



**WE4U IAS COACHING**  
**UPSC MONTHLY CURRENT AFFAIRS**  
**MAY 2022**

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## 1. INDIAN POLITY

### 1.1 Deemed Forest

[News].

Recently, Karnataka has announced that it would declassify 6.64 lakh hectares (nearly 67%) of the 9.94 lakh hectares of deemed forests in the state and hand it over to Revenue authorities.

[Concept].

**Definition of Deemed Forests.**

- \* Deemed forests, comprising about 1% of India's forest land, are a controversial subject as they refer to land tracts that appear to be a "forest", but have not been notified so by the government or in historical records.
- \* The concept of deemed forests has not even been clearly defined in any law including the Forest Conservation Act 1980.
- \* In the T N Godavarman Thirumalpad case 1996, the Supreme Court (SC) accepted a wide definition of forests under the Act and held that the word 'forest' must be understood according to its dictionary meaning.
- \* This description covers all statutorily recognised forests, whether designated as reserved, protected or otherwise for the purpose of Section 2 (1) of the Act and also includes any areas recorded as forest in the government record irrespective of the ownership.

- \* The provisions for the conservation of forest and the matters connected therewith applies clearly to all forests irrespective of the ownership or classification.
- \* The freedom to define which tracts of forest qualify as forest has been the prerogative of States since 1996.
- \* However, this only applies to forest land that has not already been historically classified as “forest” in revenue records, or categorised so by the government as “protected” or “reserve forest”.

## 1.2 Disqualification of MLAs and MPs

[News]:

The Election Commission (EC) has sent a notice to Jharkhand Chief Minister over an office-of-profit charge against him for allotment of a mining lease in his name.

[Concept]:

**Disqualification grounds.**

The constitution of India has provided (in article 102) that a member of parliament will be disqualified for membership if:

- \* He holds any office of profit under the Union or state government (except that of a minister or any other office exempted by Parliament)

- \* He is of unsound mind and stands so declared by a court.
- \* He is an undischarged insolvent.
- \* He has ceased to be a citizen of India.
- \* He is disqualified under any other law by parliament

NOTE: The last condition above led the parliament to include some other conditions for disqualification in **Representation of People Act (1951)**. These are as follows:

- \* He must not have been found guilty of certain election offences and corrupt practices
- \* He must not have been convicted for any offence that results in imprisonment for two or more years. However, detention under preventive detention law is not disqualification.
- \* He must not have failed to lodge an account of election expenses within stipulated time.
- \* He must not have any interest in government contracts, works and services.
- \* He must not be a director or managing personnel in a company / organization in which government has at least 25% share.
- \* He must not have been dismissed from government service due to corruption or disloyalty to state.
- \* He must not have been convicted for promoting enmity between groups.

- \* He must not have been punished for supporting social crimes such as untouchability, sati, dowry etc.

### 1.3 Lokpal

[News],

Lokpal to get permanent office at World Trade Centre in Delhi

[Concept],

**Lokpal Act of 2013.**

The Act allows setting up of anti-corruption ombudsman called Lokpal at the Centre and Lokayukta at the State-level.

**Composition.**

- \* The Lokpal will consist of a chairperson and a maximum of eight members.
- \* Applicability: The Lokpal will cover all categories of public servants, including the Prime Minister. But the armed forces do not come under the ambit of Lokpal.
- \* The Act also incorporates provisions for attachment and confiscation of property acquired by corrupt means, even while the prosecution is pending.
- \* The States will have to institute Lokayukta within one year of the commencement of the Act.



- \* The Act also ensures that public servants who act as whistleblowers are protected.

**Powers:**

- \* The Lokpal will have the power of superintendence and direction over any investigation agency including CBI for cases referred to them by the ombudsman.
- \* As per the Act, the Lokpal can summon or question any public servant if there exists a prima facie case against the person, even before an investigation agency (such as vigilance or CBI) has begun the probe. Any officer of the CBI investigating a case referred to it by the Lokpal, shall not be transferred without the approval of the Lokpal.
- \* An investigation must be completed within six months. However, the Lokpal or Lokayukta may allow extensions of six months at a time provided the reasons for the need of such extensions are given in writing.
- \* Special courts will be instituted to conduct trials on cases referred by Lokpal.

**Ambit of the Lokpal.**

- \* For a wide range of public servants from the PM, ministers and MPs, to groups A, B, C and D employees of the central government various rules are in place.

- \* If a complaint is filed against the PM, the Act says, “Lokpal shall inquire or cause an inquiry to be conducted into any matter involved in, or arising from, or connected with, any allegation of corruption made in a complaint”.
- \* However, certain conditions will apply. The Act does not allow a Lokpal inquiry if the allegation against the PM relates to international relations, external and internal security, public order, atomic energy and space.
- \* Also, complaints against the PM are not to be probed unless the full Lokpal bench considers the initiation of an inquiry and at least two-thirds of the members approve it.
- \* Such an inquiry against the Prime Minister (if conducted) is to be held in camera and if the Lokpal comes to the conclusion that the complaint deserves to be dismissed, the records of the inquiry are not to be published or made available to anyone.
- \* Lokpal itself is also subjected to the Law.
- \* The Act also includes the Lokpal’s own members under the definition of “public servant”.
- \* The Chairperson, Members, officers and other employees of the Lokpal shall be deemed, when acting or purporting to act in pursuance of any of the provisions of this Act to be public servants.
- \* It shall apply to public servants in and outside India.
- \* It clarifies that a complaint under this Act shall only relate to a period during which the public servant was holding or serving in that capacity.

### **Lokpal (Complaint) Rules, 2020.**

- \* The notification, under Section 59 of the Lokpal and Lokayuktas Act, lays down the rules called the Lokpal (Complaint) Rules, 2020.
- \* According to the complaint forms, published as part of the notification, a complainant has to give a valid proof of identity, as specified therein.
- \* Foreign nationals can also lodge complaints. Only a copy of their passports will be accepted as proof of identity.
- \* The complaint can be filed electronically, by post or in person. In case the complaint is filed electronically, its hard copy has to be submitted to the Lokpal within 15 days.
- \* No complaints can be filed against a public servant under the Army Act, Navy Act, Air Force Act and the Coast Guard Act.
- \* A complaint may ordinarily be made in English, provided that the Lokpal may also entertain a complaint in any of the languages referred to in the Eighth Schedule to the Constitution.
- \* Apart from the details of the accused official(s), allegation and the evidence relied upon, the complainant or the authorised signatory will also have to submit an affidavit.
- \* Registration/incorporation certificate of the organisation, on whose behalf the complaint is made and copy of authorisation certificate in favour of the signatory, if the complaint is on behalf of a board, body, corporation,

company, limited liability partnership, authority, society, association of persons or trusts, has to be furnished.

- \* The Lokpal bench will decide the complaint in the first instance at the admission stage. The Lokpal may seek other details or affidavit, if necessary.
- \* The identity of the complainant or the accused official will be protected by the Lokpal till the conclusion of inquiry or investigation. However, the protection will not be applicable in cases where the complainant herself reveals her identity to any other office or authority while making the complaint to Lokpal.
- \* The complaints, whose contents are illegible, vague or ambiguous, which are trivial or frivolous, do not contain any allegation, are not filed within the limitation period of seven years, or are pending before any other court, tribunal or authority, will have to be disposed of within 30 days.

#### 1.4 Article 161

[News]:

Tamil Nadu Governor has made a reference (mercy petition) under Article 161 to the President.

[Concept]:

**Article 161**

- \* Article 161 provides that the Governor of a State shall have the power to grant pardons, reprieves, respites or remissions of punishment or to suspend, remit or commute the sentence of any person convicted of any offence against any law relating to a matter to which the executive power of the State extends.
- \* It is on lines with Article 72 conferred upon President of India.

### 1.5 Judicial appointments

[News],

Collegium recommends two names for Supreme Court

[Concept],

**Judicial Appointments.**

**For CJI.**

- \* The President of India appoints the CJI and the other SC judges.
- \* As far as the CJI is concerned, the outgoing CJI recommends his successor.
- \* In practice, it has been strictly by seniority ever since the supersession controversy of the 1970s.

**For SC Judges.**

- \* For other judges of the SC, the proposal is initiated by the CJI.

- \* The CJI consults the rest of the Collegium members, as well as the senior-most judge of the court hailing from the High Court to which the recommended person belongs.
- \* The consultees must record their opinions in writing and it should form part of the file.
- \* The Collegium sends the recommendation to the Law Minister, who forwards it to the Prime Minister to advise the President.

#### 1.6 Chief Election Commissioner

[News]:

The current Election Commissioner, Rajiv Kumar will take over as the next Chief Election Commissioner (CEC)

[Concept]:

**Election Commission of India.**

- \* The Election Commission of India (ECI) is an autonomous constitutional authority responsible for administering Union and State election processes in India.
- \* It was established in accordance with the Constitution on 25th January 1950 (celebrated as national voters' day). The secretariat of the commission is in New Delhi.

- \* The body administers elections to the Lok Sabha, Rajya Sabha, and State Legislative Assemblies in India, and the offices of the President and Vice President in the country.
- \* It is not concerned with the elections to panchayats and municipalities in the states. For this, the Constitution of India provides for a separate State Election Commission.

