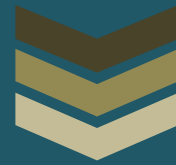


WEEKLY CURRENT AFFAIRS MAGAZINE for



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8 June to 15 June



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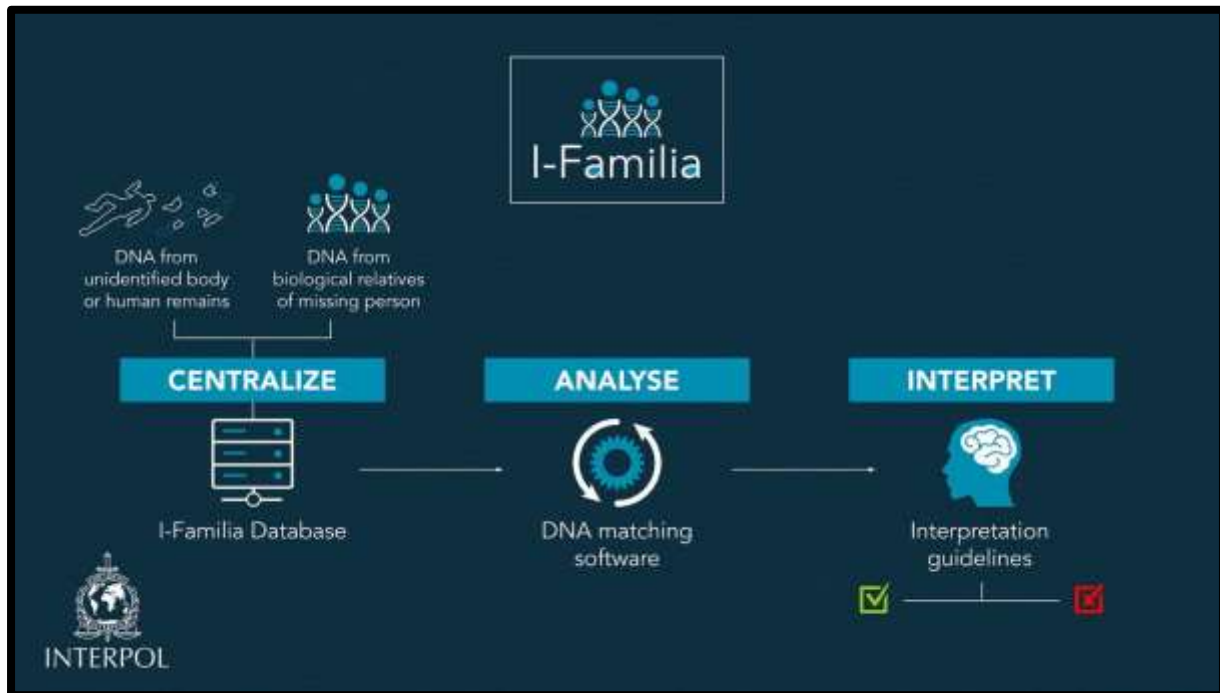
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Success is born of action...

Topic 1: INTERPOL HAS LAUNCHED A NEW GLOBAL DATABASE

Importance for Prelims: International Relations



The interpol has launched a new international info named ‘I-Familia’. It will identify missing persons or unidentified human remains round the world through deoxyribonucleic acid of relatives.

- The International Police Organization is usually called interpol.
- It is a global organization facilitating international police cooperation against cross-border terrorism, trafficking, and different crime.
- INTERPOL has 194 member countries, creating us the world’s largest police organization. State of Palestine is its member.
- All choices concerning the activities of Interpol are created by the General Assembly that is it’s supreme governing body that meets annually.
- It isn't a unit or a part of united nation system. it's an freelance international organization.
- HQ: lyon in France.
- It was supported in 1923.

- Each country hosts an interpol National Central Bureau (NCB), that links national police with our international network. in India, CBI is that the NCB.
- **Interpol notices:** These are international alert/requests circulated by Interpol allowing police in member countries to share critical crime-related data.
- There are eight varieties of notices, seven of that are colour-coded by their function.
- An eighth Special Notice is issued at the request of the UN Security Council (UNSC).

Topic 2. SEA SNOT IN TURKEY

Importance for Prelims: International Relations



Recently, there has been growing environmental concern in Turkey over the accumulation of 'sea snot'.

- It could be a slimy layer of gray or green sludge within the country's seas, which may cause considerable harm to the marine ecosystem.
- Turkey's sea of marmara, that connects the black sea to the aegean sea, has witnessed the biggest outbreak of 'sea snot'.
- The sludge has conjointly been spotted within the adjoining Black and Aegean seas.
- The thick slimy layer of organic matter, that feels like a viscous, brown and foam substance, has spread through the sea south of istanbul and additionally blanketed harbours and shorelines.

What is a sea Snot?

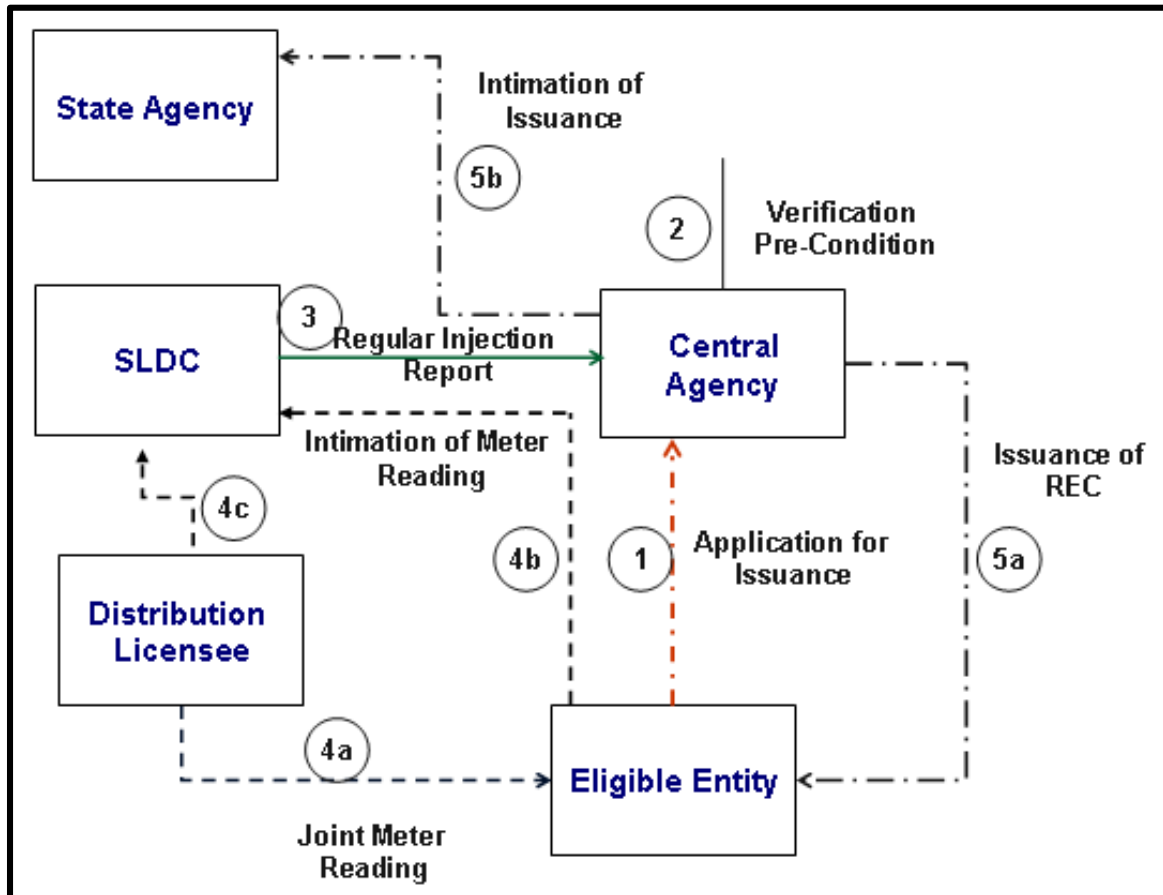
- It is marine mucilage that's formed once algae are overladen with nutrients as a result of water pollution combined with the effects of global climate

change.

- The nutrient overload occurs once algae feast on heat weather caused by global warming.
- The phenomenon of water pollution adds to the issues.
- The overproduction of phytoplankton caused by global climate change and the uncontrolled throw away of household and industrial waste into the seas has led to the Sea Snot.
- The dumping of sewage within the ocean along side rising temperatures is causing the crisis.
- A 'sea snot' outbreak was first recorded within the country in 2007 and it had been also spotted within the Aegean Sea close to Greece.

Topic 3. RENEWABLE ENERGY CERTIFICATE (REC) Mechanism

Importance for Prelims: Governance



Recently, the Ministry of Power has circulated a conversation paper on Remodel the Renewable Energy Certificate (REC) Mechanism for comments of stakeholders in power sector.

Renewable Energy Certificate (REC)

- It could be a market based instrument to promote renewable energy and facilitate compliance of renewable purchase obligations (RPO).
- It could be a tradable, legal mechanism that represents the environmental benefits associated with one Megawatt-hour of electricity generated from a renewable energy resource.
- It is aimed toward addressing the mismatch between accessibility of RE resources in state and the need of the obligated entities to meet the renewable purchase obligation (RPO).

- One Renewable Energy Certificate (REC) is treated as equivalent to one MWh.
- Ability below Renewable Energy Certificate (REC)A generating firm engaged in generation of electricity from sustainable energy sources shall be eligible to apply for enrollment for issuance of and dealing in Certificates if it fulfils the subsequent conditions:
 - It has acquire accreditation from the State Agency; and
 - It doesn't have any power purchase contract for the capability associated with such generation to sell electricity, with the obligated entity for the purpose of meeting its renewable purchase obligation.
 - A distribution licensor shall be eligible to apply for registration with the Central Agency for publication conditions:
 - It has procured renewable energy, within the previous financial year, at a tariff determined under Section sixty two or adopted under Section sixty three of the Act; and
 - It has obtained a certification from the suitable Commission towards procurement of renewable energy.

Topic 4. WORLDBANK APPROVES 500 M TO SUPPORT MSME'S

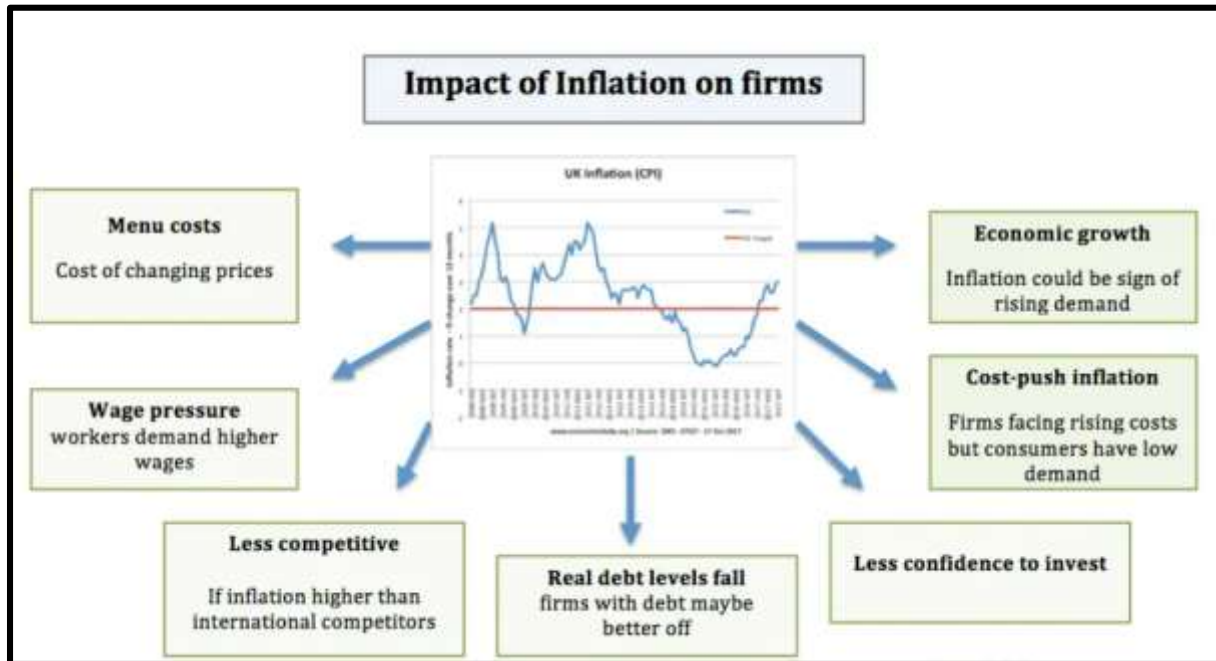
Importance for Prelims: International Relations

The World Bank's Board of executive administrators has approved a \$500 million program to support India's nationwide initiative to revitalize the MSME sector, that has been heavily impacted by the COVID-19 crisis.

