

WEEKLY CURRENT AFFAIRS MAGAZINE for



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Topic 1. START-UP WINTER AND CRYPTO WINTER

Important for subject: Economy



Why in the news?

Since the beginning of the year, the crypto market has been in a decline with sharp falls in prices.

- There has also been a funding freeze for startups: Funding for Indian start-ups has dropped by 40% to \$68 billion during the second quarter 2022.

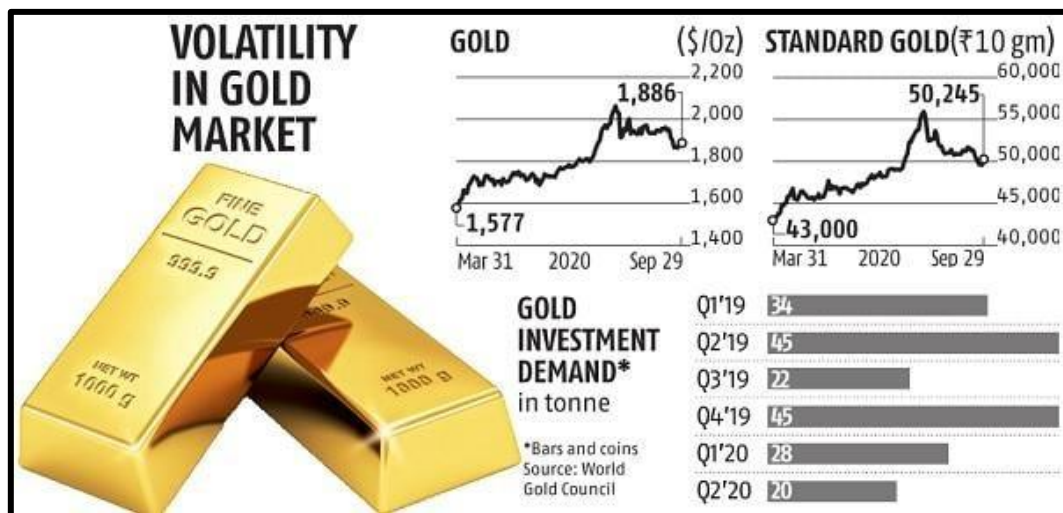
What is crypto winter?

- The HBO series Game of Thrones introduced the phrase "crypto winter" to describe a crypto market in which crypto are trading at a lower level than normal.
- The crypto winter is a low-performing crypto market in which most cryptocurrencies' value has fallen more than the bear markets.
- It is generally associated with a period where prices drop around 30% from their all-time highs.
- A bear market can be used to refer to a market that is not performing well.
- It can be stocks, crypto or even equities.
- Crypto winter is simply a time similar to a traditional bear market, but with more detail.
- A crypto winter is a negative sentiment that affects digital currencies.
- It warns about trouble settling over crypto market Factors leading the crypto winter Federal Reserve raising the interest rates, leading to investment in safer assets.
- The Terra US Dstablecoin was de-pegged in May and a relative fall in other cryptocurrencies' prices - due to net sales off.
- **Advantage:** Inflation-increases the demand for money for transaction motive instead of speculative motive.

- Crypto that are able to survive this period may be able to emerge from their positions in the spring.
- **Start-up funding winter:** There has been a slowdown in funding.
- This could be for growth-stage companies that are unable to raise additional funding or for early-stage companies that must settle for smaller fund sizes and valuations than they expected.
- **Causes:** Market volatility and market slowdown due to the prevailing macroeconomic conditions.
- Hike in Fed Interest Rate- leading to capital outflows.
- Cost push inflation- making daily business expensive leading to liquidity crunch.
- Risk-averse investors-Many of the venture capital firms who have closed new funds continue investing.

Topic 2. GOLD PRICE FALLING

Important for subject: Economy



Why in the news?

The international gold prices have fallen, falling more than 12 percent in the past three months.

- **Cause:** Monetary Policy tightening at Central Banks.
- The rise in inflation and the rise in interest rates, especially by the US Fed Reserve, has made the dollar the most secure haven for investors.
- This has resulted in a decrease in relative gold investment.

- As money moves to the US in search of higher interest rates, it will cause an appreciation in the dollar.
- Investors will also see an increase in the opportunity cost of gold.
- A strengthening dollar relative to other currencies may increase the price of buying gold in those currencies.
- This could make it less profitable for investors who are short-term.
- Despite the price drop.

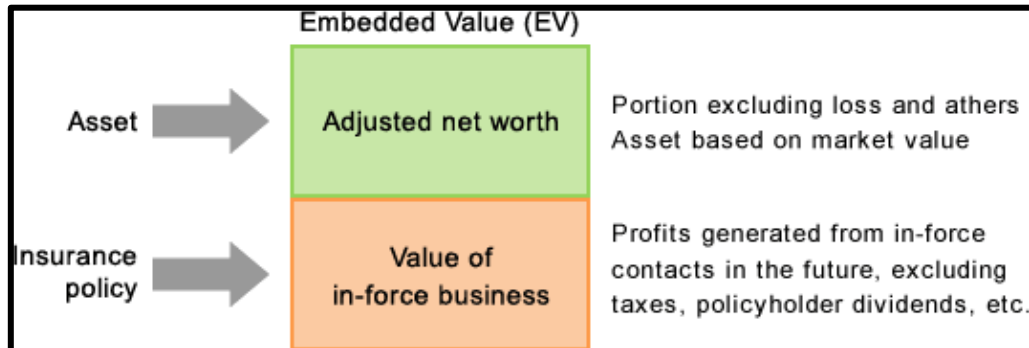
Why is imports rising?

- Gold retains its value over time and can generate above-inflation returns.
- Although commodities have their cyclical risks and gold is no exception, it will provide a long-term positive return due to its limited supply.
- Gold's liquidity is high because it is a precious metal that is widely accepted.
- **Underperformance of Equities:** Gold has a low correlation to equity and provides stability to your portfolio.
- **Positive correlation with inflation:** While equity markets have a negative correlation to inflation, gold has a positive correlation and tends not to lose its value in an inflationary climate.
- **High demand:** Investors seek refuge in gold during times of high inflation or global uncertainty, particularly when there is a war.
- **Alternatives:** Investors can choose to invest in exchange traded funds (ETFs), or sovereign gold bonds, which are the most preferred investment options. Gold helps mitigate losses during volatile periods.
- **Gold Exchange traded funds:** These open-ended funds allow you to invest in gold even if you don't have it physically.
- An exchange-traded gold fund (Gold ETF), is a passive investment fund that tracks the price of physical gold.
- One gram of gold is represented by each unit of a gold ETF.
- Investors get the units in dematerialised form.
- An ETF can be listed on stock exchanges.
- Investors can also buy and sell units on the exchange platform, just like any other equity instrument.

- A gold ETF is like buying physical gold in electronic form.

Topic 3. EMBEDDED VALUE

Important for subject: Economy



Why in the news?

After Indian Embedded Value (IEV), rose on Thursday, shares of Life Insurance Corporation of India (LIC), climbed about 1% on the BSE.

- **The Embedded Value (EV):** This is the sum of the present value of future profits and the net asset value of a life insurer.
- This measure only considers future profits of existing businesses and does not account for the possibility of new policies.
- Profits from these are not considered.
- It measures the consolidated value for shareholders in the life insurance company.
- It is the current value of the shareholders' interest in the earnings distributed from the assets to the business after adequate allowance for the total risks in the business.
- **Cause of EV jump:** Section 24 amendment to the LIC Act was brought before the IPO began.
- It separated the previously single Life Fund' into two funds, one participatory, and one non-participatory.
- Participatory policies allow policyholders to share in the company's profits.
- This is a bonus.
- Jeevan Labh, Bachat and others are examples of products offered by LIC.
- **Plus Non-participatory Policy:** This policy does not share profits with nonparticipatory policies.
- The LIC fold also includes policies like Saral Pension or Nivesh Plus.

- **Changes:** LIC, as all insurance companies, reinvests premium amounts that policyholders pay.
- The surplus or profits that resulted from the changes were held in one fund, the Life Fund.
- However, the amendment required the segregation the Life Fund into both participatory and nonparticipatory funds depending on the nature of the policies.
- **They support sharing surplus from such funds:** Non-participating money-surplus from non-participating businesses would be transferred to shareholders.
- I.e. 100% profit to shareholders Surplus from participation business would, however, be split between shareholders and policyholders.
- **In a ratio of 90:10 Impact of IEV:** Prior to this, only 10% of equity assets and reserves was captured under nonparticipatory policy.
- 100% of the embedded value for Post bifurcation is captured.
- This change has allowed 100% of non-participatory funds surplus to flow to the shareholder.
- It has resulted in a huge jump in Indian Embedded Value.
- **IEV:** is a measure of future cash flow in life insurance companies.
- It establishes LIC's market value and determines how much money is raised by the government in the flotation.

Topic 4. EURO- DOLLAR PARITY

Important for subject: Economy



Why in the news?

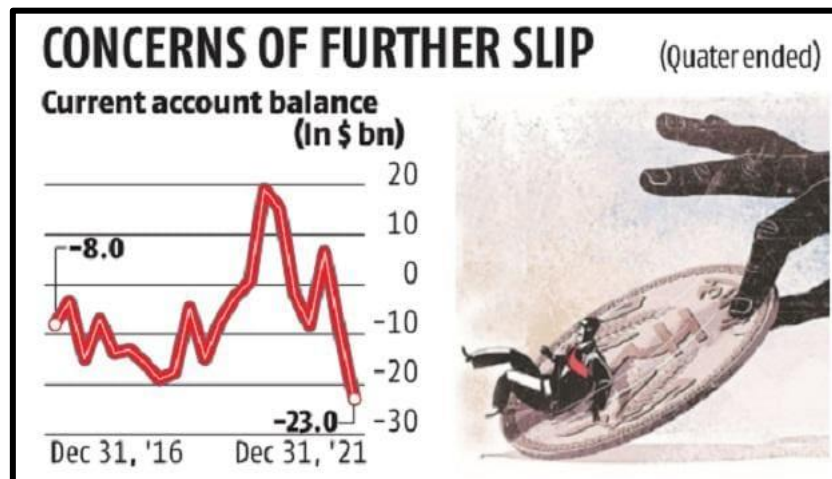
- Due to the sharp rise in US inflation, the rupee fell to -7988 against US dollars.

- The US consumer price index rose by 91 percent in June.
- This led to speculation that the US Federal Reserve would raise interest rates, causing more capital flight from other markets.
- With the fall in the dollar index, Europe's single currency, the euro, has fallen below parity with the dollar for almost 20 years.
- **Parity:** This refers to the situation in which two or more items are equal.
- It is found on foreign exchange markets, where currencies at parity have an interchange rate relationship of one to one.
- Forex markets are where currencies are parity when the exchange rate is 1:1.
- Let's say that the exchange rate is \$1-1.
- The currencies are then considered to be equal.
- **The Euro-Dollar parity:** One euro was equal to one US Dollar in terms of exchange rate.
- It fell to \$09998, and is now down almost 12% this year.
- However, it is not common for the price to drop below \$1.
- It is the second time in a row that the euro has fallen to a dollar since 2002.
- Investors are moving money out of the Eurozone to the US because of the weakening euro against the dollar
- The reason: Since 2008, the economic decline has been rapid since 2021.
- Covid pandemic, fiscal stimulus-led weak economy with high inflation.
- Russia's war on Ukraine has created an energy crisis.
- Europe is totally dependent upon Russian oil and gas, and this unprecedented rise in energy prices has caused a rise in living costs and increased investment vulnerability.
- Leading capital flight Monetary policy differential between the US and the European Central Banks with relative increases in the US interest rate
- Because it offers higher returns on investments, money is flowing to the US.
- **Impact:** Since 1999 when the US currency became freely available, there has been a very small drop in the value of forex assets.
- This is why forex in other countries has fallen in value.
- The euro is second in global foreign currency reserves and daily turnover.
- The euro/dollar is the most expensive currency in the global market.
- **Stagflation risk:** Allowing the currency to fall only fuels record-high inflation.

- However, if you try to stabilize it with higher interest rates, it could increase recession risks.
- **Capital flight:** The weakness of the euro against the US shows that investors are taking money out of the Eurozone to put it in the US.

Topic 5. UNSUSTAINABLE CURRENT ACCOUNT DEFICIT

Important for subject: Economy



Why in the news?

- Current account deficit is unsustainable and RBI's measures can only be considered temporary fixes.
- According to the BoP data, CAD was \$389 billion or 12 percent GDP. There were also net capital inflows totaling \$863 billion.
- This resulted in an accretion rate of \$75 billion to forex reserves.
- Data on trade for April-June 2022 revealed a trade deficit in the amount of \$7025 billion.
- This was despite an increase in exports of 222% and an increase in imports by 4731 percent.
- **It estimates several trade-related indicators for 2022-22:** Indicators 2021-22 and 2022-23 (as percent of GDP).
- 2022-23 (as percentage of GDP) 2022-22 (as% of GDP) 2022-22 (as% of GDP).
- Exports 132,152 Imports 1922 227 Oil imports 568. \$863billion. \$80 billion.
- Trade deficit 5975 Current account deficit 12 32
- Net capital outflows-particularly foreign portfolio investment in the event of higher interest rates in the US.

- The US dollar strengthening has led to an increase in import bills.
- A record-breaking rise in crude oil prices has led to an increasing import bill.
- India, which depends on imports for more than 80%, is experiencing an unprecedented rise in its oil consumption.
- Decline in exports in June, and higher imports, especially core imports (nonoil and gold imports), which increased by a strong 317% in June due to higher inflation.

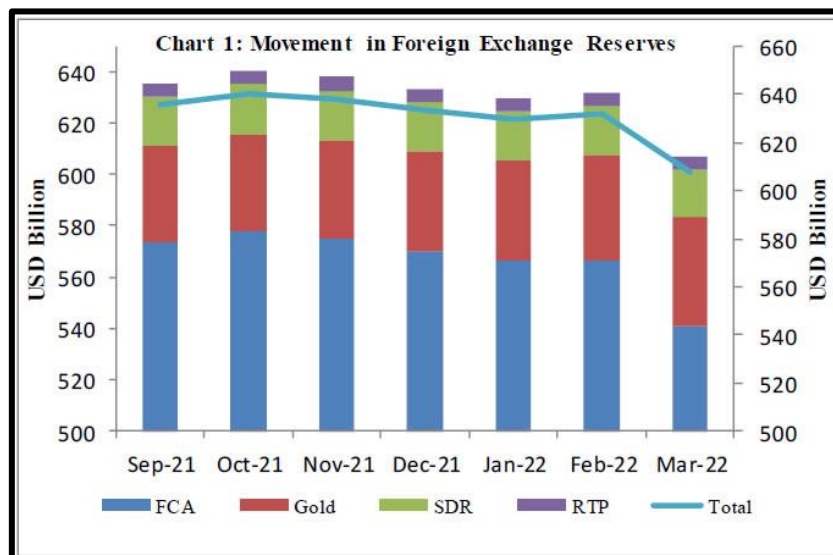
Is it possible to create a BOP deficit that is unsustainable?

