Current Affairs Update (Dec 1-7)

National

National Court of Appeal

The Chief Justice of India N.V. Ramana has urged the Government to seriously consider Attorney General K.K.Venugopal's suggestion to restructure the judiciary to include **four National Courts of Appeals.** He remarked that the judicial structure has remained stagnant since Independence and with four appellate courts, pendency will be remarkably reduced.

The National Court Appeal with regional benches in Chennai, Mumbai and Kolkata is meant to act as final court of justice in dealing with appeals from the decisions of the High Courts and tribunals within their region in civil, criminal, labour and revenue matters. In such a scenario, a much-relieved Supreme Court of India situated in Delhi would only hear matters of constitutional law and public law.

Why NCA is a good idea?

1. A National Court of Appeals makes sense, with the Supreme Court being burdened with cases of all kinds.

2. It will make geographical sense to have different benches to hear appeals. As of now, all appeals have to be heard in New Delhi, inconvenient for cases originating in other parts of the country.

3. A court of appeal can work as an excellent mechanism to sieve cases. If there are areas of law that are particularly unsettled and need clarification, the court of appeal can club them together and send these forward to the Supreme Court. Not only can a number of individual cases be disposed of but areas of law can also be settled and a clear precedent set.

4. If the Supreme Court only deals with crucial cases, the process will become streamlined and will save a lot of time and expense, for both litigants and the courts.

Why is it a bad idea- arguments against?

1. It will not reduce the litigation. Apex courts are not clogged but subordinate courts are.

2. It will merely add another layer of adjudication.

3. It is constitutionally impossible because hearing of appeals is a basic structure (which will be affected).

4. It would be a boon only for advocates.

5. This suggestion would require an amendment in **Article 130 of the Constitution** which is impermissible as this would change the constitution of the Supreme Court completely

6. Stand of the Government.

7. NCA will add one more level of adjudication and will not help decrease litigation. It will only end up being a boon to advocates. It will mean more hardship to the litigant.

Dam Safety Bill

The Dam Safety Bill was introduced in Rajya Sabha. The bill aims to inspect survey, maintain and operate dams in the country because most of the dams are more than 100 years old.

- The bill constitutes two national bodies. They are National Committee on Dam Safety and National Dam Safety Authority.
- The National Committee on Dam Safety will evolve policies and recommend regulations related to dam safety.
- The National Dam Safety Authority implements the policies framed by the National committee. Also, it will provide technical assistance to the State Dam Safety Organisations.
- The bill will also constitute two state bodies. They are State Committee on Dam Safety and State Dam Safety Authority. The functions of these committees and authorities are restricted at state level and are similar to that of the national committees and authorities.

Constitutional validity

- According to Entry 17 of State List, the states are eligible to make laws on irrigation, water supply, canals, embankments, drainage, water power and water storage.
- According to Entry 56 of the Union List, the Parliament is allowed to make laws on regulation of river valleys and inter state rivers.
- Article 252 allows the Parliament to make laws on subjects in State list if two or more states pass resolution requiring a law. In this issue, West Bengal and Andhra Pradesh have passed resolution asking for a law on dam safety.

Mysuru Declaration

During a 'National Consultative Workshop on Citizen Charter & Delivery of Services by Panchayats, participants from 16 States signed "Mysuru Declaration". Under it, these states resolved to roll out Common Minimum Service delivery by Panchayats in India from April 1, 2022.

The Mysuru Declaration aims to recognise Citizen Centric Services as the "Heart of Governance". As a part of the declaration, participating states have committed:

1. To increase availability of Citizen Services at grassroots levels in a efficient and timely manner.

2. To implement highest standards of professional integrity and accountability to deliver Public Services in timely manner.

Subansiri Hydroelectric Project (LSHP)

- Subansiri Lower Hydroelectric Project (SLHEP), is an under-construction gravity dam **on the Subansiri river along the border of Assam and Arunachal Pradesh.**
- Subansiri River (gold river), **originates in the Tibet Plateau** and enters India through **Miri hills in Arunachal Pradesh.**
- It is **the largest tributary of Brahmaputra River.**
- The project is being developed by the state-run **National Hydro Power Corporation (NHPC).**
- It will be the single largest hydroelectric plant in India when completed. The project is expected to be completed in 2023

Government launched 'unique' face recognition techology for pensioners

The face recognition technology would act as a proof of life certificate' for pensioners. It will ensure ease of living for retired & elderly citizens. All pensioners are required to submit their life certificate annually in order to receive pension.

This face recognition technology has been devised by Ministry of Electronics and Information Technology in collaboration with the UIDAI (Unique Identification Authority of India). The initiative to provide digital life certificates was launched by the Department of Pension and Pensioners' Welfare (DoPPW).

The Unique face recognition technique, launched recently to provide 'life certificate' is a historic and far-reaching reform because it will touch the lives of 68 lakh central government pensioners as well as those covered under the EPFO and state governments.

ACROSS scheme

Cabinet committee on Economic Affairs (CCEA) has approved a scheme called **Atmosphere & Climate Research-Modelling Observing Systems & Services (ACROSS)** to be continued for next five years. ACROSS scheme pertains to the atmospheric science programs of the Ministry of Earth Sciences (MoES).

Implemented by: MoES in collaboration with the India Meteorological Department (IMD), Indian Institute of Tropical Meteorology (IITM), National Centre for Medium Range Weather Forecasting (NCMRWF) and the Indian National Centre for Ocean Information Services (INCOIS).

It addresses different aspects of weather and climate services, which includes warnings for cyclone, storm surges, heat waves, thunderstorms etc. Each of these aspects is incorporated as nine sub-schemes under the umbrella scheme "ACROSS" and is implemented in an integrated.

ACROSS is an umbrella scheme with eight sub-schemes encompassing the programmes for greater understanding of atmospheric science. These eight master schemes are as follows:

1. Commissioning of Polarimetric Doppler Weather Radars (DWRs).

2. Upgradation of Forecast System, Weather & Climate Services.

3. Atmospheric Observations Network.

4. Numerical Modelling of Weather and Climate.

5. Monsoon Mission III.

6. Monsoon Convection.

7. Clouds and Climate Change (MC4).

8. High Performance Computing System (HPCS).

International

G20 Troika

India recently joined the G20 Troika. The G20 Troika is made of Indonesia, India and Italy. That is Troika is made of the current presidency, Indonesia; the previous presidency Italy and the incoming presidency which is India.

Troika means a group of three people working together. It is an English word. The Troika of G20 is made of the current, next and immediate past host countries. The Troika ensures continuity and provides presidency support.

What is OPEC?

1. The **Organization of the Petroleum Exporting Countries (OPEC)** was **founded in Baghdad,** Iraq, with the **signing of an agreement in September 1960 by five countries** namely Islamic Republic of Iran, Iraq, Kuwait, Saudi Arabia and Venezuela. **They were to become the Founder Members of the Organization.**

2. OPEC is **a permanent, intergovernmental organization.**

3. OPEC's objective is **to co-ordinate and unify petroleum policies** among Member Countries, in order to secure fair and stable prices for petroleum producers; an efficient, economic and regular supply of petroleum to consuming nations; and a fair return on capital to those investing in the industry.

4. It is **headquartered in Vienna, Austria.**

5. OPEC **membership is open to any country that is a substantial exporter of oil and which shares the ideals of the organization.**

What is the Opec+?

- Opec+ refers to the alliance of crude producers, who have been undertaking corrections in supply in the oil markets since 2017.
- OPEC plus countries include Azerbaijan, Bahrain, Brunei, Kazakhstan, Malaysia, Mexico, Oman, Russia, South Sudan and Sudan.

Cost of Living Index 2021

The Economic Intelligence Unit recently released Cost of Living Index 2021. According to the report, **Tel Aviv of Israel** is the most expensive city in the world. In 2020, **Paris** was the most expensive city according to the index.

The Cost-of-Living Index tracks the cost of living of **173 cities** in the world. It compares more than 200 every day products and services. The index bench marks the prices against the prices in New York. Thus, the cities with currencies that are stronger than the US Dollars appear higher in the ranking.

None of the Indian cities topped the first 20 ranks.

Science-Tech & Environment

Omicron

The World Health Organisation (WHO) designated SARS-CoV-2 variant **B.1.1529** as a '**variant of concern**'. This variant of SARS-CoV-2 has been named as Omicron. This variant was first detected in **Botswana** region of South Africa.

It has a "very unusual constellation of mutations," that is, 32 in the spike protein alone. This variant is characterized by 30 amino acid changes, 3 small deletions and 1 small insertion in the spike protein as compared to original virus.

The WHO currently lists 5 variants of concern:

1. Omicron (B.1.1.529), identified in southern Africa in November 2021.

2. Delta (B.1.617.2), which emerged in India in late 2020 and spread around the world.

3. Gamma (P.1), which emerged in Brazil in late 2020.

4. Beta (B.1.351), which emerged in South Africa in early 2020.

5. Alpha (B.1.1.7), which merged in Britain in late 2020.

Assisted Reproductive Technology (Regulation) Bill, 2020

The bill aims to provide for regulation of ART (Assisted Reproduction Technology). ART is used to treat infertility. In ART, the eggs are removed from woman's body, mixed with sperm to form embryos. The bill was recently passed in Lok Sabha.

The bill defines ART as follows: ART includes all techniques that are used to get pregnancy. The techniques shall include handling oocyte (immature eggs) or sperms outside the human body. It shall also include transferring the embryo in to the woman's body.

