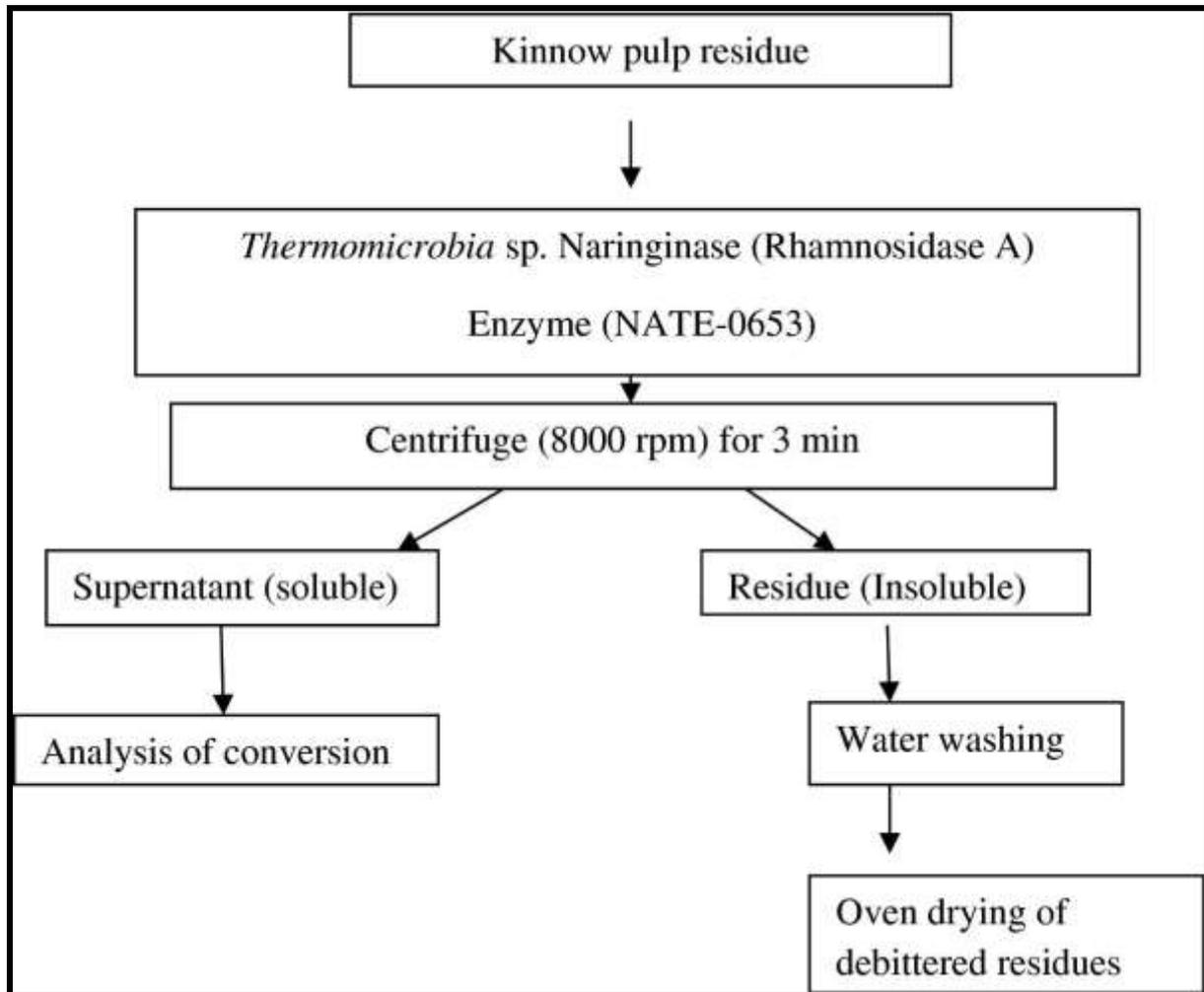
Importance for Prelims: Art and Culture

Bhaskarabda to be added to official calendar of Assam

- Bhaskarabda, an era counted from the date of the ascension of a seventh century local ruler, will be added to Saka and Gregorian eras in the official calendar of the Assam Government.
- Bhaskarabda began when Bhaskaravarman was crowned ruler of the Kamrupa kingdom.
- He was a contemporary and political ally of northern Indian ruler Harshavardhana.
- Unlike Gregorian, wherein a day starts offevolved in the dark, the Assamese calendar starts offevolved and ends at sunrise over 24 hours.
- While the Gregorian is going by using the solar cycle, the Saka and Bhaskarabda eras use a lunisolar device based on each the phases of the moon and the solar yr.
- The hole between Bhaskarabda and Gregorian is 593 years.
- The New Year within the Assamese calendar is called Bohag Bihu.
- The Assamese Calendar incorporates the seven-day week as used by many other calendars.