- The RBI Report on Currency and Finance shows that April 2022 will see a slowdown in growth due to a CAD/GDP ratio exceeding 23 percent.
- A higher Current account deficit combined with insufficient capital inflows would result in a larger BOP deficit and a reduction of forex.
- In 2022, the BOP deficit will be \$30 billion.
- This translates into \$30 billion of USD sales by the RBI.
- **Decline in foreign currency assets:** It is worth noting that these assets declined by \$115 Billion over March 2022 due to the US\$'s ongoing appreciation.
- FCAs are assets that have a value based on another currency than the country's currency.
- For example, if some of the reserves are held in euros, and the euro appreciates against the dollar, it would result in a decrease in the forex reserves' value.
- **Volatility in Indian rupee depreciation:** The exchange rate is determined primarily by supply and demand.
- If the BoP position is negative, then the pressure on rupees increases.
- Currency depreciation could have an impact on further BOP deficit.
- It can reduce export earnings, increase the cost of borrowings abroad and increase interest payments on these loans.
- According to the RBI Report, a 10% increase in exchange rate volatility will decrease export earnings by 16 per cent.
- A 10 percent decrease in the NR against US dollars will decrease profits by 21 percent.
- India's short term external debt on residual maturity constituted 431 Percent of total external debt and 441% of foreign reserves.

- This increased near-term (within one year) and further fall in forex/increase.
- Enhance export compatibility and ease processes to encourage FDI (long-term investments that are not debt-creating) inflows
- **Balance of payments equilibrium:** A floating exchange rate means that the supply and demand of currency are equal.
- A deficit in the current accounts can be offset by a surplus in the capital account.
- Current Account FPI +50bn (Surplus) Current account Trade in goods Investment in services Transfer Payments -50bn (Deficit).
- Capital flows may be affected by changes in the interest rates.
- This could affect international capital flows.

Topic 6. FOREIGN CURRENCY DEPOSITS

Important for subject: Economy



After RBI relaxed the norms, banks revised their FCNR rates and were allowed to raise new FCNR (B), and NRE deposits. This was without regard to existing regulations on interest rates. The changes took effect July 7, 2022.

- **Foreign Currency account:** An account that is held in a currency other than India, Nepal, or Bhutan.
- **Indian residents can open major foreign currency accounts:** An Authorized Dealer Category - I bank is a bank that deals in foreign exchange.
- It's a facility that allows foreign currency earners, such as exporters, to credit 100% of their foreign earnings to the account.

- This ensures account holders don't have to convert foreign currency into Rupees or vice versa and minimizes transaction costs Resident foreign Currency (Domestic).
- Indian residents can open account-are bank accounts in foreign currencies.
- These accounts are particularly useful for Non Resident Indians who wish to bring back foreign currency from overseas bank accounts Resident Currency (RFC) to India.
- **Account:** This account is for NRIs returning to India who hold foreign currency funds.
- This scheme was created by the Indian government to assist NRIs in transferring funds into Indian banks.
- Before 2011, FCNR permitted deposits in six currencies.
- In 2011, the Reserve Bank of India announced the acceptance of FCNR deposits by banks.
- Accounts can be opened in any currency that is freely convertible.
- FCNR accounts are term deposits that are held by NRIs or PIOs in foreign currencies. They are not subject to fluctuations in exchange rates.
- An FCNR (B account) has the main advantage of being tax-free and fully repatriable.
- You can open the account together (with residents or non-residents).
- Tenor - of 1-5 years (closed prior to maturity, before the completion of the minimum deposit period).
- Indian banks offer loans against deposits to depositors and third parties upon request.
- Deposits in foreign currencies are available to depositors only.

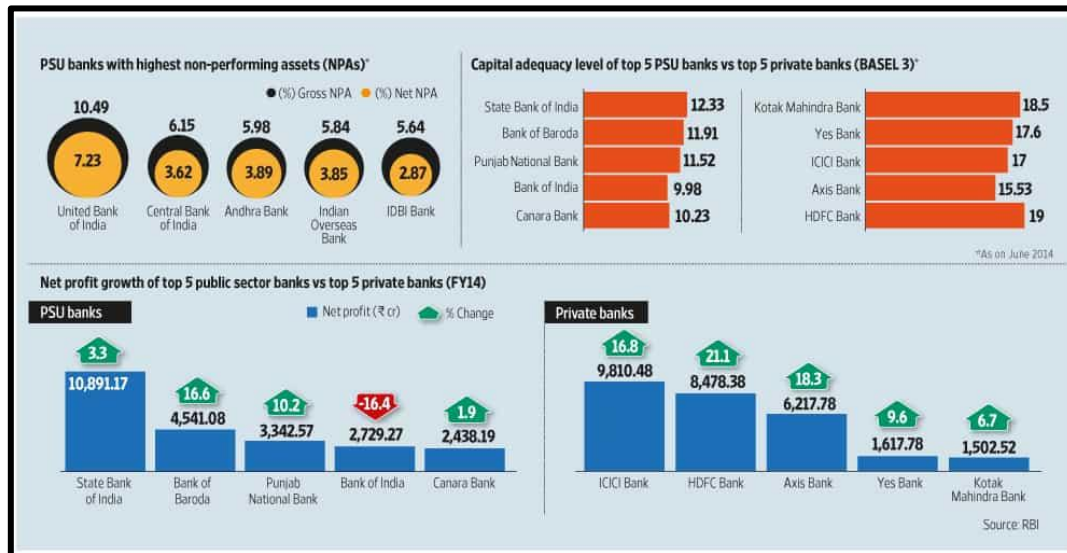
What's the difference between FCNR B and FCNR?

- FCNR B was created to replace FCNR, the prevailing FCNR system.
- A was an area where foreign exchange risk was taken care of by RBI and then by the Govt of India.
- In 1993, the apex banking introduced FCNR (B) without exchange rate guarantee to replace FCNR
 1. FCNR accounts are FCNR today.
 2. Accounts Interest rates for Foreign Currency Non-Resident Ban [FCNR(B),] generally are 5%

- Deposits are essential as they are subject to the ceilings of the Overnight Alternative Reference rate (ARR).
- NRE deposits shall have the same interest rate as domestic rupee term deposits.

Topic 7. LEADERSHIP DEVELOPMENT PROGRAMME FOR PSU BANKS (PSBS)

Important for subject: Economy



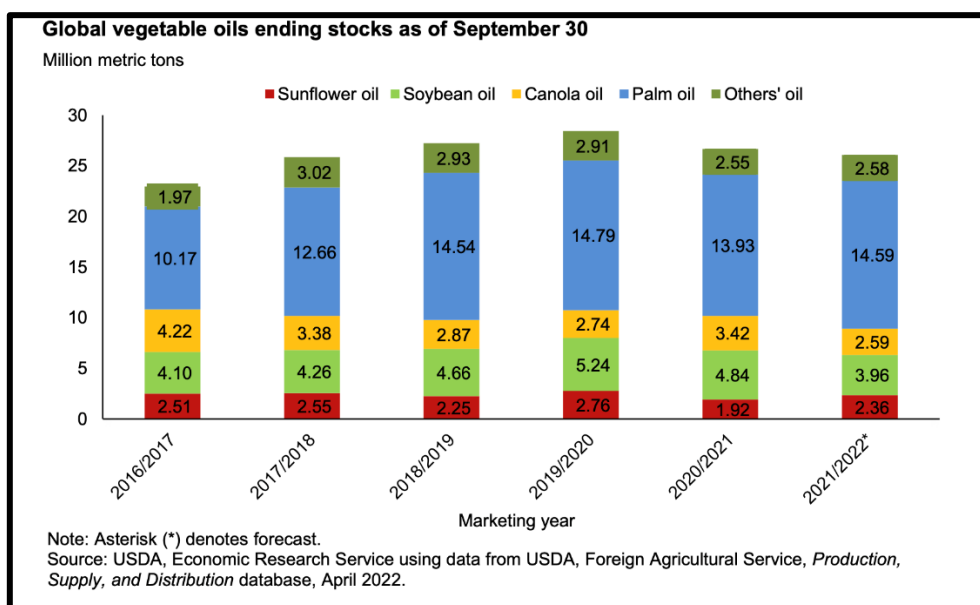
The Financial Services Institutions Bureau, which was established by the government to choose the CEOs and Directors for public sector banks, financial institutions and insurance companies, will be selecting top bank officials through a process of grooming under a leadership development program.

- The Financial Services Institutions Bureau (FSIB), Indian Banks Association (IBA) proposed the leadership development program.
- IBA will design and implement a leadership development program for PSU banks (PSBs) by a firm or institution.
- The program's goal is to create future leaders who are digitally-savvy and strategic thinkers, with the ability to build high collaborative teams and a customer-centric organisation that thrives within a highly competitive environment.
- This programme will help to accelerate the leadership development of PSBs in India, and support top management in their professional development.
- This programme is designed to help business leaders in the PSBs to be able to assume high-ranking management positions and board-level boards in PSBs.
- It also aims to create long-term sustainable businesses in a competitive marketplace.
- Each year, the programme will provide training for approximately 75 participants in senior management positions such as Chief General Managers or General Managers.

- The online training program for senior bank officers will be offered in three formats: online via e-learning modules, live webinars, meetings, and in-person.
- The fee for each participant will be set by the institution/firm for three years.
- It should cover all expenses (including costs for trademarks, patents and licenses, as well as any associated fees for use of facilities or other conveniences required for the program, boarding and lodging, and overseas stays if applicable).
- Cabinet Appointments Committee has approved a government resolution to create the Financial Services Institutions Bureau, (FSIB), in place of Banks Board Bureau (BBB).
- The Ministry of Finance, Department of Financial Service, proposed the new framework.
- The Financial Services Institutions Bureau will choose the chiefs of public-sector banks and insurance companies.
- It will select the top bank officials through a grooming process that is part of a leadership development program.
- The FSIB has the authority to issue guidelines and select general managers and directors of non-life insurance companies, general insurers, and financial institutions.
- The FSIB is the only entity that can make recommendations for the appointment of WTD (Whole Time Director) and NEC (Non-executive chairman) in Public Sector Banks, India Private Limited Company and Financial Institutions.
- First, the Department of Financial Services will make necessary modifications to the Nationalised Banks Management and Miscellaneous Provisions Scheme of 1970/1980 (as modified).

Topic 8. EDIBLE OIL PRICE

Important for subject: Economy



The data for all-Indian Daily Weighted Average Prices for major edible oils, which is available at the Department of Consumer Affairs' website, shows that costs of 5 edible oils namely mustard oil vanaspati, soybean oil, palm oil, sunflower oil - have dropped by 2-8 percent over the last month, but they remain 3-21 per percent higher than prices from last year. Consumers are not yet able to escape the rising prices for edible oils The Centre has asked edible oil producers to cut their MRP by 15 rupees per kg, as the prices of edible oils on markets around the world are experiencing declines

- Primary sources of edible oils (Soybean, Rapeseed & Mustard, Groundnut, Sunflower, Safflower and Niger) in addition to secondary source of edible Oil (Oil palm Coconut Rice Bran Cotton seeds and the Tree Borne oilseeds).
- India relies heavily on imports to supply the domestic demand for edible oils.
- In 2019-20, the nation has imported 1335 million tonnes of oils for cooking, or roughly 56% of demand.
- It was mostly comprised of it was palm (7 million tonnes) and soybean (35 million tonnes) and sunflower (25 million tonnes).
- The primary sources of these imports are Argentina as well as Brazil in soybean oil, Indonesia as well as Malaysia palm oil and Ukraine and Argentina also for sunflower oil.
- Price Monitoring Division (PMD) in the Department of Consumer Affairs.
- It is accountable for keeping track of the prices of certain important commodities.
- It tracks the wholesale and retail prices, as well as the spot and future prices for the most essential commodities, daily.
- The DoCA tracks daily prices of 22 food items including six edible oils groundnut, palm Vanaspati, mustard, Vanaspati sunflower, and soya from 179 centres across the nation.
- The department also gathers daily prices for rice, sugar, pulses wheat, tea milk, salt and other vegetables like onions, tomatoes and potatoes.
- If there is a shortage of a specific essential item and to ensure that the price of the product in check, Price Monitoring Division also implements specific market intervention schemes for commodities that provide temporary relief for consumers.
- Generally Prices are reported based on the Fair Average Quality of the item at an arbitrary centre

Topic 9. THE EXPORT INSPECTION COUNCIL (EIC) AND WHEAT FLOUR EXPORT

Important for subject: Economy



The Directorate General of Foreign Trade and the Food Ministry are planning to invite quality inspection organizations such as The Export Inspection Council (EIC) to carry out tests for grain flour (atta) exports to aid in the work of the Inter Ministerial Committee (IMC). For wheat, they will approve consignments according to the updated export policy. More details. The selected agency will forward its laboratory test reports to IMC upon which it will make its recommendation for exports,"

- The Export Inspection Council (EIC) is the official certification body of Indian autonomous organization within the minister of commerce and industry.
- It guarantees the safety and quality of goods exported to India EIC was established in The Government of India under Section 3 of the Export (Quality Control and Inspection) Act 1963 in order to ensure the growth of the export trade in India by ensuring inspection and quality control, as well as other related matters.
- The purpose that EIC plays is to EIC is to make sure that the products that are notified by the Export (Quality Control and Inspection) Act 1963 meet the standards of the import countries in terms of quality and security.
- The Export Inspection Council is located in Delhi and is led by the Chairman.
- The Executive Chief of the Council is the Director of Inspection & Quality Control who is in charge of daily operations within the Council.
- The assurance of the safety and quality of food is offered by means of a consignment-wise check or an assurance of quality food safety management certification issued by the field-based organisation.
- EIC offers a mandatory certification for diverse food items like products from fish and fisheries including dairy products honey eggs as well as the meat and other meat-related products including poultry meat products, animal casings, gelatine, Ossein as

well as crushed bone as well as pre-mixtures and feed additives, in addition to other food and non-food products are certified on a voluntary basis.