### **Constitutional Provisions.**

- \* Part XV (Article 324-329) of the Indian Constitution. It deals with elections and establishes a commission for these matters.
- \* Article 324: Superintendence, direction and control of elections to be vested in an Election Commission.
- \* Article 325: No person to be ineligible for inclusion in, or to claim to be included in a special, electoral roll—on grounds of religion, race, caste or sex.
- \* Article 326: Elections to the House of the People and to the Legislative Assemblies of States to be based on adult suffrage.
- \* Article 327: Power of Parliament to make provision with respect to elections to Legislatures.
- \* Article 328: Power of Legislature of a State to make provision with respect to elections to such Legislature.
- \* Article 329: Bar to interference by courts in electoral matters.

### **Structure of ECI.**

- \* Originally the commission had only one election commissioner but after the Election Commissioner Amendment Act 1989, it was made a multi-member body.
- \* The Election Commission shall consist of the Chief Election Commissioner (CEC) and such number of other election commissioners, if any, as the President may from time-to-time fix.
- \* Presently, it consists of the CEC and two Election Commissioners.
- \* At the state level, the election commission is helped by the Chief Electoral Officer who is an IAS rank Officer.

#### **Appointment & Tenure of Commissioners.**

- \* The President appoints CEC and Election Commissioners.
- \* They have a fixed tenure of six years, or up to the age of 65 years, whichever is earlier.
- \* They enjoy the same status and receive salary and perks as available to Judges of the Supreme Court (SC) of India.

#### **Removal.**

- \* They can resign anytime or can also be removed before the expiry of their term.
- \* The CEC can be removed from office only through a process of removal similar to that of a SC judge by Parliament.



**Limitations.**

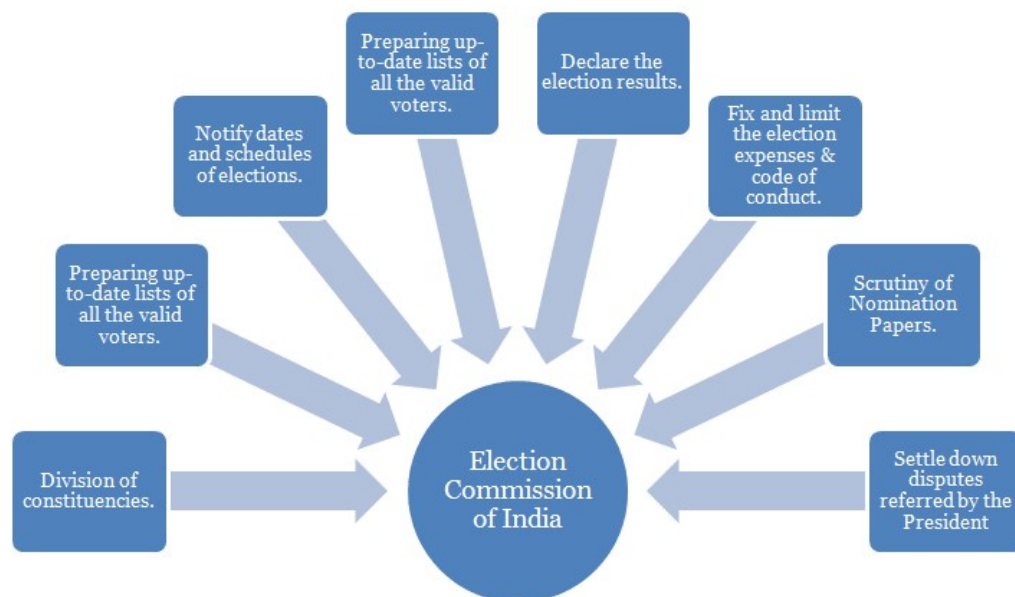
- \* The Constitution has not prescribed the qualifications (legal, educational, administrative or judicial) of the members of the Election Commission.
- \* The Constitution has not specified the term of the members of the Election Commission.
- \* The Constitution has not debarred the retiring election commissioners from any further appointment by the government.

**What are the Powers and Functions of ECI?****Administrative.**

- \* To determine the territorial areas of the electoral constituencies throughout the country on the basis of the Delimitation Commission Act of Parliament.
- \* To prepare and periodically revise electoral rolls and to register all eligible voters.
- \* To grant recognition to political parties and allot election symbols to them.
- \* Election Commission ensures a level playing field for the political parties in election fray, through strict observance by them of a Model Code of Conduct evolved with the consensus of political parties.

**Advisory Jurisdiction & Quasi-Judicial Functions.**

- \* Under the Constitution, the Commission has advisory jurisdiction in the matter of post election disqualification of sitting members of Parliament and State Legislatures.
- \* The opinion of the Commission in all such matters is binding on the President or, as the case may be, the Governor to whom such opinion is tendered.
- \* Further, the cases of persons found guilty of corrupt practices at elections which come before the SC and High Courts are also referred to the Commission for its opinion on the question as to whether such person shall be disqualified and, if so, for what period.
- \* The Commission has the power to disqualify a candidate who has failed to lodge an account of his election expenses within the time and in the manner prescribed by law.



## 1.7 Chief of Defence Staff and top-level military reforms

[News]:

The Government is yet to announce a successor to the country's top military post, post death of India's first Chief of Defence Staff (CDS) General Bipin Rawat.

[Concept]:

### Chief of Defence Staff (CDS)

Background:

- \* Its creation was recommended in 2001 by a Group of Ministers (GoM) that was tasked with studying the Kargil Review Committee (1999) report.
- \* After the GoM recommendations, in preparation for the post of CDS, the government created the Integrated Defence Staff in 2002, which was to eventually serve as the CDS's Secretariat.
- \* In 2012, the Naresh Chandra Committee recommended the appointment of a Permanent Chairman of the Chiefs of Staff Committee as a midway to eliminate apprehensions over the CDS.
- \* Finally, the post of CDS was created in 2019 on the recommendations of a committee of defence experts headed by Lt General DB Shekatkar.
- \* General Bipin Rawat was the first CDS in the country and was appointed on December 31, 2019.

**Roles and Responsibilities:**

- \* His core function will be to foster greater operational synergy between the three service branches of the Indian military and keep inter-service frictions to a minimum.
- \* He also heads the newly created Department of Military Affairs (DMA) in the Ministry of Defence.
- \* The CDS will be the single-point military adviser to the Defence Minister on matters involving all three services and the service chiefs will be obliged to confine their counsel to issues pertaining to their respective services.
- \* As the head of DMA, CDS is vested with the authority in prioritising inter-service procurement decisions as Permanent Chairman-Chiefs of Staff Committee.
- \* The CDS is also vested with the authority to provide directives to the three chiefs. However, he does not enjoy any command authority over any of the forces.
- \* CDS is first among equals, he enjoys the rank of Secretary within the DoD (Department of Defence) and his powers will be confined to only the revenue budget.
- \* He will also perform an advisory role in the Nuclear Command Authority (NCA).

## 1.8 Lieutenant Governor of Delhi

[News]:

Vinai Kumar Saxena is appointed as Delhi's new Lieutenant Governor by President of India

[Concept]:

### Lieutenant Governor of Delhi

- \* The 69th amendment to the Constitution of India inserted Article 239AA, which declared the Union Territory of Delhi to be administered by a L-G who works on 'aid and advice of elected legislative assembly.
- \* However, the 'aid and advice' clause pertains only to matters on which the elected Assembly has powers under the State and Concurrent Lists, but with the exception of public order, police, and land.
- \* Further, the Article 239AA also notes that L-G has to either act on the aid and advice of the Council of Ministers, or he is bound to implement the decision taken by the President on a reference being made by him.
- \* Also, Article 239AA, empowers the L-G to refer a difference of opinion on 'any matter' with the Council of Ministers to the President.
- \* Thus, this dual control between L-G and the elected government leads to power tussle, which was referred to the Supreme Court in 2018.

## 1.9 Inter State Council

[News]:

The Centre has reconstituted the Inter-State Council

[Concept]:

### Inter State Council

Background:

- \* As part of the process of reviewing the working of the existing arrangements between the Union and the States, the Government constituted a commission in 1988 under the Chairmanship of Justice R.S. Sarkaria.
- \* One of the important recommendations of Sarkaria Commission was for establishing a permanent Inter-State Council as an independent national forum for consultation with a mandate well defined in accordance with Article 263 of the Constitution of India.

About:

- \* The inter-state council is a recommendatory body that has been empowered to investigate and discuss subjects of common interest between the Union and state(s), or among states.
- \* It also makes recommendations for better coordination of policy and action on these subjects, and deliberations on matters of general interest to the states, which may be referred to it by its chairman.

- \* It also deliberates on other matters of general interest to the states as may be referred by the chairman to the council.
- \* The Council may meet at least thrice in a year.
- \* There is also a Standing Committee of the Council.

### **Composition.**

- \* Prime Minister Chairman
- \* Chief Ministers of all States Members
- \* Chief Ministers of Union Territories having a Legislative Assembly and Administrators of UTs not having a Legislative Assembly and Governors of States under President's Rule (Governor's Rule in the case of J&K) Members.
- \* Six Ministers of Cabinet rank in the Union Council of Ministers to be nominated by the Prime Minister Members.

### **What are the Functions of the Inter-State Council?**

- \* To create a strong institutional framework to promote and support cooperative federalism in the country and activate the council and zonal councils by organising regular meetings.
- \* Facilitates consideration of all pending and emerging issues of Centre-state and inter-state relations by the zonal councils and inter-state council.
- \* Develops a sound system to monitor the implementation of recommendations put forward by them.