The ART services shall include the following:

- Donation of sperm or oocytes

- In – Vitro Fertilisation: Means fertilising an egg and a sperm in lab

- Gestational Surrogacy: child is carried by a non – biological mother or surrogate mother

Regulates ART clinics and banks

- The bill says that every ART bank or clinic should be registered under the National Registry of Banks and Clinics of India. The bill will establish the National Registry. The registry will act as a central database holding details of the clinics and banks providing ART services.
- The clinics and banks shall become eligible to get registered only if they attain to certain standards. These standards are related to physical infrastructure, specialised manpower, diagnostic facilities, etc.
- The registration is valid for five years.

Conditions included in the bill

- Only a registered bank or clinic shall collect and store the semen.
- The semen can be received only from males in the age 21 years and 55 years. The oocytes shall be received only from females in the age 23 years and 35 years.
- The oocyte woman should be an ever – married woman. Also, she should have at least one alive child of her own and the child should be at least three years old.
- The bank should not supply the gamete of a single donor to more than one couple (seeking service).

Dhawan-1

- Skyroot Aerospace test-fired India's first privately built cryogenic rocket engine called Dhawan-1.
- The cryogenic rocket engine is 100 per cent 3D printed and 100 percent made in India.
- It has been named after Satish Dhawan, who was the third chairman of ISRO. He pioneered development of advanced launch capabilities of India.
- Engine was tested on a specially constructed testbed at Solar Industries in Nagpur.
- The engine is the upper stage of Vikram-2 launch vehicle. It uses environment friendly combinations called LNG and LOX.

WISER program

Women's Involvement in Science & Engineering Research (WISER) program was launched by Indo-German Science & Technology Centre (**IGSTC**) to encourage women researchers in R&D projects. IGSTC is a joint initiative of Department of Science & Technology (DST), India and Federal Ministry of Education & Research (BMBF) of Germany.

This is a first-of-its-kind programme, launched to promote women in the field of research and development by lateral entry.

Hydrogen-enriched compressed natural gas (HCNG)

The Bureau of Indian Standards (BIS) has also developed specifications (IS 17314:2019) of Hydrogen enriched Compressed Natural Gas (H-CNG) for automotive purposes, as a fuel.

The **blending of hydrogen with CNG** provides a blended gas termed as HCNG. It can be used in place of gasoline, diesel fuel and propane (C_3H_8) / LPG and its combustion produces fewer undesirable gases.

Advantages of HCNG:

- HCNG reduces emissions of CO up to 70%.
- Enables up to 5 % savings in fuel.
- First step towards future Hydrogen economy.
- Engines can be calibrated to release lower amounts of NO.
- Engines need minimum modification to run on HCNG.
- Ideal fuel for high load applications and heavy-duty vehicles.
- Better performance due to higher Octane rating of H2.

Disadvantages of using HCNG:

- Determining the most optimized H2/ NG (Natural Gas) ratio.
- It requires new infrastructures for preparing HCNG.
- Many steps need to be taken for commercializing it at a large scale.

- Current cost of H2 is more than the cost of Natural Gas. So, HCNG's cost is more than CNG.

National Pollution Control Day

Every year, India marks the National Pollution Control Day on **December 2**. The day is observed in the memory of the people who lost their lives in the Bhopal Gas Tragedy. The National Pollution Control Day is celebrated in India to make the citizens aware of laws that exist in India that help to contain pollution.

The Bhopal gas tragedy occurred on December 2nd and 3rd, 1984. During the accident poisonous chemical **methyl isocyanate** leaked from a pesticide plant union carbide India Limited in Bhopal.

Economics

K-shaped economic recovery

The prospects of a K-shaped recovery from COVID are increasing both in India and across the world.

What is a K-shaped recovery?

A K-shaped recovery happens when **different sections of an economy recover at starkly different rates.**

1. Households at the top of the pyramid are likely to have seen their in- comes largely protected, and savings rates forced up during the lockdown, increasing 'fuel in the tank' to drive future consumption.

2. Meanwhile, households at the bottom are likely to have witnessed permanent hits to jobs and incomes.

What are the macro implications of a K-shaped recovery?

1. Upper-income households have benefitted from higher savings for two quarters.

2. Households at the bottom have experienced a permanent loss of income in the forms of jobs and wage cuts; this will be a recurring drag on demand, if the labour market does not heal faster.

3. To the extent that COVID has triggered an effective income transfer from the poor to the rich, this will be demand-impeding because the poor have a higher marginal propensity to consume (i.e. they tend to spend (instead of saving) a much higher proportion of their income.

4. If COVID-19 reduces competition or increases the inequality of incomes and opportunities, it could impinge on trend growth in developing economies by hurting productivity and tightening political economy constraints.

Base year modified in Wage Rate Index (WRI)

Ministry of Labour released a new series of Wage Rate Index (WRI) with base year **2016**. The Wage Rate Index (WRI) is being compiled and maintained by the **Labour Bureau**. New series of WRI with base 2016=100 is going to replace old series with base **1963**-65.

New WRI series will be compiled **twice a year**, as on January 1 and July 1 each year, on point-to-point half-yearly basis. In the new WRI basket, total **37 industries** have been covered as opposed to 21 industries in 1963-65 series. Selected 37 industries in new series are categorized as 3 industries from plantation sector, 4 industries from mining sector and 30 industries from the manufacturing sector.

Significance: New series of WRI has increased the scope and coverage in terms of number of industries, occupations under selected industries, sample size, weightage of industries etc. Revision of WRI will play a significant role in coming out with minimum wages and national floor wages including other parameters which will be decided soon by expert group.

BT Explains

The letters of economic recovery

A V-, U-, W- or L-shaped recession/recovery is an informal shorthand description of the economic cycle heard often these days. The shapes take their names from the approximate pattern data make in graphs tracking the fluctuations of the economy. In the first of a two-part series on the shape of recovery, we decipher what they mean.

BY CHUANG PECK MING

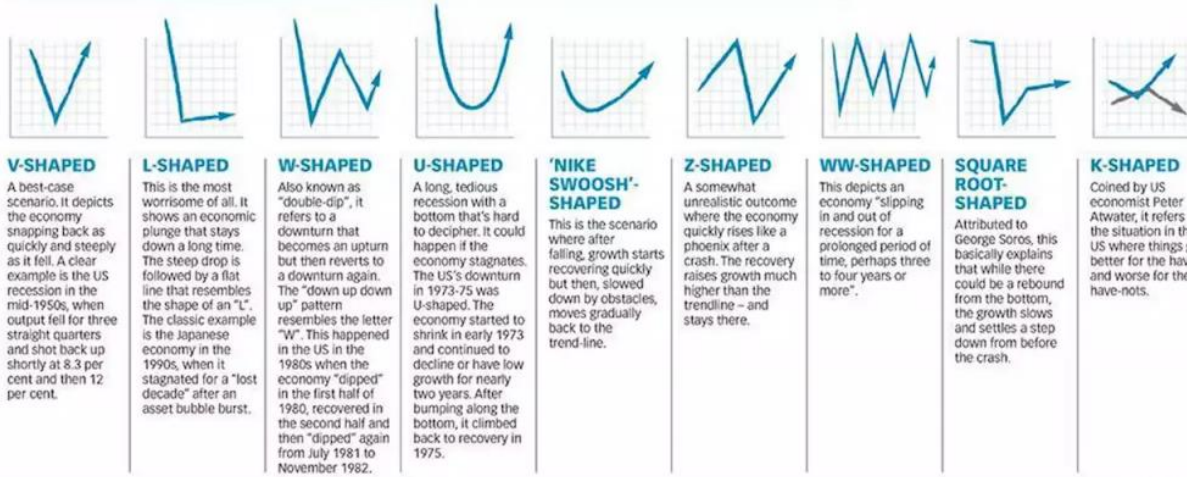## WHAT KIND OF RECESSION OR RECOVERY DO THE SHAPES SHOW?

V-SHAPED
A best-case scenario. It depicts the economy snapping back as quickly and steeply as it fell. A clear example is the US recession in the mid-1950s, when output fell for three straight quarters and shot back up shortly at 8.3 per cent and then 12 per cent.

L-SHAPED
This is the most worrisome of all. It shows an economic plunge that stays down a long time. The steep drop is followed by a flat line that resembles the shape of an "L". The classic example is the Japanese economy in the 1990s, when it stagnated for a "lost decade" after an asset bubble burst.

W-SHAPED
Also known as "double-dip", it refers to a downturn that becomes an upturn but then reverts to a downturn again. The "down up down up" pattern resembles the letter "W". This happened in the US in the 1980s when the economy "dipped" in the first half of 1980, recovered in the second half and then "dipped" again from July 1981 to November 1982.

U-SHAPED
A long, tedious recession with a bottom that's hard to decipher. It could happen if the economy stagnates. The US's downturn in 1973-75 was U-shaped. The economy started to shrink in early 1973 and continued to decline or have low growth for nearly two years. After bumping along the bottom, it climbed back to recovery in 1975.

'NIKE SWOOSH'-SHAPED
This is the scenario where after falling, growth starts recovering quickly but then, slowed down by obstacles, moves gradually back to the trend-line.

Z-SHAPED
A somewhat unrealistic outcome where the economy quickly rises like a phoenix after a crash. The recovery raises growth much higher than the trendline – and stays there.

WW-SHAPED
This depicts an economy "slipping in and out of recession for a prolonged period of time, perhaps three to four years or more".