- The names of the days of the week in the Assamese Calendar are based at the Navagraha

Topic 30. BIO-ENZYMES FROM KINNOW

Importance for Prelims: Environment



some Punjab farmers are creating bio-enzymes from kinnow

- The start of kinnow season in Punjab also brings with it the falling fruit, which is considered a total waste by farmers.
- But this fallen fruit can prove a boon to enhance soil, water, air, depleting ground water, water contamination and average ecology.
- Not simplest can plant health be improved, it additionally facilitates prevent indiscriminate utilization of chemical sprays of fungicides and bacterial diseases on crops, particularly vegetables, tuber crops like potato and cereals.
- Farmers can gather those dropped end result from their kinnow fields and prepare bio-enzymes (BEs) at a low cost.

- Round 100 farmers in Punjab, in particular in the kinnow belt, have started out making BEs from this waste fruit — peel and ‘D’ grade, very small kinnows.

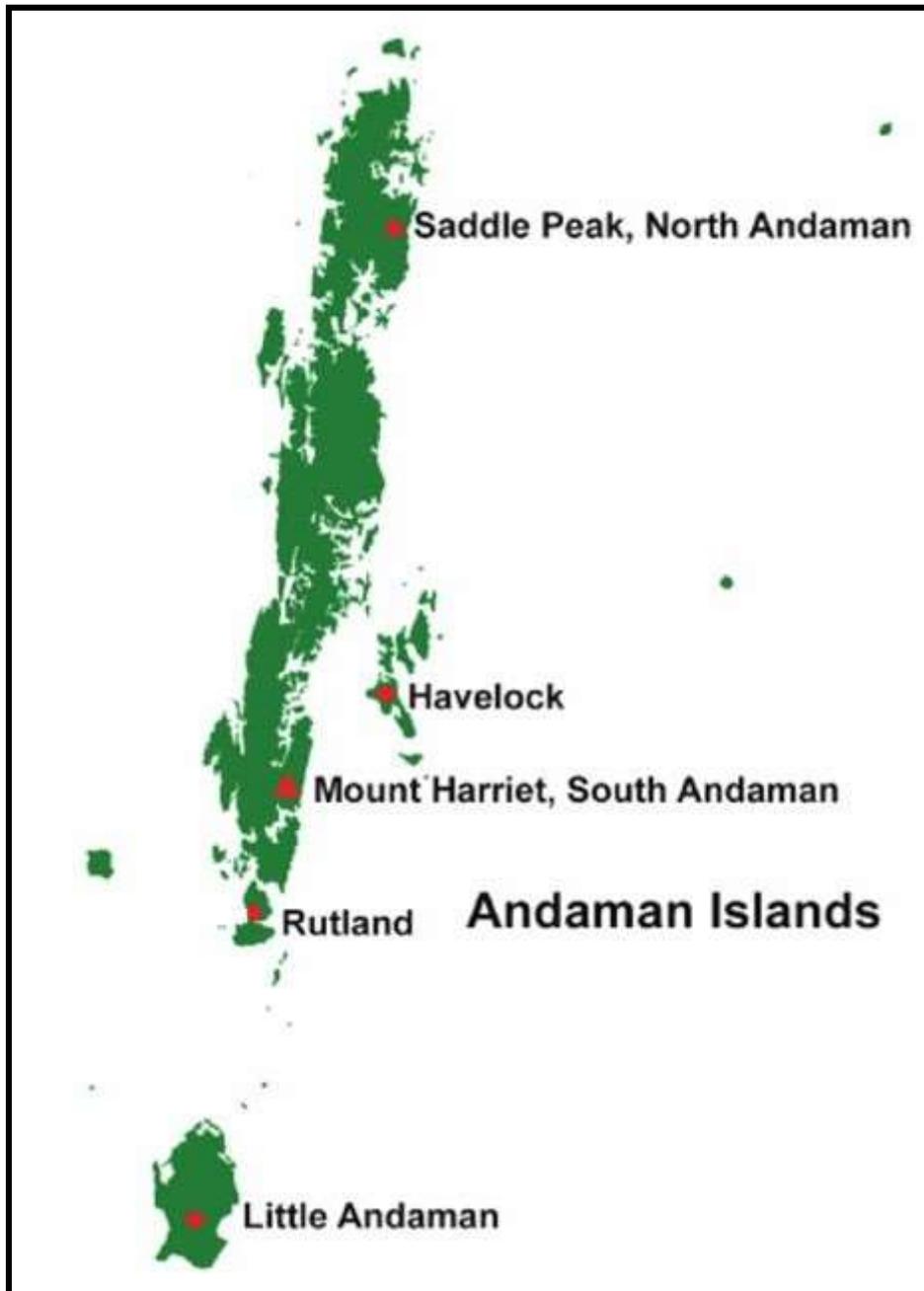
What are bio-enzymes?