## What is the Standing Committee of ISC

### About:

- \* It was set up in 1996 for continuous consultation and processing of matters for the consideration of the Council.
- \* It consists of the following members: (i) Union Home Minister as the Chairman (ii) Five Union Cabinet Ministers (iii) Nine Chief Ministers the Council is assisted by a secretariat called the Inter-State Council Secretariat.
- \* This secretariat was set-up in 1991 and is headed by a secretary to the Government of India. Since 2011, it is also functioning as the secretariat of the Zonal Councils.

### Functions:

- \* The standing committee will have continuous consultation and process matters for consideration of the council, process all matters pertaining to centre-state relations before they are taken up for consideration in the inter-state council.
- \* The standing committee also monitors the implementation of the decisions taken on the recommendations of the council and consider any other matter referred to it by the chairman or the council.



## 2. INDIAN ECONOMY

### 2.1 e - shram

[News].

Union Labour and Employment Ministry said that the Ministry was working on a mechanism to process accident insurance claims by unorganised workers registered on the e-Shram portal.

[Concept].

**e - shram Portal.**

**Aim.**

- \* To register 38 crore unorganised workers such as construction labourers, migrant workforce, street vendors, and domestic workers, among others.
- \* The workers will be issued an e-Shram card containing a 12 digit unique number.
- \* If a worker is registered on the eSHRAM portal and meets with an accident, he will be eligible for Rs 2.0 Lakh on death or permanent disability and Rs 1.0 lakh on partial disability.

**Background.**

- \* The formation of e-Shram portal came after the Supreme Court directed the Government to complete the registration process of unorganized workers so

that they can avail the welfare benefits given under various government schemes.

### **Implementation.**

- \* Government in States/UTs will conduct registration of unorganised workers across the country.

## **2.2 CRR and Repo Rate**

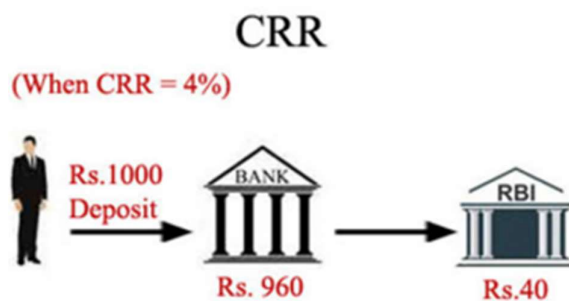
### **[News].**

RBI raised key policy rates to fight inflation. RBI raised the repo rate by 40 basis points and CRR by 50 basis points.

### **[Concept].**

#### **Cash Reserve Ratio.**

- \* It is a certain minimum amount of deposit that the commercial banks have to hold as reserves with the central bank.
- \* The percentage of cash required to be kept in reserves, vis-a-vis a bank's total deposits, is called the Cash Reserve Ratio.
- \* The cash reserve is either stored in the bank's vault or is sent to the RBI. Banks do not get any interest on the money that is with the RBI under the CRR requirements.



## Cash Reserve Ratio

**Primary purposes of the Cash Reserve Ratio:**

- \* Since a part of the bank's deposits is with the Reserve Bank of India, it ensures the security of the amount. It makes it readily available when customers want their deposits back.
- \* Also, CRR helps in keeping inflation under control. At the time of high inflation in the economy, RBI increases the CRR, so that banks need to keep more money in reserves so that they have less money to lend further.

**How does Cash Reserve Ratio help in times of high inflation?**

- \* At the time of high inflation, the government needs to ensure that excess money is not available in the economy.
- \* To that extent, RBI increases the Cash Reserve Ratio, and the amount of money that is available with the banks reduces. This curbs excess flow of money in the economy.
- \* When the government needs to pump funds into the system, it lowers the CRR rate, which in turn, helps the banks provide loans to a large number of

businesses and industries for investment purposes. Lower CRR also boosts the growth rate of the economy.

### **Repo Rate**

- \* Repo rate is the rate at which the Reserve Bank of India (RBI) lends to other banks.
- \* It is a part of the Liquidity Adjustment Facility (LAF) of the RBI.
- \* The Repo rate borrowing is generally available at the overnight repo, 7 days, 14-day repo.
- \* The commercial banks make a repurchase agreement with the RBI and sell the G-secs and buy back at a different rate on the agreed price.
- \* The increased repo rate will discourage banks to borrow from the RBI and lending to the customers. This in turn will reduce the liquidity and demand in the market. It is part of the contractionary monetary policy.
- \* On the other hand, decreased repo rate will encourage banks to borrow and lend to customers increasing the liquidity and demand in the market. This is a part of the Expansionary Monetary Policy.

### **2.3 Bond Yields**

[News].

Government said to urge Reserve Bank to help push bond yields lower

[Concept]:

## Bonds

- \* A bond is a debt investment.
- \* Corporates or governments issue bonds directly to investors, instead of obtaining loans from a bank.
- \* This is to raise money and finance a variety of projects and activities.
- \* The investor buys the bonds and loans money to the entity and in turn receives fixed interest.
- \* This is for a defined period of time (till maturity date) and a variable or fixed interest rate (coupon rate).

How are bond prices, bond yields and interest rates related?

- \* **Price** - Face value is the money amount the bond will be worth at its maturity.
- \* It is also the reference amount the bond issuer uses when calculating interest payments.
- \* The issuance price of a bond is typically set at par, usually \$100 or \$1,000 face value per individual bond.
- \* But a bond's price changes on a daily basis, just like that of any other publicly-traded security.

The actual market price of a bond depends on various factors including:

- \* the credit quality of the issuer

- \* the length of time until expiration
- \* the coupon rate compared to the general interest rate environment at the time
- \* Interest rates – The price of a bond primarily changes in response to changes in interest rates in the economy.
- \* For instance, say the investors get a better return in corporate bond either due to rise in their rate or due to fall in rate of government's bond.
- \* This would make the corporate bond much more attractive.
- \* Investors in the market will bid up the price of the bond until it trades at a premium that equalizes the prevailing interest rate environment.
- \* **Yield** – In simple terms, yield is the amount of return that an investor will realize on a bond.
- \* If the investor holds the bond to maturity, s/he will be guaranteed to get the principal amount back plus the interest.
- \* However, a bond does not necessarily have to be held to maturity by the investors.
- \* Instead, investors may sell them for a higher or lower price to other investors.
- \* The bond prices and yields generally move in opposite directions.
- \* This is because, as a bond's price increases, its yield to maturity falls.
- \* E.g. for a bond purchased with a par (face) value of \$100, and a 10% annual coupon rate, its yield would be 10% ( $10/100 = 0.10$ )
- \* If the bond price fall to \$90, the yield would become 11% ( $10/90 = 0.11$ ).

## 2.4 Exchange Rate

[News]:

The rupee fell to an all-time low and is currently at 77.20 to the American dollar.

[Concept]:

**What is exchange rate?**

- \* An exchange rate is the value of one nation's currency versus the currency of another nation or economic zone.
- \* Typically, exchange rates can be free-floating or fixed.
- \* A free-floating exchange rate rises and falls due to changes in the foreign exchange market.
- \* A fixed exchange rate is pegged to the value of another currency.
- \* The rupee's exchange rate vis-a-vis a particular currency, say the US dollar, tells us how many rupees are required to buy a US dollar.

**What is the issue?**

- \* Recently, the Indian rupee hit an all-time low exchange rate of 77.6 against the US dollar.

**What is exchange rate?**

- \* An exchange rate is the value of one nation's currency versus the currency of another nation or economic zone.
- \* Typically, exchange rates can be free-floating or fixed.
- \* A free-floating exchange rate rises and falls due to changes in the foreign exchange market.
- \* A fixed exchange rate is pegged to the value of another currency.
- \* The rupee's exchange rate vis-a-vis a particular currency, say the US dollar, tells us how many rupees are required to buy a US dollar.
- \* Currency depreciation is a fall in the value of a currency in terms of its exchange rate versus other currencies. It can occur due to factors such as economic fundamentals, interest rate differentials, political instability, or risk aversion among investors.

#### **How is the exchange rate determined?**

- \* Supply and demand of the currency- In a free-market economy, the exchange rate is decided by the supply and demand for rupees and dollars.
- \* For instance, if the Indians demand more dollars in comparison to Americans demanding the rupee, the exchange rate will fall or weaken for rupee and rise or strengthen for dollar.
- \* Central bank intervention-In India, the exchange rate is not fully determined by the market.



- \* From time to time, the RBI intervenes in the foreign exchange market to ensure that the rupee price does not fluctuate too much or that it doesn't rise or fall too much all at once.

#### **How does the rupee's exchange rate fluctuate?**

- \* Crude oil prices- When crude oil prices go up sharply, India would need more dollars to buy crude oil in the international market.
- \* That would weaken the rupee because India's demand for dollars would have gone up while the world's demand for the rupee stayed the same.
- \* This would show up as a trade deficit as well as the current account deficit in the BoP table.
- \* US central bank's interest rates- If the US central bank raises its interest rates, global investors who had been putting their money in India would consider taking it out and investing in the US.
- \* Again, the rupee would weaken and such a transaction would be recorded in the capital account.

#### **What is the RBI's role in this?**

- \* The most important thing about the BoP is that the balance of payment always balances i.e., a deficit in the current account must be balanced by a surplus in the capital account, or vice versa.
- \* RBI plays a crucial role in balancing the massive fluctuations.