SQUARE ROOT-SHAPED
Attributed to George Soros, this basically explains that while there could be a rebound from the bottom, the growth slows and settles a step down from before the crash.

K-SHAPED
Coined by US economist Peter Atwater, it refers to the situation in the US where things get better for the haves, and worse for the have-nots.

Photo: Lorenzo BT Graphics

Arunachal Pradesh: India's 1st Certified Organic Fruit Kiwi launched

India's only certified organic kiwi from Ziro Valley Farms of Arunachal Pradesh was launched at a mega National Tribal Festival called Aadi Mahotsav. Arunachal Pradesh is the 1st Indian state, that obtained "organic certification of kiwifruit" under the "Mission Organic Value Chain Development for North East Region (MOVCD-NER)", which is a Central Government scheme launched for North-eastern states.

Ziro Valley is a town and district headquarters of Lower Subansiri district in Arunachal Pradesh. This town has been included in Tentative List for UNESCO's World Heritage Site for its Apatani cultural landscape.

Current Affairs Update (Dec 7-13)

National

Cyclonic storm Jawad

A deep depression in the Bay of Bengal has intensified into cyclonic storm Jawad and is likely to make landfall near Odisha and Andhra Pradesh.

Saudi Arabia has given the **cyclone** its name 'Jawad'. The meaning 'Jawad' is liberal or merciful. The carries significance as this cyclonic storm will not be as severe as the previous ones.

Cyclones are **formed over the oceanic water in the tropical region.** In this region, the sunlight is highest which results in warming of land and water surface. Due to warming of the surface, the warm moist air over the ocean rises upwards following which cool air rushes in to fill the void, they too get warm and rise — the cycle continues.

Bill to amend Preamble

Rajya Sabha Deputy Chairman Harivansh Narayan Singh has reserved his decision to allow the introduction of **a private member's Bill to amend the Preamble to the Constitution.**

About the Constitution (Amendment) Bill, 2021:

- Introduced by BJP Member from Kerala K J Alphons.
- The Bill seeks to change the words in the Preamble **"EQUALITY of status and of opportunity" to "EQUALITY of status and of opportunity to be born, to be fed, to be educated, to get a job and to be treated with dignity".**
- It also seeks to replace the word "socialist" with "equitable".
- The Bill also proposes adding **"access to information technology" and "happiness" as objectives.**

Preamble and its amendability:

- In Keshavananda Bharati case, the court held that the basic elements or the fundamental features of the constitution as contained in the preamble cannot be altered by an amendment under **article 368.**
- The preamble has been amended only once. That is- **42nd constitutional amendment act, 1976** when three new terms were added- Socialist, secular and integrity.

Who is a Private Member?

Any MP who is not a Minister is referred to as a private member. The purpose of private member's bill is to draw the government's attention to what individual MPs see as issues and gaps in the existing legal framework, which require legislative intervention.

Admissibility of a private member's Bill:

The admissibility is decided by the Chairman for Rajya Sabha and Speaker in the case of Lok Sabha. Its rejection by the House has no implication on the parliamentary confidence in the government or its resignation.

Has a private member's bill ever become a law?

As per PRS Legislative, no private member's Bill has been passed by Parliament since 1970. To date, Parliament has passed 14 such Bills, six of them in 1956. In the 14th Lok Sabha, of the over 300 private member's Bills introduced, roughly four per cent were discussed, the remaining 96 per cent lapsed without a single dialogue.

Paika Rebellion

Union Culture Minister recently made the following recommendation regarding the **Paika Rebellion**: "The 1817 Paika rebellion of Odisha could not be called the first war of Independence, but considering it as the beginning of a popular uprising against the British, it would be included as a case study in the Class 8 National Council of Educational Research and Training (NCERT) history textbook."

Paikas: Recruited since the 16th century by kings in Odisha from a variety of social groups **to render martial services in return for rent-free land (nish-kar jagirs) and titles.** They were the **traditional land-owning militia of Odisha and served as warriors.**

How did the rebellion begin?

- When armies of the East India Company overran most of Odisha in 1803, the Raja of Khurda lost his primacy and the power and prestige of the Paikas went on a decline. So, they rebelled back.
- The British were not comfortable with these aggressive, warlike new subjects and set up **a commission under Walter Ewer** to look into the issue.
- The commission recommended that the hereditary rent-free lands granted to the Paikas be taken over by the British administration and this recommendation was zealously adhered to. They revolted against the British.
- **Bakshi Jagabandhu Bidyadhar Mohapatra Bharamarbar Rai,** the highest-ranking military general of King Khorda Mukund Dev II, led the Paikas to join the uprising.
- However, the rebellion also had several other underlying causes – like the rise in the price of salt, abolition of the cowrie currency for payment of taxes and an overtly extortionist land revenue policy.

Outcome: Although initially the Company struggled to respond they managed to put down the rebellion by May 1817. Many of the Paik leaders were hanged or deported. Jagabandhu surrendered in 1825.

Parag Agrawal

Indian-origin technology executive Parag Agrawal was appointed the new chief executive officer of Twitter after the social media giant's co-founder Jack Dorsey stepped down.

National Blockchain Strategy

The National Blockchain Strategy was recently proposed by the Ministry of Electronics and IT. The strategy has adopted multi – institutional approach.

- It involves NIC (National Informatics Centre), C – DAC (Centre for Development of Advanced Computing) and NICSI (National Informatics Centre services Inc) for offering blockchain as service.
- It aims to provide trusted digital platform for providing e – governance services using blockchain technology.
- It involves human resource development, collaboration, regulatory framework, technology stack, standards development.
- It seeks the union government to develop state – specific block chain applications.

Key Features

- The strategy will explore the possibility of use of technology for medical supplies and vaccines.
- It will improve transparency and efficiency in governance.
- NITI Aayog has recognised Blockchain technology as a promising technology. According to NITI Aayog, the technology has notable features such as accountability and decentralisation.

Agro – Climatic Zone

Agro – Climatic Zone is a land that is suitable for growing particular type of crop. It is essential to delineate the land in the country into agro – climatic zones for sustainable agricultural production.

There are **15 agro – climatic zones** in India. They are western Himalayas, eastern Himalayas, lower gangetic plains, middle gangetic plains, upper gangetic plains, trans gangetic plains, eastern plateau and hills, central plateau and hills, western plateau and hills, southern plateau and hills, east coast plains and hills, west coast plains and hills, Gujarat Plains and Hills, western dry region and islands.

What is Greater Tipraland?

Greater Tipraland is a region in Tripura. Several tribals are demanding to make the region as a separate state.

There are **19 notified** Scheduled Tribes in Tripura. Among these, 5.92 lakh are **Tripuris**, 1.88 lakh are **Reangs**. These three tribal groups are the major tribals in the state. Some of the minor tribal groups have joined hands and formed **TIPRA Motha** (Tirpaha Indigenous Regional Alliance) and IPFT (Indigenous People's Front of Tripura) political parties. These parties are now arguing that they want a separate state for their "survival and existence".

History: Tripura was ruled by **Manikya dynasty** since the late 13th century till it signed the **Instrument of Accession** with the Government of India in **1949.** Instrument of Accession is the document signed by the Indian states to enter into Union of India after independence. In due course, some of the indigenous tribes in the region have become minority in the state. This happened mainly because of the displacement of the Bengalis from East Pakistan during 1971 war. In 1881, the tribal population in the state was 63.77%. It reduced to 31.8% in 2011.

Armed Forces (Special Powers) Act (AFSPA)

Following the recent killings of 14 civilians in Nagaland, the Chief Minister Neiphiu Rio has demanded the repeal of **the Armed Forces (Special Powers) Act.** Rio criticised the Union Government for extending the "disturbed area" tag for Nagaland every year. He reminded the Centre of the criticism India had earned globally for **the "draconian Act".**

In simple terms, AFSPA gives **armed forces the power to maintain public order in "disturbed areas".**

Powers given to armed forces:

1. They have the authority to prohibit a gathering of five or more persons in an area, can use force or even open fire after giving due warning if they feel a person is in contravention of the law.

2. If reasonable suspicion exists, the army can also arrest a person without a warrant; enter or search premises without a warrant; and ban the possession of firearms.

3. Any person arrested or taken into custody may be handed over to the officer in charge of the nearest police station along with a report detailing the circumstances that led to the arrest.

Has there been any review of the Act?

On November 19, 2004, the Central government appointed a five-member committee headed by **Justice B P Jeevan Reddy** to review the provisions of the act in the north eastern states.

The committee submitted its report in 2005, which included **the following recommendations:** (a) AFSPA should be repealed and appropriate provisions should be inserted in the Unlawful Activities (Prevention) Act, 1967; (b) The Unlawful Activities Act should be modified to clearly specify the powers of the armed forces and paramilitary forces and (c) grievance cells should be set up in each district where the armed forces are deployed.

The **5th report of the Second Administrative Reforms Commission** on public order has also recommended the repeal of the AFSPA.

Hornbill Festival

The Hornbill Festival, which is called the '**Festivals of Festivals'**, is a 10-day annual cultural fest of Nagaland that showcases the rich and diverse **Naga ethnicity** through folk dances, traditional music, local cuisine, handicraft, art workshops etc. Every year the Hornbill festival is celebrated between **December 1 and December 10** in the northeast region and in the state of Nagaland. The festival is named after the Indian Hornbill Bird. The IUCN status of hornbill bird is "**Near Threatened**".