- EIC is the only organisation in India with global recognition.
- **Export Policy for Wheat flour:** The Government has put restrictions on export transport of wheat flour or Maida, Atta and Semolina.
- This is designed to stop price increase.
- These commodities are exported by exporters.
- Require the approval of the inter-ministerial commission on exports of wheat to allow delivery dates beginning on the 12th of July.
- So, the policy on export of the wheat flour (atta) is still free, however export is important according to the recommendations by the inter-ministerial commission on wheat export.
- The new approval process will be available to the wheat flour (Atta) Maida semolina (rava or sirgi) as well as wholemeal Atta, and the it's resulting anatta.
- The required modalities in relation to the quality of flour made from wheat will be announced separately in the month of May.
- India has banned exports of grain in an attempt to curb the high cost of wheat

Topic 10. SETTLEMENT OF INTERNATIONAL TRADE IN RUPEES

Important for subject: Economy

Rupee settlement opens up possibilities of trades with countries like Russia, Iran or Sri Lanka

INDIA'S TRADE WITH RUSSIA IN APR & MAY (FY23)
Exports: **\$0.25 b**
Imports: **\$5.03 b**

Imports at around \$2.5 b a month or \$30 b yearly, if sustained
Some analysts expect it to swell to a monthly \$3 b or \$36 b in FY23

Rupee settlement can potentially reduce India's hard currency outflows to extent of \$3 b/month
Also, surplus INR balance could be invested in Indian assets, including bonds & equities

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The RBI issued a circular Monday to commercial banks stating that all exports and imports in this arrangement could be denominated in rupees (INR).

- **Currency depreciation:** In the aftermath of Russia's invasion and subsequent sanctions from the US and EU, there has been an increase in pressure on the Indian rupee.

- Promoting international trade will facilitate importers and exporters.
- This mechanism was created by the Reserve Bank of India (RBI).
- The exchange rate between the currencies of two trading partners' countries can be determined market-determined.
- Special rupee Vostro accounts may be opened by correspondent banks of India to settle trade transactions with any country.
- Indian importers who undertake imports must pay in Indian Rupees.
- These funds should be credited to the special Vostro bank of the country of the partner, in addition to the invoices for supply of goods or service from the overseas seller/supplier.
- Indian exporters should be paid the export proceeds, in INR, from the balances in their designated special Vostro bank of that country.
- If payment obligations have been fulfilled, exporters can receive an advance payment in rupees to offset exports from Indian importers.
- Additionally, advance can only be released according to the instructions of an overseas importer or advice from the correspondent bank.
- An AD bank in India may request approval from RBI-Bank of a partner nation for opening a special INR.
- Vostro account will be approved by the Reserve Bank.
- The AD bank will then provide details to the Reserve Bank.
- **Exclusion:** Correspondent bank must not be from Financial Action Task Force - high risk and non-cooperative jurisdictions on which FATF has called for counter measures.
- This arrangement allows for the issuance of bank guarantees for trade transactions. However, it is subject to FEMA notification.
- **Calculation of the exchange rate between two currencies:** The indirect method is used to determine the exchange rate between two currencies, other than the US\$.
- **Rupee-Rouble exchange rates are an example:** INR-dollar = Rs 77, Rouble-dollar = 110 Ergo, Russians will need to pay 1428 Roubles (110 by 77), for every INR.
- Authorised Dealers (Authorised dealers) are institutions that have been granted a license by the RBI to purchase and sell foreign currency.
- The majority of authorised dealers are banks.

- According to the Foreign Exchange Management Act 1999, the Reserve Bank may authorize any person to be identified as an authorized person to trade in foreign currency as an.
- **Authorized Dealer:** There are three types depending on the type of institution.
- Select banks are Category I Authorized Dealers.
- They can execute all permitted capital and current account transactions according to the instructions issued from time-to-time.
- According to the RBI regulations, there are 106 Category-I authorized dealers.
- **Category II:** is for select entities that can carry out non-trade-related current account transactions.
- These include all activities allowed to Fully Fledged money Changers, and any other activity permitted by the Reserve Bank.
- **Category III:** ADs are a select group of financial and other institutions that have been designated Authorized Dealers
- **Category-III:** to perform specific foreign currency transactions in connection with their business/activities.
- **Vostro account:** A Latin word meaning "your", as in "your account", Vostro refers to an account that a correspondent bank holds for another bank.
- A Vostro account allows a foreign correspondent bank act as an agent for or to provide services as an intermediary to a domestic bank.
- Vostro account services can be used to execute wire transfers, perform foreign exchange transactions and enable deposits and withdrawals.
- If a Spanish insurance company contacts a US bank to manage funds for the Spanish insurer, the account will be deemed a Vostro account by the bank.
- The foreign correspondent bank views the funds that are held for other banks as Vostro accounts.
- They are denominated locally and are called such.
- Domestic banks refer to funds deposited at correspondent banks as "nostro accounts".
- Nostro accounts can be denominated using the foreign currency of the correspondent banking.

Topic 11. THE FINANCIAL STABILITY BOARD (FSB) AND CRYPTO-ASSETS

Important for subject: Economy

On Monday, the Financial Stability Board (FSB) announced that it would report to the G20 Finance Ministers as well as central bank Governors on October's regulatory and supervisory approaches for stable coins and other cryptocurrency assets.

- **Financial Stability Board (Financial Stability Board):** was created in April 2009 at the G20 London Summit as an alternative to the Financial Stability Forum (FSF).
- Basel, Switzerland is the home of the Financial Stability Board.
- It is funded and hosted by Bank for International Settlements.
- The Board comprises all major G20 economies, FSF members and the European Commission.
- The Financial Stability Board (FSB), an international body, monitors and makes recommendations regarding the global financial system.
- The FSB was created to assess vulnerabilities in the global financial system and to review on a timely basis, from a macro prudential perspective the regulatory, supervision and related actions required to address them and their outcomes.
- Encourage coordination and information sharing among authorities responsible to financial stability.
- Monitor and advise about market developments and their implications on regulatory policy.
- Provide guidance and monitoring on the best practices for meeting regulatory standards.
- To ensure that this work is timely, coordinated and focused on the priorities and fills gaps, coordinate strategic reviews of international standard-setting bodies.
- Establish guidelines for the establishment and support of supervisory colleges.
- Support cross-border crisis management by assisting with contingency planning, especially for systemically important companies.
- To conduct, collaborate with the International Monetary Fund.
- Early Warning Exercises Encourage member jurisdictions to implement agreed commitments and standards through monitoring, peer review, and disclosure.
- The structure of the FSB includes the Plenary, which is the only decision-making body, and a Steering Committee that handles operational work between.

- **Plenary meetings and three Standing Committees with specific, but complementary responsibilities towards this process:** The Standing Committee on Assessment of Vulnerabilities, which is the main mechanism of the FSB for identifying and assessing financial system risks.
- The Standing Committee on Supervisory and Regulatory Cooperation is charged with further supervision analysis or drafting a regulatory or supervisory response to a material vulnerability identified in SCAV.
- The Standing Committee on Standards Implementation, which oversees the implementation of FSB policy initiatives as well as international standards, is called "Standing Committee on Standards Implementation" (SCSI).
- The FSB's decisions do not have legal force.
- Instead, the organization uses moral suasion to exert peer pressure and moral influence to establish internationally agreed policies and minimum standards which its members will implement at their national level.
- Unlike other multilateral financial institutions that are legalized, the FSB does not have a legal structure or any formal power.
- Its charter, which is an informal, non-binding memorandum accord for cooperation, was adopted by its members.
- The FSB is made up of 68 member institutions.
- These include ministries of finance, central bank supervisory and regulatory bodies from 25 jurisdictions, as well as 10 international organisations and standard-setting body.
- There are also 6 Regional Consultative groups that reach out to 65 jurisdictions in the world Organizations Bank.
- International Settlements European Central Bank European Commission International Monetary Fund Organisation for Economic Co-operation and Development
- The World Bank Standard-setting Bodies Basel Committee on Banking Supervision International Association of Insurance Supervisors International Organization of Securities Commissions.
- Crypto-assets are digital assets that use public ledgers to prove ownership.
- To create, verify, and secure transactions, they use cryptography, peer to peer networks, and distributed ledger tech (DLT), such as block chain.
- They may have different functions and characteristics.

- Crypto assets work independently of any central bank, central authority, or government.
- Cryptocurrency utility tokens security are some of the most common crypto assets.
- Tokens Non-Fungible tokens Stable coins.
- It is easier to understand crypto assets by saying that they are digital assets. Crypto assets do not use cryptography.
- This type of asset is dependent on distributed ledger technology.
- To issue crypto assets, like bitcoins, one does not need to have a third party such as a bank.
- Three primary uses of crypto assets are: to invest, as a way of exchanging, and to gain access to goods and services

Topic 12. ALTERNATIVE INVESTMENT FUNDS (AIFS)

Important for subject: Economy



Market regulators are currently investigating up to 15 alternative investment funds (AIFs).

- **SEBI for different malpractices and creation of hybrid structures. Details:** SEBI recently tightened its norms for IPO investments. This is creating problems for High Net worth Investors.
- You can invest in primary market issuances, which are at the same level as retail investors.

- HNI therefore uses the AFI route for investing in IPOs, as AIFs can be placed even before IPO placements and can even take a large stake during an IPO.
- AIFs can be used in any company.
- **Alternate Investment Fund:** This is a vehicle that invests in non-traditional assets such as real estate, infrastructure, and venture capital.
- Alternative investments are financial assets that do not fall under one of the traditional equity/income/cash categories.
- Alternative investments include venture capital, private equity, hedge funds, real estate, commodities and tangible assets.
- The SEBI regulates it.
- It is a private pooled investment vehicle that collects funds from sophisticated Indian and foreign investors to invest it in accordance to a defined investment strategy for the benefit of its shareholders.
- It is defined by Securities and Exchange Board of India (Alternative Investment Funds Regulations 2012).
- AIF as a fund that has been established in India under the Limited Liability Partnership (LLP) form.
- A private pooled investment vehicle, such as a company or trust or body corporate that collects funds from investors.
- Foreign investors and Indian investors can invest it according to a defined investment strategy to benefit their investors.
- It does not include funds that are covered by the SEBI (Collective Investment Schemes Regulations, 1999), SEBI (Mutual Funds Regulations 1996, or any other regulation of SEBI governing fund management activities.
- AIFs in India are private funds that are not otherwise subject to Indian regulatory agencies.
- **Categories:** AIFs must register in one of three categories as per the SEBI (AIF Regulations 2012).
- **Category I:** Invests in start-ups, early stage ventures, social ventures, SMEs or infrastructure.
- What the government and regulators consider socially or economically desirable.
- **Category II:** It is not included in categories I or III, and it does not undertake.

- Leverage or borrowing that is not necessary to meet daily operational requirements.
- **Examples:** private equity funds, real-estate funds, Debt funds.
- These funds are not eligible for any incentives or concessions from the government.
- **Category III:** AIFs that employ complex or diverse trading strategies.
- Leverage can also be achieved through investments in unlisted or listed derivatives.
- **Examples:** Alternative Investment Funds, such as hedge funds or private investment in Public Equity Funds.
- These funds trade with the goal of making short-term returns.
- **The following are not AIFs:** Mutual funds Collective Investment Schemes.
- Employee stock options trusts Employee welfare trusts and gratuity trusts Family benefit trust holding companies

Topic 13. FSIB COMPOSITION AND FUNDING

Important for subject: Economy

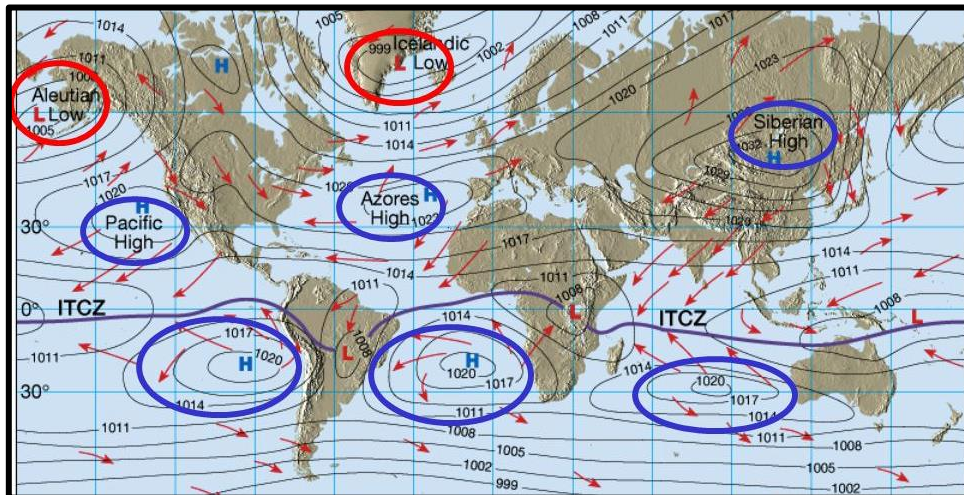
Regulation about the Financial Services Institutions Bureau. The Cabinet Appointments Committee has approved a government resolution to create the Financial Services Institutions Bureau. This will replace the Banks Board Bureau.

- All assets, liabilities, and interests of the BBB have been transferred to the FSIB.
- **The Ministry of Finance Mandates, Department of Financial Service proposed the new framework:** FSIB will be responsible for making recommendations regarding the appointment of whole-time directors (WTDs), nonexecutive chairpersons (NECs) at public sector banks and insurers (PSBs), and financial institutions (FIs).
- It will also provide advice to the government regarding the extension and termination of WTDs or NECs at financial institutions.
- The FSIB also will recommend a performance evaluation system for WTDs at PSBs, FIs, and PSIs.
- The FSIB also will advise the government about formulation and enforcement a code for conduct and ethics for NECs and WTDs.
- It will create a database about the performance of PSBs. FIs. And PSIs.
- The FSIB will assist PSBs, FIs, and PSIs in developing business strategies and capital raising plans.

- The FSIB will provide advice to the government regarding the management structure of PSBs, FIs, and PSIs.
- It will also provide advice to the government regarding the development of training and development programs for management personnel in PSBs, FIs, and PSIs.
- **Composition:** 11 members, including the chairperson -nominated first by the Centre.
- Bhanu Pratap Sharma is a former Secretary of the Department of Personnel & Training.
- For two years, ex officio Secretaries to Department Financial Services (DFS), and Department of Public Enterprises IRDAI Chairperson.
- Three persons with significant subject matter knowledge in relation to PSBs or FIs will be nominated to the part-time members.
- Three persons with important subject matter knowledge in relation to PSIs will also be nominated to the part-time members.
- First, the Department of Financial Services will make necessary modifications to the Nationalised Banks Management and Miscellaneous Provisions.
- Scheme of 1970/1980, as amended. Expenditure-In each financial year, each of the three financial service categories (PSBs/FIs and PSIs), will contribute funds in proportion to the respective vacancies of NECs and WTDs at the start of each financial year.
- Background The BBB was established in April 2016 to help select members of PSB boards.
- Later, the Department of Financial Services expanded the BBB's scope to include public sector insurers.
- The BBB was not given a legal mandate to handle appointments related to public sector insurance.
- The Centre restructured the framework to create a single entity FSIB that would cover all public sector banks, financial institutions, and insurers.