- \* To soften the rupee's fall, the RBI would sell in the market some of the dollars it has in its forex reserves.
- \* This will soak up a lot of rupees from the market, thus moderating the demand-supply gap between rupee and dollars.

### **What will be the impact of a weaker rupee?**

#### **Negative impacts**

- \* Inflation- The biggest impact of a weakening rupee is on inflation, given India imports more than 80% of its crude oil, which is India's biggest import.
- \* Imports- A depreciation of the domestic currency results in higher import costs for the country.
- \* India is also heavily dependent on other countries for fertilizers and edible oils and the country's fertilizer subsidy bill is already set to hit a record high of as much as Rs 1.9 trillion this fiscal.
- \* Forex reserves- India's foreign exchange reserves have fallen below \$600 billion for the first time in a year as the RBI intervened in the forex market to defend the rupee.
- \* Foreign education- Foreign travel and overseas education becomes costlier.
- \* Interest- The interest burden would increase on foreign currency denominated debt.

- \* Investor confidence- A large and rapid devaluation may scare off international investor and makes investors less willing to hold government debt

### Positive impacts

- \* Exports- Exports become cheaper, more competitive to foreign buyers providing a boost for domestic demand.
- \* Local industry- Travel to India gets cheaper and local industry may benefit.
- \* Remittance- Those working abroad can gain more on remitting money to their homeland.
- \* Current account deficit-It assists in reducing the current account deficit.

### 2.5 RBI surplus transfer

[News]:

The Reserve Bank of India (RBI) will transfer Rs 30,307 crore as surplus to the government for fiscal ended March 2022 down 69% from the Rs 99,126 crore in the year ended March 2021 and lower than the Rs 74,000 crore budgeted by the government for the current fiscal.

[Concept]:

**RBI Surplus Transfer: Why and How**

**RBI's Earning:**

- \* Returns earned on its foreign currency assets, which could be in the form of bonds and treasury bills of other central banks or top-rated securities, and deposits with other central banks.
- \* Interest on its holdings of local rupee-denominated government bonds or securities, and while lending to banks for very short tenures, such as overnight.
- \* Management commission on handling the borrowings of state governments and the central government.

**RBI's Expenditure:**

- \* Printing of currency notes and on staff, besides the commission it gives to banks for undertaking transactions on behalf of the government across the country, and to primary dealers, including banks, for underwriting some of these borrowings.

**Surplus Transfer:**

- \* RBI transfers the surplus – that is, the excess of income over expenditure – to the government, in accordance with Section 47 (Allocation of Surplus Profits) of the Reserve Bank of India Act, 1934.

- \* A technical Committee of the RBI Board headed by Y H Malegam (2013), which reviewed the adequacy of reserves and surplus distribution policy, recommended a higher transfer to the government.
- \* By and large, with a few exceptions, the quantum of surplus transfer averages around 0.5% of the GDP.

### **Implications**

- \* It would help the government to go for bank recapitalisation in a big way given the economic slowdown, when channels of credit disbursements are choked because of a lack of capital with the commercial banks.
- \* The transfer of the additional surplus from the RBI could enable the government to pursue efforts towards stimulating the economy while maintaining budget discipline.
- \* The government, in the case of revenue shortages, would be able to meet the fiscal deficit target without cutting expenditures on important sectors.
- \* It would give the Government necessary fiscal space to maneuver structural reforms to boost economic growth.
- \* The surplus transfer from the RBI has implications for the central bank's balance sheet, government budget, financial market and, above all, monetary policy and debt management by the RBI.

## 2.6 PM GatiShakti

[News]:

The Department for Promotion of Industry and Internal Trade (DPIIT) stated that all logistics and connectivity infrastructure projects, entailing an investment of over Rs 500 crore will route through the network planning group (NPG) constituted under the PM GatiShakti initiative.

[Concept]:

### PM GatiShakti

**Aim.**

- \* To ensure integrated planning and implementation of infrastructure projects in the next four years, with focus on expediting works on the ground, saving costs and creating jobs.
- \* The Gati Shakti scheme will subsume the Rs 110 lakh crore National Infrastructure Pipeline that was launched in 2019.
- \* Besides cutting logistics costs, the scheme is also aimed at increasing cargo handling capacity and reducing the turnaround time at ports to boost trade.
- \* It also aims to have 11 industrial corridors and two new defence corridors – one in Tamil Nadu and other in Uttar Pradesh. Extending 4G connectivity to all villages is another aim. Adding 17,000 kms to the gas pipeline network is being planned.

- \* It will help in fulfilling the ambitious targets set by the government for 2024-25, including expanding the length of the national highway network to 2 lakh kms, creation of more than 200 new airports, heliports and water aerodromes.
- \* Integrated Approach: It intends to bring together 16 infrastructure related Ministries.
- \* This will help in removing long-standing issues such as disjointed planning, lack of standardisation, problems with clearances, and timely creation and utilisation of infrastructure capacities.
- \* Gati Shakti Digital Platform: It involves the creation of a common umbrella platform through which infrastructure projects can be planned and implemented in an efficacious manner by way of coordination between various ministries/departments on a real-time basis.

#### **Expected Outcomes**

- \* The scheme will help mapping the existing and proposed connectivity projects.
- \* Also, there will be immense clarity on how different regions and industrial hubs in the country are linked, particularly for last mile connectivity.
- \* A holistic and integrated transport connectivity strategy will greatly support Make in India and integrate different modes of transport.
- \* It will help India become the business capital of the world.

- \* Need for Integrated Infrastructure Development.
- \* There exists a wide gap between macro planning and micro implementation due to the lack of coordination and advanced information sharing as departments think and work in silos.
- \* According to a study, the logistical cost in India is about 13% of GDP, which is higher than developed countries.
- \* Due to this high logistical cost, the competitiveness of India's exports is greatly reduced.
- \* It is globally accepted that the creation of quality infrastructure for Sustainable Development is a proven way, which gives rise to many economic activities and creates employment on a large scale.
- \* The scheme is in synergy with the National Monetisation Pipeline (NMP).
- \* The NMP has been announced to provide a clear framework for monetisation and give potential investors a ready list of assets to generate investment interest.

#### **Associated Concerns**

- \* **Low Credit Off-take:** Although the government had taken up 'strong' banking sector reforms and the Insolvency and Bankruptcy Code had yielded about Rs. 2.4 lakh crore of recoveries on bad loans, there are concerns about declining credit offtake trends.



- \* Banks give credit off-takes to help businesses acquire financing for future projects through the promise of future income and proof of an existing market.
- \* Lack of Demand: In the post-Covid-19 scenario, there is a lack of private demand and investment demand.
- \* Structural Problems: Due to land acquisition delays and litigation issues, the rate of implementation of projects is very slow on global standards.
- \* Getting approvals is very difficult in terms of land access, environmental clearances; also impending litigation in court delays the infrastructure projects.

#### **Way Forward**

- \* PM Gati Shakti is a step in the right direction. However, it needs to address structural and macroeconomic stability concerns, emanating from high public expenditure.
- \* Thus, it is imperative that this initiative is underpinned by a stable and predictable regulatory and institutional framework.

### 3.INTERNATIONAL RELATIONS

#### 3.1 Shanghai Cooperation Organisation (SCO)

[Concept],

#### Shanghai Cooperation Organization (SCO)

**About.**

- \* SCO is a permanent intergovernmental international organization.
- \* It's a Eurasian political, economic and military organization aiming to maintain peace, security and stability in the region.
- \* It was created in 2001.
- \* The SCO Charter was signed in 2002, and entered into force in 2003.

**Genesis.**

- \* Prior to the creation of SCO in 2001, Kazakhstan, China, Kyrgyzstan, Russia and Tajikistan were members of the Shanghai Five.
- \* Shanghai Five (1996) emerged from a series of border demarcation and demilitarization talks which the four former Soviet republics held with China to ensure stability along the borders.
- \* Following the accession of Uzbekistan to the organization in 2001, the Shanghai Five was renamed the SCO.
- \* India and Pakistan became members in 2017.

- \* On 17th September, 2021, it was announced that Iran would become a full member of the SCO.

### **Objectives.**

- \* Strengthening mutual trust and neighborliness among the member states.
- \* Promoting effective cooperation in –politics, trade & economy, research & technology and culture.
- \* Enhancing ties in education, energy, transport, tourism, environmental protection, etc.
- \* Maintain and ensure peace, security and stability in the region.
- \* Establishment of a democratic, fair and rational new international political & economic order.