The state government has decided to call off the ongoing Hornbill Festival in protest against the killing of 14 civilians by security forces.

International

India- Russia Annual Summit

21st annual **India-Russia** summit was held recently. It was attended by Prime Minister Narendra Modi and Russian President Vladimir Putin. Alongside, **the inaugural 2+2 ministerial meeting** was also held.

The meeting saw the signing of **28 agreements** across sectors from defence to energy to space exploration, science and technology, heavy engineering, to trade and investment.

Why is Russia Important for India?

- Even as India is diversifying its defense trade partners, Russia still dominates the Indian defense inventory to the tune of about 70 per cent.
- Russia remains the only partner that is still willing to give India critical technologies, such as a nuclear submarine.
- The emerging Russia-China strategic relationship has important security consequences for India.
- Russia also reaffirmed its "unwavering support" to India for a permanent seat in an expanded UN Security Council.
- Russia expressed its support for India's membership of the Nuclear Suppliers Group.
- Both countries have mutual benefits in supporting struggle against terrorism, Afghanistan, climate change; organisations like SCO, BRICS, G-20 and ASEAN.

World Inequality Report 2022

- France-based World Inequality Lab published its report titled "World Inequality Report 2022".
- Report notes that, top 1 % of the India's population owns more than one-fifth of the total national income in 2021.

- The bottom half of the population earns just 13.1 per cent.
- It highlights that, economic reforms and liberalization that India has adopted, have mostly benefited the top 1 percent.
- Report identifies India as a poor and an unequal country, with an affluent elite.
- 1 percent richest people in India hold 22% of the total national income in 2021, while the top 10 % owns 57 per cent of the income.

UAE buys record 80 Rafale jets

The United Arab Emirates (UAE) has signed 14 billion Euros of agreement with France for 80 Rafale warplanes. This is the biggest international order ever made for the Rafale jets.

The UAE rival Qatar had recently bought 36 Rafale jets from France. The Rafale jets are to replace the Mirage 2000 fleet of UAE. However, the US F-35 jets are to remain deployed. France and USA are the two major defence suppliers of UAE.

Barbados

- Barbados has officially removed **Queen Elizabeth II** as its head of state and become the world's newest republic nearly 400 years after the country became a British colony.
- Barbados, however, will continue to be one of the 54 Commonwealth nations.

Davis Cup 2021

The Davis Cup 2021 was won by Russian Tennis Federation. The Davis Cup finals was held between Daniil Medvedev and Andrey Rublev of Russia. And Daniit Medvedev won the match bringing victory to the Russian Tennis Federation. Andrey Rublev was named the Most Valuable Player. The Davis Cup is also called the World Cup of Tennis.

US to boycott Winter Olympics

The US Government recently announced the boycott of Olympics 2022. The Olympics 2022 is to be held in Beijing. The US cited that "China's human rights ATTROCITIES" is the main reason for its boycott. The US has named the boycott as "Diplomatic Boycott".

The US is boycotting for the following human rights atrocities of China:

- Situations in Taiwan and Tibet

- The crackdown in Hong Kong

- Abuse of minority Muslim Uyghurs in Xinjiang

Previously, the US boycotted the Olympics completely in 1980. Then the boycott was to protest against the Soviet Union military presence in Afghanistan.

China is hosting both Summer and Winter Olympics. This is the first time in the Olympics history that a country is hosting both Summer and Winter Olympics. The Summer and Winter Olympics are held once in four years. The Summer Olympics is generally referred to as Olympics with more number of countries participating. On the other hand, the Winter Olympics is relatively smaller event. The summer Olympics are held once in four years, mainly during the leap years. The winter Olympics are held two years after the leap year. The Summer Olympics were held in 2000, 2004, 2008, 2012, etc. And the Winter Olympics were held in 2002, 2006, 2010, etc. China hosted the Summer Olympics in 2008 and is now to host the Winter Olympics in 2022.

Australia joins US boycott of Beijing Winter Olympics

Prime Minister of Australia Scott Morrison announced that, Australia will not send officials to February's Winter Olympics in Beijing. Australia took this decision amid disagreement with China over several issues, ranging from Australia's foreign interference laws to a move to acquire nuclear-powered submarines. The Prime Minister also cited human rights abuses in the Xinjiang province as well as Beijing's freeze on ministerial contact with Australia.

UAE announces 4.5-day workweek

- The government of United Arab Emirates (UAE) is set to implement a new four-and-a-half-day work week on January 1, 2022.
- United Arab Emirates has become the first country in the world to implement a national work week which is shorter than five-day week across the world.
- The new work week will be implemented as part of government's efforts to enhance social wellbeing and boost work-life balance.
- It will help in connecting the UAE with global markets from an economic point of view. It reflects UAE's strategic position on global economic map.
- New change will facilitate greater international business relations as well as possibilities for thousands of UAE-based & global enterprises by ensuring easy commercial, economic and financial activities with the countries following Saturday-Sunday weekend.

Science-Tech & Environment

The negative imports list for defence

The Government has brought in few changes in its **negative imports list policy.** This includes:

- The armed forces will now be able to import defence equipment in certain circumstances even if it figures in the negative import list.

- This includes scenarios where there is an "immediate requirement" that domestic industry cannot cater to, or if the safety of soldiers is at stake due to inadequacies in an indigenous product.

- There is also a provision now to review or remove items mentioned in the negative import list, which was first formulated in August 2020.

What is the negative imports list policy/positive indigenisation list?

Introduced in August 2020, the negative list essentially means that the Armed Forces—Army, Navy and Air Force—will only procure such items from domestic manufacturers. The manufacturers could be private sector players or Defence Public Sector Undertakings (DPSUs).

The **Defence Ministry** notified **the second negative import list,** in May 2021, of 108 items that can now be only purchased from indigenous sources. **The new list takes the total number on the list to 209.**

The list comprises complex systems, sensors, simulator, weapons and ammunitions like helicopters, next generation corvettes, Air Borne Early Warning and Control (AEW&C) systems, tank engines.

Significance and implications of this move:

1. Recognises the potential of local defence industry.

2. Invigorate impetus to domestic Research and Development by attracting fresh investment into technology and manufacturing capabilities.

3. Provides an excellent opportunity for 'start-ups' as also Micro, Small and Medium Enterprises (MSMEs).

Exercise Ekuverin
- The Exercise Ekuverin is a joint military exercise held between India and Maldives. It is held between the armies of India and Maldives.
- Ekuverin means "Friends" in Dhivehi language. It is an Indo – Aryan language. It is spoken in India, Lakshadweep and Maldives. The Exercise is being conducted between India and Maldives since 2008.
- The 2021 Exercise Ekuverin was held in Maldives.

Laser Communications Relay Demonstration (LCRD)
NASA has launched its new **Laser Communications Relay Demonstration (LCRD).** It is the agency's **first-ever laser communications system**. The LCRD will help the agency test optical communication in space.

LCRD is a technology demonstration that will pave the way for future optical communications missions. The LCRD payload is hosted onboard **the US Department of Defense's Space Test Program Satellite 6 (STPSat-6).** It will be in **a geosynchronous orbit,** over 35,000km above Earth.

Advantages of optical communications systems:

- Optical communications systems are smaller in size, weight, and require less power compared with radio instruments.
- A smaller size means more room for science instruments.
- Less weight means a less expensive launch.
- Less power means less drain on the spacecraft's batteries.
- With optical communications supplementing radio, missions will have unparalleled communications capabilities.

Laser VS radio: Laser communications and radio waves use different wavelengths of light. Laser uses infrared light and has a shorter wavelength than radio waves. This will help the transmission of more data in a short time.

TYPES OF ATMOSPHERIC JET ENGINES

TURBOJET

Turbojets are the oldest and most general purpose jet engines, finding use in a large variety of applications. They are most efficient at supersonic velocities, and are capable of speeds around Mach 3. They were also found on the Concorde and the Tupolev Tu-144.
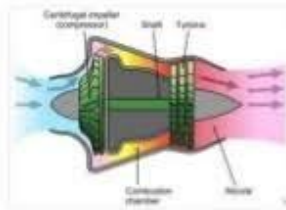
TURBOFAN

A turbofan is essentially a turbojet but with a large ducted fan that provides additional thrust by moving large amount of low velocity air around the main engine. This type of engine is more efficient than turbojets at subsonic speeds. Ex. Boeing 747.
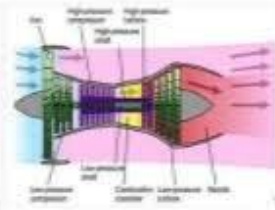
RAMJET

A ramjet is nothing more than a turbojet with all of the rotating parts removed. Ramjets are primarily used with missiles, due to their simple, small, and high-velocity design
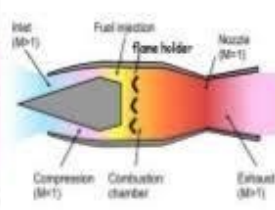
SCRAMJET

A scramjet is identical to a ramjet, but with one difference: combustion occurs with the air moving at supersonic velocities. As a result, scramjets are estimated not to work well below Mach 5, but could possibly reach speeds of Mach 24 (18000 mph).