Topic 14. AZORES HIGH

Important for subject: Geography



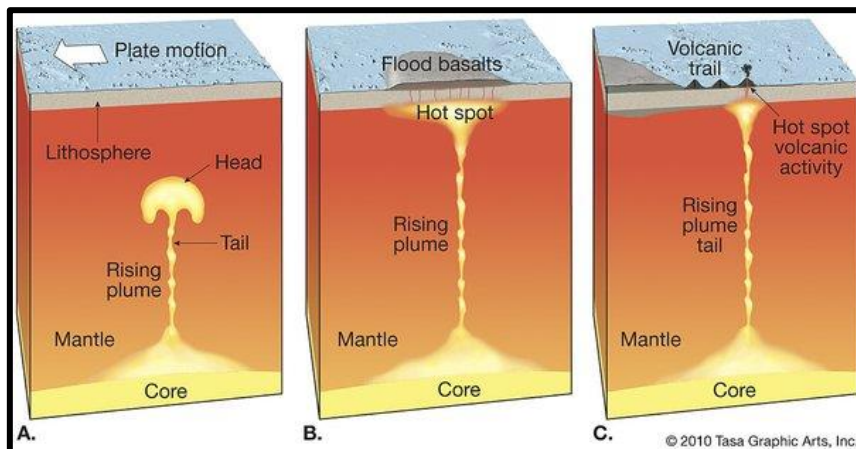
Extremely dry winter in Western Mediterranean because of expansion of "Azores High"

Azores High is an eastern subtropical North Atlantic high pressure system. It extends across Western Europe during winter.

- It is associated to anticyclonic winds of the subtropical North Atlantic. It is formed from dry air aloft falling the subtropics. Reasons for Azores High's expansion.
- The Azores High expansion can be explained by external climate forces.
- This means that the only external force that causes this signal in industrial era is atmospheric greenhouse gases concentrations.
- Azores High expansion was established after 1850, and strengthened in 20th century in line with anthropogenic ally driven warming.
- The Azores High has seen dramatic changes over the past century, and these changes to the North Atlantic climate have been unprecedented in the past millennium.
- Reports of an expanding Azores High and a poleward shift within the North Atlantic storm track, an increase in anticyclone frequency near the Azores High's poleward edges, as well as positive trends in regional subtropical indicator data support these reports.

Topic 15. MANTLE PLUMES AND TECTONIC PLATES

Important for subject: Geography



Mantle Plumes & Tectonic Plates Indian plates dragged a significant amount of Kerguelen material for over 2,000 km beneath the Indian lithosphere. A study has shown this.

- The buoyant rise of low-density and hot magma, or plumes, from the Earth's inner core towards the surface causes extensive volcanism. This leads to the formation of seamounts above the ocean floor and volcanic chains.
- A rising plume must cut through the thick lithosphere to reach the earth's surface. Many times the magma's buoyant power is not enough to penetrate the lithosphere.
- These cases are typical of plumes that dump the material at sub lithospheric depths.
- The tectonic plates which lie above the lithosphere tend to pull the ponded materials with them when they move.
- One fundamental question in understanding the earth's processes remains unanswered is how far a plume material can be pulled by tectonic plates at their base after impacting with the plume.
- NCPOR (National Centre for Polar and Ocean Research), has recently shed some light on the matter.
- Scientists examined samples of igneous rock collected near the Ninety East Ridge of the Indian Ocean.
- The Ninety East Ridge, an aseismic Ridge, is almost parallel to the Indian Ocean's 90-degree east longitude.
- It measures approximately 5,000 km in length with an average width of 200km.

- An extensive geochemical and isotopic analysis revealed that basaltic samples had very similar compositions and were high in alkaline to those released from the Kerguelen hotspot at the Southern Indian Ocean.
- Additionally, the alkaline samples were about 58,000,000 years old, which is much younger than the surrounding oceanic crust around Ninety East Ridge (between 82 and 78 million years).
- New research suggests that the Indian tectonic plates, which were simultaneously moving northward at an extremely high speed, had pulled a significant amount of Kerguelen plumb material more than 2,000 kilometers below.
- The Indian lithosphere. Subsequent activation of deep fractures might have caused decompression melting the underlying plume material.
- These magmatic sills or lava flows were likely to have been deposited near the Nighty East Region around 56 million years ago.

Topic 16. CENTRE TO PROMOTE DRAGON FRUIT CULTIVATION IN 50000 HECTARES

Important for subject: Geography



The Centre is following the lead of the Gujarat and Haryana Governments and promoting the cultivation of dragon fruits.

- The fruit is good for diabetics and provides high nutritional value. The Centre is implementing MIDH under Green Revolution – Krishonnati Yojana.
- The MIDH scheme is funded by the Government of India (GOI), which contributes 60% of the total outlay for all states, except North East and Himalayas.
- 40% is provided by state governments.
- In the case of North Easter States and Himalayan States and Himalayan States and Himalayan States and Himalayan States and Himalayan States and Himalaya, GOI contributes to 90%

Topic 17. DERECHO- A STORM THAT TURNED THE SKY GREEN IN THE US

Important for subject: Geography



Climatology According to the US's National Weather Service, a derecho is "a widespread and long-lived, straight line windstorm" that is associated "with a band of rapidly moving thunderstorms or showers".

- The name derecho comes from Spanish, which means "straight."
- According to University of Oklahoma, the time between successive wind damage events must not exceed three hours.

Why did the sky turn blue during the recent derecho?

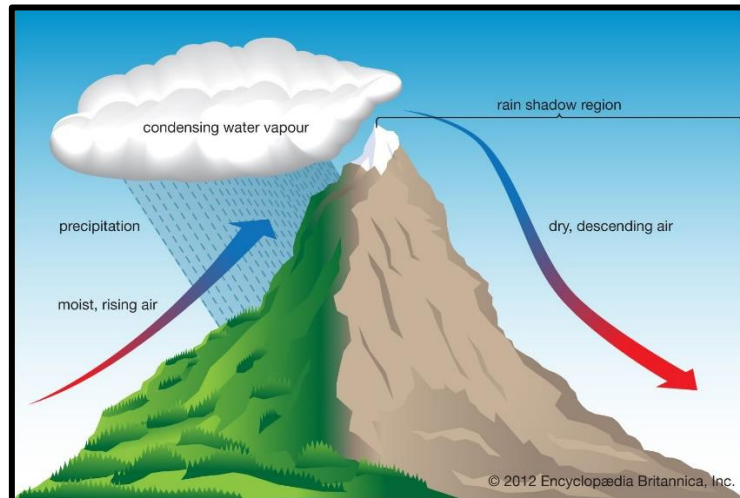
- The resulting 'green sky' is caused by severe thunderstorms.
- A Washington Post report stated that heavy raindrops and hail can scatter all other wavelengths of light below storm clouds.
- This causes the blue light to combine with the red-yellow from the afternoon sun or evening sun to create green.

Where do derechos usually occur?

- They are most common in the eastern and central parts of the United States.
- The "Super Derecho", which occurred on May 8, 2009, was one of the most unusual and intense derechos ever recorded.
- It swept from Kansas to Kentucky at speeds of up to 170 km/hr.
- Other derechos have been documented elsewhere in the world.
- In 2010, Russia saw its first derecho.
- They also passed through Germany, Finland, and more recently, in Bulgaria and Poland.

Topic 18. CLOUDBURST

Important for subject: Geography



At least 8 people have died in a cloudburst in Amarnath Cave in Kashmir

- The cloudburst is an isolated weather phenomenon that produces intense rainfall in a limited space lasting only a some hours.
- This causes flash floods or landslides, houses falling down, displacement of vehicles and human casualties at a larger scale.
- Meteorologists state that the rain that comes from cloudbursts are usually in the shower type, with a drop rate of at least 100 millimetres (4 inches) per hour, or with drops of size 4-6 millimetres, at a the speed of 10 metres per second.
- The most important reason is the rising temperature, which consequently, have caused an increase in rainfall all over the Himalayas.

How does it form?

- Usually, cloudbursts are connected with storms.
- The air currents that roar upwards during a storm hold an enormous amount of water.
- If these currents cease suddenly and the whole amount of water drops to an area of a tiny size with devastating force, all at once and results in massive destruction.
- This is caused by a rapid condensation of clouds. Prone regions.
- They are most common in mountainous and desert areas and in the areas of continental landmasses that are in the interior.
- The topographical conditions, such as steep hills encourage the development of these clouds in mountainous regions.

- Also, the devastations the area as water flowing down the slopes of steep hills brings debris, boulders, and fallen trees that are able to destroy any structure that is in their path.
- The Chhota Nagpur plateau spread across north Odisha, West Bengal and Jharkhand is the most susceptible area for the formation of the most severe storms.
- Cloudburst may occur not just in monsoon months but also in the months of March and May.
- It is well-known for its severe convective weather. Prediction.
- Large-scale characteristics that favor the the occurrence of severe storms that are that are associated with cloudburst, can be predicted for up to three days ahead.
- However, the exact location and timing of the cloud explosions can be predicted using NOWCAST mode that is only several hours ahead in the event that the initial genesis of storms has already begun.
- **To identify these sudden changes the Doppler Weather Radar (DWR):** is an effective tool that can provide a time and place specific cloudburst predictions could be set up just a few hours ahead of time.
- When paired with satellite imagery, it can provide valuable inputs to extrapolate cloudbursts across India

Topic 19. AMARNATH CAVE

Important for subject: Geography



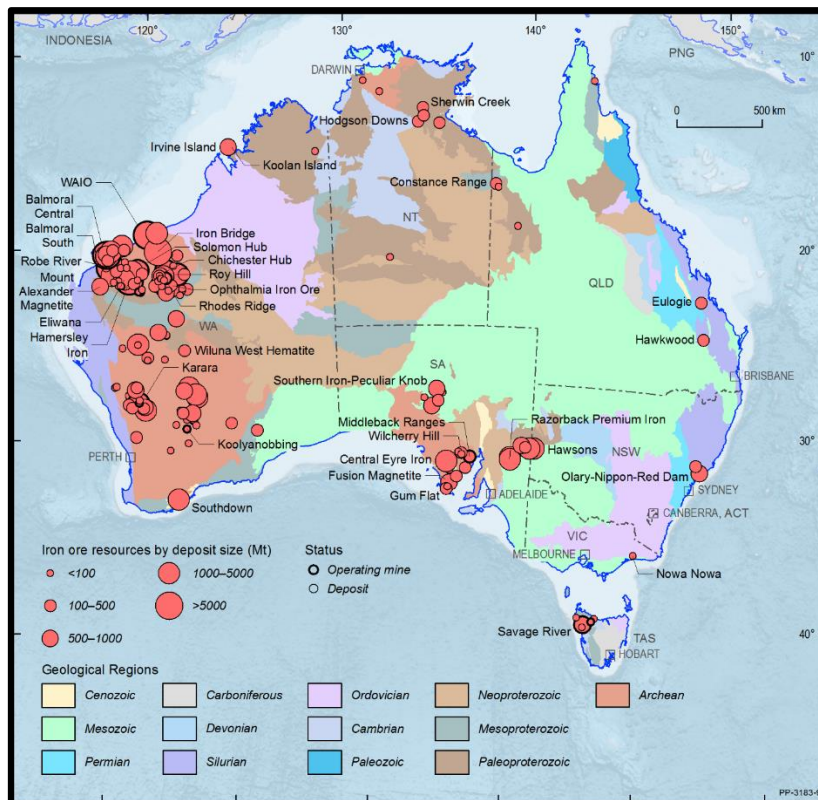
The flash flood that was caused by the cloudburst increased the death toll to eight in the Amarnath Cave Shrine near Pahalgam in south Kashmir

- **Amarnath Cave Shrine:** The annual Amarnath Yatra to the cave shrine of Lord Shiva situated high within the Himalayas is one of the nation's most popular pilgrimages.

- It is located at 3,888m above sea level and situated within South Kashmir, J & K Shrine Formation: Stalagmite and Stalactite.
- The Shiva Lingam is a Stalagmite.
- A stalagmite cave formation or speleo that is a spouting formation rising from the floor of a cave.
- It's formed by the freezing of water droplets falling from the cave's roof to the floor, resulting in an upward-sloping increase in the amount of frozen ice.
- **There are many kinds of stalagmites:** Limestone, Lava, Ice Concrete.
- The stalagmites that are regarded to be the lingam which is a physical manifestation of Shiva is the stalagmite that is ice.
- Stalagmite (either permanent or seasonal in the natural world) and is commonly known as iciclesand.
- They are an elongated-dome shape.
- Stalagmites are usually comprised of calcium carbonate however, they can also contain lava and mud, as well as peat, pitch and sinter.
- They also contain sand, sinter as well as amber at (crystallized urine of rats).
- The majority of stalagmites have round or flattened tips.
- The similar formation that hangs down in a cave's roof is called a Stalactite.
- It is created by the mineral precipitation from water that is dripping from the cave's ceiling. Many stalagmites have pointed tips

**Topic 20. NMDC ARM TO PROSPECT, MINE IRON ORE, CRITICAL MINERALS
IN WESTERN AUSTRALIA**

Important for subject: Geography



Economic Geography State-owned PSU mining company, NMDC Ltd, is exploring the development and exploration of iron-ore mining operations at Mt Bevan in western Australia Along with magnetite iron ore The company will look for crucial minerals such as lithium, copper and tungsten.

- The words "critical" are important and are essential for the many high-tech devices which power the global economy, including smartphones, electric vehicles, or wind turbines.
- Initial research has revealed the fact that Mt Bevan holds 1,170 million tons of magnetite iron ore.
- Magnetite iron ore could be repurposed into a better-quality product.
- Premiums for higher-quality iron ore are growing in part because they create steel that is more efficient.
- The subsidiary of NMDC, Legacy, is also working on an advanced exploration project on Mt Celia, at the South Laverton Project

Topic 21. YOUTH IN INDIA 2022 REPORT–MINISTRY OF STATISTICS AND PROGRAMME IMPLEMENTATION

Important for subject: Geography

State/Union Territory	% of youth in total population of State/UT		
	2021	2031	2036
Bihar	28.8	27.7	25.5
Himachal Pradesh	25.1	21.4	19.5
Kerala	22.1	20	19.2
Madhya Pradesh	27.7	25.3	24.7
Maharashtra	26.1	22.5	21
Rajasthan	28.7	25.8	24.6
Tamil Nadu	23.2	20.4	19.1
Uttar Pradesh	29.9	26.3	25.1
India	27.2	24.1	22.7

Source: Youth in India 2022 Report, MoSPI
Report of the Technical Group on Population Projections for India and States 2011-2036, Ministry of Health & Family Welfare, 2020

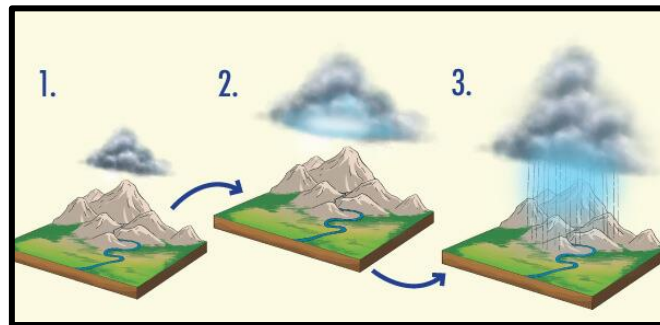
The positive demographic dividends of India are at an inflection point in the form of the share of the population that is dominated by youth beginning to decrease as the proportion of older people is expected to continue to rise throughout 2021-2036.