- Bio-enzymes are organic answers produced thru fermentation of natural waste which include various end result, vegetable peels and vegetation, via blending in sugar, jaggery/molasses and water.
- It takes 60-a hundred days to ferment natural waste. To fasten the fermentation, yeast may be used as way of life to put together it in 45-50 days.
- BE’s also have a lot of usage in our daily lives.
- Kinnow – Kinnow is a year-long duration crop and the main harvesting period is from November-end to March, but some varieties of citrus fruit start coming into the markets in October.
- Horticulture department experts say nearly 15-20 per cent (1.5 lakh to 2 lakh tonnes) of the total kinnow production falls from the tree before and during the harvesting period.
- Experts say the fallen fruit is a main mission for kinnow farmers in the kingdom as one wishes to dig up small pits to bury them, otherwise the fallen fruit rot and invite a fly assault on the healthful fruit nevertheless on the flora. But now, a few farmers are the use of this waste kinnow to improve the pH stage and soil fertility in their land via making BEs from this waste fruit. Formulate to prepare BEs 40 plastic drums having 500 litres capacity each (a one- time investment) to which added 99 kg kinnow, 33 kg jaggery and 330 litres water In every and tightened the lid, which needs to be loosened up for a few seconds every day for 30 days to release the gasoline because of fermentation method.
- After 30 days, the lid is opened in the same manner on a gap of two days for two weeks and then the drum is kept air-tight and opened occasionally.

- The bio-enzymes are finally ready in three and half months. We can use it for a whole year in the form of spray on vegetables and mixing it with field irrigation.
- Advantages – Effect of citrus BEs on crop disease showed good results against bacterial diseases like black rot, bacterial canker on crops like cabbage broccoli, cauliflower, kale, turnip, tomato, radish and oilseeds etc. And showed precise effects on fungal diseases like collar rot, root rot, damping off and wire stem on the crops like rice, cereals, potato, tomato, sugar beet, cabbage, soya bean, cucumber etc. and it worked moderately on cotton, melon, onion, Banana, soyabean against wilt, crown rot like fungal diseases.
- BEs have a number of correct microbes and one of the main techniques which helps universal development of our ecology and facilitates in mitigating the imbalance, which has come about due to overuse of chemical compounds, in our soil, air and water.
- In a state like Punjab in which water desk is depleting rapidly and water contamination is likewise a foremost issue, BEs can deliver the soil lower back to lifestyles which allow in higher water recharging and also prevent the contamination of water by enhancing the health of the soil.