4/15/2017   VAIBHAV PATHAK ,MECHANICAL , BTECH 4TH YEAR
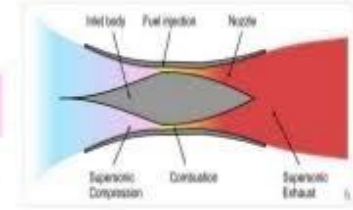
Kasturirangan Committee on Western Ghats

Recently, Karnataka Chief Minister Basavaraj Bommai informed the Centre that the state is opposed to the **Kasturirangan Committee** report on Western Ghats. He said that declaring Western Ghats as ecologically sensitive zone would adversely affect the livelihood of people in the region

Recommendations of Kasturirangan Committee:

- A ban on mining, quarrying and sand mining.
- No new thermal power projects, but hydro power projects allowed with restrictions.
- A ban on new polluting industries.
- Building and construction projects up to 20,000 sq m was to be allowed but townships were to be banned.
- Forest diversion could be allowed with extra safeguards.

What is facial recognition?

Facial recognition is a biometric technology that uses distinctive features on the face to identify and distinguish an individual.

Working: AFRS works by maintaining a large **database with photos** and videos of peoples' faces. Then, a new image of an unidentified person — often taken from **CCTV footage** — is compared to the existing database to find a match and identify the person. The **artificial intelligence** technology used for pattern-finding and matching is called "**neural networks**".

Benefits of facial recognition:

1. Improves outcomes in the area of Criminal identification and verification.

2. Easy identification amongst crowds.

3. Boosts the police department's crime investigation capabilities.

4. Helps civilian verification when needed. No one will be able to get away with a fake ID.

What are the Concerns?

- Absence of specific laws or guidelines poses a huge **threat to the fundamental rights to privacy and freedom of speech and expression** because it does not satisfy the threshold the Supreme Court had set in its landmark privacy judgment in **the 'Justice K.S. Puttaswamy Vs Union of India' case.**
- Many institutions have not conducted **"privacy impact assessment"** prior to deployment of the facial recognition system (FRS).
- **Function creep:** A function creep happens when someone uses information for a purpose that is not the original specified purpose (Police got permission to use the FRS by an order of the Delhi High Court for tracking missing children. Now they are using it for wider security and surveillance and investigation purpose, which is a function creep).
- This might lead to **an over-policing problem or problems** where certain minorities are targeted without any legal backing or any oversight as to what is happening.

- **Mass surveillance:** If someone goes to a protest against the government, and the police are able to identify the person, then there might be repercussions.

Indian SARS-CoV-2 Consortium on Genomics (INSACOG)

- The Indian SARS-CoV-2 Genomics Consortium (INSACOG) is jointly initiated by the Union Ministry of Health and Family Welfare, and Department of Biotechnology (DBT) with Council for Scientific & Industrial Research (CSIR) and Indian Council of Medical Research (ICMR).
- It is a consortium of 28 National Laboratories to monitor the genomic variations in the SARS-CoV-2.
- It carries out whole genome sequencing of SARS-CoV-2 virus across the nation, aiding in understanding the spread and evolution of the virus.
- INSACOG also aims to focus on sequencing of clinical samples to understand the disease dynamics and severity

Intensified Mission Indradhanush (IMI 3.0)

- It is a campaign aimed **to reach those children and pregnant women** who have been missed out or been left out of the Routine Immunisation Programme.
- **This is aimed** to accelerate the full immunisation of children and pregnant women through a mission mode intervention.
- The first phase has been rolled out from 22nd Feb. for 15 days,
- It is being **conducted in pre-identified 250 districts/urban areas across 29 States/UTs** in the country.
- **Beneficiaries from migration areas and hard to reach areas will be targeted** as they may have missed their vaccine doses during the pandemic.

Parker Solar Probe

The NASA probe recently made an extremely close encounter with the Sun. The probe was just 5.3 million miles away from the surface of our star and passed by at a ridiculous speed of 363,660 mph, making it **the fastest artificial object ever created.** Additionally, the Parker Solar Probe also broke the record for **the closest satellite to survive a near pass of the Sun.**

Project RE – HAB

- Project RE – HAB is Reducing Elephant Human – Attacks using Bees. It was recently launched in Assam.
- The Project RE – HAB creates "bee fences". The honey bees in these fences' thwart elephant attacks in human habitations. They dissuade the elephants without harming them.
- It is highly cost – effective as compared to erecting fences or digging trenches. Simultaneously, it increases honey production and increases farmer income. Also, the project helps to address climate change issues by regenerating forest cover.

- The Project RE – HAB is implemented by the Khadi and Village Industries Commission (KVIC). The KVIC is a statutory body established under Khadi and Village Industries Commission Act, 1956.
- The Project was first launched in Karnataka. Upon its huge success in the state, it is to be launched in West Bengal, Odisha, Jharkhand, Chhattisgarh, Tamil Nadu and Kerala.

Economics

Bank for International Settlements

- BIS is an international financial organisation owned by 62 member central banks, representing countries from around the world including India.
- It fosters international monetary and financial cooperation and serves as a bank for central banks.
- It carries out its work through its meetings, programmes and through the Basel Process – hosting international groups pursuing global financial stability and facilitating their interaction.
- Its **headquarter** is in Basel, Switzerland.
- The BIS was established in 1930 by an intergovernmental agreement between Germany, Belgium, France, the United Kingdom, Italy, Japan, the United States, and Switzerland.

Current Affairs Update (Dec 14-19)

National

Legalization of MSP debate

What is the rationale behind the demand for legalization of MSP?

Farmers receive less than MSP: In most crops grown across much of India, the prices received by farmers, especially during harvest time, are well below the officially-declared MSPs. And since MSPs have no statutory backing, they cannot demand these as a matter of right.

Limited procurement by the Govt: Also, the actual procurement at MSP by the Govt. is confined to only about a third of wheat and rice crops (of which half is bought in Punjab and Haryana alone), and 10%-20% of select pulses and oilseeds. According to **the Shanta Kumar Committee's 2015 report,** only 6% of the farm households sell wheat and rice to the government at the MSP rates.

What are the challenges with the legalization of MSP?

1. **Statutory MSP is unsustainable:** A policy paper by NITI Aayog's agricultural economist Ramesh Chand argued against legalising MSP. It reasoned that any fixed pre-determined price will push away private traders whenever production is more than demand, and there is a price slump in the market. This, in turn, will lead to government de-facto becoming the primary buyer of most farm produce for which MSP is declared, which is unsustainable.

2. **Huge scope for corruption and recycling/leakage** of wheat and rice, from godowns, ration shops or in transit.

3. **Disposal problems:** While cereals and pulses can be sold through the public distribution system, disposal becomes complicated in the case of niger seed, sesamum or safflower.

4. **Inflation:** Higher procurement cost would mean increase in prices of foodgrains, leading to inflation, which would eventually affect the poor.

5. **It will also impact India's farm exports,** if the MSP is higher than the prevailing rates in the international market. Farm exports account for 11% of the total exports of commodities.

6. With a legally guaranteed higher MSP, India will face stiff **opposition at the WTO.** The US had successfully won a case against China at the WTO in 2019 which was concerned with China's domestic support to agriculture in the form of Market Price Support (MPS).

7. **It would lead to a huge burden on the exchequer,** since the government would have to procure all marketable surplus in the absence of private participation.

8. **Demands from other sectors:** If the Centre makes a law to guarantee 100% procurement in all the 23 crops where MSP is announced, farmers cultivating fruits and vegetables, spices, and other crops will also demand the same.

Reciprocal Exchange of Logistics Agreement (RELOS)

India is all set to conclude **the bilateral logistics agreement with Russia (the Reciprocal Exchange of Logistics Agreement (RELOS))** soon.

What are logistics agreements?

The agreements are administrative arrangements facilitating access to military facilities for exchange of fuel and provisions on mutual agreement simplifying logistical support and increasing operational turnaround of the military when operating away from India.

India has signed several logistics agreements with all Quad countries, France, Singapore and South Korea beginning with **the Logistics Exchange Memorandum of Agreement (LEMOA)** with the U.S. in 2016.

Benefits of such logistics agreements:

The Navy has been the biggest beneficiary of these administrative arrangements, signed with several countries, improving operational turnaround and increasing inter-operability on the high seas.

Five Central Asian countries to be chief guest at Republic Day

India has invited the five central Asian countries namely Kazakhstan, Kyrgyzstan, Turkmenistan, Tajikistan, and Uzbekistan, as the chief guest for Republic Day celebrations, 2022. This is for the first-time that representatives of all five Central Asian countries would be guest at the Republic Day celebrations.

Jair Bolsonaro of Brazil in 2020, for the Republic Day. United Kingdom Prime Minister Boris Johnson was expected to attend Republic Day celebrations in 2021, but he couldn't attend because of Covid-19 pandemic.

Royal Gold Medal 2022

- Architect **Balkrishna Doshi** will receive the Royal Gold Medal 2022, one of the world's highest **honours for architecture**.
- With a 70 year career and over 100 built projects, 94-year-old Mr. Doshi has influenced the direction of architecture in India and its adjacent regions through both his practice and his teaching.

- Given in recognition of a lifetime's work, the **Royal Gold Medal** is approved personally by **Queen Elizebth II** and is given to a person or group of people who have had a significant influence on the advancement of architecture.

The Kashi Vishwanath Temple

The famous Hindu temple is dedicated to **Lord Shiva**. It is situated in Vishwanath Gali of Varanasi in Uttar Pradesh. It stands on the western bank of **River Ganga**. The temple is among the twelve Jyotirlingas, the holiest of Shiva Temples. Main deity of the temple is known by the names like Shri Vishwanath and Vishweshwara, which means Lord of the Universe.