- The \$500 million Raising and accelerating micro, tiny and Medium Enterprise (MSME) Performance (RAMP) Program is that the World Bank's second intervention in this sector, the primary being the \$750 million MSME Emergency Response Program, approved in July 2020 to address the immediate liquidity and credit wants of millions of viable MSMEs severely impacted by the continued COVID-19 pandemic.
- The RAMP Program can support the govt. of India's efforts to increase MSME productivity and funding within the economic recovery part, crowd in private sector funding within the medium term, and tackle long-standing monetary sector issues that are holding back the growth of the MSME sector.
- The RAMP program can give better access to finance the operating capital for MSMEs by strengthening the receivable financing markets;
- It can scale up on-line dispute resolution mechanisms to deal with the issues of delayed payments. Such efforts are expected to enhance the cost-effectiveness, quality, accessibility, impact, and outreach of such schemes.

Topic 5. INFLATION AND ITS EFFECTS

Importance for Prelims: Economics



Global Inflation usually spills over to emerging economies through the commodities channel that is already showing up within the WPI that captures inflation in the producer's level.

- Inflation refers to the increase within the costs of most product and services of daily or common use, like food, clothing, housing, recreation, transport, consumer staples, etc.
- Inflation measures the average value modification during a basket of commodities and services over time.
- The opposite and rare fall within the price index of this basket of items is called 'deflation'.
- Inflation is indicative of the decrease within the buying power of a unit of a country's currency. this might ultimately lead to a deceleration in economic process.
- However, a moderate level of inflation is needed within the economy to confirm that production is promoted.

Who measures Inflation in India?

- Inflation is measured by a central government authority, that is in charge of adopting measures to confirm the graceful running of the economy.
- In India, the Ministry of Statistics and Programme Perpetration measures inflation.
- In India, inflation is primarily measured by 2 main indices — WPI (Whole sale Price Index) and CPI (Consumer value Index) that measure wholesale and retail level price changes, respectively.
- The CPI calculates the distinction within the value of commodities and services like food, medical aid, education, physics etc, which Indian customers purchase to be used.

Adverse impacts of inflation:

- Inflation causes decrease within the real worth of cash and alternative financial items overtime.
- Inflation causes uncertainty over future and this might discourage investment and savings.
- High inflation could lead to shortages of products if customers begin hoarding out of concern that costs can increase within the future.

Favorable impacts of Inflation:

- Inflation ensures that the central banks regulate the interest rates.
- Inflation encourages non-monetary investment.

Topic 6. NATIONAL RIVER CONSERVATION PLAN

Importance for Prelims: Governance

The Ganga Action plan (GAP) part – I that was taken up as 100 percent centrally

funded scheme and aimed toward preventing the pollution of watercourse Ganga and to improve its water quality.

- It was started in June 1985. Subsequently, the GAP phase II was launched in 1993 for pollution abatement of river Yamuna and Gomti, major tributaries of watercourse Ganga.
- The watercourse pollution abatement programme was more enlarged to incorporate other major rivers of the country in 1995 under the aegis of National River Conservation Plan (NRCP).
- Finally in Dec 1996, GAP phase II was conjointly incorporated with the NRCP.
- All projects for watercourse improvement within the country were brought under one umbrella scheme of NRCP.

Objective

- To improve the water quality of the key rivers that are the major fresh water source within the country through the implementation of pollution abatement Schemes.

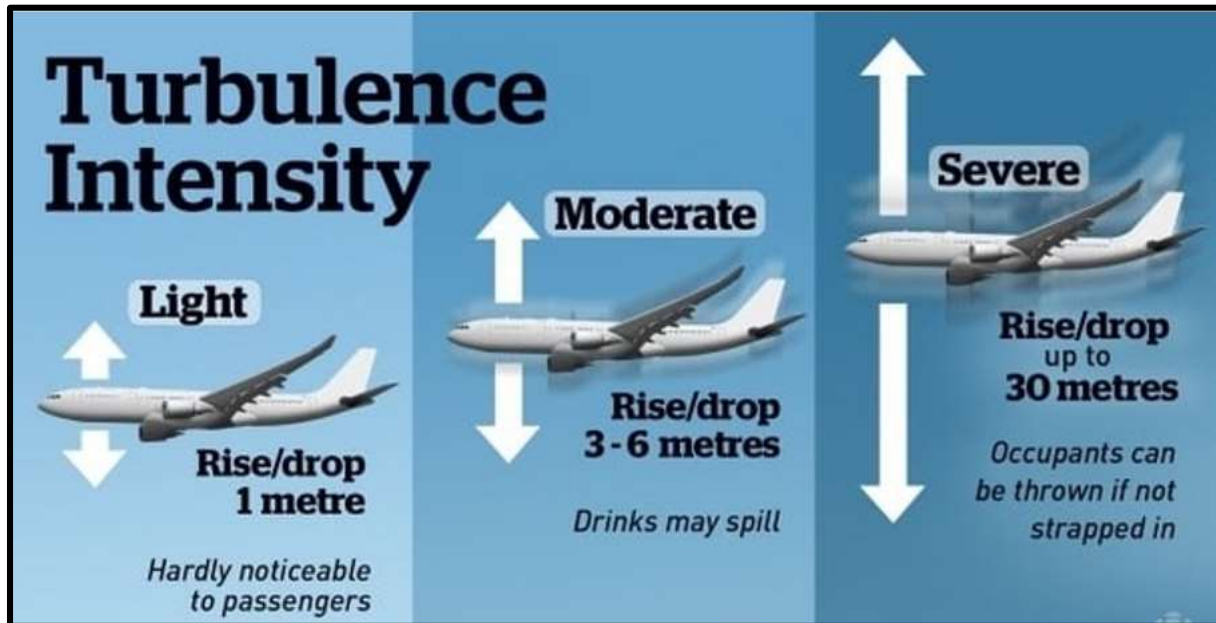
The activities under NRCP include the following:

- Interception and diversion works/ laying of sewerage systems to capture raw sewage flowing into the rivers through open drains and entertaining them for treatment.
- Setting of sewage Treatment Plants (STPs) for treating the diverted sewage.
- Construction of Low price Sanitation bathrooms to prevent open defecation on riverbanks.

- Construction of electrical Crematoria and Improved Wood Crematoria to conserve the use of wood.
- River Front Development works, like improvement of bathing ghats.
- Public participation & awareness and capability building.

Topic 7. WHY DO AIRCRAFT RUN INTO TURBULENCE?

Importance for Prelims: Science & tech



Eight passengers on board a Vistara flight from Mumbai to Kolkata on Mon, June 7, suffered injuries after the Boeing 737-800 encountered severe turbulence during its descent.

- Air turbulence means that disruption of airflow over the wings of an airplane, which causes it to enter an irregular vertical motion.
- There are a minimum of seven completely different types of turbulence that an aircraft will face.
- Jet streams trigger unexpected changes in wind speed that may rock the plane.
- Another kind is thermal turbulence. It's created by hot rising air, usually from cumulus clouds or thunderstorms.
- Mechanical turbulence is caused by the landscape.
- Mountains or tall buildings can distort the wind flow within the sky above them.
- Airplanes also can produce turbulence. The wings cause wake turbulence as it passes through the air.

- This will affect planes flying behind each other.
- It's why planes avoid taking a similar flight path on take offs and landings.
- Pilots and air traffic management do a lot to avoid turbulence.
- Other styles of turbulence include “wake turbulence”, that forms behind an aircraft when it flies through air, making wingtip vortices.

Are turbulence incidents dangerous?

- It depends on the nature and intensity of the roughness.
- Aircraft face some kind of turbulence on an everyday basis, and pilots are trained to deal with these disturbances.

Topic 8. GLOBAL OUTAGE OF INTERNET

Importance for Prelims: Science & tech

Several huge websites round the world went down for regarding half an hour, because of a major issue with the content delivery network (CDN) of American cloud computing services supplier fastly.

Most users would have seen a 503 error once attempting to access these websites, indicating that the browser wasn't able to access the server.

What is a CDN?

- A CDN (Content Delivery Network) could be a highly-distributed platform of servers that helps minimize delays in loading website content by reducing the physical distance between the server and therefore the user.
- Without a CDN, content origin servers should respond to each single finish user request.
- A CDN refers to a geographically distributed cluster of servers that job together to provide quick delivery of internet content.
- They house content about to the telecommunication service providers' networks. Majority of web traffic across the global nowadays is routed through CDNs.
- Platforms like Netflix, Facebook, and Amazon— ones with large quantities of data control in world libraries — host their geographically relevant content nearer to where that content is to be consumed.
- This ensures the end customer is able to access the content quicker. Another reason companies rely on these CDNs is to assist protect their sites against traffic spikes, distributed denial of service (DDOS) attacks, etc.

Past experiences:

- This isn't the 1st time that a problem with CDN has caused several

alternative dependent websites to go down. previously in 2020, Cloud flare, another leading international cloud platform, had faced problems that impacted its consumer websites.

- The Cloud flare glitch resulted in sites like Discord, Feedly, Politico, Shopify, and League of Legends going down.

Topic 9. DRAFT MODEL RULES FOR LIVE-STREAMING AND RECORDING OF COURT PROCEEDINGS

Importance for Prelims: Governance

The e-Committee of Supreme Court of India has discharged the Draft Model Rules for Live-Streaming and Recording of Court Proceedings and has invited feedback on them.

- The e-Committee of the Supreme Court of India along side the Department of Justice, Government of India is working under the National Policy and Action Plan for implementation of data and Communication Technology ICT within the Indian Judiciary.
- Justice Dhananjaya Y. Chandrachud is that the Supreme Court judge and Chairperson of e-Committee.
- The right of access to justice, guaranteed under Article twenty one of the Constitution encompasses the right to access live court proceedings.

Features

- According to the draft rules, all proceedings in high courts will be telecast except for cases concerning marital status disputes, gender-based violence, those involving minors and “cases, that within the opinion of the Bench, might provoke enmity amongst communities likely to result in a breach of law and order”.
- “The final judgment as to whether or not or to not permit the Live-streaming of the Proceedings or any portion therefrom will be of the Bench, however, the choice of the Bench are guided by the principle of an open and clear judicial process.
- The choice of the Bench shall not be legitimate.”

Topic 10. UNITED NATIONS ECONOMIC AND SOCIAL COUNCIL (ECOSOC)

Importance for Prelims: International Organizations



India has been elective to the UN Economic and Social Council, ECOSOC for the term 2022-24.

- The United Nations Charter established Economic and Social Council in 1945 as one of the six main organs of the United Nations.
- The Council consists of fifty four Members States, that are elected yearly by the General Assembly for overlapping three-year terms.
- Seats on the Council are assigned supported geographical presentation with 14 allocated to African states, eleven to Asian states, six to eastern European states, ten to Latin yankee and Caribbean states and thirteen to western European and alternative states. Mandate:
- It is that the central platform for fostering debate and innovative thinking, forging consensus on ways in which forward, and coordinative efforts to achieve internationally agreed goals.
- It is additionally accountable for the follow-up to major United Nations

conferences and summits.

- ECOSOC's annual High-Level segment includes: High-Level Political Forum, that reviews implementation of the 2030 Agenda for Sustainable Development, is convened under the auspices of the Council every July.
- Development Cooperation Forum reviews trends and progress in development cooperation.
- Specialized agencies: The specialised agencies of the UN are autonomous organizations operating among the UN System, definition that while they report their activities to the Economic and Social Council, they're mostly free to their own devices.

Topic 11. ARAVALLI RANGES

Importance for Prelims: Geography



The Supreme Court ordered the Haryana government and therefore the Faridabad Municipal Corporation to require “all essential measures” to remove encroachments, including regarding 10,000 residential constructions, within the ecologically fragile Aravali forestland close to Lakarpur Khori village.

- The Aravalli range (also spelled Aravali) could be a mountain range in Northwestern India.
- It runs approximately 670 kilometre (430 mi) during a south-west direction, beginning close to Delhi, passing through southern Haryana and Rajasthan, and ending in Gujarat.
- The highest peak is Guru Shikhar at 1,722 metres (5,650 ft). Guru Shikhar could be a peak in the Aravali Mountains of Rajasthan. It's fifteen kilometre from Mount Abu.

- Three major rivers and their tributaries flow from the Aravalli, specifically Banas and Sahibi rivers that are tributaries of Yamuna, also as Luni stream that flows into the Rann of Kutch.

Topic 12. MONSOON SESSION LIKELY TO BEGIN IN JULY

Importance for Prelims: Polity

The monsoon session of Parliament is expected to start on schedule in July.

The last session of Parliament was curtailed and complete sine die on March twenty five and under the Constitutional norms, the next session has to be control within six months. This period ends on Sept fourteen.

- Three sessions are curtailed since the pandemic began in March last year.
- First of those was the Budget session of 2020. The winter session last year was also cut short.
- Last year, the monsoon session, that typically starts in July, began in Sept.