Topic 31. PEAK IN ANDAMAN AND NICOBAR ISLANDS IS NAMED AFTER MANIPUR

Importance for Prelims: Geography



On Sunday, the Union government rechristened Mount Harriet, a historical tourist spot in the Andaman and Nicobar islands, as ‘Mount Manipur’.

- The Union government rechristened Mount Harriet, a historic tourist spot in the Andaman and Nicobar islands, as ‘Mount Manipur’.

- After the Anglo-Manipur War of 1891, numerous Manipuris who had fought the British inside the war, inclusive of Maharaja KulachandraDhwaja Singh, had been exiled to the British penal colony inside the Andaman Islands.
- Since the cell prison (Kalapani) was but to be constructed, Kulachandra and the prisoners had been stored on Mount Harriet, a hillock in what is now the Ferragunj tehsil of South Andaman district.
- According to a British-era document from the Manipur State Archives, 23 men, including King Kulachandra and his brothers, were “transported for life” to the Andamans.
- While some died there, Kulachandra was released and shifted elsewhere before his death.
- The 23 are considered war heroes in Manipur.
- That is why Mount Harriet is an important symbol of the Anglo-Manipur War of 1891.
- Anglo-Manipur War of 1891 Considered an epoch within the history of Manipur, the Anglo-Manipur War turned into fought among the kingdom of Manipur and the British over a month in 1891.
- The warfare became brought about through a coup inside the palace of Manipur, which were marked by using inner factionalism in the years leading up 1891.
- According to the Manipur State Archives website, the British government took advantage of the “internal dissension” among the princes of the royal family.
- In 1886, when Surchandra inherited the throne from his father Chandrakirti Singh, the kingdom of Manipur was not under the British rule but had links with the crown through different treaties.
- However, Surchandra ascension to the throne became debatable and his more youthful brothers — Kulachadra, Tikendrajit — revolted in opposition to him.

- 1890 coup by the rebel faction deposed Surchandra, and proclaimed Kulachandra, the next oldest brother, the king.
- Surchandra fled to Calcutta looking for British help to reinstate him. Instead, the British dispatched James Quinton, the Chief Commissioner of Assam, with an army to Manipur.
- His task became to realize Kulachandra because the king beneath the situation that they be allowed to arrest the coup leader Crown Prince Tikendrajit and deport him from Manipur.
- This aggressive imposition of British law in a sovereign kingdom turned into rejected with the aid of the king, precipitating the Anglo-Manipuri War of 1891.
- In the first phase of the war, the British surrendered and their officers — including Quinton — were executed in public.
- In the second one segment, the British attacked Manipur from 3 facets, and finally capture the Kangla Fort in Imphal.
- Prince Tikendrajit and 4 others were hanged by the British, whilst Kulachandra, alongside 22 others, had been banished to the Andaman Islands. Many say the war changed into described as a “blow to British status”.
- Despite their victory, it had led to the death of five critical officers.
- In India, it was viewed as being part of the general uprising against British rule in the country, soon after after the Revolt of 1857.
- The war led to Manipur officially becoming a princely state under the indirect rule of the British crown.
- Mount Harriet Mount Harriet is the third highest peak in the Andaman and Nicobar Islands, and served as the summer headquarters of the Chief Commissioner during British Raj.
- It is believed to be named after British artist and photographer, Harriet Christina Tytler, who was the wife of Robert Christopher Tytler, a soldier who served in the British Indian Army.

- Between 1862 and 1864, Tytler was the superintendent of the penal colony at Port Blair.
- District officials from South Andaman stated Mount Harriet homes a colonial bungalow, which now features as a forest visitor house.
- Close by is the Mount Harriet National Park known for its huge variety of birds.