### **Membership.**

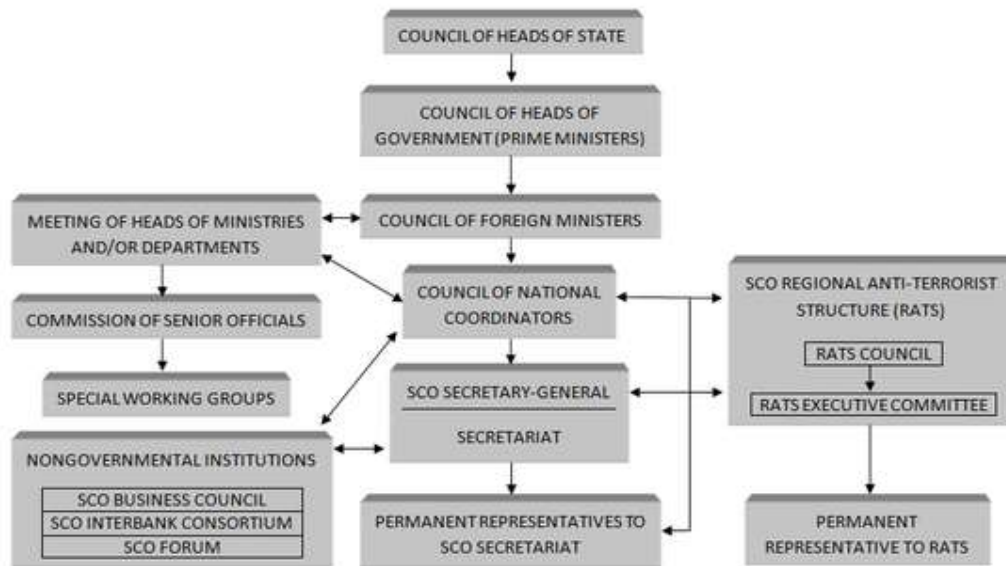
- \* Kazakhstan, China, Kyrgyzstan, Russia, Tajikistan, Uzbekistan, India, Pakistan and Iran.

### **Structure.**

- \* Heads of State Council – The supreme SCO body which decides its internal functioning and its interaction with other States & international organisations, and considers international issues.
- \* Heads of Government Council – Approves the budget, considers and decides upon issues related to economic spheres of interaction within SCO.

- \* Council of Ministers of Foreign Affairs – Considers issues related to day-to-day activities.
- \* Regional Anti-Terrorist Structure (RATS) – Established to combat terrorism, separatism and extremism.

#### THE STRUCTURE OF THE SHANGHAI COOPERATION ORGANISATION



- \* **SCO Secretariat** – Based in Beijing to provide informational, analytical & organizational support.
- \* **Official language.**–The official working language of the SCO Secretariat is Russian and Chinese.

### 3.2 Quad Summit – Indo-Pacific Partnership for Maritime Domain Awareness (IPMDA)

[News].

The fourth Quad summit was held in Japan

[Concept]:

### **The Indo-Pacific Partnership for Maritime Domain Awareness (IPMDA)**

- \* Indo-Pacific maritime domain awareness initiative was launched at recently held Quad Summit at Tokyo.
- \* It is an initiative for information sharing and maritime surveillance across the region.
- \* The IPMDA would offer a near-real-time, integrated, and cost-effective maritime domain awareness picture.
- \* It will respond to humanitarian and natural disasters, and combat illegal fishing.
- \* It will also allow the tracking of “dark shipping” across Indo-Pacific region.
- \* It will support and work in consultation with Indo-Pacific nations and regional information fusion centres in the region.
- \* This initiative will integrate three critical regions in the Indo-Pacific — the Pacific Islands, Southeast Asia, and the IOR.

### **3.3 BRICS Plus**

- \* ‘BRICS Plus’ was first mooted by Chinese Foreign Minister Wang Yi in March 2017 with the objective of widening the “circle of friends” of BRICS that can

bring unity among developing countries and enhance South-South cooperation.

- \* The initiative is aimed at upping the outreach activities of the BRICS countries with the Global South and building wider partnership with emerging markets and developing countries (EMDCs).
- \* This is in line with the tradition of inviting friends and partners of the host country to the BRICS Summit – for example, Russia invited the Shanghai Cooperation Organisation (SCO) as well as the Eurasian Economic Union (EAEU) countries for the 2015 Ufa Summit, and India invited BIMSTEC (Bay of Bengal Initiative for Multi-Sectoral Technical and Economic Cooperation) countries for the 2016 Goa Summit.
- \* Similarly, China invited Egypt, Guinea, Tajikistan, Mexico and Thailand as guests in the 2017 Xiamen Summit, and South Africa hosted the BRICS-Africa Outreach during the 2018 Johannesburg Summit.
- \* China had initially shown interest in creating a permanent BRICS Plus arrangement. However, there is no consensus within the grouping on getting a permanent set of developing countries as BRICS Plus category.
- \* The other four member countries (Brazil, Russia, India and South Africa) remain wary of China's predominance in BRICS and its increasing influence in the Global South.

- \* Through BRICS Plus, China probably seeks to forge regional and bilateral alliances across the continents, which could also be instrumental in pushing its Belt and Road Initiative (BRI).
- \* China later clarified that the idea is not to expand the core set of BRICS member countries but to integrate different regions, where BRICS can play a significant role.
- \* Since any such decision has to be taken through consensus, China's idea of 'BRICS Plus' cannot materialise without the approval of other member countries.
- \* If at all member countries agree to have a BRICS Plus category, the choice of each with regard to partner countries would vary considerably, resulting in possible tension within the grouping.
- \* For now, the member countries need to focus on further consolidating the position of BRICS as an effective grouping. Any new addition would dilute such efforts and sharpen the fault lines.

## 4. INDIAN HISTORY

### 4.1 Basava Jayanti

[News].

Basava Jayanti is being celebrated on birthday of Basavanna, a Hindu Kannada poet of 12th century

[Concept].

**Basavanna**

- \* Basaveshwara was born in Bagevadi (of undivided Bijapur district in Karnataka) in 1131 AD.
- \* A 12th-century poet and philosopher, who is celebrated and held in high regard, especially by the Lingayat community, as he was the founder of Lingayatism.
- \* The term Lingayat denotes a person who wears a personal linga, an iconic form of God Shiva, on the body which is received during the initiation ceremony.
- \* In Kalyana, the Kalachurya king Bijjala (1157-1167, AD) appointed Basaveshwara as a karanika (Accountant) in the initial stage, in his court and later as the Prime minister.

**Main Teachings.**



- \* His spiritual discipline was based on the principles of Arivu (true knowledge), Achara (right conduct), and Anubhava (divine experience) and it brought a social, religious and economic revolution in the 12th century.
- \* This path advocates a holistic approach to Lingangayoga (union with the divine).
- \* This comprehensive discipline encompasses bhakti (devotion), jnana (knowledge), and kriya (action) in a well-balanced manner.

#### **Social Reforms:**

- \* Basaveshwara is known to have brought about several social reforms.
- \* He believed in a society free of the caste system, with equal opportunity for all and preached about manual hard work.
- \* He also founded the Anubhava Mantapa, loosely translated as the forum of experiences, an academy which included Lingayat mystics, saints, and philosophers.

#### **Other Socio-Economic Principles:**

- \* Basaveshwara gave two more very important socio-economic principles.
- \* Kayaka (Divine work): According to this, every individual in society should take up the job of his choice and perform it with all sincerity.
- \* Dasoha (Equal distribution): There must be an equal income for equal work.

- \* The worker (Kayakajeevi) may lead his day-to-day life by his hard-earned income. But he should not preserve the money or property for tomorrow. He must utilize the surplus money for society and the poor.

### **Anubhava Mantapa**

- \* Basaveshwara established the Anubhava Mantapa, which was a common forum for all to discuss the prevailing problems of socio, economic and political strata including religious and spiritual principles along with personal problems.
- \* Thus, it was the first and foremost Parliament of India, where Sharanas (citizens of welfare society) sat together and discussed the socialistic principles of a Democratic set up.
- \* All those discussions of Sharanas were written in the form of Vachanas.
- \* Vachanas were an innovative literary form written in simple Kannada language.
- \* His practical approach and act of establishment of 'Kalyana Rajya' (Welfare state) brought a new status and position for all the citizens of the society, irrespective of class, caste, creed and sex.
- \* Recently, the Chief Minister of Karnataka has laid the foundation stone for the 'New Anubhava Mantapa' in Basavakalyan.

## 4.2 Rakhigarhi

[News]:

ASI's excavation at Harappan site of Rakhigarhi

[Concept]:

- \* Rakhigarhi is the largest Harappan site in the Indian subcontinent.
- \* Other large sites of Indus valley Civilization (Harappan civilization) in Indian sub-continent are Harappa, Mohenjodaro and Ganveriwala in Pakistan and Dholavira (Gujarat) in India.
- \* At Rakhigarhi, the excavations are being done to trace its beginnings and to study its gradual evolution from 6000 BCE (Pre-Harappan phase) to 2500 BCE.
- \* The site was excavated by Amarendra Nath of ASI.
- \* Rakhigarhi is among the five iconic sites announced by Union Finance Minister during Budget Speech in 2020.
- \* The other such sites are Hastinapur in Uttar Pradesh, Sivasagar in Assam, Dholavira in Gujarat and Adichanallur in Tamil Nadu.

**What are the Major Findings of the Site?**

- \* **Settlements.**

- \* The archaeological excavations revealed the mature Harappan phase represented by planned township having mud-brick as well as burnt-brick houses with a proper drainage system.

#### **Seals and Pottery.**

- \* A cylindrical seal with five Harappan characters on one side and a symbol of an alligator on the other is an important find from this site.
- \* The ceramic industry was represented by red ware, which included dish-on-stand, vase, perforated jar among others.

#### **Rituals and Burials.**

- \* Animal sacrificial pits lined with mud-brick and triangular and circular fire altars on the mud floor have also been excavated that signifies the ritual system of Harappans.
- \* The excavations have yielded a few extended burials, which certainly belong to a very late stage, maybe the medieval times.
- \* Two female skeletons, who were buried with a plethora of pottery and adorned jewellery like jasper, agate beads and shell bangles, have been excavated.