Constitutional Provisions

- Article eighty five needs that there shouldn't be a gap of over six months between two sessions of Parliament.
- Please note, the Constitution doesn't specify once or for how several days Parliament should meet.
- The power to convene a session of Parliament rests with the govt. The decision is taken by the cabinet Committee on Parliamentary Affairs.
- The choice of the Committee is formalised by the President, in whose name MPs are summoned to meet for a session.

Topic 13. BRICS OPPOSES EXCEPTIONALISM: CHINA

Importance for Prelims: International Relations

Virtual BRICS Foreign Ministers was held recently. At the end of the meeting two declarations were made on the “Meeting of the BRICS Ministers of Foreign Affairs/International Relations” and another on “BRICS Joint declaration on Strengthening and Reforming the multilateral System”.

What has China said on BRICS and its intended objectives?

- BRICS countries pursue openness, inclusiveness and win-win cooperation, and reject “bloc politics and ideologic confrontation”.
- The BRICS countries, as emerging markets and developing countries, are indeed different from some developed countries in their attitude towards multilateralism and multilateral cooperation.
- The BRICS countries stress the requirement to watch the purposes and principles of the UN Charter and oppose exceptionalism and double standard.

What do these statements indicate/suggest?

- These statements clearly reveal that China is in opposition to the formation of the Quad grouping amongst the United States, India, Australia and Japan.
- It believes this cluster is targeting or harming the interests of third parties.

BRICS:

- BRICS is an acronym for the grouping of the world’s leading rising economies, namely Brazil, Russia, India, China and South Africa.
- In 2001, the British economist Jim O’Neill coined the term BRIC to explain the four emerging economies of Brazil, Russia, India, and China.
- The grouping was formalised throughout the 1st meeting of BRIC Foreign Ministers’ in 2006.
- South Africa was invited to join BRIC in Dec 2010, once that the group adopted the acronym BRICS.

- The presidency of the forum is rotated annually among the members, in accordance with the acronym B-R-I-C-S.

Cooperation Mechanism:

Track I: Formal diplomatic engagement connecting the national governments.

Track II: Engagement through government-affiliated establishments, e.g. state-owned enterprises and business councils.

Track III: Civil society and People-to-People engagement.

Topic 14. PETROL AND DIESEL PRICES ARE CONTINUING TO RISE IN INDIA

Importance for Prelims: Economy

Petrol has crossed the Rs 100 mark in a minimum of six states as a result of a Rs 4.9 per litre hike in its value since the start of the year.

Fuel value dynamics in India

- Retail petrol and diesel costs are in theory decontrolled — or connected to world crude oil costs.
- It means if crude costs fall, retail costs ought to return down too, and vice versa.
- But this doesn't happen in practice, largely because oil value decontrol may be a one-way street in India.
- When international fossil oil costs fall and costs slide, the govt. slaps fresh taxes and levies to confirm that it rakes in further revenues.
- The consumer ought to have ideally benefited by method of lower pump costs, is forced to either shell out what she's already paying or spend even a lot more for each litre of fuel.
- The main beneficiary during this subversion of value decontrol is that the government.

Why crude oil prices are rising now?

- The price of petroleum has gone up sharply in 2021 on the rear of a recovery in global demand because the world economy recovers from the Covid-19 pandemic.
- The value of Brent crude has gone up by 37.1 per cent to concerning \$71 per barrel from about \$51.8 per barrel at the start of the year.
- The value of fuel and diesel are pegged to a 15-day rolling average of the international costs of the petrol and diesel.
- However, current petrol costs are considerably more than costs in FY14

once the average value of India's crude basket was \$105.5 per barrel.

What is the impact of taxes?

- Increasing central and state taxes on fuel and diesel are the key reason for the prices of petrol and diesel being at record highs, even though the value of crude oil is solely 3.5 per cent higher than at the start of 2020, before the Covid-19 pandemic led to a sharp fall within the demand for petroleum.

Topic 15. NO DECISION ON ADDU ATOLL: SOLIH

Importance for Prelims: Environment / Geography

The Maldives has created no choice on opening an Indian consulate in its southern Addu atoll, President Ibrahim Mohamed Solih said on Tuesday, a fortnight after the Indian cabinet cleared a proposal for it.

About Addu atoll

- Addu is one in every of the foremost beautiful sites of Maldives' 26 coral atolls. It comprises more than 2 dozens of Maldives' 1192 islands.
- Addu atoll, additionally called Seenu atoll, is that the southmost atoll of the Maldives.
- Addu atoll is that the location of Addu city, one among the 2 cities of the Maldives.
- Addu City consists of the inhabited areas of Addu atoll, specifically the natural islands of Hulhudhoo, Meedhoo, Maradhoo, Feydhoo, and Hithadhoo.
- Addu atoll, together with Fuvahmulah, extend the Maldives into the Southern Hemisphere.
- About ten per cent of actual Maldives residents are living here with unique culture and dialect.
- According to the official figures discharged by Maldives tourism Indian citizens are second among individuals coming to the Maldives to go to from everywhere the world.

Atolls

- An atoll could be a roughly circular (annular) oceanic reef system near by an oversized (and often deep) central lake.
- The lake has a depth 80-150 metres and should be joined with ocean water through a number of channels cutting across the reef.
- Atolls are placed at great distances from deep sea platforms, wherever the

submarine features could facilitate in formation of atolls, like a submerged island or a volcanic cone which can reach A level appropriate for coral growth.

- An atoll could have any one of the subsequent 3 forms:
 - 1. a circular reef enclosing a lake with no island;
 - 2. an atoll encompassing a lake with an island;
 - 3. a coral island or an atoll island that is, in fact, an atoll reef, engineered by the method of erosion and deposition of waves with island crowns formed on them.
- Atolls are much more common within the Pacific than the other ocean. The state atoll and the Funafuti atoll within the Ellice Islands are well known samples of atolls.
- A large number of atolls additionally occur within the Lakshadweep Islands.
- In the south Pacific, most atolls occur in mid-ocean.
- Examples of this reef kind are common in French Polynesia, the Caroline and Marshall Islands, Micronesia, and the Cook Islands.
- The Indian Ocean conjointly contains numerous atoll formations.
- Examples are found in the Maldives and Chagos Island groups, the Seychelles, and within the Cocos Island group.

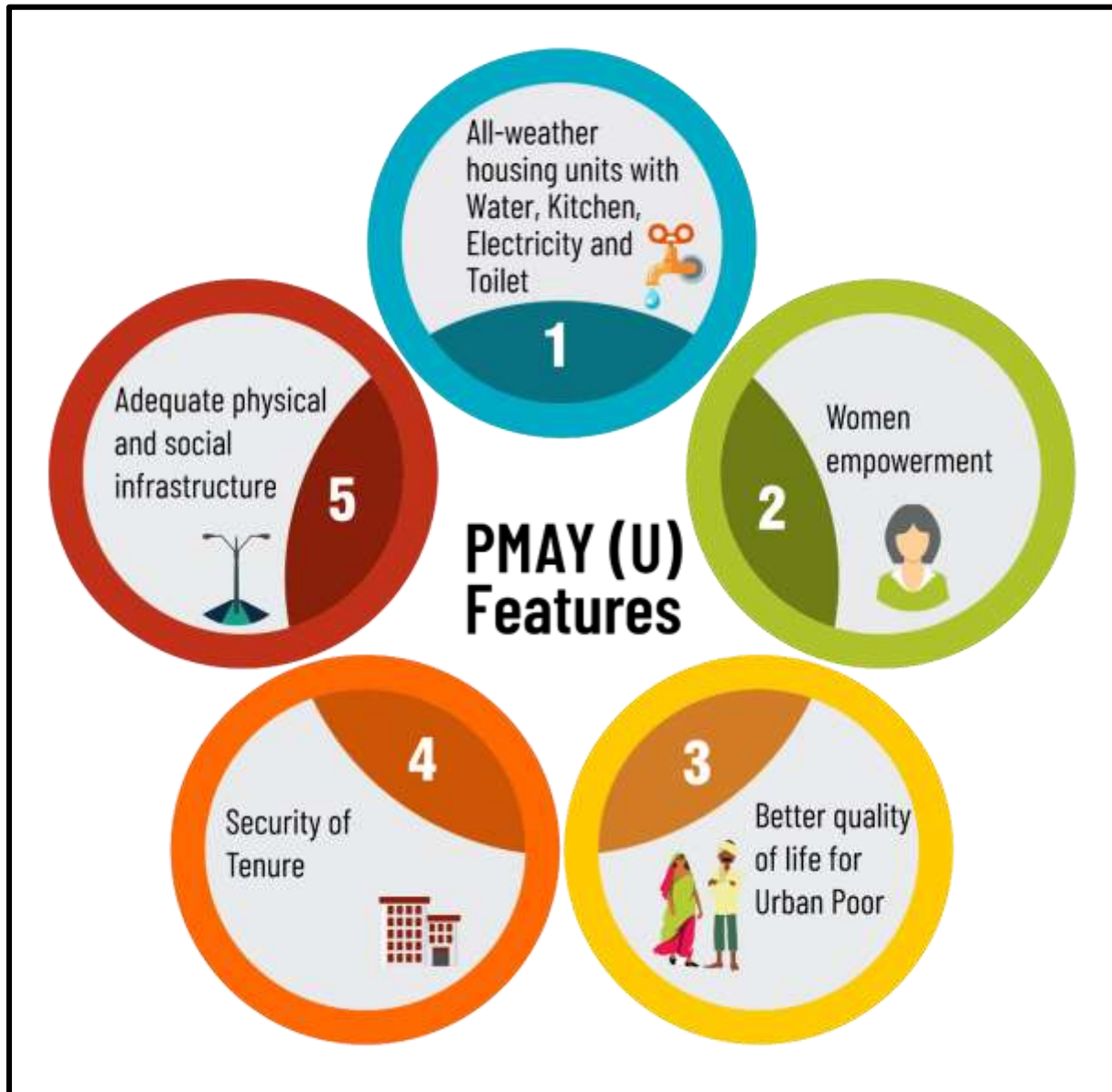
Other types of coral reef

- **Fringing reefs** : Fringing reefs are reefs that grow directly from a shore.
- They are located very near to land, and sometimes form a shallow lake between the beach and the main body of the reef.
- A fringing reef runs as a narrow belt [1-2 kilometer wide].
- This kind of reef grows from the deep ocean bottom with the oceanward side sloping steeply into the deep sea.
- Coral polyps don't extend outward due to sudden and huge increase in depth.

- The fringing reef is far and away the foremost common of the 3 major kinds of coral reefs, with various examples all told major regions of coral reef development.
- **Barrier reefs** : Barrier reefs are comprehensive linear reef complexes that parallel ashore, and are separated from it by lake
- This is that the largest (in size, not distribution) of the 3 reefs, runs for 100 of kilometres and is many kilometres wide.
- It extends as a broken, irregular ring around the coast or an island, running almost parallel to that.
- Barrier reefs are far less common than fringing reefs or atolls, though examples can be found within the tropical Atlantic also because the Pacific.

Topic 16. PRADHAN MANTRI AWAS YOJANA – URBAN

Importance for Prelims: Government Schemes



Recently, the govt. has approved 708 proposals for construction of 3.61lakh homes under Pradhan Mantri Awas Yojana-Urban (PMAY-U). The ‘PMAY-U Awards2021-100 Days Challenge’ was additionally launched by the Ministry of Housing & Urban Affairs(MoHUA).

Pradhan Mantri Awas Yojana-Urban (PMAY-U)

- It may be a flagship Mission of government of india being implemented by Ministry ofHousing and urban Affairs (MoHUA).

- It was launched in 2015.
- The main stakeholders are State Level Nodal Agencies (SLNAs), Urban Local Bodies (ULBs)/ Implementing Agencies (IAs), Central Nodal Agencies (CNAs) and Primary lending establishments (PLIs)
- All homes under PMAY (U) have basic amenities like toilet, water supply, electricity and kitchen.
- purpose of Pradhan Mantri Awas Yojana-Urban (PMAY-U)
- It is aimed toward providing pucca houses to any or all eligible beneficiaries of Urban India by 2022 with the vision of 'Housing for All'.
- It addresses urban housing shortage among the EWS/LIG and MIG categories including the slum dwellers.
- It adopts a restaurant approach to suit the requirements of people supported the geographical conditions, topography, economic conditions, availability of land, infrastructure etc.

About PMAY-U Awards 2021-100 Days Challenge

- The awards are given to recognize and celebrate the outstanding contribution and performances by States, Union Territories (UTs), Urban Local Bodies (ULBs) and beneficiaries.
- It aims to motivate healthy competition among States/UTs/ULBs and recognize their best performance.
- The awards have normally been confidential into three major levels: State Awards, Municipal companies, Municipal Councils and Nagar Panchayats Awards Special class Awards Beneficiary Awards

Topic 17. APPOINTMENT OF ELECTION COMMISSIONERS

Importance for Prelims: Polity

Recently, Shri Anup Chandra Pandey has assumed charge because the new Election Commissioner (EC) of India.