Topic 32. NORTHERN CLIMES NO LONGER SAFE HAVEN FOR MIGRATORY ANIMALS

Importance for Prelims: Environment

Climate change effect: Northern climes no longer safe haven for migratory animals

- Unhindered warming of Earth has forced a change in several ecological patterns, and migration of terrestrial animals and birds to the Arctic during summer may be the latest casualty, according to a new report.
- Moving to the northern regions is increasingly becoming less beneficial and potentially harmful to these migratory species, an analysis of 25 studies pointed out.
- Each summer, thousands of birds, animals and insects travel long distances north for easy availability of food, less chances of contracting diseases and fewer predators.
- But rising temperatures in the Arctic location has become this flourishing association on its head.
- Numerous Arctic and North temperate sites may additionally now constitute ecological traps or maybe worse degraded environments for diverse migratory animals, which include shorebirds, caribou or butterflies.
- The ultimate outcome of this crisis is a decline in the population of the migratory species for whom travelling to the north is instrumental to survival during the warm months, the paper noted.
- Many birds, who historically are looking for shelter in the northern regions in summer, have incurred better mortality of off springs because of dwindling food deliver, the scientists wrote.
- New parasites and pathogens have also emerged in the Arctic, according to the report.

- A mixture of these nearby adjustments because of climate exchange have reduced the population of native prey, forcing the predators to show to migratory individuals.
- Lemmings and voles were once the main meals source for predators which include foxes inside the Arctic.
- The milder winters can cause rain to fall on snow and then re-freeze, preventing the lemmings from reaching their food.
- Foxes eat the eggs and chicks of migratory birds as lemmings and voles reduce in numbers.
- The fee of nest predation of Arctic migratory shorebirds has tripled over the past 70 years, in huge element due to climate change.
- The erosion of the natural advantages of migration will have a ripple effect that will alter “species composition, trophic food webs as well as the whole ecosystem functioning”, the researchers predicted.
- Concerted conservation efforts of the breeding grounds in the Arctic and temperate regions in the north are the need of the hour, the authors wrote.
- They also referred to as for identity of glaring troubles on the stopover and wintering web sites of migratory species.

Topic 33. C TAP

Importance for Prelims: International Relations



WHO praising India for record vaccination

- In May 2020, WHO and partners launched the COVID-19 Technology Access Pool (C-TAP) to facilitate timely, equitable and affordable access of COVID-19 health products by boosting their supply.
- C-TAP provides a global one-stop shop for developers of COVID-19 therapeutics, diagnostics, vaccines and other health products to share their intellectual property, knowledge, and data, with quality assured manufacturers through public health-driven voluntary, non-exclusive and transparent licenses.
- By sharing intellectual property and know-how through the pooling and these voluntary agreements, developers of COVID-19 health products can

Facilitate scale-up production through a couple of manufacturers that currently have untapped capacity to scale up manufacturing.

- It's goal is making vaccines and other medical technologies truly global public goods.
- Banks easing stance towards crypto transactions in last three to four months One of the problems for the Indian trading platforms has been the lack support from banks or banking systems.
- Several trading systems have complained within the past that banks often give up their tie-up with them which stops those platforms from making transactions in the proper way.
- This is also the reason why there are frequent issues with deposits and withdrawals on these platforms.
- The lack of regulatory clarity continues to be a challenge to a degree, but there's now extra of an understanding toward the sector.
- With growing investor interest in cryptocurrencies, some of banks had, in advance this year, warned customers about virtual currency transactions, bringing up the Reserve Bank of India's 2018 circular.
- However, the RBI had, on May 31, asked regulated entities to not cite its April 2018 circular on 'prohibition on dealing in virtual currencies' as it is no longer valid following the Supreme Court ruling.
- It had also asked them to continue to carry out customer due diligence processes in line with regulations governing standards for Know Your Customer, Anti-Money Laundering (AML), Combating of Financing of Terrorism (CFT), and duties of regulated entities under Prevention of Money Laundering Act, 2002.