- The most populous states, Bihar as well as Uttar Pradesh, which experienced an increase in the youth population until 2021, are predicted to see a decrease from now on.
- States like Kerala, Tamil Nadu and Himachal Pradesh are projected to witness a greater number of elders than youth in 2036.
- The proportion of youth aged between 15-29 years grew between 266 and 279 per cent in the year 1991, to 279 by 2016 before dropping to 272 percent in 2021.
- This is expected to drop to 227 by 2036.
- The proportion of the elderly people in the total population has risen from the 68 percent of 1991 to 92 percent in 2016 and is expected to rise to the 149th percentile by 2036.
- The window of the demographic dividend is closing in the case of southern states, the percentage of dependent population is anticipated to rise due to the growing longevity, which will put the pressure on medical and social security requirements.
- In the 2022 edition of World Population Prospects of the United Nations (WPP), India is predicted to overtake China in the rankings of world's largest populous nation in 2023.

- A steady decline in fertility has resulted into an increase in people who are that range between the ages of 25-64 as well as this change in age distribution gives a time-bound possibility for faster growth in the economy, referred to by "demographic dividend." "demographic dividend"

Topic 22. WHY CLOUDBURSTS MORE IN MOUNTAINOUS REGION

Important for subject: Geography



Experts have stated that it's hard to determine the exact date when a cloudburst might occur. There is no definitive information on the precise number of cloudbursts that happen in India.

- Because of their definition, which deals only a tiny area it's difficult to accurately forecast and detect cloudbursts in the shortest time.
- However they tend to occur in mountainous regions primarily due to terrain.
- Cloud bursts can occur in plains, but mountains are more susceptible to cloud explosions because of.
- This is due to the fact that in hilly regions, cloudy, saturated clouds that are ready to condense to make rain because of the upward motion of the extremely warm current of air.
- Instead of falling downwards raindrops are transported upwards by the current of air.
- New drops form and raindrops that already exist grow in size.
- After a while after which the rain drops become excessively heavy to be able to hang the cloud, and they fall quickly

Topic 23. RE-WILDING RED PANDAS: DARJEELING ZOO ATTEMPTS COUNTRY'S FIRST AUGMENTATION OF ENDANGERED MAMMAL IN THE WILD

Important for subject: Geography

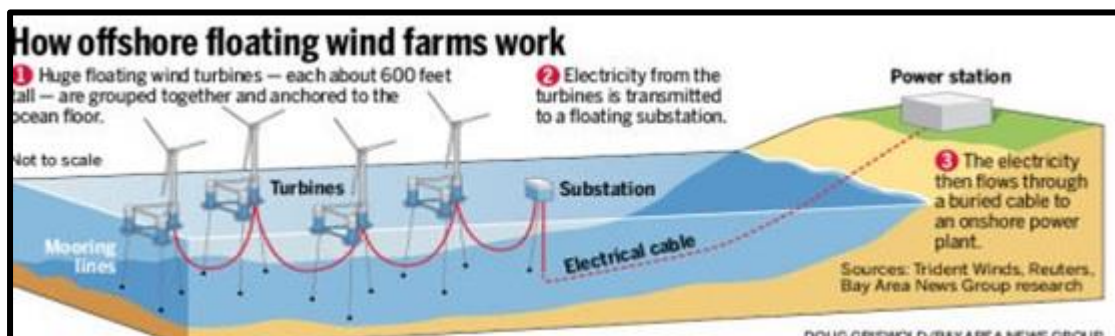


Singalila National Park is the highest protected area of West Bengal. It will soon be home to new residents.

- The Padmaja Naidu Himalayan Zoological Park started an ambitious program to release 20 red pandas (*Ailurus Fulgens*) into the forest in the first ever rewilding program for red pandas in India.
- Red pandas have been decreasing in wild populations, even in the Singalila or Neora.
- Valley National Parks are both located in West Bengal.
- **Red List of Threatened Species:** Red pandas are shy, solitary, and arboreal animals that are considered to be an indicator species of ecological change.
- India is home both the (sub-) species Himalayan red panda, *Ailurus Fulgens*, and Chinese red panda, *Ailurus Styani*.
- The Siang river in Arunachal Pradesh divides the two phylogenetic types

Topic 24. OFFSHORE WIND ENERGY IN INDIA

Important for subject: Geography



The government's increasing concern about offshore energy is evident in the Ministry's "Strategy Paper for Establishment of Offshore Wind Energy Projects"

- Wind energy accounts for more than 35 GW of total renewable energy capacity at 78 GW.
- The national goal is 60 GW wind energy installations by 2022.
- Offshore Wind Energy
- **Today, wind energy is typically divided into two types:** offshore wind farms that are located in bodies of water and onshore wind farms.
- Offshore wind energy is the installation of wind farms within the water bodies.
- They use the sea wind to generate electricity.
- These wind farms can either be fixed-foundation or floating.
- A fixed-foundation turbine can be built in shallow waters, while a floating turbine can be built in deeper waters.
- Its foundation is anchored to the seabed.
- Floating wind farms are still in infancy.
- They must be located at least 200 miles from the coast and 50 feet in the ocean.
- Offshore wind turbines generate electricity, which is then returned to shore via cables buried on the ocean floor.
- To provide a legal basis for the development of India's offshore wind sector, the Indian government has notified the national offshore wind energy policy on October 2015.
- A campaign to measure wind resource must be conducted that uses light detection and range (LiDARs), as well as geophysical, geotechnical and oceanographic studies in certain zones off the coasts of Gujarat and Tamil Nadu.
- The government plans to build the first commercially viable offshore wind energy project with a 1 GW capacity in the zone-B off Gujarat's coast.
- Private players interested in establishing offshore wind projects can also conduct the necessary studies/surveys within the EEZ of India, as per the "Guidelines for Offshore."
- NIWE has published Wind Power Assessment Studies and Surveys.
- About National Institute of Wind Energy, (NIWE).
- In 1998, the National Institute of Wind Energy (NIWE), Government of India, was established in Chennai as an independent R&D institution.
- It is a knowledge-based organization of high quality, dedication, and offers services.

- It is equipped with a Wind Turbine Test Station at Kayathar, which has received technical and partial financial support from DANIDA, Govt of Denmark.

Topic 25. APPLE ANNOUNCES LOCKDOWN MODE AGAINST SPYWARE

Important for subject: Science and Technology

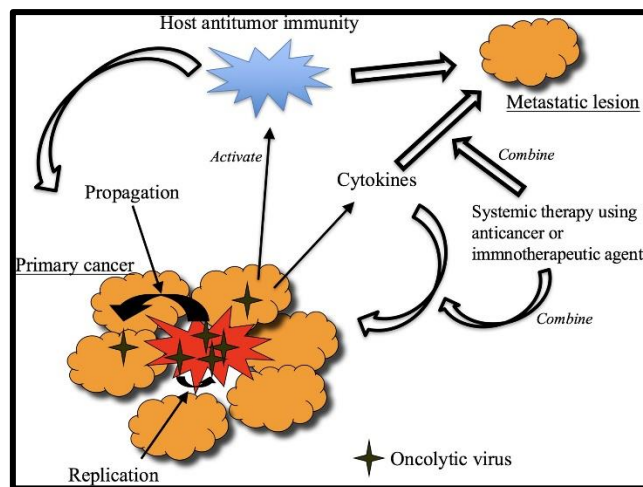
Apple's Lockdown function adds extreme protection to iOS 16, iPadOS 16 and macOS Ventura

How will it work?

- This setting will prevent message attachments from the Messages app and disable link previews.
- It also blocks invitations from unknown sources, blocks FaceTime calls, and disables web surfing technology by default.
- Other tech giants have made similar efforts, such as Google's Advanced Protection Program or the Super Duper Secure mode Microsoft began testing in Edge.

Topic 26. HOW ONCOLYTIC VIRUS THERAPY IS CHANGING CANCER TREATMENT

Important for subject: Science and Technology



Oncolytic viruses, a type of immunotherapy, use viruses to infect or destroy cancer cells.

- Cancer caused by infection by viruses Infection with certain viruses has been linked to the development of certain types of cancer, including the hepatitis B (HBV) virus.
- In liver cancer, and in the human papillomavirus (HPV), in cervical cancer and head & neck cancer.
- There are many treatment options for oncolytic virus therapy.
- **The FDA currently approves one oncolytic viral therapy for cancer treatment: T-VEC, Imlygic:** A modified herpes simplex virus (HSV).

- This virus infects cancer cells and encourages their destruction.
- It is approved for patients with melanoma.
- Common side effects of the oncolytic virus include fatigue, chills, fever, flu-like symptoms and injection site pain.
- Clinical trials are underway for the evaluation of oncolytic virus platforms.
- **Maraba virus:** A virus that is only found in insects.
- **Measles virus:** This highly contagious virus infects the respiratory system and can cause measles.
- **Newcastle Disease Virus:** A virus that is primarily found in birds and can cause mild conjunctivitis in humans.
- It can also cause flu-like symptoms in people.
- Picornavirus is a virus family that can cause a variety of diseases in birds and mammals.
- Clinical trials are currently being conducted on the coxsackievirus.
- Reovirus is a group of viruses that can cause gastrointestinal and respiratory problems in a variety of animals.
- **Vaccinia virus (vaccination against smallpox):** This virus was used to help vaccinate humans against smallpox.
- It rarely causes illness in humans, and leaves a rash on the body.
- **Vesicular Stomatitis virus:** A virus that is part of the same family as Maraba virus and can cause flu-like symptoms in people

Topic 27. METAVERSE

Important for subject: Science and Technology



What is metaverse?

- The metaverse can be viewed as a parallel world in which users have multiple identities, possessions, and characters.

- It is a 3D integrated virtual world.
- Interoperability is the key to metaverse's success.
- The metaverse doesn't pause, end or reset. It continues indefinitely.

How will the metaverse really work?

- Virtual Reality games, digital spaces, virtual worlds, and even Fortnite are not all the same thing.
- The metaverse is being described as a new world order, in which your services can be offered virtually in exchange for Cryptocurrencies or other virtual assets.
- It can be seen as your existence being intertwined with the digital world in a deeper and more complex way.
- Interoperability is crucial because everyone and everything is meant to be part of it.
- To ensure that the metaverse functions smoothly it will require a rewrite of the rules currently in place for many of the internet services.

Topic 28. UNION MINISTER INAUGURATES IS4OM TO SAFEGUARD INDIAN SPACE ASSETS

Important for subject: Science and Technology



What is ISRO System for Safe & Sustainable Operations Management (IS4OM)?

It is ISRO's holistic approach to ensure safety of space assets and sustain the use of outer space for national developmental.

- The new facility, which will be based in Bengaluru, will serve a variety of functions, including protecting India's space assets and protecting them against space debris.
- It also predicts the orbital movement of space debris, anticipating possible collisions, and coordination with international agencies.

- It is not just about (space-traffic management), it is also about maintaining orbits open to all, operating in space without causing any problems one another, and ensuring sustainable usage.
- **Different functions of "IS40M"**: First, it concerns using radars and optical observation in order to observe and tag objects in the space.
- If an object is a danger to our satellite, we must move it out of harm's path and inform any foreign agencies (whose satellites are nearby) about our collision avoidance maneuver.
- Tracking will be required for objects that could fall back onto earth and asteroids on collision course with Earth.
- It is responsible for monitoring and observing space objects and their environment.
- The space environment analysis, risk assessment, mitigation and data exchange are some of its key functions.

Why space is necessary for Traffic Management System?

- As the number of satellites orbiting Earth is increasing, so too is the amount of space debris.
- The term debris includes all the items that have been impacted by space assets, including the defunct satellites and the upper stages of spent rockets.
- Given the speed at which these objects orbit the earth, it is possible for them to collide with the Earth.
- This could lead to a catastrophic event that could disrupt space-based services.
- It is therefore increasingly important to have a Space Traffic Management System

Topic 29. SIGNIFICANCE OF JAMES WEBB SPACE TELESCOPE'S FIRST DEEP FIELD IMAGE FROM NASA

Important for subject: Science and Technology



NASA's James Webb Space Telescope (JWST) provided the deepest and sharpest image of infrared of the universe's distant regions to date.

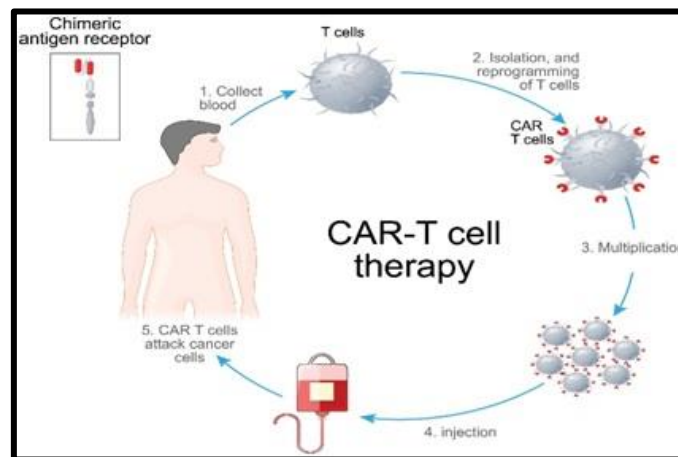
What is the First Deep Field?

- A composite of images of various wavelengths taken by JWST's NearInfrared Camera (NIRCam).
- It is known for Webb's First Deep Field, the image depicts the galaxy cluster, SMACS 0723 when it appeared on the scene 46 billion years ago.
- The distortion that appears within the picture is due to gravitational lensing, a phenomenon that Webb's NIRCam has brought these distant galaxies into focus.
- They have small, blurry structures that were never seen before, such as star clusters as well as diffuse features.
- **James Webb Space Telescope (JWST):** The JWST has for a long time been hailed as the replacement to the long-running Hubble Space Telescope (HST).
- It was specifically designed for infrared astronomy and allows it to detect these distant objects.
- JWST to look further into the past of the universe and gain information about the development of star systems just 100 or 250 million years following.
- The Big Bang Hubble Space Telescope (HST).
- The HST was launched in the year 1990.
- It was originally designed to be the first optical observatory in space that was optimized for capturing light in wavelengths that are visible to our eyes.
- However, this was an obstacle in observing the universe's distant stars and of the first galaxies to be discovered in the universe.
- Because of the expanding Universe, the farther the object gets from Earth the faster it gets further away.
- This causes an effect known as red shifting.
- This is when light that is emitted by the object (even when it's originally shorter in distance) is stretched to longer wavelengths and turns redder.
- Because infrared light is beyond.
- The visible spectrum is visible and since Hubble is designed to capture light that is visible far away objects that appear extremely red, are inaccessible to Hubble.