- Article 324 of the Constitution has created the subsequent provisions with reference to the composition of election commission
- The election commission shall contain of the chief election commissioner and such number of alternative election commissioners, if any, because the president could from time to time fix.
- The appointment of the chief election commissioner and different election commissioners shall be created by the president.
- When the other election commissioner is therefore appointed, the chief election commissioner shall act because the chairman of the election commission.
- The president can also appoint once consultation with the election commissions such regional commissioners as he might think about necessary to help the election commission.
- The conditions of service and tenure of workplace of the election commissioners and their regional commissioners shall be determined by the president.
- Powers and Tenure of Election Commissioners The chief election commissioner and therefore the 2 alternative election commissioners have equal powers and receive equal wages, allowances and alternative perquisites, that are similar to those of a judge of the Supreme Court.
- In case of distinction of opinion amongst the Chief election commissioner and/or two other election commissioners, the matter is decided by the Commission by majority.
- They hold workplace for a term of six years or till they attain the age of

sixty five years, whichever is earlier.

- Independence of Election Commissioners Article 324 of the Constitution has created the subsequent provisions to safeguard and ensure the freelance and impartial functioning of the Election Commission: The chief election commissioner is supplied with the safety of tenure.
- He can not be removed from his workplace except in same manner and on the same grounds as a judge of the Supreme Court.
- He will be removed by the president on the basis of a resolution passed to that effect by each the houses of Parliament with special majority, either on the ground of proved misbehavior or incapacity.
- The service conditions of the chief election commissioner can't be varied to his disadvantage when his appointment.
- Any alternative election commissioner or a regional commissioner can not be removed from workplace except on the advice of the chief election commissioner.

Topic 18. MONEY SUPPLY AND MONEY MULTIPLIER

Importance for Prelims: Economics

C Rangarajan, D K Srivastava write: A word of caution, though: With higher expenditure, financed through borrowings, the impact of liquidity expansion on inflation needs to be monitored.

Money Supply:

- The total stock of cash in circulation among the public at a specific point of time is known as money supply.
- It has to be noted that total stock of cash is completely different from total provide of cash.
- Supply of cash is only that a part of total stock of cash that is held by the public at a specific point of your time.
- The circulating cash involves the currency, printed notes, cash within the deposit accounts and within the kind of different liquid assets.
- RBI publishes figures for four different measures of cash provide, viz. M1, M2, M3 and M4.
- $M1 = CU + DD$
 $M2 = M1 + \text{Savings deposits with Post office savings banks}$
 $M3 = M1 + \text{net time deposits business of banks}$
 $M4 = M3 + \text{Total deposits with Post workplace savings organisations (excluding National Savings Certificates)}$
CU is currency (notes plus coins) held by the public and DD is net demand deposit held by commercial banks.
- The word 'net' implies that solely deposits of the public held by the banks are to be included in money supply.
- The interbank deposits, that industrial a bank holds in different commercial banks, are not to be considered a part of money supply.
- M1 and M2 are called narrow cash. M3 and M4 are called broad cash.
- These gradations are in decreasing order of liquidity.
- M1 is most liquid and simplest for transactions whereas M4 is least liquid

of all.

- M3 is that the most ordinarily used measure of cash provide. it's conjointly known as aggregate financial resources.

Money Multiplier Effect:

- Money multiplier could be a term in financial economics that's a phenomenon of creating money within the economy within the kind of credit creation, based on the fractional reserve banking system.
- Money multiplier is additionally called the monetary multiplier. it's the most limit to which money supply will be affected by bringing concerning changes within the amount of money deposits.
- Money multiplier impact is seen in industrial banks as they accept deposits and after keeping a particular amount as a reserve, distribute the cash as loans for injecting liquidity within the economy.
- The quantity of {cash} that ought to be kept by industrial banks in their reserve for withdrawal functions by the purchasers is referred to because the reserve ratio or required reserve ratio or cash reserve ratio.
- Mathematically, cash multiplier formula will be delineated as Money multiplier = $1/r$ Where r = needed reserve ratio or money reserve ratio
- It means if the reserve ratio is higher, then the money multiplier are lower and the banks need to keep more reserves. As a result, they'll not be able to lend more cash to people and businesses.
- Similarly, a lower reserve ratio results in a higher cash multiplier that allows a lesser amount of cash to be kept as a reserve and extra lending opportunities to the public.

Topic 19. APPOINTMENT OF CHIEF JUSTICE OF HIGH COURT

Importance for Prelims: Polity

Recently, the President of India appointed Shri Justice Sanjay Yadav as the Chief Justice of the Allahabad High Court.

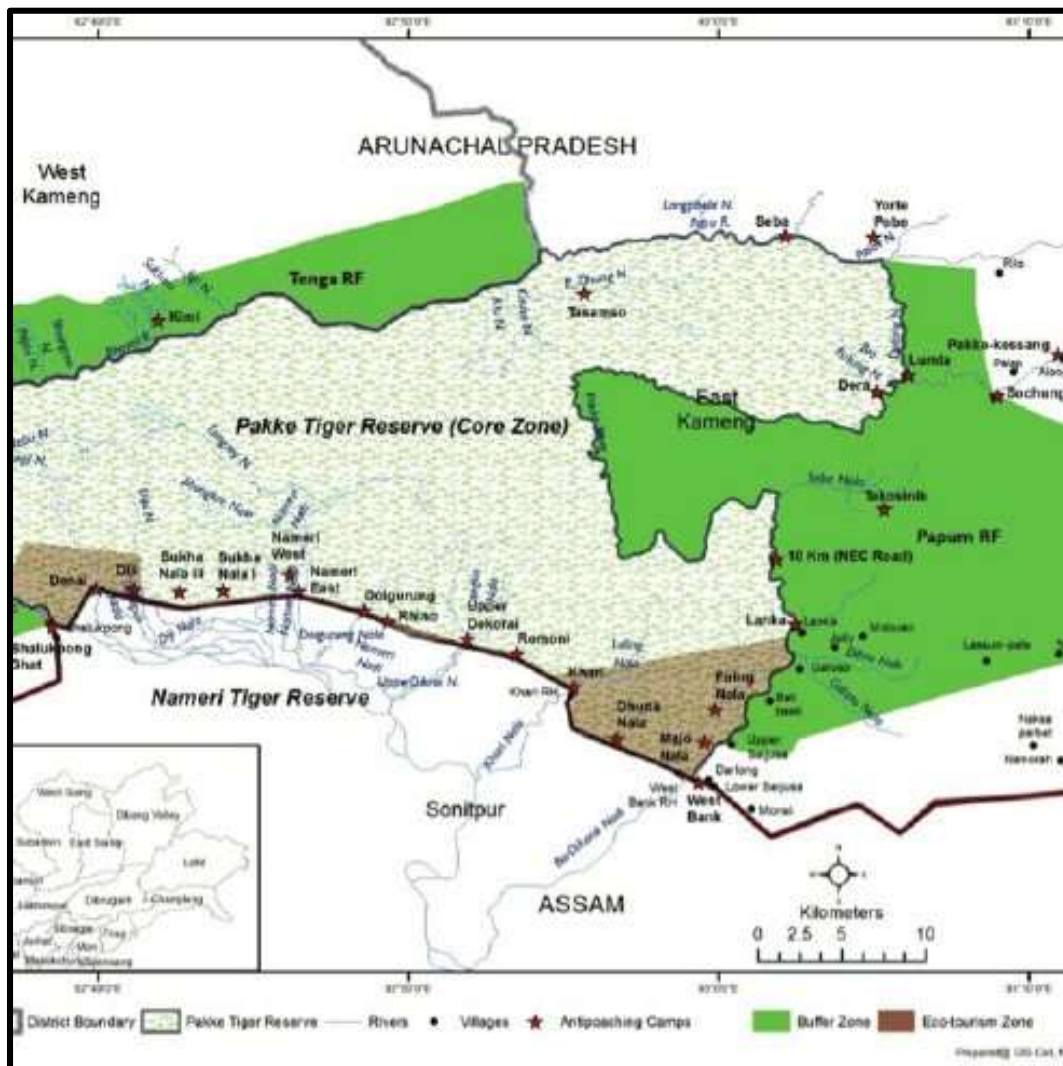
- Every high court (whether exclusive or common) consists of a chief justice and such other judges because the president could from time to time deem necessary to appoint.
- The Constitution doesn't specify the strength of a high court and leaves it to the discretion of the president.
- The President determines the strength of a high court from time to time depending upon its workload.

Provisions for appointing chief justice of high court

- The chief justice is appointed by the President when consultation with the chief justice of India and therefore the governor of the state involved.
- The judges of a high court are appointed by the President.
- The President, in exercise of the ability conferred by clause (1) of Article 217 of the Constitution of India, will appoint the chief justice of a high court.
- The chief justice of high court is appointed as per the policy of getting Chief Justices from outside the respective States.
- The Collegium takes the call on the upgrading.
- High Court judges are suggested by a Collegium comprising the CJI and two senior-most judges.

Topic 20. PAKKE TIGER RESERVE

Importance for Prelims: Environment



More than two hundred contingency employees of the Pakke Tiger Reserve in Arunachal Pradesh went on an indefinite strike over non-payment of wages since Dec 2020.

Pakke Tiger Reserve

- Pakke Tiger Reserve (declared in 1999 – 2000) lies within the foothills of the eastern Himalaya within the East Kameng district of Arunachal Pradesh. It's conjointly known as Pakhui Tiger Reserve.
- It falls among the eastern Himalaya biodiversity Hotspot.
- It is home to over 2000 species of plants, three hundred species of birds,

forty species of mammals, thirty species of amphibians and thirty six species of reptiles.

- Many species of the flora and fauna are globally threatened, and PTR is one among the last remaining strongholds left for these species.
- It is thought for its wonderful sightings of 4 resident hornbill species.

Topic 21. MAHARASHTRA'S PROPOSED AMENDMENT FOR PROTECTION OF HERITAGE TREES

Importance for Prelims: Environment



माहिती वसुंधरा अभियान

Protecting and preserving Trees in Urban Areas



Heritage Tree at Satara

- Introducing the Concept of Heritage Trees
- Introducing Age of the Tree as a basis for protection and preservation
- Compensatory Plantation to ensure net positive impact
- Protecting Significant Number of Trees
- Formation of Maharashtra State Tree Authority for protection and preservation of trees

Recently, the maharashtra government has decided to form amendments to the maharashtra (Urban Areas) Protection and Preservation of Trees Act of 1975, to introduce provisions for the protection of 'heritage trees'.

Heritage Trees

- Under the proposed modification, a tree with an estimated age of fifty years or more shall be outlined as a heritage tree.
- The heritage tree could belong to specific species, which can be notified from time to time.
- The state global climate change department ought to conjointly consider a

tree's rarity, its botanical, historical, religious, mythological and cultural importance in defining a heritage tree.

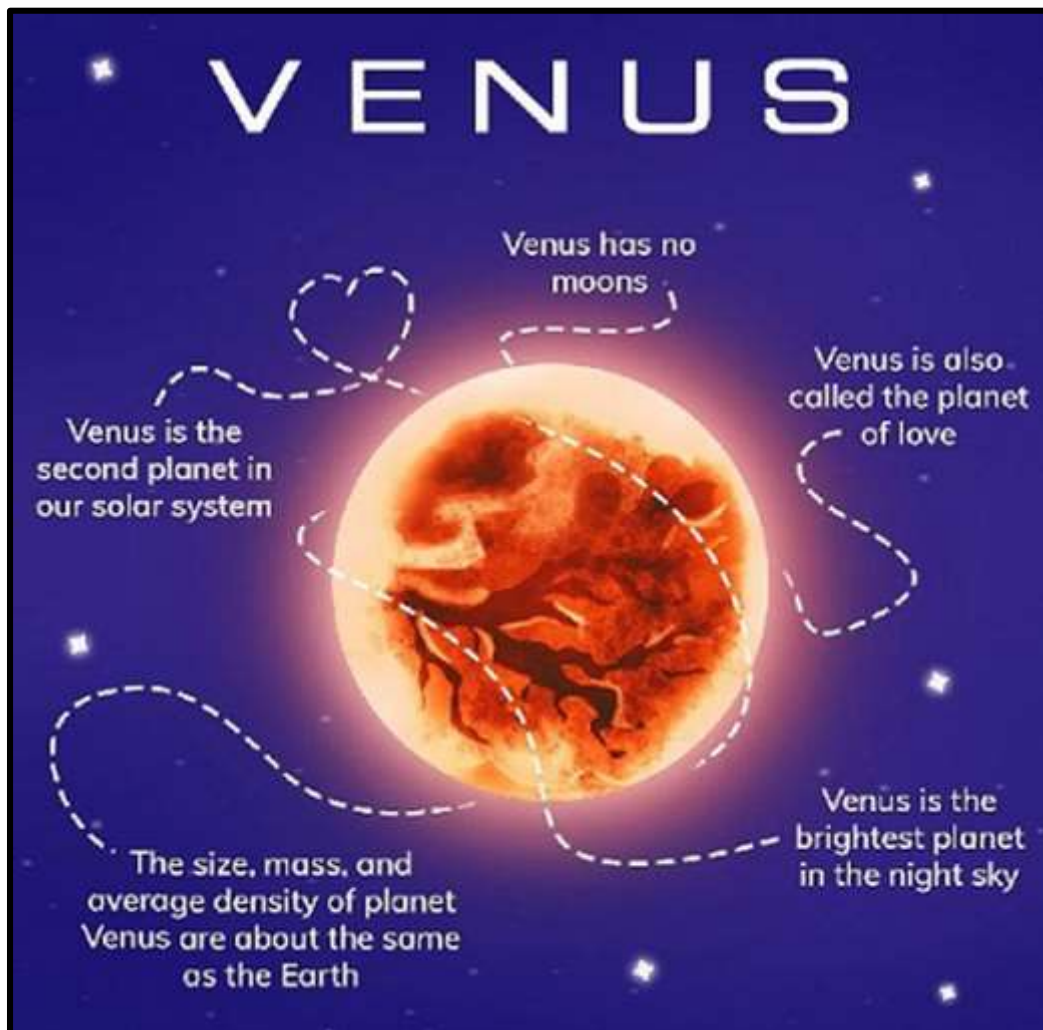
- The native Tree Authority can need to guarantee tree census to be carried out each five years along side calculation of heritage trees.
- Amendments planned by Maharashtra Government