Topic 34. PIG KIDNEY TO A HUMAN

Importance for Prelims: Science and Tech

surgeons gave pig kidney to a human

- On October 19, USA Today reported that surgeons from New York have successfully transplanted a pig kidney into a brain-dead human.
- The group from NYU Langone Health used the kidney from a genetically engineered pig and transplanted it into a deceased donor.
- The function and acceptance of the new kidney were studied for 54 hours.
- The kidney began functioning and producing large amounts of urine within minutes of being connected to the person's blood vessels.
- He added that the creatinine that is cleared from the blood with the aid of the kidney dropped from 1.9 to 0.8 demonstrating that the kidney was functioning optimally.
- If found compatible in the long run, this process of Xenotransplantation, or transplanting organs between different species, could help provide an alternative and additional supply of organs for people facing life-threatening diseases.

Why a genetically engineered pig?

- The transplant conducted on September 25, used a kidney that turned into received from a pig that had undergone editing to knock out a gene that codes for a sugar molecule called Alpha-gal.
- Alpha-gal isn't always generally observed in humans and this molecule can elicit a devastating immune reaction in people.
- The pigs with this gene alteration are referred to as GalSafe pigs and were FDA accredited for human use for the ones who have red meat allergic reactions and additionally for use in pharmacology.
- These pigs have been well studied and have passed various levels of regulatory scrutiny.

- Though primate organs are more compatible with humans, pigs are easier to genetically modify.
- They also breed better with large litter, grow faster, and are less likely to transmit infections.
- The length of their organs is likewise much like ours.

Did they transplant the pig kidney inside the human body?

- No, the kidney was attached to blood vessels in the upper leg, outside the abdomen.
- It was covered with a protective shield for observation.
- The genetic modification of the single sugar molecule was responsible for preventing rapid rejection.

Topic 35. YADADRI TEMPLE IN TELANGANA

Importance for Prelims: Art and Culture

It's raining gold at Yadadri temple in Telangana. Businessmen, politicians rush to donate the lustrous metal for renovation project

- A reverse gold rush is underway at Yadadri in Bhongir district of Telangana.
- Devotees — in particular businessmen and politicians — are racing to donate the yellow metallic, on the way to be used for the gold plating of the Vimana Gopuram of the Sri Lakshmi Narasimha Swamy Temple.
- The target is to collect 125 kg of gold to renovate the temple, a pet project of Telangana Chief Minister K Chandrasekhar Rao, which started some six years ago and is almost complete now.
- The State government has decided to take up the gold tapering of the sikhara of the sanctumsanatorium at an estimated cost of ₹65 crore.
- The Yadadri temple protection venture pursuits to go beyond the holy precincts and develop the temple metropolis on the traces of Tirumala to ensure social and economic development of the area.
- The total value of the assignment is pegged at ₹1,000 crores.
- About Yadadri temple Sri Lakshmi Narasimha Swamy Temple or simply known as Yadadri or Yadagirigutta temple,(also known as Pancha Narasimha Kshetram and Rishi Aradhana Kshetram) is a Hindu temple situated on a hillock in the small town of Yadagirigutta in the Yadadri Bhuvanagiri district of the Indian state of Telangana.
- The temple is an abode of Narasimha, an incarnation of Lord Vishnu.
- It is located 60 kilometres (37 mi) from Hyderabad. According to Skanda Purana, Yada Maharishi son of commemorated Maharshi Rishyasringa carried out penance here to Lord Vishnu as Narasimha.