- HST a gravitational lens is a swarm in matter (such as an array of galaxies) between the distant source of light and an observer capable of bending the light source as it travels towards the person who is looking at it.
- This phenomenon is referred to as gravitational lensing.

Topic 30. CELL THERAPY CANCER CENTRE TAKES SHAPE IN BENGALURU, TRIALS ARE ON

Important for subject: Science and technology



The Pulitzer-winning author, US oncologist Dr Siddhartha Mokherjee, and Kiran Mazumdar Shaw (leading biotech entrepreneur) founded Immuneel Therapeutics Ltd in 2019. They planned to establish a breakthrough cell.

- **Stem cells in therapy for cancer:** These cells are the raw material of the body -- they are the cells that all other cells have specialized functions.
- Stem cells can divide into more cells, called daughter cells, when there are certain conditions in the body and laboratory.
- These daughter cells can either be regenerated from stem cells (self-renewal), or become specialized cells with a specific function (differentiation).
- No other cell in the body is capable of creating new types of cells.
- Types of Stem Cells
- They are undifferentiated and live in differentiated tissues.
- **SSCs can be obtained from many sources:** fetus and umbilical cord, placentas, infants, children, or adults; and different organs/tissues.
- They are usually found in very small numbers in most tissues of the Pluripotent Stem.
- Cells can differentiate into derivatives from all three germ layers (ectoderm mesoderm, endoderm and mesoderm), but not placenta.

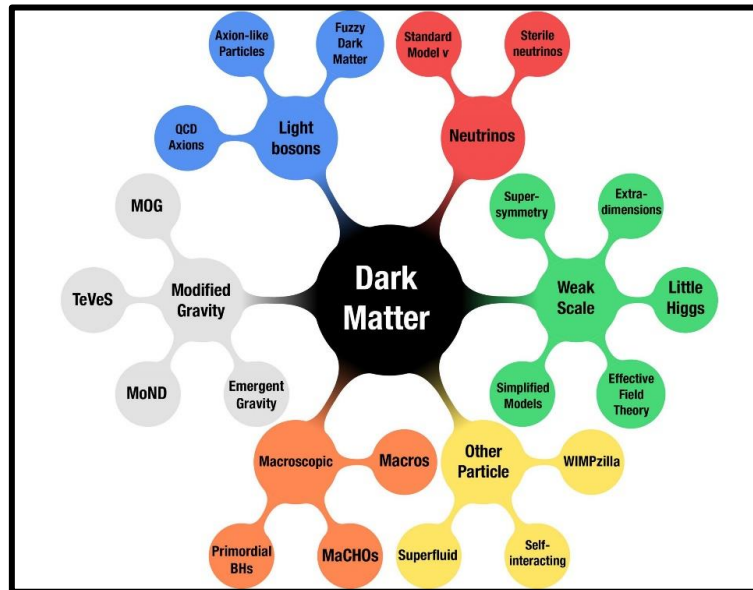
- Embryonic Stem Cells are derived from blastocysts.
- Those derived before the differentiation of trophectoderm or inner cell mass (ie the morula stage), are truly totipotent and capable of giving birth to the whole organism. ESCs derived from the inner cell mass are pluripotent (not totipotent).
- Induced Pluripotent stem cells (iPSCs), which are named after the ESCs, are also pluripotent in nature.
- They can expand and differentiate indefinitely into mesodermal, ectodermal and endodermal cells.
- The iPSCs are made from somatic cells using a variety genetic and epigenetic techniques

What is stem cell therapy?

- Stem cell therapy is also known as regenerative medical.
- It promotes the healing of damaged, diseased or injured tissue with stem cells and their derivatives. Stem cells can then implanted into an individual.
- Mumbai baby boy received 40 million stem cells, and his lungs started to heal.
- This case involved mesenchymal stem cell therapy, which are adult stem cells that are different than embryonic stem cells. Ex: In 2017, a US patient became the third and first person to be cured by HIV.
- The NGSCR was released by the Indian Council of Medical Research in 2017.
- It aims at ensuring that human cell research is ethically and scientifically conducted.
- **These guidelines address:** The monitoring mechanism and regulatory pathway for clinical, basic and clinical research, product development, based on the categories of research and level to be manipulated.
- The procurement of embryos, gametes and somatic cells to derivation or propagation of stem cell lines and their banking and distribution.
- Other areas of importance include international collaboration, the exchange of cell/lines, education for stakeholders, and advertising Prohibitions.
- Guidelines Research on human germline gene therapy and reproductive.
- Cloning In vitro culture embryos from intact human embryos after 14 days of fertilization, or the formation of primitive streak, whichever comes first Clinical trials involving the transfer of xenogeneic cell lines

Topic 31. THE SEARCH FOR DARK MATTER

Important for subject: Science & Tech



The next-generation dark matter detector is in operation and has already delivered its first results.

What is LUX-ZEPLIN experiment?

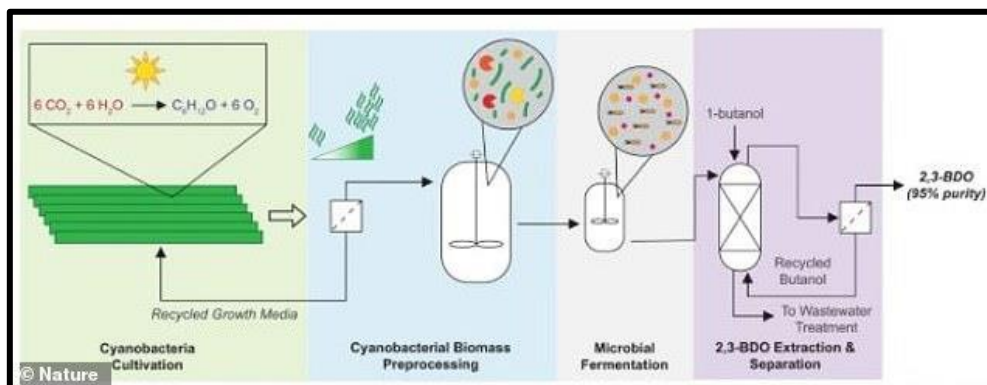
- The LUXZEPLIN detector was designed to search for hypothesized dark matter, called weakly interacting large particles (WIMPs).
- These particles will collide with matter only very rarely, and they interact very weakly when they do.
- Although dark matter particles are not yet directly detectable, the LZ detector may be able to detect faint interactions between these mysterious particles and xenon atoms.
- This means that the detector must be sensitive and eliminate all noise.
- Two nested titanium tanks contain ten tons of the elements in their liquid state.
- Two photo multiplier tube arrays (PMT) monitor these tanks and are able to detect faint sources.
- It is located deep below the Black Hills in South Dakota, USA.
- Dark matter detectors are underground to protect them from high-energy protons, atomic nuclei and other particles that travel through space at almost the speed of light.

What is Dark Matter?

- Dark matter is about 85% of all the matter known in the universe. However, it is virtually invisible because it doesn't interact with light.
- Scientists cannot infer dark matter's presence except through its gravitational effect, which literally holds most galaxies together and prevents their constituent stars spinning apart.
- Dark matter doesn't contain protons or neutrons as the everyday matter.

Topic 32. ROCKET FUEL: BACTERIA THAT PACK A PUNCH

Important for subject: Science and Technology



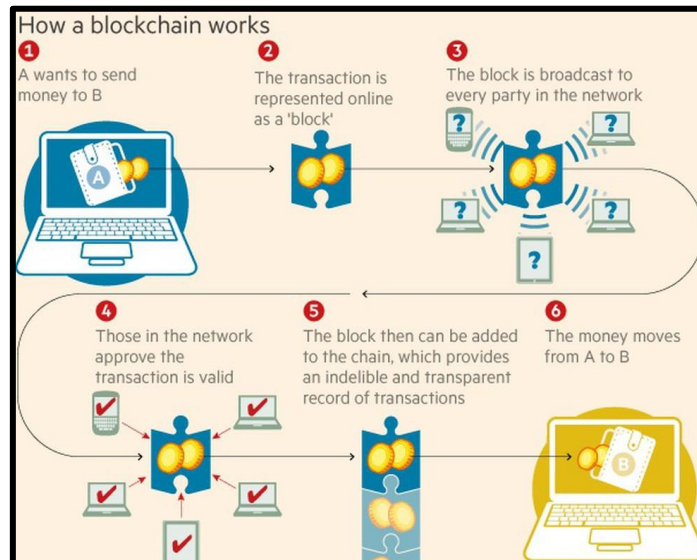
The US Lawrence-Berkeley Lab has developed a fuel made from a bacterium which packs more energy than any rocket fuels currently in use. How common *Streptomyces* could fuel rockets

- This bacteria is used to produce many drugs, including streptomycin.
- Scientists have given the fuel its new name, "POP-FAME".
- This stands for polycyclopropanated fatty acid methyl ester.
- In the 1960s, Syntin, a petroleum-based rocket fuel, was developed by the Soviet Union. It was used to launch numerous Soyuz rockets.
- The 'three-carbon ring' is at the heart of fuel's structure.
- It's a triangle with a single carbon atom at each vertex. (Each carbon Atom combines with two additional carbon atoms, most notably hydrogen).
- This structure is known as a cyclopropane.
- They hold potential energy in the bonds.
- **Types of Fuel:** Longer chains fuels are solids that can be used for rocket fuel applications.

- Shorter chains could be better for jet fuel and the middle might contain a diesel alternative molecule.

Topic 33. COFFEE BOARD LAUNCHED BLOCKCHAIN BASED COFFEE E-MARKETPLACE

Important for subject: Polity



Coffee Board of National Bodies: The Coffee Board, a statutory body, was established under Section (4) of 1942's Coffee Act. It functions under the administrative control of India's Ministry of Commerce and Industry.

- The Board is composed of 33 members, including the Chairperson.
- The 32 remaining members representing different interests are appointed according to Section 4(2) of Coffee Act, read with Rule 3 Coffee Rules, 1955.
- The Board focuses its activities primarily in the areas research, extension, and development, market intelligence as well as external & internal promotion, welfare measures, and marketing intelligence.
- Bangalore is the headquarters of the Board.
- The board also has a Central Coffee Research Institute in Balehonnur, Karnataka, and a Sub-Station in Chettalli, Karnataka.
- There are also Regional Coffee Research Stations located at Chundale, Chundale, Thandigudi, Tamil Nadu, Narasipatnam, Andhra Pradesh, and Diphu (Assam).
- It also has extension units that are located in the coffee growing regions of Karnataka and Kerala.

- Block chain is a digital database or ledger that stores information in "blocks" and then links them together to form "chains".
- It offers an unmatched combination of permanent and non-tamper-evident records, transaction transparency and auditability, and real-time transaction transparency.
- Blocks are the "current" portion of a block chain that records transactions.
- Once completed, they go into the permanent block chain database.
- Every time a block is completed, a new one is generated.
- Blocks are linked together (like a chain), in a proper linear, chronological sequence.
- Each block contains a hash of previous blocks. Each computer or user can access an exact copy of the block chain.
- All users are connected together in a network.
- Any new information added to or altered via a block must be approved by more than half of the total users.
- **Rubber Board:** Other commodity board The Rubber Board, a statutory organisation established under Section (4) of 1947's Rubber Act, is under the administrative control of Ministry of Commerce and Industry.
- The Chairman of the Board, who is appointed by Central Government, leads it.
- It has 28 members that represent various interests in natural rubber industry.
- The headquarters of the Board is in Kottayam, Kerala.
- The Board is responsible to develop the rubber industry by supporting and encouraging research, extension, and training activities related rubber.
- It also keeps statistics on rubber, promotes rubber marketing and engages in labour welfare activities.
- **Five Departments are responsible for the activities of Board members:** Extension & Advisory Services; Research Services (rubber Research Institute of India); Training (Rubber Training Institute); Finance.
- **There are five independent divisions:** Internal audit, Planning and Market Promotion. Vigilance Tea Board is the fifth.
- Tea Board was established as a statutory entity on the 1st of April 1954, as per Section 4 of the Tea Act 1953.
- It is an apex body that oversees the development of the tea industry.

- The Board is composed of 32 members, including the Chairman and Deputy Chairmen appointed by the Government of India from different parts of the Tea Industry.
- The Board's Head office is located in Kolkata.
- **There are two Zonal offices:** one in North Eastern Region, Jorhat in Assam, and one in Southern Region, Coonoor (Tamil Nadu).
- Three overseas offices have been established in London, Dubai, and Moscow to promote tea.
- A separate directorate was created during the reporting year to address the development needs of the small sector, which represents more than 1/3 of national tea production.
- Tea Board's functions and responsibilities include increasing production and productivity, improving tea quality, market promotion, and welfare measures for plantation workers, and supporting Research and Development.
- Another important function is the collection, collation, and dissemination of statistical data to all stake holders.
- The Board, as the regulatory body, exerts control over producers, manufacturers and exporters, tea brokers and auction organizers through various control orders notified by Tea Act Tobacco Board.
- The Tobacco Board was established as a statutory entity on the 1st of January 1976, under Section (4), 1975 Tobacco Board Act.
- The Chairman of the Board, Guntur (Andhra Pradesh), is the head of the Board.
- He is responsible for developing the tobacco industry.
- The Board's primary function is to promote all types of tobacco and its allied products for export.
- However, it also has other functions such as production, distribution (for domestic use) and regulation of Flue Cured Virginia tobacco Spices Board Spices Board was established under the 1986 Spices Board Act (10 of 1986).
- The merger of the Cardamom Board with the Spices Export Promotion Council, under the administrative control of Department of Commerce Spices Board, is responsible for overall development of the cardamom industry as well as export promotion of 52 spices in the Schedule of the Spices Board Act 1986.

- The Board's primary functions include the development of small and big cardamom, regulation and promotion of spice exports, and quality control for spices.
- The Spices Board also conducts small and large-scale research on cardamom under the Indian Cardamom Research Institute

Topic 34. ENFORCING FUNDAMENTAL DUTIES

Important for subject: Polity

Enforcement of Fundamental Duties. A Supreme Court petition sought to enforce fundamental duties, including patriotism, unity of nation and patriotism, by means of 'comprehensive and well-defined laws.