The plan includes:

- Concept of heritage tree and plan of action for conservation; Method to outline age of the tree; Rules to be followed before hacking trees; Formation of the Maharashtra Tree Authority; Structure of the native tree authority and their duties; and Tree cess and fine to be charged
- The State can bring about amendments within the Maharashtra (Urban Area) Protection and Preservation of Trees Act.
- A State-level Tree Authority will be formed to guard and preserve heritage trees.
- The authority can hear applications seeking permission to chop two hundred or a lot of trees that are 5 or a lot of years previous.
- The State authority can issue directions for the use of tree cess and therefore the fine amount cannot be over 1 lakh per tree just in case of violations.

Topic 22. ENVISION MISSION TO VENUS

Importance for Prelims:Space & tech



Recently, the European Space Agency (ESA) had declared that it has selected EnVision as its next orbiter that may visit Venus someday within the 2030s.

EnVision Mission

- It is an European Space Agency (ESA) led mission with contributions from National Aeronautics and Space Administration.
- The earliest launch chance for EnVision is 2031, followed by 2032 and 2033.
- The spacecraft can take concerning fifteen months to reach Venus and can take sixteen more months to achieve orbit circularization.
- The spacecraft can carry a range of instruments to study the planet's

atmosphere and surface, monitor trace gases within the atmosphere and analyse its surface composition.

- A radar provided by National Aeronautics and Space Administration can assist to image and map the surface.
- It can follow another ESA-led mission to Venus known as 'Venus Express' (2005-2014) that focussed on atmospheric analysis and pointed to volcanic hotspots on the planet's surface.

About Venus

- It is that the second-brightest object in the sky when the moon.
- It seems bright due to its thick cloud cover that reflects and scatters light.
- It is called the Earth's twin due to their similar sizes.
- The planet's thick atmosphere traps heat and is that the reason that it's the hottest planet within the solar system, despite returning once Mercury.
- The surface temperatures on Venus will go up to 471 degrees Celsius, that is hot enough to soften lead.
- It moves forward on its orbit round the Sun however spins backwards around its axis slowly which means that on Venus the Sun rises within the west and sets within the East.
- One day on Venus is equivalent to 243 Earth days due to its backward spinning, opposite to it of the Earth's and most different planets.
- Venus additionally doesn't have a moon and no rings.

Topic 23. CHIME COLLABORATION HAVE ASSEMBLED THE LARGEST COLLECTION OF FAST RADIO BURSTS (FRBS)

Importance for Prelims: Science & tech



Scientists with the Canadian hydrogen Intensity Mapping Experiment (CHIME) Collaboration have assembled the biggest collection of quick radio bursts (FRBs) in the telescope's 1st FRB catalogue.

CHIME Telescope

- CHIME is an interferometric radio telescope at the Dominion Radio Astrophysical Observatory in British Columbia, Canada.
- It consists of 4 antennas consisting of a hundred x 20-meter cylindrical parabolic reflectors with 1024 dual-polarization radio receivers suspended on support above them.
- The telescope receives radio signals every day from half of the sky because the Earth rotates.
- While most radio astronomy is completed by swivelling an oversized dish to focus light from different parts of the sky, CHIME stares, motionless, at the sky, and focuses incoming signals using a correlator.
- This could be a powerful digital signal processor which will work through large amounts of data, at a rate of concerning seven terabytes per second, equivalent to some per cent of the world's net traffic.

What are FRBs?

- FRBs are oddly bright flashes of light, registering within the radio band of the electromagnetic spectrum, that blaze for some milliseconds before vanishing without a trace.
- These brief and mysterious beacons are spotted in numerous and distant parts of the universe, also as in our own galaxy.
- Their origins are unknown and their appearance is extremely unpredictable.
- But the advent of the CHIME project has nearly quadrupled the number of quick radiobursts discovered to date.
- With additional observations, astronomers hope soon to pin down the extreme origins of these curiously bright signals.

Topic 24. UK & USA TO SIGN NEW ATLANTIC CHARTER

Importance for Prelims: International Relations

Biden, Johnson sign new Atlantic Charter on dealing, defense amid Covidrecovery.

Atlantic Charter

- The Atlantic Charter was an announcement issued on fourteen August 1941 that set out American and British goals for the world when the end of world war II.
- The charter's adherents signed the Declaration by UN on one January 1942, that was the basis for the fashionable UN.
- The charter impressed many different international agreements and events that followed the end of the war.
- The dismantlement of the British Empire, the formation of North Atlantic Treaty Organization, and therefore the General Agreement on Tariffs and Trade (GATT) all derived from the Atlantic Charter.

Why sign new charter?

- At their meeting, the 2 leaders plan to sign what they're calling a new Atlantic Charter, pledging to "defend the principles, values, and establishments of democracy and open societies."
- United States hopes to reassure European allies that the US had shed the transactional tendencies of Donald Trump's term and could be a reliable partner once more.
- The United States staunchly opposed the Brexit movement, the British exodus from the European Union that Mr. Johnson championed, and has expressed nice concern with the future of Northern Ireland.
- Biden once known as the British leader a "physical and emotional clone" of Trump.

Topic 25. KAKORI CONSPIRACY CASE

Importance for Prelims: History

One of the important events of the freedom struggle, the Kakori Conspiracy, took place on Aug 9, 1925

ONE NIGHT IN KAKORI...

Number 8 Down Train, travelling from Shahjahanpur to Lucknow was looted to steal British money

₹8000 was the amount stolen

Hanged
Bismil, Lahiri, Khan & Roshan Singh

Kala Pani
Sachindra Sanyal & Sachindra Bakshi

The robbery was executed by
Ram Prasad Bismil, Ashfaquallah Khan, Rajendra Lahiri, Chandrashekhar Azad, Sachindra Bakshi, Keshab Chakravarty, Manmathnath Gupta, Murari Sharma, Mukundi Lal & Banwari Lal

1 person was killed by accident; no one else was harmed

Others were sentenced from **3-14 years** imprisonment

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Union Culture Minister Prahlad Singh Patel on Friday said it was important to inform future generations of the legacy of freedom fighter Ram Prasad Bismil, who was martyred in 1927 for his role in the Kakori conspiracy to protest against British rule

The Kakori Conspiracy

- In August 1925, an armed robbery took place on board the Kakori Express, going from Shahjahanpur to Lucknow, carrying money that had been collected at various railway stations and was to be deposited in Lucknow.
- In this planned robbery, carried out to fund the activities of the HSRA, Bismil, Khan and over 10 other revolutionaries stopped the train and fled

with the cash they found in it.

- Within a month of the robbery, many members of the HSRA were arrested.
- In September 1926, Bismil was arrested however Khan was on the run and was later arrested.
- The trial for the case went on for about 1.5 years. It ended in April 1927, with Bismil, Khan, Rajendra Lahiri and Roshan Singh sentenced to death, and the others given life sentences.

Ram Prasad Bismil

- Ram Prasad Bismil was born to a Municipality employee Muralidhar and his wife.
- He learnt Hindi at home and Urdu from a Moulvi. In spite of his father's objections, he was admitted to an English medium school.
- He also joined the Arya Samaj founded by Dayananda Saraswati. This had a profound influence on him.
- On reading Parmanand's death sentence, he composed a Hindi poem titled 'Mera Janm' (My Birth). He also translated English and Bengali works into Hindi.
- Bismil was involved in the **Mainpuri Conspiracy of 1918** in which police found a few young people including Bismil selling books that were proscribed by the government. Bismil escaped arrest by jumping into the Yamuna River.
- He also attended the 1921 session of the Indian National Congress at Ahmedabad.
- Bismil was one of the chief founders of the Hindustan Republican Association (HRA) along with Sachindra Nath Sanyal and Jadugopal Mukherjee.
- The organisation was founded in 1924 and its constitution was drafted

chiefly by Bismil.

- The HRA produced many pamphlets which sought to inspire people to fight the government through revolutionary activities.
- Bismil is perhaps most remembered for the Kakori Conspiracy Case. He was the mastermind behind the plan which was to loot a train carrying government money.
- The incident occurred on 9th August 1925 at Kakori, near Lucknow.
- While lodged in Gorakhpur Central Jail, Bismil went on a hunger strike demanding to be treated as a political prisoner.
- Bismil was hanged on 19th December 1927 at Gorakhpur Jail. He was just 30 years old.

Topic 26. COAST GUARD INDUCTS THREE ALH MK-III

HELICOPTERS

Importance for Prelims: Defence

The Coast Guard on Saturday inducted the first batch of three Advanced Light Helicopters (ALH) Mk-III designed and manufactured by Hindustan Aeronautics Ltd.(HAL).

About ALH MK-III Helicopter

- The Advanced Light Helicopter (ALH-DHRUV), designed and built in-house, is a twin-engine, multi-role, multi-mission new generation helicopter in the 5.5 tonne weight range.
- It's a multi-role chopper powered by Hindustan Aeronautics Limited's Shakti engine(HAL).
- HAL (Hindustan Aeronautics Limited) is an Indian state-owned aerospace and defence corporation headquartered in Bangalore.
- The Ministry of Defence is in charge of its administration.
- The ALH Mk III will be used for search and rescue, special operations, and coastal surveillance and will have an all-glass cockpit.
- The Advanced Light Helicopter programme was conceived by HAL in 1984. Dhruv Mk-I, Mk-II, Mk-III, and Mk-IV are the four main variants of Dhruv.
- Features of ALH MK-III Helicopter
- The plane, which is a step up from the Mk 1, would be able to reduce low visibility during nighttime search and rescue operations.
- It has a 0.7 mm gun, giving it a significant capability in LIMO (low intensity maritime operations).
- The new automatic flight control system outperforms the previous one by a longshot.

Topic 27. 'OPERATION OLIVIA' TO THE RESCUE OF OLIVE RIDLEYS

Importance for Prelims: Environment



Every year, the Indian Coast Guard's "Operation Olivia", initiated in the early 1980s, helps protect Olive Ridley turtles as they congregate along the Odisha coast for breeding and nesting from November to December.

- Operation Oliva has been launched by the Indian Coast Guard in the state of Odisha.
- It is an annual mission that aims to protect the Olive Ridley sea turtles during their breeding seasons and to conserve their natural breeding habitats.
- The Mission has been launched this year jointly with the Odisha state forest department.
- Two dedicated ships of the coast guard and some aircraft have been engaged in this novel nature conservation activity.
- The two ships will ensure that fishing vessels do not enter the major breeding sites of the turtles like Gahirmatha marine sanctuary, Dhamara

River, and Rushikulyabeach.

- The Coast guard keeps a vigil on the illegal fishing and turtle catching in this area as a part of the mission.
- The ICG also makes interactions with the fishermen and people of the local community to raise awareness on conserving the Olive Ridleys.

Olive Ridley Turtles

- Olive Ridley turtles are one of the species of sea turtles and have been listed as vulnerable by the International Union for Conservation of Nature (IUCN).
- It is included in Schedule I of the Indian Wildlife Protection Act, 1972, and in the Appendix I of the Convention of International Trade in Endangered Species of Wild Fauna and Flora.
- The species is one of the most abundant of all sea turtles found in the world.
- It is primarily found in warm and tropical waters, primarily in the Pacific and Indian Oceans, but also in the warm waters of the Atlantic Ocean.
- They are famous for their unique mass nesting called arribadas wherein females lay eggs in the moonlight.