#### **Other Antiquities.**

- \* Blades; terracotta and shell bangles, beads of semi precious stones, and copper objects; animal figurines, toy cart frame and wheel of terracotta; bone points; inscribed steatite seals and sealings.

### 4.3 Raja Ram Mohan Roy

[News]:

Celebrating the 250th birth anniversary of Raja Ram Mohan Roy.

[Concept]:

#### Raja Ram Mohan Roy

- \* Raja Ram Mohan Roy was the father of Modern India's Renaissance and a tireless social reformer who inaugurated the age of enlightenment and liberal reformist modernisation in India.
- \* Ram Mohan Roy was greatly influenced by western modern thought and stressed on rationalism and modern scientific approach.
- \* Ram Mohan Roy's immediate problematique was the religious and social degeneration of his native Bengal.
- \* He believed that religious orthodoxies have become causes of injury and detrimental to social life and sources of trouble and bewilderment to the people, instead of tending to the amelioration of the condition of society.

- \* Raja Ram Mohan Roy concluded that religious reform is both social reform and political modernisation.
- \* Ram Mohan believed that each sinner must make restitution for his sins and it is to be done through self-purification and repentance and not through sacrifices and rituals.
- \* He believed in social equality of all human beings and thus was a strong opposer of the caste system.
- \* Ram Mohan was attracted to Islamic monotheism. He said that monotheism is also the fundamental message of Vedanta.
- \* His idea of a single, unitarian god was a corrective to the polytheism of orthodox Hinduism and to Christian trinitarianism. He believed that monotheism supported one universal model for humanity.
- \* Raja Ram Mohan Roy believed that unless women were freed from unhuman forms of oppression like illiteracy, child marriage, sati, purdah, Hindu society can not progress.
- \* He characterised sati as the violation of every humane and social feeling and as symptomatic of the moral debasement of a race.

### **What are the Contributions?**

#### **Religious reforms.**

- \* Raja Ram Mohan Roy's first published work Tuhfat-ul-Muwahhiddin (a gift to deists) published in 1803 exposed irrational religious beliefs and corrupt practices of the Hindus as the belief in revelations, prophets, miracles etc.
- \* In 1814, he founded Atmiya Sabha in Calcutta to campaign against idolatry, caste rigidities, meaningless rituals and other social ills.
- \* He criticized the ritualism of Christianity and rejected Christ as the incarnation of God. In Precepts of Jesus (1820), he tried to separate the moral and philosophical message of the New Testament, which he praised, from its miracle stories.

#### **Social reforms:**

- \* Raja Ram Mohan Roy conceived reformist religious associations as instruments of social and political transformation.
- \* He founded the Atmiya Sabha in 1814, the Calcutta Unitarian Association in 1821, and the Brahmo Sabha in 1828 which later became the Brahmo Samaj.
- \* He campaigned against the caste system, untouchability, superstitions and use of intoxicants.
- \* He was well known for his pioneering thought and action on the emancipation of women and especially on the abolition of sati and widow remarriage.
- \* He attacked child marriage, illiteracy of women and the degraded state of widows and demanded the right of inheritance and property for women.

**Educational reforms.**

- \* Roy did much to disseminate the benefits of modern education to his countrymen. He supported David Hare's efforts to found the Hindu College in 1817, while Roy's English school taught mechanics and Voltaire's philosophy.
- \* In 1825, he established Vedanta college where courses in both Indian learning and Western social and physical sciences were offered.

**Economic and Political Reforms.**

- \* **Civil liberties.** Roy was impressed and admired the British system of constitutional government for the civil liberties it gave to the people. He wanted to extend the benefits of that system of government to Indian people.
- \* **Press freedom.** Through his writings and activities, he supported the movement for free press in India.
- \* When press censorship was relaxed by Lord Hastings in 1819, Ram Mohan found three journals- The Brahmanical Magazine (1821); The Bengali weekly, Samvad Kaumudi (1821); and the Persian weekly, Mirat-ul-Akbar.
- \* **Taxation reforms.** Roy condemned oppressive practices of Bengali zamindars and demanded fixation of minimum rents. He also demanded the abolition of taxes on tax-free lands.
- \* He called for a reduction of export duties on Indian goods abroad and the abolition of the East India Company's trading rights.



- \* **Administrative reforms:** He demanded the Indianisation of superior services and separation of the executive from judiciary. He demanded equality between Indians and Europeans.



## 5.GEOGRAPHY

### 5.1 Chakma Tribes

[News].

Custodial death of a couple of Chakma community - Overlap of administration between tribal customary laws and regular penal provisions.

[Concept].

**Chakma Tribe.**

- \* Chakmas are one of the major tribes of Tripura.
- \* Chakmas are known to be a tribe of South-East Asia.
- \* They have first migrated to Arakan Hill of Myanmar and then Chittagong Hill tracts of Tripura.
- \* A major part of them however migrated to Mizoram and Arunachal Pradesh in course of time from their original home land.
- \* Among Chakma there are 3 major groups: Anokia, Tandugia, and Mangla.
- \* Language: Linguistically Chakma language is mixed with some words of the Indo-Aryan language, Tibeto-Chinese and mainly Arakan language.

**Issue faced**

- \* Buddhists by faith, the Chakmas faced religious persecution in East Pakistan along with the Hajongs, who were Hindus.

## 5.2 Urban Heat Islands

[News].

Several parts of the country are reeling under heat wave conditions. Cities, especially, are a lot hotter than rural areas. This is due to a phenomenon called an “urban heat island”.

[Concept].

### Urban Heat Islands

- \* Urban heat island may be defined as the local and temporary phenomenon in which certain pockets within a city are experiencing higher heat load than its surrounding area.
- \* This rise of heat basically happens due to buildings and houses of cities made up of concrete where the heat is trapped and not able to dissipate easily.
- \* Urban heat island is basically induced due to trapped heat between establishments made up of concrete.
- \* The temperature variation can range between 3 to 5 degrees Celsius.

### Why are Cities Hotter than Rural Areas?

- \* It has been observed that greener localities experienced lower temperatures than non-green localities.
- \* Green vegetation like plants, trees and forests are prominent factors to regulate the incidences of the urban heat islands.

- \* Rural areas are blessed with more green cover in the form of plantations, farmlands, forests, and trees than urban areas.
- \* Transpiration is the phenomena which the plants carry to regulate the temperature.
- \* In urban areas is the basic cause of Urban Heat Island in urban areas.
- \* Frequent construction of Highrise structures, roads, parking spaces, pavements, and public transportation transit lines have accelerated the incidences of urban heat islands.
- \* It occurs by black or any dark colored material.
- \* Buildings in cities are often made of glass, bricks, cement, and concrete. All of them are dark-colored materials, which attract and absorb more heat

#### **What are the Causes of Urban Heat Island?**

- \* Manifold increase in construction activities: For building simple urban dwellings to complex infrastructures, carbon absorbing material like asphalt and concrete is needed for the expansion of cities. They trap huge amounts of heat which increases the mean surface temperatures of urban areas.
- \* Dark surfaces: Many buildings found in urban areas have dark surfaces, thereby decreasing albedo and increased absorption of heat.
- \* Air conditioning: Buildings with dark surfaces heat up more rapidly and require more cooling from air conditioning, which requires more energy from power plants, which causes more pollution. Also, air conditioners

exchange heat with atmospheric air, causing further local heating. Thus, there is a cascade effect that contributes to the expansion of urban heat islands.

- \* **Urban Architecture:** Tall buildings, and often accompanying narrow streets, hinder the circulation of air, reduce the wind speed, and thus reduce any natural cooling effects. This is called the Urban Canyon Effect.
- \* **Need for mass transportation system:** Transportation systems and the unimpeded use of fossil fuels also add warmth to urban areas.
- \* **Lack of Trees and green areas:** which impedes evapotranspiration, shade and removal of carbon dioxide, all the processes that help to cool the surrounding air.

#### **How can Urban Heat Islands be Reduced?**

- \* **Increase Area Under Green Cover:** Plantation and effort to increase the area under green cover are the primary requirement to cut heat load within urban areas.
- \* **Passive Cooling to Reduce Urban Heat Islands:** Passive cooling technology, a widely-used strategy to create naturally ventilated buildings, can be a vital alternative to address the urban heat island for residential and commercial buildings.

- \* The IPCC report cites ancient Indian building designs that have used this technology, which could be adapted to modern facilities in the context of global warming.
- \* Other methods of heat mitigation include using appropriate construction materials.
- \* Roof and terraces should be painted in white or light colors to reflect heat and reduce the absorption.
- \* Terrace plantation and kitchen gardening should be promoted.

### 5.3 Pangong Tso

[News]:

Ministry of External Affairs (MEA) stated that two bridges built by China in Pangong area, have continued to be under the illegal occupation of China since the 1960s.

[Concept]:

Pangong Tso.



- \* Pangong Tso literally translates into a “conclave lake”. Pangong means conclave in Ladakhi and Tso means lake in Tibetan language.
- \* Situated at over 14,000 feet, the Lake is about 135 km long.
- \* It is formed from Tethys geosyncline.
- \* The Karakoram Mountain range, which crosses Tajikistan, Afghanistan, Pakistan, China and India, with heights of over 6,000 meters including K2, the world’s second highest peak, ends at the north bank of Pangong Tso.
- \* Its southern bank too has high broken mountains sloping towards Spangur Lake in the south.
- \* The lake’s water, while crystal clear, is brackish, making it undrinkable.

#### 5.4 Donbas and Luhansk

[News].