Jnanpith Awards

56th and 57th Jnanpith Awards were announced recently, for the year 2020 and 2021 respectively. Assamese Poet **Nilmani Phookan Jr.** and Konkani Novelist **Damodar Mauzo** have emerged as the winners of 56th and 57th Award respectively. They were selected for their contribution to Indian literature. Jnanpith Awards are India's highest literary honour, which is bestowed on the writers for their outstanding contribution in Literature. Damodar Mauzo is from Majorda in Goa while Nilmani Phookan is from Guwahati in Assam.

Jnanpith Award is the **oldest and highest literary award**. Award is honoured annually by **Bharatiya Jnanpith** to an author for their contribution to literature. The award was established in 1961. It is bestowed **only on the Indian writers** who are write in the Indian languages mentioned in the **8th schedule** of Indian Constitution, besides English.

Status of women in Indian judiciary

- In the 71 years of history of the SC, there have been only eight women judges — the first was Justice Fathima Beevi, who was elevated to the bench after a long gap of 39 years from the date of establishment of the SC.
- There are only 80 women judges out of the sanctioned strength of 1,113 judges in the High Courts and the Supreme Court.
- There are six High Courts — Manipur, Meghalaya, Patna, Tripura, Telangana, and Uttarakhand — where there are no sitting women judges.

Public Accounts Committee

- The PAC is **formed every year** with **a strength of not more than 22 members of which 15 are from Lok Sabha** and **7 from Rajya Sabha**.
- The **term of office of the members is one year.**
- The **Chairman is appointed by the Speaker of Lok Sabha.** Since 1967, the chairman of the committee is selected from the opposition.
- Its chief function is **to examine the audit report of Comptroller and Auditor General (CAG)** after it is laid in the Parliament.

Supreme Court: Issue Aadhaar, voter cards to sex workers

Supreme Court observed that fundamental rights are guaranteed to every citizen irrespective of vocation and directed the central government to start the process of issuing voter ID, Aadhaar and ration cards to sex workers. Supreme court also directed centre to keep providing dry ration to sex workers.

International

UN Observer status to Solar Alliance

The **UN General Assembly** has conferred **Observer Status** to **the International Solar Alliance (ISA)**, a historic decision which India said would help provide for a well-defined cooperation between the Alliance and the United Nations that would benefit global energy growth and development.

Significance of the observer status:

The granting of Observer Status to ISA in the General Assembly would help provide for regular and well-defined cooperation between the Alliance and the United Nations that would benefit global energy growth and development.

International Solar Alliance (ISA)

- The ISA was conceived as **a joint effort by India and France** to mobilise efforts against climate change through the deployment of solar energy solutions.

- It was presented by the leaders of the two countries at **the 21st Conference of Parties (COP21)** to **the United Nations Framework Convention on Climate Change (UNFCCC) held in Paris in 2015.**

- It is an alliance of more than 122 countries **initiated by India**.

- ISA is a **coalition of solar resource rich countries lying fully or partially between the Tropic of Cancer and the Tropic of Capricorn** to specifically address energy needs by harnessing solar energy.

- **The Paris Declaration** establishes ISA as an alliance dedicated to the promotion of solar energy among its member countries.

Miss Universe 2021

21 years after Lara Dutta won the title of Miss Universe, Harnaaz Sandhu from India has become the new Miss Universe 2021. The 70th Miss Universe 2021 was held in Eilat, Israel. Before Ms Sandhu, only two Indians have won the title of Miss Universe:

1. Sushmita Sen in 1994 and

2. Lara Dutta in 2000.

Catherine Russell to head UNICEF

Secretary-General Antonio Guterres has appointment Catherine Russell as the head of UN children's agency UNICEF. UNICEF is also known as "United Nations Children's Fund". It is a United Nations agency, which is responsible to provide humanitarian and developmental aid to children across the world. It is among the most widespread and recognizable social welfare organizations of the world. It is present in 192 countries and territories.

Olaf Scholz

Parliament of Germany has elected Olaf Scholz as the ninth post-World War II chancellor. This has opened a new era for Germany after 16-year tenure of Angela Merkel.

Pacific ring of fire

A 7.3-magnitude earthquake struck eastern Indonesia. The epicentre was in **the Flores Sea,** north of East Nusa Tenggara province.

Why Indonesia is vulnerable to earthquakes?

Indonesia sit along **the Ring of Fire region,** an area where most of the world's volcanic eruptions occur. **Indonesia is at the meeting point of three major continental plates** – the Pacific, the Eurasian and the Indo-Australian plates – and the much smaller Philippine plate. As a result, several volcanoes on the Indonesian islands are prone to erupting.

The **Ring of Fire is a Pacific region** home to over 450 volcanoes, including three of the world's four most active volcanoes – Mount St. Helens in the USA, Mount Fuji in Japan and Mount Pinatubo in the Philippines. It is also sometimes called the circum-Pacific belt. Around 90% of the world's earthquakes occur in the Ring of Fire, and 80% of the world's largest earthquakes.

The Ring of Fire is the result from subduction of oceanic tectonic plates beneath lighter continental plates. The area where these tectonic plates meet is called a subduction zone. The world's deepest earthquakes happen in subduction zone areas as tectonic plates scrape against each other – and the Ring of Fire has the world's biggest concentration of subduction zones.

As energy is released from the earth's molten core, it forces tectonic plates to move and they crash up against each other, causing friction. The friction causes a build-up of energy and when this energy is finally released it causes an earthquake. If this happens at sea it can cause devastating tsunamis.

EU: Malta legalises cannabis at home

Malta has become the first country in European Union to legalise cannabis at home and for personal use. Under the new law, Malta has allowed people aged 18 and above to have up to seven grams of cannabis.They would also be allowed to grow up to four plants at home.

Consumption of cannabis in public is still illegal and punishable by a 235 euro fine. Furthermore, consuming the cannabis in front of a child, either in public or at home, would attract a penalty of 300 and 500 euros.

India, Iran and Uzbekistan discuss on Joint use of Chabahar port

India, Iran and Uzbekistan held talks on joint use of the Chabahar Port. They also underlined the importance role played by the port in enhancing regional connectivity. Chabahar seaport is in Chabahar located in Iran, on the Gulf of Oman. The port serves as the only oceanic port of Iran. It comprises of two separate ports namely, Shahid Kalantari and Shahid Beheshti. India is keen to develop this port because it will provide India an alternative route for trade between India and Afghanistan.

Science-Tech & Environment

Supersonic Missile Assisted Release of Torpedo System (SMART)

India successfully launched Supersonic Missile Assisted Release of Torpedo System (SMART) from **Abdul Kalam Island**. SMART system has been designed for **enhancing anti-submarine warfare capability** far beyond the conventional range of torpedo. The Defence Research and Development Organization (**DRDO**) has developed the weapon for Indian Navy.

SMART is a next-generation, missile based standoff **torpedo delivery system**. It has been designed to enhance the anti-submarine warfare capability. Missile will work beyond the conventional range of the torpedo. It is a canister-based missile system comprising of advanced two-staged solid propulsion, precision inertial navigation and electromechanical actuators.

Bird Flu
- Fresh cases of **bird flu** have been confirmed in the Kuttanad region of Kerala. Response teams have been formed for culling birds in affected areas. Samples have tested positive for the **H5N1 influenza virus.**
- Avian influenza is a disease caused by avian influenza **Type A viruses found naturally in wild birds worldwide.**

- Avian Influenza type A viruses are **classified based on two proteins on their surfaces – Hemagglutinin(HA) and Neuraminidase(NA).** There are about 18 HA subtypes and 11 NA subtypes.
- The infection is deadly as it has a high mortality rate of about 60%.
- There are no known cases of H5N8 in human beings. Risk to general public is very low.
- **Control measures:** Culling is usually undertaken to control the infection when it is detected in animals. Besides culling, safe disposal of all such culled animals and animal products is also important.

Finn's weaver bird

- Finn's weaver (Ploceus megarhynchus) bird, numbering less than 500 in India, which **until now was listed as "vulnerable"** in the International Union for Conservation of Nature's (IUCN) Red List has been **uplisted to "endangered" category.**
- The bird is primarily found in Terai grasslands in Uttarakhand and western Uttar Pradesh, apart from a few pockets in Assam

What is 'Solar hamam'?

- Solar Hamam, a locally designed and branded heating system is gaining popularity across the villages of Ladakh, Himachal Pradesh and Uttarakhand.
- Solar Haman is aimed at providing clean energy solutions to households across mountainous regions. It seeks to conserve forests, free women from collecting fuel wood and mitigate carbon emission.
- Development of this technology is significant because households in the mountains depend on natural resources to get fuel, fodder, health, nutrition, agriculture, livelihood and employment.
- The Solar Hamam provides an anti-freezing outlet. It provides for 15-18 litres of boiling hot water, within first solar illumination of 30-35 minutes, at maximum temperature of 90°C in the morning.
- Successive batches of hot water are available 15-20 minutes apart.
- Post-installation maintenance for the solar hamam is minimal.
- It is fabricated by rural artisans, mainly carpenters. Thus, it has also helped in generating employment.
- The Solar Hamam had won "Himachal Pradesh State Innovation Award for 2016-17".

India votes against UNSC resolution to securitise climate action

- India voted against a UN Security Council (UNSC) draft resolution to securitise climate change. The draft resolution linked climate change with global security challenges.
- India argued that; this move seeks to undermine the hard-won consensus which was reached at the recent Glasgow Summit.