- Petitioners argued that citizens needed to be reminded that their fundamental duties were just as important as their fundamental rights under the Constitution.
- Although it acknowledged that the 11 fundamental duties listed under Article 51A of Constitution were essentially "moral obligations" for citizens, the petition used "sacrosanct", to describe these obligations.
- It stated that the time was right to balance rights, liberty and freedoms with obligations. Fundamental duties instilled a profound sense of social responsibility towards the nation.
- It stated that fundamental duties were "brazenly ignored" by people. These duties were important tools to preserve unity and integrity.
- In the petition, the Supreme Court's ruling in the Ranganath case was cited to argue that social sanctions Verma Committee on Fundamental Duties should be used to enforce fundamental duties.
- 1999 Verma Committee on Fundamental Duties of the Citizens identified the existence of legal provisions to implement some of the Fundamental Duties.
- These are listed below: The Prevention of Insults to National Honor Act (1971), prevents disrespect to Constitution of India, National Flag and National Anthem.
- There are many criminal laws that can be used to punish people who encourage enmity among different groups of people based on language, race or place of birth.
- The Protection of Civil Rights Act (1955), provides penalties for offenses related to caste or religion.

- According to the Indian Penal Code (IPC), imputations or assertions that are prejudicial to national integration are punishable offenses.
- The 1967 Unlawful Activities Prevention Act allows for the designation of a communal organization as an illegal association.
- The 1951 Representation of the People Act (or the Representation of the People Act) allows for the disqualification of state legislators or members of Parliament for engaging in corrupt practice. This is when they solicit votes on the basis of religion or promote enmity among different sections of the population on the grounds of race, caste, language and religion.
- The Wildlife (Protection) Act of 2002 prohibits the trade in endangered and rare species. The Forest (Conservation) Act of 80 checks indiscriminate forest deforestation and diversion of forestland for non-forest purposes.

Topic 35. 'UNPARLIAMENTARILY WORDS' UNFIT FOR THE HOUSE

Important for subject: Polity

What are 'unparliamentarily words' unfit for the House, and how are they compiled?

An argument broke out over a 50-page compilation of words that were deemed inappropriate for use in Parliament Article 105 of the Constitution of India Powers and privileges.

- The Houses of Parliament, and members and committees thereof, are subject to this constitution and its rules and standing orders.
- The procedure of Parliament shall allow freedom of speech.
- Any proceedings brought against any Member of Parliament for anything said or any vote he has given in Parliament or any other committee shall not be admissible.
- This is the only provision that applies to the publication, paper, vote, or proceedings by either House of Parliament.
- Other than that, the powers, privileges, and immunities for each House of Parliament and its members and committees shall be as defined by Parliament.
- Anything an MP says is important and subject to the Rules of Parliament, the "good judgment" of Members and the control of proceedings from the Speaker.
- These checks ensure that MPs are not able to use "defamatory, indecent, undignified or unparliamentarily language" within the House Rule 380 ("Expunction")
- **The Rules of Procedure and Conduct of Business for Lok Sabha state:** "If Speaker is of the opinion that words were used in debate.

- These words are indecent, defamatory, indecent, unparliamentarily, or undignified, and the Speaker can, while exercising discretion, order that such words are expunged.
- **Rule 381 states:** "The House shall mark the portion so expunged with asterisks. An explanatory footnote shall also be added to the proceedings.
- Phrases and words in English as well as in Indian languages which are considered "unparliamentarily."
- These words are kept out of the records of Parliament by the Presiding Officers, Speaker of Lok Sabha, and Chairperson Rajya Sabha.

Topic 36. RS NOMINATION

Important for subject: Polity

On Wednesday, the government nominated Ilaiyaraaja as musician, PT Usha track-and-field legend, Telugu screenwriter V Vijayendra Prasad and Veerendra Heggade, philanthropist, and spiritual leader, to Rajya Sabha.

- Art 80(3) Article 80(3) states that members must have special knowledge or experience.
- Concerning such matters, namely Literature, Science, Art, and Social Service.
- Rajya Sabha was established in 1952. Since then, total of 142 people have been nominated to be its members.
- This list includes journalists, lawyers, educators, historians and litterateurs. It also includes economists, journalists, engineers, economists and administrators.
- The Fourth Schedule to the Constitution of India, 26 January 1950, stipulated that the Rajya Sabha should consist of 216 members.
- 12 of these members were to be nominated and the other 204 elected by the States.
- The current strength is however 245, of which 233 are from the states and territories, and 12 are nominated or appointed by the President.
- The Rajya Sabha does not need to be disintegrated; one-third retires every two years.
- The Rajya Sabha's 12 nominee members are people who are highly respected in certain fields and well-known contributors to that field.
- Nominated members usually include people with special knowledge or experience in literature, science and art.

What's the role of nominated member?

- Rajya Sabha's nominated members enjoy all the privileges and powers to which elected MPs have access.
- They can participate in the House's proceedings in the usual manner, even though some members are not present and don't seem to be interested in legislative work.
- This is why Sachin Tendulkar (cricketer), Rekha (actor) and Anu Aga (businesswoman) have been criticized in recent years. Nominated members cannot vote in the election for the President.
- However, they do not have the right of vote for the election to the Vice-President.

Why is the Rajya Sabha nominated for members?

- According to N Gopalaswami Ayyangar, who was part of the Constitution.
- Drafting Committee nomination offers an opportunity to more experienced people, who may not be in the thick of the political fray but might be willing to engage in the debate with a level of learning and importance that we don't normally associate with the House of the People.
- **This sentiment was perfectly captured by the first 12 presidential nominees:** Zakir Husain who became the President of India later; historians Kalidas Nag, Radha Kumud Mookerji and Gandhian author Kakasaheb Kalelkar; social worker N R Malkani and danseuse Rukmini Devi Andale; Gandhian scholar J M Kumarappa and jurist Alladi Krishnaswami.

Topic 37. FOREST (CONSERVATION) RULES 2022

Important for subject: Polity

Recently, it was announced that the Ministry of Environment, Forest and Climate Change (MoEFCC) has published an announcement on the Forest (Conservation) Rules, 2022.

- **The key provisions for committees are:** The committee was an advisory Committee that was a regionally empowered committee in each of the regional integrated offices, and a screening committee in the State/Union Territory (UT).
- **The Government Advisory Committee:** The role of the Advisory Committee is restricted to give advice or make recommendations in relation to approvals under the relevant sections of any proposals that are referred to it as well as any other matter relating to the conservation of forests that is referred to them by government officials.
- **Central government.**

- Project Screening Committee Project Screening Committee MoEFCC has directed the establishment of a screening committee for projects in each state/UT, for an initial examination of projects that involve the diverting forests.
- The five-member panel will meet at a minimum twice every month.
- The committee will provide advice to the governors of the states on projects in a timely controlled way.
- **Regional Empowered Committees:** The term "linear" refers to all projects(roads and highways, for example) and projects that require forests up to 40 hectares or those that are slated to make utilization of forest land that has a canopy density of up to 07 -- regardless of their size and extent to be used for survey purposes -- will be reviewed within the Integrated Regional Office Responsibility to states: States have the task of settling the forest rights of forest inhabitants (Forest Rights Act 2006) and permitting the diversion of forests.
- Allows compensation for forest restoration (CA) in states that do not have CA If the state has more than two-thirds of its land under green cover or more than one-third of the forest cover and forest cover, then CA can be taken in other states or UTs where the coverage is less than 20%. Concerns.
- New Forest Conservation Rules do not mention the previous requirement to obtain the gram sabha NoC prior to taking forest land to be used to be used for projects.
- The rule clarifies that the compliance of Forest Rights Act Forest Rights Act is not in any way required to get the final approval of forest diversion granted by the ministry of environment.
- They also permit the settlement of forest rights when the final approval for clearance of forest is given from the Centre.
- The Forest Rights Act (FRA) in 2006.
- It recognized the rights of tribes of the forest that are a part of it as well as other traditional forest dwellers to forest resources, which they relied to meet a range of needs that included habitation, livelihood and various other socio-cultural needs.
- The policies for managing forests, such as policies for forest management, including Acts, Rules and Forest Policies of Participatory Forest Management in post-colonial and colonial India were not, prior to the passage of this Act acknowledge the symbiotic connection of the STs with the forest as evident in their dependence upon the forests as well as their tradition-based wisdom on the conserving the forests.

- In order to rectify the historical injustice caused to forest-based communities.
- In order to ensure land tenure and livelihood as well as food security for the forest dwellers Scheduled Tribes as well as other forest dwellers of the past.
- To enhance the conservation program of the forest by imposing the responsibility and authority of Forest Rights holders to ensure sustainable use, preservation of biodiversity, and maintaining ecological balance.
- The Act includes Rights of Self-cultivation as well as Habitation which are typically regarded as individual rights.
- Rights of Community Rights as fishing, grazing and access to water bodies in forests as well as Habitat Rights for PVTGs.
- Traditional seasonal resource access of the pastoral and nomadic communities Access to biodiversity, the right of communities to intellectual property and the traditional knowledge and recognition of traditional customary rights and rights to protect, regenerate , or preserve or manage any community forest resource to ensure its sustainable usage.
- **The law identifies four kinds of rights:**
- **Title rights:** It confers FDST along with OTFD the right to own to the land cultivated by forest dwellers or tribals which is subject to a maximum of four hectares. Ownership is limited to the land being used for cultivation by the relevant family, and no new land will be given.
- **Rights to use:** The rights of inhabitants extend to the extraction of Minor Forest Produce and grazing zones, to routes for pastoralists, etc.
- Rights to development and relief to rehabilitation in the event of illegal eviction or forceful displacement, as well as to basic facilities that are essential to be restricted forest protection
- **Rights to manage forests:** This includes the right to safeguard the environment, regenerate or conserve, or manage any forest resource that has been historically protected and conserving to ensure sustainable use.
- Additionally, it provides rights to allot forests for development purposes in order to meet the fundamental infrastructure requirements of the community.
- Together along with Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Settlement Act, 2013 FRA safeguards the tribes from being evicted without rehabilitation, and settlement Special Status of Gram Sabha.

- The Act also confers on members of the Gram Sabha and rights holders the obligation to conserve and protection of biodiversity including forest, wildlife, adjoining waters sources, catchment zones, and other sensitive ecological areas, and to put an end to any destructive practices that could harm these resources, or the traditional and natural heritage of the tribes.
- The Gram Sabha is also a highly empowered body as per the Act which allows the tribal community to be a major factor in the determining of local policies and plans which affect their lives.
- This is why the Act allows forest dwellers to utilize and access forests in the same way they have always been accustomed to and to conserve, protect the forests and to manage them, as well as protect forest dwellers from illegal expulsions, and provides basic development services to allow the forest dwellers, to use services for education and nutrition, health infrastructure, etc.

Topic 38. STATES DISCUSS ISSUES OF RIVER WATER SHARING, WOMEN'S SAFETY, FAST-TRACK COURTS WITH HOME MINISTER DURING A MEETING OF THE NORTHERN ZONAL COUNCIL

Important for subject: Polity

Federalism Amit Shah unveiled Thursday the "Statue of Peace" of Ramanujacharya, a social reformer and philosopher from Sonawar, on Thursday

What Are Zonal Council?

- Zonal Councils are statutory bodies, but not constitutional. They are established by an Act of Parliament, the States Reorganisation Act of 1956.
- **This act divided the country into five areas:** Northern, Central and Eastern, Eastern, Southern, and created a zonal council.
- A separate Act of Parliament, The North-Eastern Council Act of 1972, also created a North-Eastern Council.
- Its members are Assam, Manipur and Mizoram.
- These advisory bodies make recommendations on matters of common interest
Organizational structure: Chairman: Each of these is chaired by the Union Home Minister.

- Councils Vice Chairman: Each zone's Chief Ministers serve as Vice Chairman for the Zonal Council.
- Each member holds office for one year.
- **Members:** Chief Minister, two others.
- The Governor nominates the Ministers from each State and two Union Territories members to the zone Advisers.
- One person is nominated for each Zonal Council, Chief Secretaries, and another officer/Development commissioner nominated each state.
- Facilitating cooperation between the States and the Centre to exchange ideas and experience.
- Establishing a climate for co-operation among the States in order to ensure the successful execution of development projects.
- **Functions of the Councils:** Any matter of common concern in the fields of economic and socio planning.
- Any matter concerning border disputes or inter-State transportation.
- Any matter related to or arising from the reorganization the States under the States Reorganisation Act

Topic 39. BETI BACHAO BETI PADHAO

Important for subject: Governance



Beti Bachao Beti Padhao

- According to the Women and Child Development guidelines, Beti Bachao Beti Padhao will be expanded across the country.
- This is the Centre's flagship program for women's empowerment.
- It focuses on education and improving sex ratio.

- **Ministry Objective:**
- **These are the objectives of the Scheme:** To prevent gender-biased sex selection elimination.
- To ensure the survival and protection for the girl child.
- To ensure that the girl child is educated and participates in school.
- To increase girls' participation in sports, the Target BBBP scheme seeks to achieve the following: An improvement in the Sex Ratio.
- At Birth (SRB), by 2 points each year; Improvement in institutional deliveries, sustained at 95% or higher, 1% increase.
- Enrolment in secondary education and the skilling of women/girls per year.
- To determine the dropout rate of secondary and higher secondary girls.
- Sensitization about safe menstrual hygiene management
- Strategies create a sustained Social Mobilization and Communication Campaign for girls to promote education and equal value.
- For intensive & integrated action, Mobilize & Train should be centered on Gender Critical Cities and Cities with low CSR.
- Panchayati Raj Institutions/Urban local bodies/ Grassroots worker as catalysts for social change, in partnership with local community/women's/youth groups Engage with Communities to challenge gender stereotypes and social norms Enable Inter-sectoral and inter-institutional convergence at District/Block/Grassroots levels

Topic 40. INDIA RANKS 135 OUT OF 146 IN GENDER GAP INDEX

Important for subject: Governance



What is Gender Gap Index?

The Global Gender Gap Index measures gender parity across four dimensions or sub-indices.

1. Economic participation and opportunities
 2. Education
 3. Health and Survival
 4. Political empowerment
- It is a scale that measures scores from 0 to 100.
 - This can be used to indicate the distance between parity and the closing of the gender gap.
 - **The World Economic Forum released the Index. Key Takeaways:** India ranks 135 out of 146 countries.
 - Global Gender Gap Index 2022 India was ranked 140th out of 156 countries in 2021.
 - India is ranked 146 for health and survival, 143 for economic participation and opportunity and 107 for educational attainment, while 48 ranks for political empowerment.