Topic 28. BHARITALASUCHUS TAPANI, A CARNIVOROUS REPTILE THAT LIVED 240 MILLION YEARS AGO

Importance for Prelims: Science & tech



In the mid 20th century, researchers from the Indian Statistical Institute, Kolkata, carried out extensive studies on rocks of the Yerrapalli Formation, uncovering several fossils. By studying some of these specimens stored at the Institute, an international team has now thrown light on a carnivorous reptile that lived 240 million years ago.

- The Yerrapalli Formation of the Pranhita-Godavari Basin in Telangana has had several fossils unearthed from it.
- One of the species identified includes a carnivorous reptile that lived 240 million years ago. It has been named *Bharitalasuchustapani*.
- Studies have revealed that the reptile belonged to a family of extinct reptiles named *Erythrosuchidae*.
- The *Bharitalasuchustapani* were robust animals with big heads and large teeth, and these probably predated other smaller reptiles.
- They were approximately the size of an adult male lion and might have been the largest predators in their ecosystems.
- Apart from this erythrosuchid reptile, the fossil assemblage of the Yerrapalli Formation includes many other extinct creatures such as ceratodontid lungfish, rhynchosaur and allokotosaurian.

Topic 29. BRU TRIBES ISSUE

Importance for Prelims: Social Issue



The National Green Tribunal (NGT) has sought replies from the Forest Department and a district administration in Tripura on a complaint that Bru refugees from adjoining Mizoram were being resettled in a forest.

- The Brus, also referred to as the Reangs, are spread across the north-eastern states of Tripura, Assam, Manipur, and Mizoram.
- In Tripura, they are recognised as a Particularly Vulnerable Tribal Group.
- They speak the Reang dialect of Kokborok language which is locally referred to as Kau Bru.
- Their Hojagiri folk dance is well known all over the world.
- ‘Buisu’, not ‘bihu’ is the most popular festival of Reang tribes.

Topic 30. HARDY – VIGOROUS CORALS (BLUE RICE CORALS)

Importance for Prelims: Environment

In 2014 and 2015, the brown rice coral in Hawaii was completely bleached, but the blue rice coral recovered quickly after bleaching, and blue coral was unaffected by the elevated ocean temperatures.

- Hawaiian blue rice corals have a deep blue pigment derived from algae called zooxanthellae that live inside the coral tissue.
- The researchers found that these algae produce sunscreen for the coral.
- This pigment has a protein named chromoprotein which filters out harmful UV radiation.
- After the 2014 and 2015 Hawaii bleaching events, the blue rice coral was found to have exceptional reproductive vigour at 90% motility.
- But the brown coral's motility was only half this.
- A key factor in the blue rice coral's ability to reproduce successfully might be its sunscreen pigment, which the coral may retain even if it bleaches.

Corals:

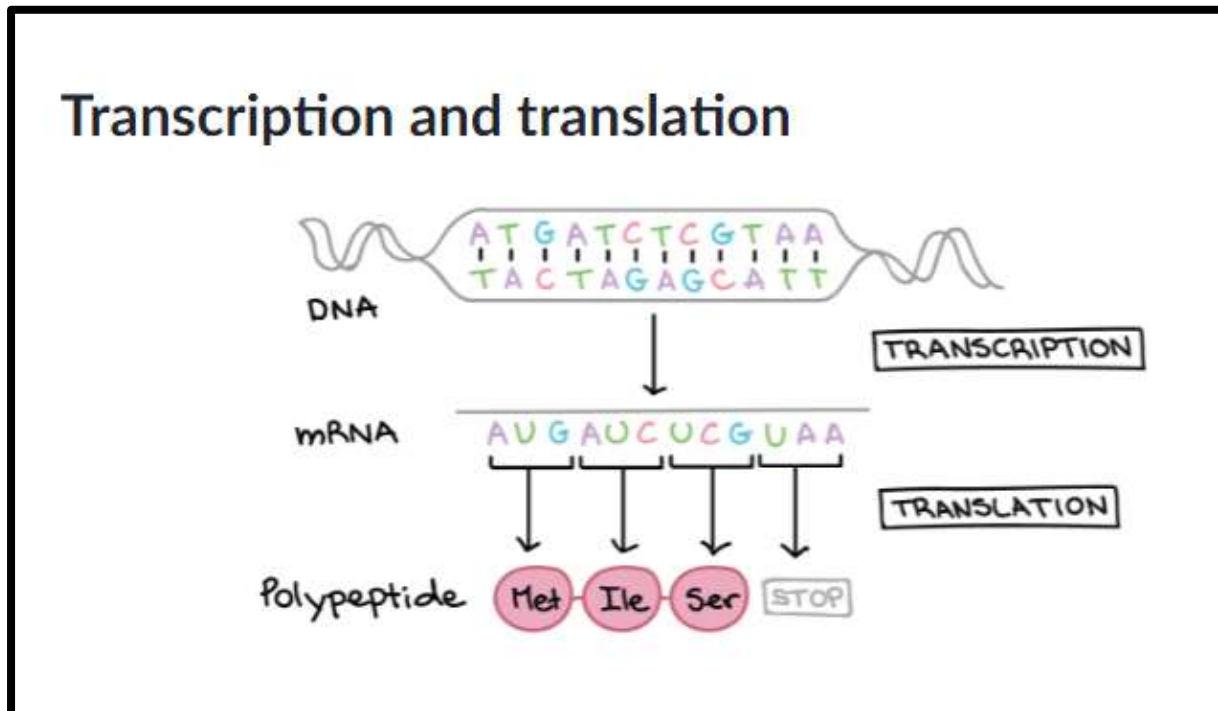
- Corals are made up of genetically identical organisms called polyps. These polyps have microscopic algae called zooxanthellae living within their tissues.
- The corals and algae have a mutualistic relationship.
- The coral provides the zooxanthellae with the compounds necessary for photosynthesis.
- In return, the zooxanthellae supply the coral with organic products of photosynthesis, like carbohydrates, which are utilized by the coral polyps for the synthesis of their calcium carbonate skeletons.
- In addition to providing corals with essential nutrients, zooxanthellae

are responsible for the unique and beautiful colors of corals.

- They are also called the “rainforests of the seas”.
- There are two types of corals: Hard, shallow-water corals—the kind that builds reefs.
- Soft corals and deep water corals that live in dark cold waters.

Topic 31. RNA into DNA

Importance for Prelims: Science & tech



A new study notes that as against the present understanding that solely DNA transcription into ribonucleic acid as being possible, the reverse can even happen.

- Deoxyribonucleic acid (DNA) and ribonucleic acid (RNA) are very important molecules in cell biology, responsible for the storage and reading of genetic info that underpins all life.
- They are each linear polymers, consisting of sugars, phosphates and bases, but there are some key variations that separate the 2.
- Unlike deoxyribonucleic acid that is double stranded, ribonucleic acid is single-stranded.
- The bases in deoxyribonucleic acid are adenine ('A'), thymine ('T'), guanine ('G') and cytosine ('C').
- RNA shares adenine ('A'), guanine ('G') and cytosine ('C') with deoxyribonucleic acid, however contains Uracil ('U') rather than thymine.

- Unlike deoxyribonucleic acid that replicates and stores genetic info and functions as a blueprint for all genetic info contained in an organism, ribonucleic acid converts the genetic info contained in deoxyribonucleic acid to a format used to build proteins, and then moves it to ribosomal protein factories.

Transcription

- Transcription is that the method of copying a segment of deoxyribonucleic acid into RNA. The segments of deoxyribonucleic acid transcribed into RNA molecules which will encode proteins are said to produce messenger RNA.

Topic 32. GREAT APES IN PERIL

Importance for Prelims: Environment



A study involving over sixty co-authors has found that African great apes, are set to suffer large range declines because of impacts of global climate change, land-use changes and increase in human population.

- The study looked at the impact of global climate change, human population growth and human land use on great ape habitat range, and developed estimates for habitat loss within the best and worst case scenarios.
- The researchers predict that Africa's nice apes, that include gorillas, chimpanzees and bonobos, can lose eighty five per cent of their habitat vary by 2050.
- Climate modification, human land use and population growth push vegetation and other food sources uphill, leaving the survival of Africa's great apes, also as alternative land animals, up to their ability to climb and adapt to new environments.
- African ape populations are presently endangered, largely because of habitat loss, poaching, pet trades and global climate change.
- Asia's solely great ape, the orangutan, is additionally in deep trouble (critically endangered species).
- Its last remaining strongholds within the rainforests of Sumatra (Indonesia) and the island of Borneo (Indonesia and Malaysia) are being

destroyed by unlawful logging, a proliferation of palm oil plantations, and by widespread forest fires, several set by plantation owners.

Topic 33. PASHIPAE MISSION WILL PEEP INTO UNKNOWN

REGIONS OF THE SKY

Importance for Prelims: Science & tech

Recently, the Scientists from the University of crete, Greece, Caltech, USA, Inter-University Centre for astronomy and astrophysics (IUCAA), India, the South African Astronomical Observatory and therefore the University of oslo, Norway, are involved in PASIPHAEMission.

PASIPHAE Mission

- Polar-Areas Stellar-Imaging in Polarisation High-Accuracy Experiment (PASIPHAE) is a world collaborative sky surveying project.
- The project has been funded by the world's leading establishments from USA, Norway, South Africa and personal foundations.
- Scientists aim to check the polarisation within the light returning from countless stars.
- The survey can use 2 high-tech optical polarimeters to observe the northern and southern skies, simultaneously.
- It will focus on capturing starlight polarisation of very faint stars that are thus far away that polarisation signals from there haven't been systematically studied.
- The distances to those stars are obtained from measurements of the GAIA satellite (of European space Agency) By combining these knowledge, astronomers will produce a three-dimensional model of the distribution of the dirt and magnetic field structure of the galaxy using a novel polarimeter instrument called WALOP (Wide space Linear Optical Polarimeter).

What is WALOP?

- Wide area Linear Optical polarimeter (WALOP) is an instrument, once mounted on two small optical telescopes, which will be used to observe

polarised light signals emerging from the stars on high galactic latitudes.

- A WALOP every are mounted on the 1.3-metre Skinakas Observatory, Crete(Greek islands), and on the 1-metre telescope of the South African Astronomical Observatory placed in sutherland.
- Once built, they'll be distinctive instruments providing the widest ever field of read ofthe sky in polarimetry.
- In easy terms, the pictures can concurrently have the finest of details of a star at the side of its wide background.
- 200 kilogram weighing WALOP are capable of notice hundreds of starsconcurrently present each within the northern and therefore the southern skies.

Topic 34. BIOLOGICAL AND TOXIN WEAPONS CONVENTION

(BTWC) OF 1972

Importance for Prelims: International Conventions

Biological Weapons Convention

prohibits development, production, stockpiling, acquisition, retention or transfer of BWs

- opened for signature on 10 April 1972
- EiF on 26 March 1975
- First multilateral disarmament treaty banning an entire category of WMD
- Non-discriminatory in nature
- Unlimited duration
- Open to any state



For bio-weapons, all we've got is that the Biological and toxin Weapons Convention(BTWC) of 1972 with no implementing body.

Biological weapons

- Also known as germ weapons, they're any of a number of disease-producing agents—such as bacteria, viruses, rickettsiae, fungi, toxins, or different biological agents—that may be utilised as weapons against humans, animals, or plants.
- Biological weapons, like chemical weapons, radiological weapons, and nuclear weapons, are normally mentioned as weapons of mass destruction.

The Biological Weapons Convention (BWC):

- It is that the 1st multilateral disarmament treaty banning the event, production and stockpiling of a whole class of weapons of mass destruction, was opened for signature on ten Apr 1972. The BWC entered into force on twenty six March 1975.
- The Convention is of unlimited length. As of migh 2021, 183 states have become party to the treaty.
- Four further states have signed however not confirm the treaty, and another 10 states have neither signed nor acceded to the treaty

The BWC bans:

- The development, stockpiling, acquisition, retention, and production of: Biological agents and toxins “of varieties and in quantities that haven't any justification for prophylactic, protecting or different peaceful purposes;”
- Weapons, instrument, and delivery vehicles “designed to use such agents or toxins for hostile functions or in armed conflict.”
- The transfer of or help with acquiring the agents, toxins, weapons, equipment, and delivery vehicles described above.

Topic 35. INNOVATIONS FOR DEFENCE EXCELLENCE (IDEX)

Importance for Prelims: Defence



Recently, the Ministry of Defence has approved the budgetary support of Rs498.8 crore to Innovations for Defence Excellence (iDEX) – Defence Innovation Organisation (DIO) for the next 5 years.