- The new climate agreement was accepted by the negotiators from around 200 countries, after the COP26 summit, which recognises India's intervention to "phase down" rather than "phase out" the fossil fuels.

About the Draft resolution

- The draft resolution was moved jointly by Niger and Ireland.
- It called the UN Secretary General Antonion Guterres to "integrate climate-related security risk into comprehensive conflict-prevention strategies, as central component".
- Russia had vetoed the resolution.

What is a 'Sponge city' in Water Management?

Chennai is all set to adopt innovative water management strategies and transform into a sponge city to curb the urban flooding. Sponge city concept seeks to make **urban areas more permeable**, have more open spaces to store rainwater as well to allow it to percolate to aquifers. Water Resources Department in Chennai is looking over possibility of digging recharge shafts in smaller water bodies across the city.

Sponge city is a new urban construction model for flood management, and to strengthen ecological infrastructure & drainage systems. This concept was **proposed by Chinese researchers** in 2000. This system helps in **alleviating urban flooding, urban heat island effect and water resources shortage**. It also improves the ecological environment and biodiversity by absorbing & capturing rain water and using it to reduce floods. Sponge city policies are **nature-based solutions**, which use natural landscapes for catching, storing and cleaning water. This concept was inspired by ancient wisdom of adaptation to climate challenges, specifically in monsoon world.

In India, there is a need of Sponge cities because,

1. Urban flooding has become recurring phenomenon in Indian metros.

2. India's Land policy has not been effective in managing or controlling the recurrence of major floods in urban areas.

3. Urban cities lack proper drainage network.

4. Concrete structures in urban cities are causing water wastage.

Royal Bengal Tiger sighted at Buxa Reserve

- A camera trap set up at Buxa Tiger Reserve (BTR) in Alipurduar district of West Bengal have captured a sight of Royal Bengal Tiger that the region has not witnessed in more than two decades.
- The sighting of Bengal Tiger is significant because no tiger had been photographed for more than 23 years, in the Buxa Reserve. The last known tiger was photographed in 1998.
- Buxa Tiger Reserve is located in northern West Bengal. Buxa Tiger Reserve was established, as the 15th tiger reserve of India, in 1983.
- The Royal Bengal Tiger belongs to specific population of the Panthera tigris tigris subspecies, which is native to the Indian subcontinent. The tiger is threatened by poaching and fragmentation of habitat.

Economics

India's WTO dispute over sugar subsidies

At the World Trade Organisation (WTO), India has lost the dispute over subsidies of sugar exports with the dispute settlement panel. The dispute settlement panel ruled against India, on a complaint filed by

Brazil, Australia, and Guatemala. However, this ruling will not come into effect immediately because, India will file an appeal against this report.

For the five consecutive sugar seasons, in between 2014-15 to 2018-19, India had provided non-exempt product-specific domestic support to the sugarcane producers in excess of permitted 10 per cent level of total value of sugarcane production. Thus, the settlement panel report found that, India was acting inconsistently with its obligations provided under Article 7.2(b) of the Agreement on Agriculture.

India's sugar exports: India incentivises sugar exports by extending financial support to the sector. This sector employs more than 50 million farmers in states like Uttar Pradesh and Maharashtra.

The World Gold Council
- It is the market development organisation for the gold industry.
- It works across all parts of the industry, from gold mining to investment, and their aim is to stimulate and sustain demand for gold.
- It is an association whose members comprise the world's leading gold mining companies.
- It helps to support its members to mine in a responsible way and developed the Conflict Free Gold Standard.
- Headquartered in the UK, they have offices in India, China, Singapore, Japan and the United States.

Gold & Economy

As Currency: Gold was used as the world reserve currency up through most of the 20th century. The United States used the gold standard until 1971.

As a hedge against inflation: The demand for gold increases during inflationary times due to its inherent value and limited supply. As it cannot be diluted, gold is able to retain value much better than other forms of currency.

Strength of Currency: When a country imports more than it exports, the value of its currency will decline. On the other hand, the value of its currency will increase when a country is a net exporter. Thus, a country that exports gold or has access to gold reserves will see an increase in the strength of its currency when gold prices increase, since this increases the value of the country's total exports.

Current Affairs Update (Dec 20-25)

National

Raising legal age of marriage for women

The Cabinet has decided to **raise the legal age of marriage for women** from 18 to 21. This decision is based on the recommendation of **a panel led by Jaya Jaitly.**

The committee has said the recommendation is not based on the rationale of population control (India's total fertility rate is already declining) but more with women's empowerment and gender parity. The committee has said access to education and livelihood must be enhanced simultaneously for the law to be effective.

Lok Sabha has sent **the Prohibition of Child Marriage (Amendment) Bill, 2021** which seeks to raise the age of marriage for women to 21 to **a standing committee.**

Why is the law being relooked at?

- From bringing in gender-neutrality to reduce the risks of early pregnancy among women, there are many arguments in favour of increasing the minimum age of marriage of women.
- Early pregnancy is associated with increased child mortality rates and affects the health of the mother.
- Despite laws mandating minimum age and criminalising sexual intercourse with a minor, child marriages are very prevalent in the country.
- Also, according to a study, children born to adolescent mothers (10-19 years) were 5 percentage points more likely to be stunted (shorter for their age) than those born to young adults (20-24 years).

Criticism:

- Women's rights activists have opposed the suggestion and have cited evidence to show that **such a move may be used to incarcerate young adults marrying without parents' consent.**
- Also, this move would lead to **criminalisation of a large number of marriages** that will take place once the law comes into effect.

Push for semiconductor manufacturing

Government approved a ₹76,000 crore scheme to boost semiconductor and display manufacturing in the country, taking the total amount of incentives announced for the electronics sector to **₹2.30 lakh crore.**

Details:

- **Aim:** "Development of sustainable semiconductor and display ecosystem in the country" is aimed at making India a **global hub of electronic system design and manufacturing.**

- **Finance:** The scheme would provide **fiscal support of up to 50% of the project cost** for setting up semiconductor and display fabrication units.

- **Collaboration**: Centre would work with the States to set up **high-tech clusters** with the necessary infrastructure such as land and semiconductor-grade water.

- **India Semiconductor Mission:** A specialised and independent 'India Semiconductor Mission' will be set up. It will act as the **nodal agency for efficient and smooth implementation** of the schemes on semiconductors and display ecosystem.

- **"Chips to start-ups" programme:** It would develop 85,000 well-trained engineers. Semiconductor designers would be given the opportunity to launch start-ups. The government would bear **50% of the expense** under the design-linked incentive scheme.

Importance of the Programme:

- **Strategic**: Trusted sources of semiconductors and displays had strategic importance in the current geopolitical scenario and were "**key to the security of critical information infrastructure**".

- **Ensure the digital sovereignty of India:** The approved programme will propel innovation and build domestic capacities

- **Job Creation**: It will also create highly skilled employment opportunities to harness the demographic dividend of the country," .The entire programme would lead to **35,000 high-quality direct jobs** and 1 lakh indirect employment.

- **Potential for India:** Electronics manufacturing in the country had increased to **$75 billion** over the past seven years and was expected to reach **$300 billion** in the next six years.

- **Increase in FDI:** The Programme will attract an investment of **₹1.67 lakh crore** and lead to production worth ₹9.50 lakh crore.

What is Special Category Status?

There is **no provision of SCS in the Constitution;** the Central government extends financial assistance to states that are at a comparative disadvantage against others. This classification was done on the recommendations of **the Fifth Finance Commission in 1969.**

It was based on **the Gadgil formula**. The parameters for SCS were:

1. Hilly Terrain;

2. Low Population Density And/Or Sizeable Share of Tribal Population;

3. Strategic Location along Borders With Neighbouring Countries;

4. Economic and Infrastructure Backwardness; and

5. Nonviable Nature of State finances.

Some prominent guidelines for getting SCS status:

1. Must be economically backward with poor infrastructure.

2. The states must be located in hilly and challenging terrain.

3. They should have low population density and significant tribal population.

4. Should be strategically situated along the borders of neighboring countries.

Present scenario: The **14th Finance Commission** has done away with the 'special category status' for states, except for the Northeastern and three hill states. Instead, it suggested that the resource gap of each state be filled through 'tax devolution', urging the Centre **to increase the states' share of tax revenues from 32% to 42%,** which has been implemented since 2015.

Delimitation Commission

The **Jammu and Kashmir Delimitation Commission** (headed by retired Supreme Court Judge **Justice Ranjana Prakash Desai**), has made the following recommendations:

1. Increase six seats for the Jammu division and one for the Kashmir division.

2. Reserve 16 seats for the Scheduled Caste (SC) and Schedule Tribe (ST) communities.

Implications: J&K will have a 90-member Legislative Assembly now, up from 87 prior to the Centre's decision to end J&K's special constitutional position.

What is delimitation and why is it needed?

Delimitation literally means the process of fixing limits or boundaries of territorial constituencies in a state that has a legislative body.

The **Delimitation Commission for Jammu and Kashmir was constituted by the Centre** on March 6 last year to redraw Lok Sabha and assembly constituencies of the union territory in accordance with the

provisions of **the Jammu and Kashmir Reorganisation Act, 2019** and Delimitation Act, 2002, passed by the Centre in August 2019 along with other J&K-specific Bills.