- India is ranked poorly among its neighbours and trails Bangladesh (71), Nepal (96) Sri Lanka (110), Maldives (127) and Bhutan (126). Only Iran (143), Pakistan (155) and Afghanistan (146), performed worse in South Asia.
- According to the report, India will take 132 years for gender parity.
- The gap between 2021-2021 is only 4 years.
- The gap has been closed by the 681% World Economic Forum.
- It is an international lobbying and non-governmental organization based in Geneva.
- It was established by Klaus Schwab, a German economist and engineer.
- The WEF's annual meeting in January at Davos (a mountain resort in Switzerland's eastern Alps) is the most well-known event.

Topic 41. INTERNATIONAL LAWS TO STOP PLASTIC POLLUTION FROM FISHING VESSELS

Important for subject: Environment



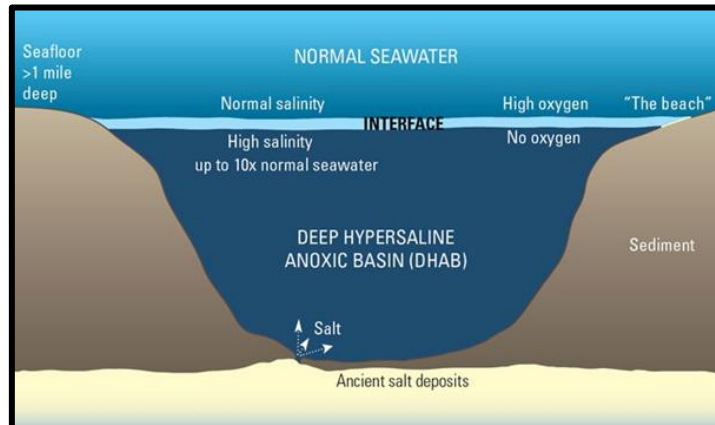
The recent United Nations Oceans Conference was focused on ocean plastic pollution. It issued a declaration supporting an earlier UN Environment Assembly decision to begin negotiations for a global plastics convention.

- Around half of all ocean plastic pollution is caused by 45 million fishing boats operating in international and national waters.
- Fishing vessels can also produce waste such as nets and floats that have been deliberately abandoned.
- Plastics were found in deep ocean areas such as the Mariana Trench, and remote regions like Henderson Island in Pitcairn group.
- Lost or abandoned fishing gear could lead to "ghost fishing".
- Where nets, FADs, and other gear continue "fishing" for decades.
- Other effects of ocean plastic pollution are entanglement and ingestion, transfer invasive species and toxic substances, navigational hazards, and beach fouling

- **The International Maritime Organisation (IMO):** has developed two main regimes for plastic pollution by fishing vessels.
- One is the London Dumping Regime, which regulates the intentional dumping of plastic waste from ships and platforms at sea.
- This means that plastic waste, including fishing nets and FADs, must not be deliberately dumped in any maritime zone other than the state's internal waters.
- There is an exception to disposal of material that is not necessary for vessel operation, but it is impossible to argue this covers deliberate disposal of plastic waste due to the damage it does to marine ecosystems.
- Another is the International Convention for the Prevention of Pollution from Ships, (MARPOL), which regulates both accidental and deliberate plastics discharge from ships.
- The London regime doesn't apply to fishing gear that is lost accidentally, but MARPOL does.
- It prohibits the accidental and deliberate discharge of plastics into the ocean.
- However, there is a loophole.
- The ban does not apply fishing boats where "all reasonable precautions were taken to prevent such losses" or where the release of fishing gear is necessary to protect the environment.
- These rules are not the only ones.
- The Commission for the Conservation of Antarctic Marine Living Resources, which manages the fisheries in the Southern Ocean and bans the use of plastic packing bands on all vessels.
- These rules are not enforced well.
- It is difficult to monitor and enforce the ban on plastic pollution from high-seas vessels.
- There are also insufficient incentives for vessels to retrieve any gear that they find while fishing.

Topic 42. CAN GREEN TECHNOLOGY HURT MARINE BIODIVERSITY?

Important for subject: Environment



The negative effects of green technology adoption must be addressed, according to the study published in Nature Ecology and Evolution.

- **Green Technology and the Environment:** Biodegradable plastics have been replaced by fossil fuel-based plastics using biodegradable materials, such as biodegradable plastic bags made from plant starches.
- These materials are not biodegradable in the ocean, and can also cause marine litter.
- A potential threat to marine ecology is also the growing demand for renewable energy technology such as lithium batteries for electric vehicles.
- The 'brine pools' in deep seas, which contain more saline water and higher lithium concentrations, could be future locations for extraction.
- These environments could be at risk due to a rising demand for electric vehicles powered by lithium.
- The mesopelagic Zone is home to approximately 10 billion tonnes of small lantern fishes.
- They can be sold for food or used as fertilizer.
- The large-scale capture of mesopelagic species would result in immense environmental damage.
- These fish act as an ocean pump, and remove carbon from our atmosphere.
- **Horizon scanning:** This technique identifies new, but not well-known issues that could have important implications over the next decade.

- This methodology is intended to "primarily serve as a signpost, focusing on specific issues and supporting researchers and practitioners in seeking investment in these areas.
- This is a great way to bring together experts from different subject areas in order to discuss common problems and develop more comprehensive solutions.
- The horizon scan was previously used to identify environmental issues that have now been proven to have a universal impact.
- An early warning was given by a scan in 2009 about the danger micro plastics pose to marine environments

Topic 43. I2U2 SUMMIT

Important for subject: International Relations



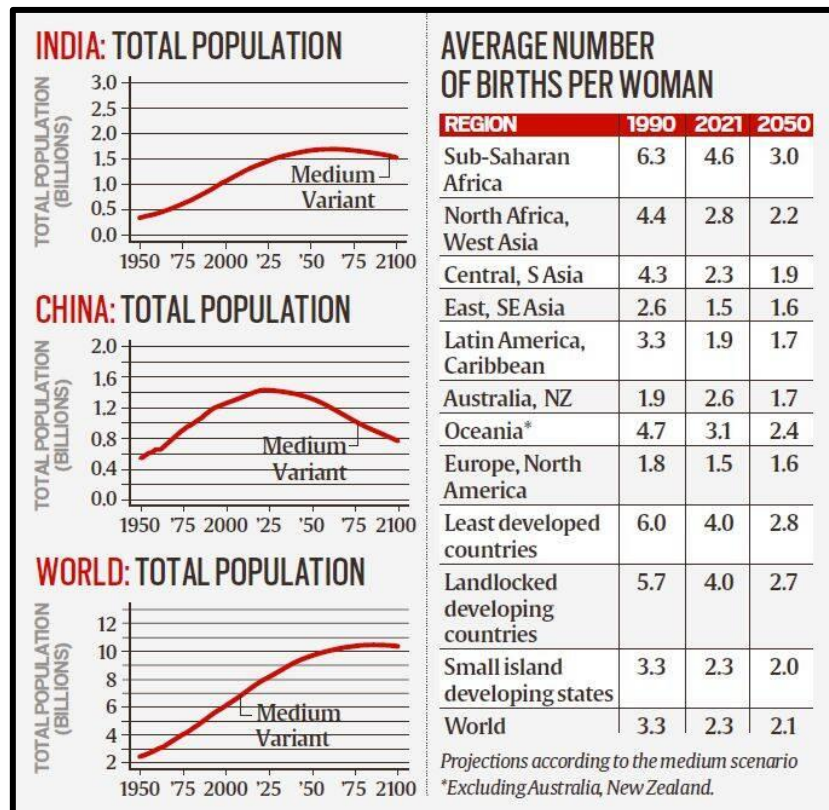
I2U2 is an acronym for India, Israel and the UAE. It was also known as the "West Asian Quad" by Ahmed Albanna (Ambassador of the UAE to India).

- It was given the International Forum for Economic Cooperation and Aim of I2U2.
- The countries have mutually identified six areas of cooperation.
- They want to encourage investment in water, energy transportation, space, food security, and health.
- The cooperation between the four nations would be encouraged by the framework.
- It would encourage support in different domains such as technology, infrastructure, and maritime security.
- This grouping also shows India's increasing engagement with West Asia, including Israel, with which it has established closer ties Background.
- The 2020 Abraham Accords had seen Israel officially normalize diplomatic ties to the UAE and Bahrain.
- This marked a significant shift in the stance of West Asian nations on Israel.

- I2U2 was formed in October 2021, following the Abraham Accords to address issues concerning maritime security and infrastructure.

Topic 44. READING UN POPULATION REPORT

Important for subject: IR



According to the World Population Prospects 2022, India will surpass China in 2023 as the most populous country on the planet. The global population will be 8 billion by 2023.

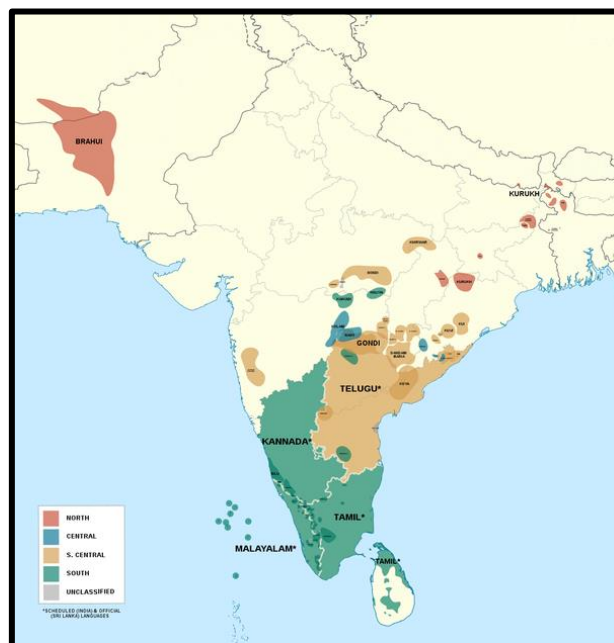
What is the WPP?

- Since 1951, the WPP has been published by the Population Division of UN Department of Economic and Social Affairs in a biennial cycle.
- Each WPP revision provides historical data series on population indicators that start in 1950.
- This is done by taking into consideration newly released national data in order to revise estimates for Past trends in fertility, death or international migration.
- **Key findings from the report include:** Global population growth is predicted to be around 85 billion by 2030, 97 billion by 2050, and 104 billion by 2100.

- **Eight countries will account for more than half of the global population growth projected to 2050:** the Democratic Republic of the Congo (Egypt), Egypt, Ethiopia and Nigeria.
- As a percentage of the total population, older people are growing in number.
- A projected rise in the share of the global 65-year-old population is expected to occur from 10% in 2022 and 16% by 2050.
- The steady drop in fertility has resulted in an increase in the number of people working age (between 25-64) which creates an opportunity for rapid economic growth per capita.
- This shift in age distribution offers a time-bound opportunity for rapid economic growth, known as the "demographic dividend".
- Between 2000 and 2020, high-income nations had a population growth contribution that exceeded the balance between births and deaths (662 million).
- Over the next few decades, immigration will be the only driver of high-income country's population growth.

Topic 45. ARYAN AND DRAVIDIAN ARE GEOGRAPHICAL TERMS: TN GUV

Important for subject: History



According to the Governor, the geographic regions north and south of Vindhya range, known as 'PanchAryas' and 'PanchDravidas' respectively, were deliberately distorted in order to create racial divisions among the people and weaken the country's unity.

- Dravidar, or Dravidian, was a term that represented areas such as those in Maharashtra, Andhra Pradesh and Telangana.
- The Guv laid a wreath at the "Vellore Sepoy Mutiny Memorial Pillar" and paid tribute to the brave soldiers who participated in the 'Day of Vellore Sepoy Uprising Against the British' here

What is Vellore Mutiny 1806?

- The Vellore Mutiny was about 50 years before the Indian Revolt in 1857.
- It was triggered in Vellore (present-day Tamil Nadu) on 10 July 1806 and lasted just one day.
- However, it was violent and shaken the British East India Company.
- It was the first major mutiny of the Indian sepoys within the East India Company.
- The immediate cause of the mutiny was mainly resentment towards changes to the sepoy dress codes, which were introduced in November 1805.
- Hindus were forbidden from wearing any religious symbols on their foreheads during duty.
- Muslims were also required to trim their moustaches and shave their beards.
- General Sir John Craddock was also the Commander-in-Chief for the Madras Army and ordered that a round hat be worn, similar to the one associated with Indian converts, Christians, and Europeans.
- The new headdress featured a leather cockade that was meant to replace the existing one.

Topic 46. GOVT REVIVES POETRY BANNED DURING BRITISH RULE

Important for subject: History

The Freedom Struggle section on the Amrit Mahotsav website, named Swatantra Swar shows a few poems written prior to 1947 in various languages like Bengali, Gujarati, Hindi, Kannada, Marathi, Odia, Punjabi, Sindhi, Tamil, Telugu and Urdu.

- A few of the most popular poems included "Rashtriya Pataka" from the book "Azaadi Bansuri".
- Telugu poetry "Bharatha Matha Geetham" by Vaddadhi Seetharamanjaneyulu, and Pudipeddhi Kashi Viswanatha Sashtri "Daridra Nian" by Odia poet Gangadhar Mishra.

- Gujarati poem "Kasumbi No Rang" from the book Sindhudo by poet Jhaverchand Meghani.
- **What's Azadi Ka Amrit Mahotsav:** Azadi Ka Amrit Mahotsav is an initiative by the Government of India to celebrate and remember the 75th anniversary of India's independence and the glorious past of its Indian people, their culture, and achievements.
- Furthermore, Azadi ka Amrit Mahotsav is a symbol of everything that is modern about India's social, political, and economic identity.
- The Azadi Ka Amrit Mahotsav ceremony officially started on March 12th, 2021.
- It began the countdown of 75 weeks to India's 75th Independence anniversary.
- It will conclude after one year on August 15, 2023.
- It is the Ministry of Culture, the sole authority for the long-running Amrit Mahotsav celebrations

Topic 47. MOROCCO A TOP FERTILIZER PRODUCER COULD HOLD A KEY TO THE WORLD'S FOOD SUPPLY

Important for subject: Agriculture


Morocco is home to a fertiliser industry that has huge production capabilities and an international reach. It is also one of the top four exporters of fertilisers in the world, after China and Canada.

- Fertilizers are generally divided into three main categories: phosphorus fertilisers and potassium fertilizers.
- **Nitrogen fertilizer:** This is the most important nutrient.
- Plants absorb nitrogen more than any other element.
- The essential ingredient in ensuring that plants remain healthy and nourished after harvest is nitrogen is vital.
- Because nitrogen is necessary for the formation of proteins, and protein is a major component of the tissues of most living organisms.
- **Phosphorus fertilizers are:** The ability of a plant to store and use energy, as well as the process of photosynthesis, is affected by phosphorus.
- It is also necessary to support plants' growth and development normally.
- The phosphate rock that makes up commercial fertilizers contains phosphorus.
- Potassium fertilizers are important because they help increase crop yields and quality.

- Potassium protects plants from cold and dry weather, strengthening their root system and protecting them against wilting.

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