- Lakshmi- Narasimhadeva temple at the hilltop has deities of Narasimha in all 5 paperwork embedded in stone in the fundamental cave.
- Historically, the temple has accompanied the Thenkalai culture of the Vaishnava Agama Shastras as accompanied in South India.
- Temple architecture The architecture of the temple is based on Agama Shashtra.
- The temple is built entirely in stone.
- The temple was earlier built on 2 acres.
- After demolishing all systems on the temple hillock, the base for the temple is now 14 acres.
- The entire Yadadri temple renovated with the Krishna Sila (Black stone) is going to become known for its uniqueness.
- Sculptures Three types are stones are being used for the temple like Krishna Sila (also known as Purusha Sila) for presiding deities in the sanctum sanctorum; Sthri Sila for deities of Goddesses; and Napunsaka Sila used for flooring, walls etc. Black granite stone is likewise used, based totally at the temple architecture of the Kakatiya Dynasty in Telangana.
- The black granite stone has tiny pores, and it becomes strong and hard when milk, curd, oil and other liquids get into those pores, according to learned shilipis (sculpture experts).

Topic 36. FOREIGN CONTRIBUTION REGULATION ACT (FCRA)

Importance for Prelims: Governance



Genuine NGOs need not shy away from regulatory compliance: Centre to SC

- There is no fundamental right to receive unbridled foreign contributions without any regulation, the Centre has told Supreme Court, defending amendments made last year to the 2010 Foreign Contribution Regulation Act (FCRA).
- The authorities said it recognizes the function of NGOs and voluntary businesses in countrywide improvement and “true NGOs want not shrink back from any regulatory compliance mandated below the...Act.”
- The government said foreign contributions, considering their nature and vast expanse of abuse, are a tightly regulated and controlled means and that it is well within its rights to make changes to effectively implement the objectives set by Parliament.
- The Foreign Contribution (Regulation) Amendment Bill, 2020
- The Foreign Contribution (Regulation) Amendment Bill, 2020 amends the Foreign Contribution (Regulation) Act, 2010.

- The Act regulates the acceptance and utilisation of foreign contribution by individuals, associations and companies.
- Foreign contribution is the donation or transfer of any forex, safety or article (of beyond a exact fee) through an overseas supply.
- **Prohibition to accept foreign contribution:** Under the Act, positive persons are prohibited to just accept any foreign contribution.
- These include: election applicants, editor or publisher of a newspaper, judges, government servants, participants of any legislature, and political parties, among others.
- The Bill adds public servants (as defined under the Indian Penal Code) to this list.
- Public servant consists of any character who's in provider or pay of the government, or remunerated through the government for the overall performance of any public responsibility.
- **Transfer of foreign contribution:** Under the Act, foreign contribution can not be transferred to another character until such character is also registered to simply accept foreign contribution (or has obtained previous permission beneath the Act to achieve overseas contribution).
- The Bill amends this to prohibit the transfer of foreign contribution to any other person.
- The term 'person' under the Act includes an individual, an association, or a registered company.
- **Aadhaar for registration:** The Act states that a person may accept foreign contribution if they have:
 - (i) acquired a certificate of registration from the important government, or
 - (ii) not registered, but obtained prior permission from the government to accept foreign contribution.

- Any individual in search of registration (or renewal of such registration) or prior permission for receiving overseas contribution have to make an utility to the valuable authorities in the prescribed manner.
- The Bill adds that any person in search of prior permission, registration or renewal of registration need to offer the Aadhaar range of all its workplace bearers, administrators or key functionaries, as an identification document.
- In case of a foreigner, they must provide a copy of the passport or the Overseas Citizen of India card for identification.
- **FCRA account:** Under the Act, a registered character need to accept foreign contribution simplest in a unmarried department of a scheduled financial institution designated by them.
- However, they may open more accounts in other banks for utilisation of the contribution.
- The Bill amends this to nation that overseas contribution need to be received simplest in an account unique by way of the bank as “FCRA account” in such department of the State Bank of India, New Delhi, as notified by using the relevant government.
- No funds other than the foreign contribution should be received or deposited in this account.
- The individual can also open any other FCRA account in any scheduled bank in their desire for keeping or making use of the obtained contribution.
- **Restriction in utilisation of foreign contribution:.** Under the Act, if a person accepting foreign contribution is found guilty of violating any provisions of the Act or the Foreign Contribution (Regulation) Act, 1976, the unutilised or unreceived foreign contribution may be utilised or received, only with the prior approval of the central government.
- The Bill adds that the government may also restrict usage of unutilised foreign contribution for persons who have been granted prior permission to receive such contribution.