Ukrainian President said the – Incessant bombardment has turned Ukraine's

Donbas region into hell.

[Concept].

Donbas and Luhansk.



\* The Donbass region, comprising the Donetsk and Luhansk oblasts of Ukraine, has been at the centre of the conflict since March 2014 when Moscow (Russia) invaded and annexed the Crimean Peninsula.

### 5.5 Wanchuwa festival

[News].

Tiwa tribesmen celebrated the Wanchuwa festival in Karbi Anglong district of Assam.

[Concept].



### **Tiwa Tribe**

- \* Tiwa also known as Lalung is indigenous community inhabiting the states of Assam and Meghalaya and are also found in some parts of Arunachal Pradesh and Manipur.
- \* They are recognized as a Scheduled tribe within the state of Assam.
- \* They practice Jhum or shifting cultivation.

### **Wanchuwa festival**

- \* This festival is celebrated by Tiwa tribesmen to mark their good harvest.
- \* It comes with songs, dances, a bunch of rituals and people clad in their native attires.

### **5.6 Katchatheevu Island**

**[News]:**

Recently, during Prime Minister's visit to Tamil Nadu, Tamil Nadu Chief Minister has asked for retrieval of Katchatheevu Island from Sri Lanka.

**[Concept]:**

#### **Katchatheevu Island**

- \* It is an uninhabited off-shore island in the Palk Strait originally owned by a king of Ramnad (present-day Ramanathapuram, Tamil Nadu).

- \* The island is used by fishermen to dry their nets.



- \* During the British rule, it was administered jointly by India and Sri Lanka.
- \* In the early 20th century, Sri Lanka claimed territorial ownership over the islet, so in 1974 India ceded the island to Sri Lanka, through a joint agreement.
- \* Two years later through another accord, India further gave up its fishing rights in the region.

## 5.7 Gold reserve

[News].

The Bihar government has decided to accord permission for exploration of the "country's largest" gold reserve in Jamui district

[Concept].

- \* As per a Geological Survey of India (GSI) survey, around 222.88 million tonnes of gold reserve, including 37.6 tonnes of mineral-rich ore, are present in Jamui district.
- \* GSI findings indicated the presence of gold in areas such as Karmatia, Jhajha and Sono in Jamui district

### **Gold reserve in India**

- \* The largest reserves of gold ores are located in Bihar (44 per cent), followed by Rajasthan (25 percent), Karnataka (21 per cent), West Bengal (3 percent), Andhra Pradesh (3 percent), Jharkhand (2 percent).
- \* The remaining 2 per cent reserves are in Chhattisgarh, Madhya Pradesh, Kerala, Maharashtra and Tamil Nadu.

### **Geological Survey of India**

- \* The GSI is a government organization in India, attached to the Ministry of Mines for conducting geological surveys and studies.
- \* The GSI was established in 1851 and is one of the oldest of such organizations in the world and the second oldest survey institution in the country.
- \* It is the prime provider of basic earth science information to the government, industry and the general public.
- \* Its main function is related to creation and updation of national geo-scientific information and mineral resource assessment.

## 6.ENVIRONMENT

### 6.1 Pangolin

[News].

A Pangolin was rescued from the Ranthambhore Tiger reserve.

[Concept].



- \* Pangolins are scaly anteater mammals and they have large, protective keratin scales covering their skin. They are the only known mammals with this feature.
- \* It uses these scales as armour to defend itself against predators by rolling into a ball when threatened.

**Diet:**

- \* Insectivore- Pangolins are nocturnal, and their diet consists of mainly ants and termites, which they capture using their long tongues.

**Types:**

- \* Out of the eight species of pangolin, the Indian Pangolin (*Manis crassicaudata*) and the Chinese Pangolin (*Manis pentadactyla*) are found in India.

#### **Difference.**

- \* Indian Pangolin is a large anteater covered by 11-13 rows of scales on the back.
- \* A terminal scale is also present on the lower side of the tail of the Indian Pangolin, which is absent in the Chinese Pangolin.

#### **Habitat.**

- \* Indian Pangolin.
- \* It is widely distributed in India, except the arid region, high Himalayas and the North-East.
- \* The species is also found in Bangladesh, Pakistan, Nepal and Sri Lanka.

#### **Chinese Pangolin.**

- \* It is found in the Himalayan foothills in Eastern Nepal, Bhutan, Northern India, North-East Bangladesh and through Southern China.
- \* Threats to Pangolins in India:
- \* Hunting and poaching for local consumptive use (e.g. as a protein source and traditional medicine) and international trade for its meat and scales in East and South East Asian countries, particularly China and Vietnam.

- \* They are believed to be the world's most trafficked mammal.

#### **Conservation Status:**

- \* Wildlife Protection Act, 1972: Schedule I
- \* IUCN Red List: Endangered
- \* Chinese Pangolin is 'critically endangered'
- \* CITES: Appendix I

#### **Ranthambore Tiger Reserve**

- \* Ranthambore Tiger Reserve lies in the eastern part of Rajasthan state in Karauli and Sawai Madhopur districts, at the junction of the Aravali and Vindhya hill ranges.
- \* Parks and Sanctuaries Included: It comprises of the Ranthambore National Park as well as Sawai Mansingh and Keladevi Sanctuaries.

#### **6.2 Community Forest Rights**

[News]:

The Chhattisgarh government has become only the second state in the country (after Simlipal in Odisha) to recognize Community Forest Resource (CFR) rights of a village inside a national park (Kanger Ghati).

[Concept]:

### **Community Forest Resource (CFR)**

- \* It is the common forest land that has been traditionally protected and conserved for sustainable use by a particular community.
- \* The community uses it to access resources available within the traditional and customary boundary of the village; and for seasonal use of landscape in case of pastoralist communities.
- \* Each CFR area has a customary boundary with identifiable landmarks recognised by the community and its neighboring villages.

### **Categories.**

- \* It may include forest of any category – revenue forest, classified & unclassified forest, deemed forest, District Level Committee (DLC) land, reserve forest, protected forest, sanctuary and national parks etc.

### **What are Community Forest Resource Rights?**

- \* Under Section 3(1)(i) of the Scheduled Tribes and Other Traditional Forest Dwellers (Recognition of Forest Rights) Act (commonly referred to as the Forest Rights Act or the FRA), 2006 the Community Forest Resource rights provide for recognition of the right to “protect, regenerate or conserve or manage” the community forest resource.

- \* These rights allow the community to formulate rules for forest use by itself and others and thereby discharge its responsibilities under Section 5 of the FRA.
- \* CFR rights, along with Community Rights (CRs) under Sections 3(1)(b) and 3(1)(c), which include nistar rights (used erstwhile in princely states or zamindari, etc.) and rights over non-timber forest products, ensure sustainable livelihoods of the community.
- \* These rights give the authority to the Gram Sabha to adopt local traditional practices of forest conservation and management within the community forest resource boundary.

#### **What are the Benefits of CFR Rights Recognition?**

- \* Giving Justice to Forest Communities:
- \* Aimed at undoing the “historic injustice” meted out to forest-dependent communities due to curtailment of their customary rights over forests.
- \* It is important as it recognises the community’s right to use, manage and conserve forest resources, and to legally hold forest land that these communities have used for cultivation and residence.
- \* Underlines Role of Forest Dwellers:
- \* It also underlines the integral role that forest dwellers play in sustainability of forests and in conservation of biodiversity.



- \* It is of greater significance inside protected forests like national parks, sanctuaries and tiger reserves as traditional dwellers then become a part of management of the protected forests using their traditional wisdom.



## 7.SCIENCE AND TECHNOLOGY

### 7.1 Advanced Towed Artillery Gun System

[News].

The indigenous Advanced Towed Artillery Gun System (ATAGS) successfully completed the validation trials towards meeting the specifications of the Army.

[Concept].

#### Advanced Towed Artillery Gun System (ATAGS)

- \* It is an indigenously developed howitzer gun 155 mm x 52 calibre designed by the Defence Research and Development Organisation (DRDO).
- \* Howitzers is an umbrella term for a category of long-range artillery guns.
- \* The ATAGS project was started in 2013 by DRDO to replace older guns in service in the Indian Army with a modern 155 mm artillery gun.

**Features.**

- \* The armament system of ATAGS mainly comprises barrel, breech mechanism, muzzle brake and recoil mechanism to fire 155 mm calibre ammunition held by Army with a longer range, accuracy and precision and provides greater firepower.
- \* The ATAGS is configured with all electric drive to ensure maintenance free and reliable operation over a longer period of time.

- \* It has advanced features in terms of high mobility, quick deployability, auxiliary power mode, advanced communication system, automatic command and control system with night firing capability in the direct fire mode.
- \* The specialised gun system is compatible with C4I (command, control, communications, computers, and intelligence) systems like the Artillery Combat Command and Control System (ACCCS) called Shakti for technical fire control, fire planning, deployment management, and operational logistics management of the Army.

#### **Future role:**

- \* The development process of ATAGS by the DRDO coincides with development of Howitzer Dhanush for Advanced Weapons and Equipment India of the erstwhile Ordnance Factory Board.
- \* In 2019, the Army and the Ministry of Defence gave bulk production clearance to produce 114 Dhanush.