Innovations for Defence Excellence (iDEX)

- It was launched by the Hon'ble Prime Minister in Apr 2018.
- It are going to be funded and managed by a Defence Innovation Organization (DIO).
- It can operate because the executive arm of DIO, carrying out all the specified activities while DIO can give high level policy guidance to iDEX.
- It aims at creation of an ecosystem to foster innovation and technology development in Defence and aerospace.
- The objectives of iDEX are: Facilitate rapid development of recent, indigenized, and innovative technologies for the Indian defence and aerospace sector, to meet wants for these sectors in short timelines; Create a culture of engagement with innovative startups, to encourage co-creation for defence and aeronautical sectors; and Empower a culture of technology co-creation and co-innovation inside the defence and aeronautical sectors

Defence Innovation Organisation (DIO)

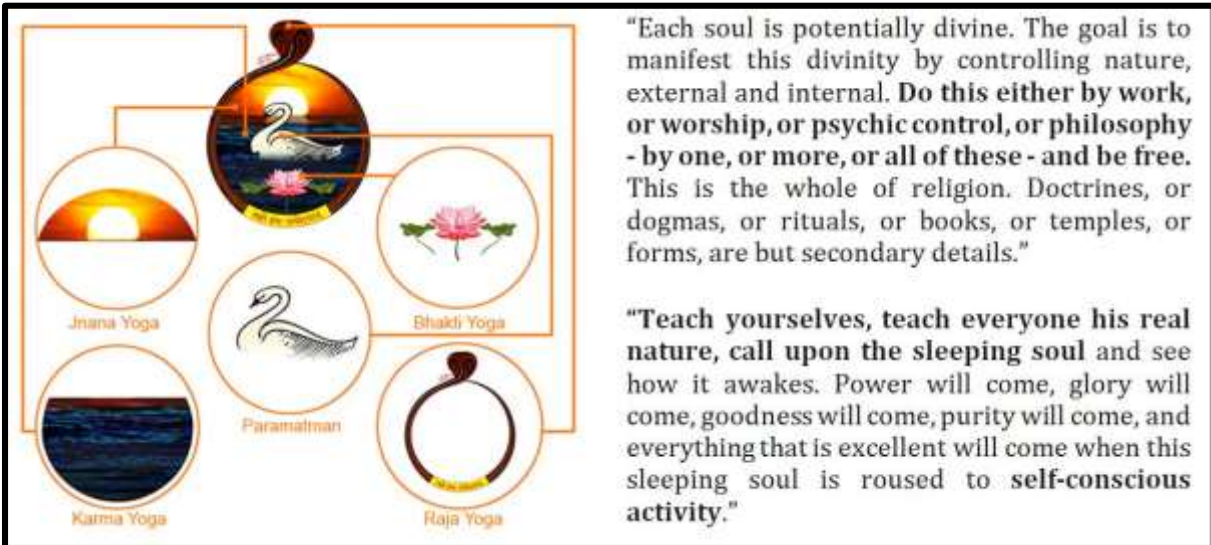
- It is created as a “not for profit” company as per Section eight of the

businesses Act 2013.

- Its primary intention is to fund and manage the alteration for Defence Excellence (iDEX).
- It can offer high level policy guidance to iDEX.
- The chief executive officer of iDEX are selected and recruited by the DIO and can be a professional person of sound technical, scientific and engineering background.
- The chief executive officer of iDEX would even be chief executive officer of DIO thereby providing the linkage between the high level policy guidance given by DIO and its implementation during a professional manner through iDEX.

Topic 36. RAMAKRISHNA MISSION

Importance for Prelims: Culture



“Each soul is potentially divine. The goal is to manifest this divinity by controlling nature, external and internal. **Do this either by work, or worship, or psychic control, or philosophy - by one, or more, or all of these - and be free.** This is the whole of religion. Doctrines, or dogmas, or rituals, or books, or temples, or forms, are but secondary details.”

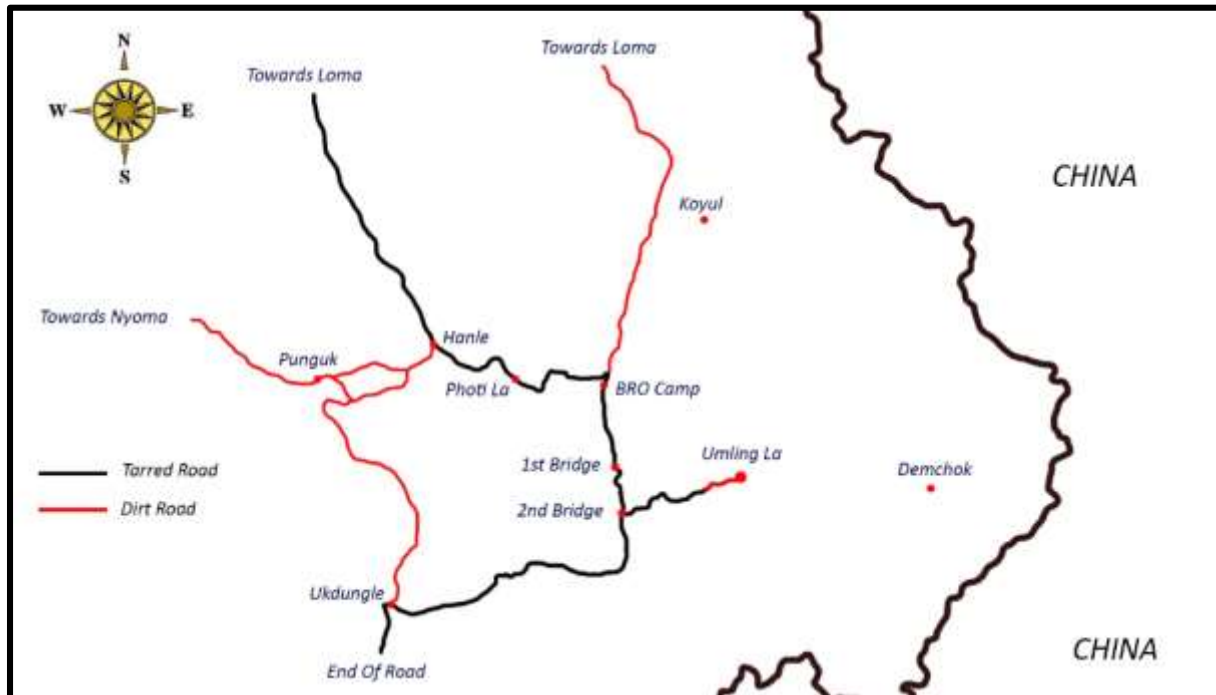
“Teach yourselves, teach everyone his real nature, call upon the sleeping soul and see how it awakes. Power will come, glory will come, goodness will come, purity will come, and everything that is excellent will come when this sleeping soul is roused to **self-conscious activity.**”

PM Modi expressed grief over the demise of swami Shivamayanandaji Maharaj, vice-president of Ramakrishna math and mission.

- Ramakrishna Mission (RKM) may be a Hindu spiritual and religious organisation which forms the core of a worldwide religious movement referred to as the Ramakrishna Movement or the Vedanta Movement.
- The mission is named once and impressed by the Indian saint Ramakrishna Paramahansa and based by Ramakrishna's chief disciple swami Vivekananda on 1 May 1897.
- The headquarters of Ramakrishna Math and Ramakrishna Mission are situated in an area named Belur within the district of Howrah, West Bengal, India.
- The entire campus of the headquarters is popularly called as 'Belur Math'.
- Vedanta (also called as Uttara Mīmāṃsā) is one among the six (āstika) schools of Hindu philosophy. Literally which means “end of the Vedas”, Vedanta reflects concepts that emerged from the philosophies contained within the Upanishads.

Topic 37. UMLING LA PASS

Importance for Prelims: Geography



Raksha Mantri flagged off the 1st ever Solo lady motorbike Expedition by Ms Kanchan Ugursandi to Umling La Pass, Ladakh and back.

- Umling La Pass, placed at an altitude of 19,300ft, has overtaken Khardung La Pass to become the highest motorable road within the world.
- The construction of this road has been achieved by the BRO (Border Road Organization) as a part of “Project Himank” Umling La Pass, stretching to a distance of just about 86km, connects Chisumle and Demchok villages.
- Both these villages lie in close proximity to the Indo-China border within the eastern sector.

Khardung La Pass

- Khardung La may be a mountain pass within the Ladakh region of Jammu and Kashmir. The pass on the Ladakh range is north of Leh and is that the gateway to the Shyok and Nubra valleys.
- Locally, it's additionally called as “Khardong La” or “Khardzong La”.

- The elevation of Khardung La is 5,359 m. it's incorrectly claimed by some locals as the highest vehicle-accessible pass within the world.

Topic 38. SIGNIFICANCE OF TULU LANGUAGE IN INDIA

Importance for Prelims: Culture



Recently, varied organisations initiated a Twitter campaign demanding official language status to Tulu in Karnataka and Kerala and received an overwhelming response.

About Tulu Language

- Tulu may be a Dravidian language.
- It is spoken primarily in 2 coastal districts Dakshina Kannada and Udupi of Karnataka and Kasaragod district of Kerala.
- As per the 2011 Census report, there are 18,46,427 Tulu-speaking individuals in India.
- It includes a wealthy oral literature tradition with folk-song forms like paddana, and traditional folk theatre yakshagana.
- It has an active tradition of cinema with around five to seven Tulu language movies produced a year.

Present status of Tulu language

- According to karnataka Tulu Sahitya Academy president Dayananda G Kathalsar, people who speak Tulu are confined to the above-mentioned regions of Karnataka and Kerala.
- They are informally called Tulu Nadu.
- Tulu isn't an official language within the country.
- If enclosed within the eighth schedule, Tulu would get recognition from the Sahitya Akademi.

Topic 39. INDIA ON TRACK TO ACHIEVE NATIONAL COMMITMENT OF LAND DEGRADATION NEUTRALITY: PM

Importance for Prelims: Environment

“We are on target to accomplish our national commitment of land degradation neutrality. we also are operating towards restoring twenty six million hectares of degraded land by 2030,” he keynote address throughout his virtual keynote address at the High-Level Dialogue on Desertification, Land Degradation and Drought at the UN General Assembly (UNGA).

Land Degradation Neutrality

- Land degradation neutrality (LDN) could be a condition wherever any land degradation (loss of productivity caused by environmental or human factors) is prevented and already degraded land may be restored.
- LDN has been outlined by the Parties to the protocol as:— A state whereby the quality and amount of land resources, necessary to support ecosystem functions and services and enhance food security, remains stable or increases among such temporal and spatial scales and ecological community.

Benefits of LDN

- As land is fixed in quantity, there's ever-increasing competition to control land resources and capitalize on the flows of products and services from the land.
- LDN represents a paradigm shift in land management policies and practices.
- It could be a distinctive approach that counterbalances the expected loss of productive land with the recovery of degraded areas.
- This has the potential to cause social and political instability, fueling poverty, conflict and migration.

About UNCCD:

- Established in 1994.
- It is that the sole lawfully binding international agreement linking atmosphere and development to sustainable land management.
- It is that the solely convention stemming from a direct recommendation of the Rio Conference's Agenda twenty one.
- To facilitate publicise the Convention, 2006 was declared "International Year of Deserts and Desertification".
- The Convention addresses specifically the arid, semi-arid and dry sub-humid areas, known as the drylands, wherever some of the foremost vulnerable ecosystems and peoples will be found.
- Aim: Its 197 Parties aim, through partnerships, to implement the Convention and achieve the sustainable Development Goals.
- The final goal is to guard land from over-use and drought, so it will still offer food, water and energy.
- The Ministry of environment, Forest and global climate change is that the nodal Ministry for this Convention.

Topic 40. APPOINT LOKSABHA DEPUTY SPEAKER: CONGRESS TO OM BIRLA

Importance for Prelims: Polity

The post of Deputy Speaker has been lying vacant since the constitution of the 17th Lok Sabha in 2019. Congress leaders argued that the post of Deputy Speaker has not remained vacant for such a long time within the recent past.

About Deputy Speaker:

- Article ninety three of the Constitution provides for the election of each the Speaker and the Deputy Speaker.
- The constitutional workplace of the Deputy Speaker of the Lok Sabha is additional symbolic of republic than some real authority.
- There is not any need to resign from their original party tho' as a Deputy Speaker, they have to stay impartial.

Roles and functions:

- They act because the presiding officer just in case of leave or absence caused by death or illness of the Speaker of the Lok Sabha.