- This may be accomplished if, based on a summary inquiry, and pending any similarly inquiry, the government believes that such person has contravened provisions of the Act.
- **Renewal of license:** Under the Act, anybody who has been given a certificate of registration must renew the certificate within six months of expiration.
- The Bill provides that the government may conduct an inquiry before renewing the certificate to ensure that the person making the application:
 - (i) is not fictitious or benami,
 - (iii) has not been prosecuted or convicted for creating communal tension or indulging in activities aimed at religious conversion, and
 - (iv) has not been found guilty of diversion or misutilisation of funds, among others conditions.
- **Reduction in use of foreign contribution for administrative functions:** Under the Act, someone who gets overseas contribution must use it most effective for the motive for which the contribution is received.
- Further, they must not use more than 50% of the contribution for meeting administrative expenses.
- **The Bill reduces this limit to 20%. Surrender of certificate:** The Bill provides a provision allowing the relevant authorities to allow a person to surrender their registration certificates.
- The government may do so if, post an inquiry, it is satisfied that such person has not contravened any provisions of the Act, and the management of its foreign Contribution (and related belongings) has been vested in an expert prescribed through the government.
- **Suspension of registration:** Under the Act, the authorities may suspend the registration of someone for a length not exceeding a hundred and eighty days.

- The Bill adds that such suspension may be extended up to an additional 180 days.

Topic 37. AFRICA'S MELTING GLACIERS FUEL DROUGHT WORRIES

Importance for Prelims: Environment



Africa's melting glaciers fuel drought worries

- Africa's fabled Japanese glaciers will vanish in two decades, 118 million poor human beings face drought, floods or intense warmth, and weather trade should decrease the continent's economic system by using 3 per cent by mid-century, the UN climate agency warned.
- The modern report on the kingdom of Africa's climate via the World Meteorological Organisation (WMO) and African Union organizations paints a dire photograph of the continent's capacity to conform to increasingly frequent weather disasters.
- The report has been jointly published by the WMO, the African Union Commission and the Economic Commission for Africa through the Africa Climate Policy Centre, international and regional scientific organizations and United Nations agencies.

- The record says closing year changed into Africa's 1/3 warmest on report, in line with one set of data, 0.86 ranges Celsius above the average inside the 3 decades main to 2010.
- It has mostly warmed slower than high-latitude temperate zones, but the impact is still devastating.
- The file came as African international locations demanded a new gadget to music investment from wealthy countries which are failing to satisfy a \$one hundred-billion annual target to assist the growing world tackle climate change
- The report forecast that at current rates all three of Africa's tropical ice fields — Tanzania's Kilimanjaro, Kenya's Mount Kenya, and Uganda's Rwenzoris, which are often identified as the location of the legendary Mountains of the Moon — would be gone by the 2040s.
- Mt Kilimanjaro, the highest mountain in Africa, lies on the Equator.
- Its summit is, but, snowbound in the course of the 12 months.
- The snow on Mt Kenya, the second-highest peak in Africa after Kilimanjaro, could disappear as soon as 2030, according to the report.
- It will be one of the first peaks within the world to lose its glaciers to anthropogenic weather exchange, the report warned.
- The continent has passed the world on worrying indicators, in keeping with the file.
- It has warmed faster than the global average temperature over land and ocean combined.
- The length 1991-2020 changed into hotter than for the 1961- 1990 duration in all African sub areas.
- It was significantly higher than the warming during 1931-1960.
- The year 2020 ranked between the third and eighth warmest year on record for Africa according to the report.
- These findings resonate with those of IPCC's maximum latest assessment.

- At least one out of each tenth character displaced in 2020 became inside the East and Horn of Africa vicinity.
- By 2030, up to 118 million extremely terrible people at the continent may be uncovered to drought, floods, and extreme warmness.
- This will affect progress towards poverty alleviation and growth, according to the report.