## **7.2 Monkeypox**

**[News]:**

A case detected in United Kingdom

**[Concept]:**

## Monkeypox

- \* It is a viral zoonotic disease (transmission from animals to humans) and is identified as a pox-like disease among monkeys hence it is named Monkeypox. It is endemic to Nigeria.
- \* It is caused by monkeypox virus, a member of the Orthopoxvirus genus in the family Poxviridae.
- \* The natural host of the virus remains undefined. But the disease has been reported in many animals.
- \* Animals known to be sources of Monkeypox virus include monkeys and apes, a variety of rodents (including rats, mice, squirrels and prairie dogs) and rabbits.

## Outbreaks:

- \* It was first reported in 1958, in monkeys in the Democratic Republic of Congo (DRC) and in humans in 1970, also in the DRC.
- \* In 2017, Nigeria experienced the largest documented outbreak, 40 years after the last confirmed case.
- \* Subsequently, the disease has been reported in many West and Central African countries.

## Symptoms:

- \* Infected people break out in a rash that looks a lot like chicken pox. But the fever, malaise, and headache from Monkeypox are usually more severe than in chicken pox infection.
- \* In the early stage of the disease, Monkeypox can be distinguished from smallpox because the lymph gland gets enlarged.

#### **Transmission.**

- \* Primary infection is through direct contact with the blood, bodily fluids, or cutaneous or mucosal lesions of an infected animal. Eating inadequately cooked meat of infected animals is also a risk factor.
- \* Human-to-human transmission can result from close contact with infected respiratory tract secretions, skin lesions of an infected person or objects recently contaminated by patient fluids or lesion materials.
- \* Transmission can also occur by inoculation or via the placenta (congenital monkeypox).

#### **Vulnerability:**

- \* It spreads rapidly and can cause one out of ten deaths if infected.

#### **Treatment and Vaccine.**

- \* There is no specific treatment or vaccine available for Monkeypox infection. In the past, the anti-smallpox vaccine was shown to be 85% effective in preventing Monkeypox.

- \* But the world was declared free of smallpox in 1980 so the vaccine isn't widely available anymore.
- \* Currently, there is no global system in place to manage the spread of Monkeypox, with each country struggling to contain any outbreak whenever it occurs.

### 7.3 Black Hole

[News],

Scientists from the Event Horizon Telescope (EHT) facility, revealed the first image of the black hole at the centre of the Milky Way.

[Concept],

**Blackhole.**

- \* A black hole is a place in space where gravity pulls so much that even light cannot get out.
- \* The gravity is so strong because matter has been squeezed into a tiny space.
- \* This can happen when a star is dying.
- \* Because no light can get out, people can't see black holes. They are invisible.
- \* Space telescopes with special tools can help find black holes.
- \* The special tools can see how stars that are very close to black holes act differently than other stars.

## How Do Black Holes Form?

- \* Scientists think the smallest black holes formed when the universe began.
- \* Stellar black holes are made when the center of a very big star falls in upon itself, or collapses.
- \* When this happens, it causes a supernova.
- \* A supernova is an exploding star that blasts part of the star into space.
- \* Scientists think supermassive black holes were made at the same time as the galaxy they are in.

## If Black Holes Are "Black," How Do Scientists Know They Are There?



- \* A black hole cannot be seen because strong gravity pulls all of the light into the middle of the black hole.
- \* But scientists can see how the strong gravity affects the stars and gas around the black hole.
- \* Scientists can study stars to find out if they are flying around, or orbiting, a black hole.
- \* When a black hole and a star are close together, high-energy light is made.

- \* This kind of light can not be seen with human eyes.
- \* Scientists use satellites and telescopes in space to see the high-energy light.

### Could a Black Hole Destroy Earth?

- \* Black holes do not go around in space eating stars, moons and planets.
- \* Earth will not fall into a black hole because no black hole is close enough to the solar system for Earth to do that.
- \* Even if a black hole the same mass as the sun were to take the place of the sun, Earth still would not fall in.
- \* The black hole would have the same gravity as the sun.
- \* Earth and the other planets would orbit the black hole as they orbit the sun now.
- \* The sun will never turn into a black hole.
- \* The sun is not a big enough star to make a black hole.

### 7.4 Advance Version of BrahMos

[News].

Two months after the extended-range BrahMos missile was tested from a naval ship, the missile was air-launched from a Su-30 MKI aircraft

[Concept].

About BrahMos.





- \* BrahMos is an indigenously manufactured supersonic cruise missile, jointly developed with Russia
- \* Name: BrahMos is named on rivers Brahmaputra and Moskova.
- \* Stages in Brahmos Missile: It is a two-stage (solid propellant engine in the first stage and liquid ramjet in second) missile.
- \* Multiplatform Missile: i.e. it can be launched from land, air, and sea and multi capability missile with pinpoint accuracy that works in both day and night irrespective of the weather conditions.
- \* Fire and Forgets Principle: It operates on the "Fire and Forgets" principle i.e. it does not require further guidance after launch.
- \* Range: The range of BrahMos was earlier around 290 km, which, with the new version, has reached around 350 km.

## 7.5 Gaganyaan Mission

[News].

## ISRO tests booster for Gaganyaan

[Concept],



- \* ISRO has successfully carried out the static test of the HS200 solid rocket booster, taking the space agency one more step closer to the keenly awaited
- \* Gaganyaan human spaceflight mission.
- \* The test was held at the Satish Dhawan Space Centre, Sriharikota
- \* Designed and developed by the Vikram Sarabhai Space Centre (VSSC), HS200 booster is the ‘human-rated’ version of the S200 rocket boosters used on the geosynchronous satellite launch vehicle Mk-III (GSLV Mk-III), also called the LVM3.
- \* The GSLV Mk-III rocket, which will be used for the Gaganyaan mission, will have two HS200 boosters that will supply the thrust for lift-off. The HS200 is a 20-metre-long booster with a diameter of 3.2 metres and is the world’s second largest operational booster using solid propellants.
- \* The successful completion of this test marks a major milestone for the prestigious human space flight mission of ISRO, the Gaganyaan, as the first stage of the launch vehicle is tested for its performance for the full duration

- \* The control system used in the HS200 booster employs one of the world's most powerful electro-mechanical actuators with multiple redundancy and safety features Gaganyaan Mission
- \* Gaganyaan is a mission by the ISRO to send a three-member crew to space for a period of five to seven days
- \* Launch Vehicle: ISRO's Geosynchronous Satellite Launch Vehicle GSLV Mk III
- \* Components: Consists of a service module and a crew module, collectively known as an Orbital Module
- \* The Gaganyaan spacecraft will be placed in a low earth orbit (LEO) of 300-400 kilometres.
- \* Vyom Mitra: ISRO to send humanoid Vyommitra in unmanned Gaganyaan spacecraft ahead of human spaceflight Geosynchronous Satellite Launch Vehicle GSLV Mk III.
- \* GSLV MkIII, is a three-stage heavy lift launch vehicle developed by ISRO.
- \* The vehicle has two solid strap-ons, a core liquid booster and a cryogenic upper stage.

## 7.6 mRNA Vaccine

[News].

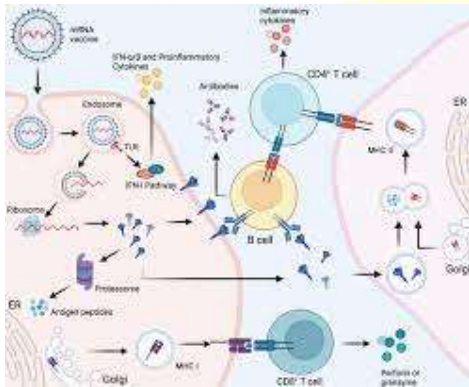
The Centre for Cellular and Molecular Biology (CCMB) has established the

“proof of principle” (proof of concept) of the first indigenous mRNA vaccine

Technology

[Concept]:

**mRNA vaccines**



- \* mRNA vaccines trick the body into producing some of the viral proteins itself.
- \* They work by using mRNA, or messenger RNA, which is the molecule that essentially puts DNA instructions into action.
- \* Inside a cell, mRNA is used as a template to build a protein.

**How does it works**

- \* To produce an mRNA vaccine, scientists produce a synthetic version of the mRNA that a virus uses to build its infectious proteins.
- \* This mRNA is delivered into the human body, whose cells read it as instructions to build that viral protein, and therefore create some of the virus's molecules themselves.
- \* These proteins are solitary, so they do not assemble to form a virus.

- \* The immune system then detects these viral proteins and starts to produce a defensive response to them.

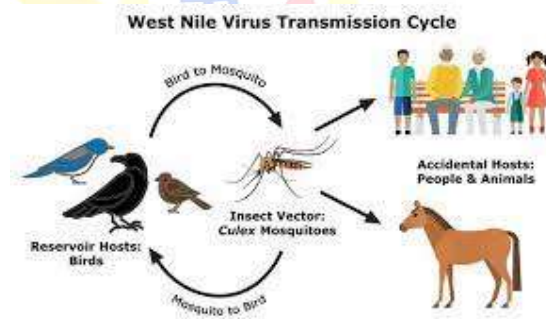
## 7.7 West Nile Virus

[News].

The Kerala health department is on alert after the death of a 47-year-old from Thrissur due to the West Nile Virus.

[Concept].

### West Nile Virus



- \* The West Nile Virus is a mosquito-borne, single-stranded RNA virus
- \* It is a member of the flavivirus genus and belongs to the Japanese encephalitis antigenic complex of the family Flaviviridae.
- \* WNV is commonly found in Africa, Europe, the Middle East, North America and West Asia.