Election:

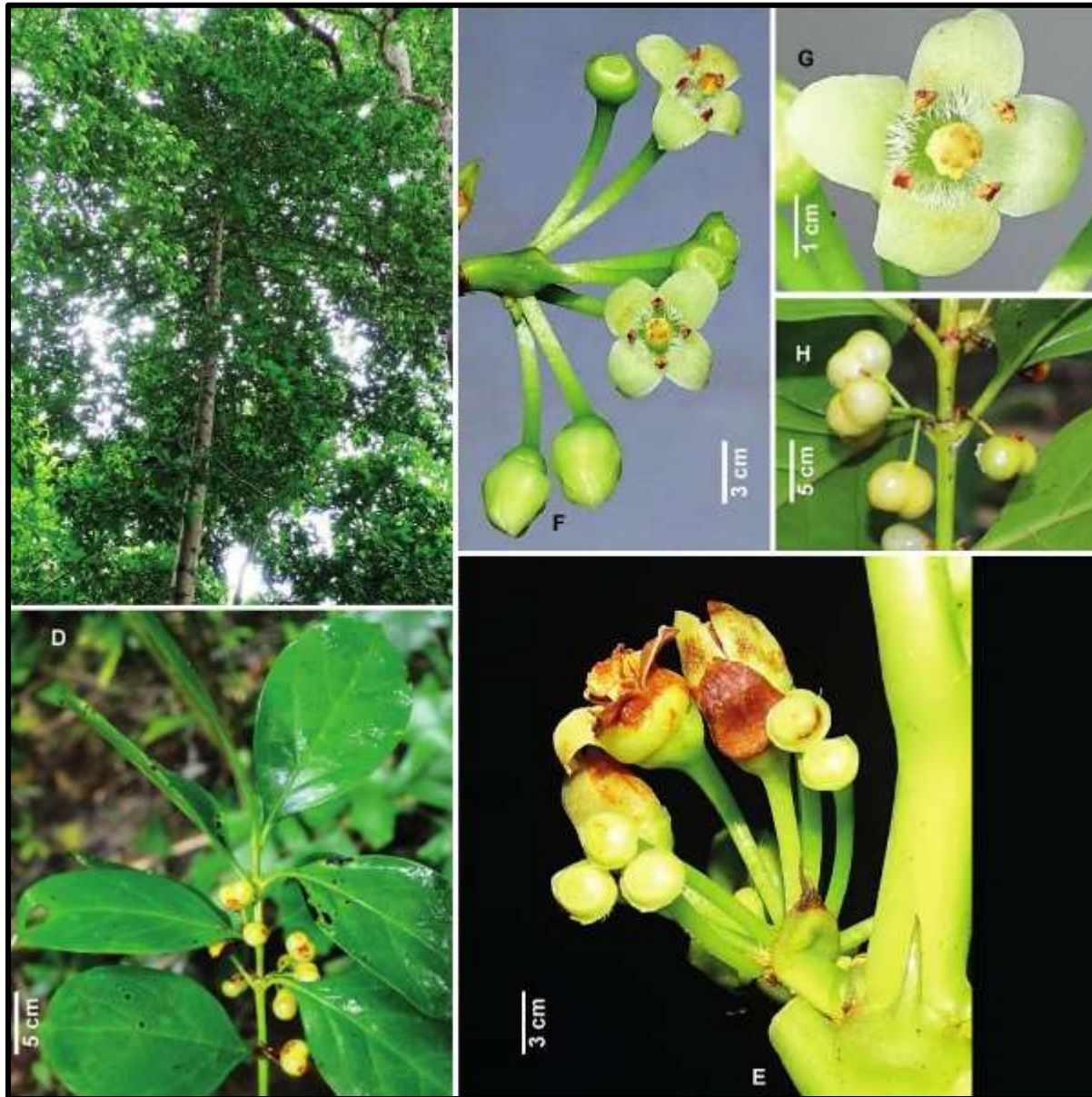
- Usually, the Deputy Speaker is elective within the 1st meeting of the Lok Sabha after the General elections from amongst the members of the Lok Sabha.
- It is by convention that position of Deputy Speaker is obtainable to opposition party in India.

Tenure and removal:

- They hold workplace till either they stop to be a member of the Lok Sabha or they resign.
- They may be removed from workplace by a resolution passed within the Lok Sabha by an effective majority of its members.

Topic 41. PYROSTRIA LALJII

Importance for Prelims: Environment



A 15-metre-tall tree that belongs to the genus of the coffee family has currently been uncovered from the Andaman Islands.

- The new species, *Pyrostrialaljii* was first reportable from the Wandoor forest in South Andaman.
- The alternative places within the Andaman and Nicobar Islands where the tree might be located are the Tirur forest close to the Jarawa Reserve Forest and therefore the Chidia Tapu (Munda Pahar) forest.

- The new species is additionally the 1st record of the genus *Pyrostria* in India. Plants belonging to genus *Pyrostria* are typically found in Madagascar.
- **Features:** The tree is distinguished by an extended stem with a whitish coating on the trunk and oblong-obovate leaves with a cuneate base.
- Other physical features that distinguish the tree from alternative species of the genus is its umbellate inflorescence with eight to twelve flowers.
- *Pyrostria laljii* has been assessed as '**Critically Endangered**' supported the International Union for Conservation of Nature's (IUCN) Red List criteria.
- The species has been named *Pyrostria laljii* when Lal ji Singh, Joint Director and Head of workplace, Andaman and Nicobar Regional Centre, Botanical Survey of India.

Topic 42. RARE EARTH ELEMENTS

Importance for Prelims: Science & tech

	1A	2A	3A	4A	5A	6A	7A	8	1B	2B	3B	4B	5B	6B	7B	0		
1	H															He		
2	Li	Be									B	C	N	O	F	Ne		
3	Na	Mg									Al	Si	P	S	Cl	Ar		
4	K	Ca	Sc	Ti	V	Cr	Mn	Fe	Co	Ni	Cu	Zn	Ga	Ge	As	Se	Br	Kr
5	Rb	Sr	Y	Zr	Nb	Mo	Tc	Ru	Rh	Pd	Ag	Cd	In	Sn	Sb	Te	I	Xe
6	Cs	Ba	L	Hf	Ta	W	Re	Os	Ir	Pt	Au	Hg	Tl	Pb	Bi	Po	At	Rn
7	Fr	Ra	A															
		L	La	Ce	Pr	Nd	Pm	Sm	Eu	Gd	Tb	Dy	Ho	Er	Tm	Yb	Lu	
		A	Ac	Th	Pa	U	Np	Pu	Am	Cm	Bk	Cf	Es	Fm	Md	No	Lr	

■ We handle orange-boxed elements.

The U.S. Senate passed a law aimed at boosting American production and processing of rare earths. In 2019, the U.S. imported 80% of its rare earth minerals from China, the U.S. Geological Survey says.

- These are a set of 17 chemical elements in the periodic table, specifically the 15 lanthanides plus scandium (Atomic Number 21) and Yttrium (Atomic Number 39).
- Lanthanide series comprises the 15 metallic chemical elements with atomic numbers 57 through 71, from lanthanum through lutetium.
- Scandium and yttrium are considered rare-earth elements because they tend to occur in the same ore deposits as the lanthanides and exhibit similar chemical properties, but have different electronic and magnetic properties.
- Cerium (AN 58) is the most abundant rare earth metal.

Why these elements called as RARE?

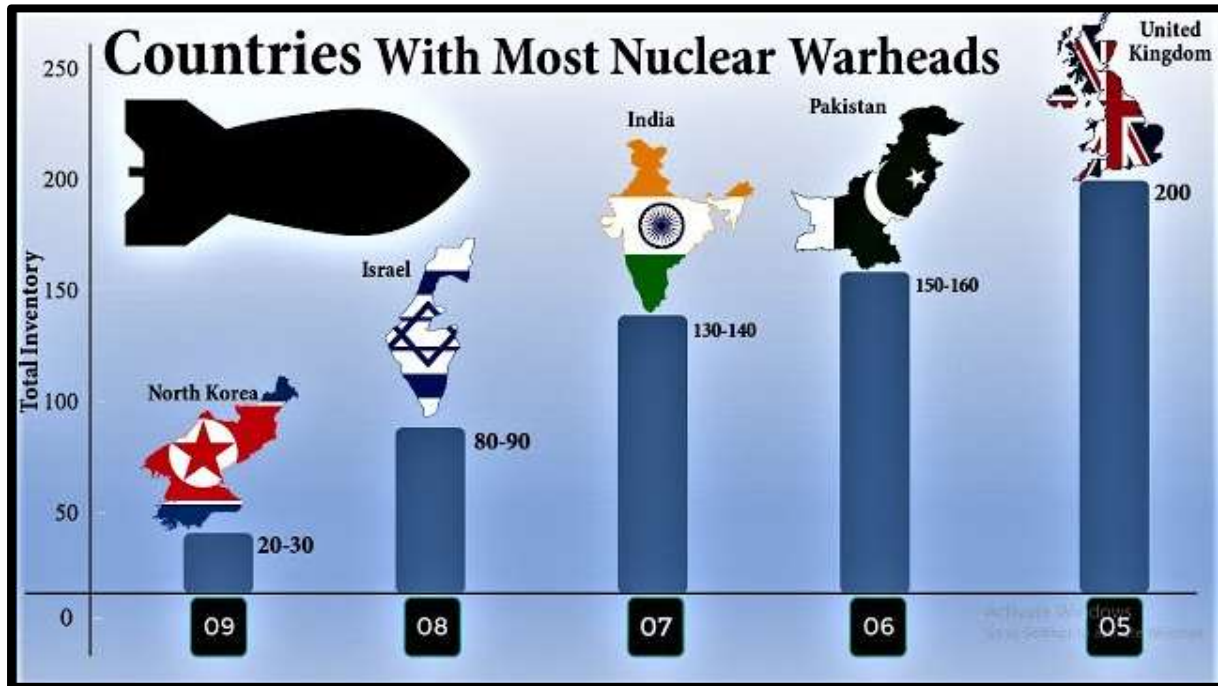
- There isn't any shortage of rare earths. however their extraction is

troublesome (Requires highskill, Capital intensive, Environmental issues).

- Two main ore of extractions are monazite and Bastansite.
- Their colour ranges from Shiny Silver to Iron grey.
- They are soft, malleable, ductile and sometimes reactive, particularly at elevated temperatures or once finely divided.
- Its application ranges from Civilian (smartphones, laptops, crude oil refinement catalysts) to military together with nuclear applications. Rare minerals that are essential to electrical vehicles, wind turbines and drones.
- China has the biggest reserve (37 percent), followed by Brazil and Vietnam (18percent each), Russia (15 percent), and also the remaining countries (12 percent). DengXiaoping said once, the center East has oil and China has rare earth.

Topic 43. GLOBAL NUCLEAR WARHEAD STOCKPILE APPEARS TO BE GROWING, SIPRI WARNS

Importance for Prelims: International Organizations



The overall range of nuclear warheads in international military stockpiles appears to be increasing this year, a new finding discharged by the Stockholm International Peace Research Institute (SIPRI) on Monday reveals.

- The 9 nuclear-armed states – the U.S, Russia, the UK, France, China, India, Pakistan, Israel and therefore the Democratic People’s Republic of Korea (North Korea) – along possessed an estimated 13 080 nuclear weapons at the begin of 2021.
- This marked a decrease from the thirteen four hundred that SIPRI calculable these states possessed at the start of 2020,” SIPRI said.
- However, SIPRI analysis shows that this declining trend seems to have stalled.

About SIPRI

- SIPRI is an freelance international institute dedicated to analysis into conflict, armaments, arms limitation and disarmament.

- Established in 1966, SIPRI provides information, analysis and suggestions, established on open sources, to policymakers, researchers, media and also the interested public.
- Based in Stockholm, SIPRI is frequently ranked among the foremost respected think tanks worldwide.
- The regulations are the lead the way principles of SIPRI's work.
- They were adopted by the Swedish Government.
- SIPRI was established on the basis of a choice by the Swedish Parliament and receives a considerable part of its funding within the kind of an annual grant from the Swedish Government.
- The Institute additionally seeks financial support from alternative organizations so as to carry out its analysis.

Topic 44. AT NATO MEET – BIDEN VOWS TO DEFEND EUROPE

Importance for Prelims: International Relations

United states President Joe Biden told fellow North Atlantic Treaty Organization leaders on monday the defence of Europe, Turkey and Canada was a “sacred obligation” for the US, a marked shift from his precursor Donald Trump’s threats to withdraw from the military alliance.

North Atlantic treaty Organization:

- It is an intergovernmental military alliance.
- Established by Washington treaty that was signed on four Apr 1949.
- Head office — Brussels, Belgium.
- Head office of Allied Command Operations — Mons, Belgium.

Significance:

- It constitutes a system of collective defence whereby its self-supporting member states conform to mutual defence in response to an attack by any external party.

Composition:

- Since its founding, the admission of new member states has raised the alliance from the original twelve countries to thirty. The foremost recent member state to be further to NATO was North Macedonia on twenty seven March 2020.
- NATO membership is open to “any different European state in a very position to additional the principles of this treaty and to contribute to the protection of the north Atlantic area.”

Objectives:

- Political – North Atlantic Treaty Organization promotes democratic values and permits members to consult and cooperate on defence and security-related problems to resolve issues, build trust and, in the long-term, prevent conflict.

- Military – North Atlantic Treaty Organization is committed to the peaceful resolution of disputes. If diplomatic efforts fail, it's the military power to undertake crisis-management operations.
- These are carried out under the collective defence clause of NATO's start treaty– Article five of the Washington treaty or under a UN mandate, alone or in cooperation with different countries and international organisations.