Article 31D of Indian Constitution

- The Government has clarified that the word 'anti-national' has not been defined in statutes.
- 'Anti-national activity' was **inserted in the Constitution during the Emergency in 1976 but was removed later.**
- **The Constitution (Forty–Second Amendment) Act, 1976** inserted in the Constitution Article 31D (during Emergency) which defined 'anti-national activity' and this **Article 31D** was, subsequently, omitted by **the Constitution (Forty-third Amendment) Act, 1977.**

Durga Puja

The **Intergovernmental Committee for the Safeguarding of the Intangible Cultural Heritage** has inscribed **'Durga Puja in Kolkata'** on **the Representative List of the Intangible Cultural Heritage of Humanity.**

In total, **14 Intangible Cultural Heritage elements from India** have now been inscribed on UNESCO's Representative List.

UNESCO says, **Intangible Cultural Heritage includes traditions or living expressions inherited from our ancestors and passed on to our descendants,** such as oral traditions, performing arts, social practices, rituals, festive events, knowledge and practices concerning nature and the universe or the knowledge and skills to produce traditional crafts.

UNESCO established its Lists of Intangible Cultural Heritage with the aim of **ensuring better protection of important intangible cultural heritages worldwide and the awareness of their significance.** The list was **established in 2008** when **the 2003 Convention for the Safeguarding of the Intangible Cultural Heritage** took effect.

Data protection Bill Report

Nearly two years after it was constituted on 11 December 2019, **the Joint Committee on the Personal Data Protection Bill, 2019,** headed by BJP MP **P.P. Chaudhary,** has presented its final report on the upcoming bill in both Houses of Parliament on 16 December.

Key recommendations:

1. Remove the word 'personal' from the existing title of 'Personal **Data Protection Bill**'. This is intended to reflect that the bill, in order to better ensure privacy, will also be dealing with non-personal data, such as personal data that has been anonymised.

2. Amend the section restricting the transfer of personal data outside India to say "sensitive personal data shall not be shared with any foreign government or agency unless such sharing is approved by the central government.

3. No social media platform be allowed to operate in India unless its parent company, which controls the technology powering its services, sets up an office in the country.

4. It proposes a separate regulatory body to be set up to regulate the media.

5. Jail term of up to 3 years, fine of Rs 2 lakh or both if de-identified data is re-identified by any person.

6. The word 'personal' ought to be dropped from the name of the Bill.

7. Central government may exempt any government agency from the legislation only under exceptional circumstances.

Order of the Druk Gyalpo
- Prime Minister Narendra Modi has been conferred **Bhutan's highest civilian award, 'Order of the Druk Gyalpo'.**
- The award was conferred by the King of Bhutan, Jigme Khesar Namgyel Wangchuck, in recognition of Modi's contribution to India-Bhutan relations and his services to Bhutan and its people.
- Modi is the first foreign head of government to receive the award.

Conditions for declaring cold waves
The IMD records a cold wave when the **minimum temperature is equal to or less than 10 degrees Celsius at a weather station in the plains and is 4.5 degrees to 6.4 degrees** below the normal temperature for that period.

For hilly regions, a cold wave is declared when the minimum temperature is less than or equal to 0 degrees Celsius and the minimum temperature is 4.5 degrees to 6.4 degrees below the normal.

"Tamil Thai Vaazhthu" declared Tamil Nadu's State Song
Tamil Thai Vaazhthu is a prayer song sung in praise of Mother Tamil. It is a 55-second song and is sung at the beginning of functions across all government offices, educational institutions, public sector undertakings and similar public events, on the line of national anthem.

Goa Liberation Day
60th Goa Liberation Day was celebrated on 19th December, 2021 in commemoration of the **Indian armed forces freeing Goa from Portuguese colonial rule.**

Portuguese were the first ones to colonize parts of India and were **the last to leave.** The Portuguese invaded Goa in the year 1510.

Operation Vijay began on December 17, 1961, when the then Prime Minister Jawaharlal Nehru ordered the invasion. With a force of almost 30,000, the Indian attack overpowered the ill-prepared Portuguese 3,000 member army.

With minimal bloodshed, the attack was successful and was carried forward to retrieve the other Portuguese-controlled areas, Daman and Diu. At this point on December 18, the Portuguese Governor **General Vassalo da Silva** gave up control of the Union Territory of Goa, Daman and Diu.

Chillai Kalan

With the winter solstice today (December 21), one of the harshest winter periods of 40 days, called **Chillai Kalan,** has begun in Kashmir. Chillai Kalan is a Persian term which means 'major cold'. This is followed by a 20-day-long **'Chillai Khurd'** and 10-day-long **'Chillai Bacha'**.

"Anti-Doping Bill"

- Sports Minister, Anurag Thakur, introduced "Anti-Doping Bill" in Lok Sabha.
- The bill seeks to provide statutory framework for the functioning of National Anti-Doping Agency (NADA).
- Bill empowers NADA to conduct raids and strengthen measures of tackling drug abuse in Indian
- It will also provide statutory framework for the operation National Dope Testing Laboratory (NDTL) and other dope testing laboratories as well.
- It also provides for creation of a National Board for Anti-Doping in Sports in order to strengthen anti-doping activities in sport.

International

WEF: Davos meeting deferred

The World Economic Forum (WEF) has decided to defer its annual meeting in Davos, because of continued uncertainty over the Omicron variant of coronavirus.

WEF is an international non-governmental and lobbying organisation. It is headquartered in Cologny, Switzerland. Klaus Schwab had founded WEF on January 24, 1971. The foundation is mostly funded by its 1,000 member companies as well as public subsidies.

Davos is an Alpine resort town and a municipality located in Davos Region of Switzerland. It is located on river Landwasser, in the Rhaetian Alps.

Lewis Hamilton

Seven times Formula One (F1) champion Lewis Hamilton has received "knighthood" for services to motorsport. Lewis Hamilton holds the record of most race wins with 103. He is a British racing driver, currently competing in Formula One for Mercedes.

Science-Tech & Environment

Changes to Biological Diversity Act, 2002

Government has recently introduced **the Biological Diversity (Amendment) Bill, 2021** in Lok Sabha.

Highlights of the Bill:

1. The Bill seeks **to reduce the pressure on wild medicinal plants** by encouraging the cultivation of medicinal plants.

2. The Bill proposes to **exempt AYUSH practitioners from intimating biodiversity boards** for accessing biological resources or knowledge.

3. The Bill also facilitates **fast-tracking of research, simplify the patent application process, decriminalises certain offences**.

4. The Bill brings more **foreign investments** in biological resources, research, patent and commercial utilisation, without compromising the national interest.

5. The bill focuses on **regulating who can access biological resources and knowledge and how access will be monitored.**

6. The Bill has also clarified and strengthened the role of **state biodiversity boards**.

Why is the Biodiversity Act 2002 being amended?

- People from AYUSH medicine urged the government to simplify, streamline and reduce the compliance burden to provide for a conducive environment for collaborative research and investments.
- They also sought to simplify the patent application process, widen the scope of access and **benefit-sharing** with local communities.

Concerns:

- The main focus of the bill is to facilitate trade in biodiversity as opposed to conservation, protection of biodiversity and knowledge of the local communities.
- The bill has been introduced **without seeking public comments** as required under **the pre-legislative consultative policy**.
- There are **ambiguous provisions in the proposed amendment** to protect, conserve or increase the stake of local communities in the sustainable use and conservation of biodiversity.
- Activists say that the amendments were done to "solely benefit" the AYUSH Ministry.
- The bill has **excluded the term Bio-utilization** which is an important element in the Act. Leaving out bio utilization would leave out an array of activities like characterization, incentivisation and bioassay which are undertaken with commercial motive.
- The bill also **exempts cultivated medicinal plants from the purview of the Act** but it is practically impossible to detect which plants are cultivated and which are from the wild.

SGTF Test Kits
- Formally known as **the S-gene Target Failure (SGTF) test,** this proxy test can be used for early detection of Omicron.
- The test detects the absence of **the S-gene,** which is **an indicator of the presence of Omicron variant** in a Covid positive patient.
- S gene is not present in the Omicron variant. This is the result of the multiple mutations that the variant has undergone and is a marker to identify the variant

Agni P
The Defence Research and Development Organisation (DRDO) successfully tested the new generation nuclear capable ballistic missile 'Agni P'. Agni P was launched from Dr APJ Abdul Kalam Island off the coast of Odisha.

Agni P is a two-stage canisterised solid propellant ballistic missile, having a dual redundant navigation and guidance system. It is a medium-range ballistic missile, developed by Defence Research and Development Organisation (DRDO) as the successor of Agni-I and Agni-II missiles. It is the sixth missile in Agni (missile) series of ballistic missile. The missile can be either transported on train or stored in canister.

What is Parvovirus?
- It is a highly contagious viral disease affecting puppies and dogs.
- It affects the intestinal tract of canines with puppies being more susceptible.
- **Symptoms:** Bloody diarrhoea, vomiting, drastic weight loss, dehydration and lethargy
- The virus has reported a 90 per cent mortality rate.

History: This virus was **discovered in 1967** and has rapidly become a serious threat to canine health. This is primarily due to the fact that the virus is hard to kill, can live for a long time in the environment, and is shed in large quantities by infected dogs.

Current outbreak: Nearly 2,000 pet and stray dogs in Amravati city

How does the virus spread in dogs?

Through direct contact with an infected dog or by indirect contact with a contaminated object, including the hands and clothing of people who handle infected dogs.

What's causing increase in the number of cases?

- The recent rise in cases of Parvovirus in pets is due to the Covid-19 pandemic that compelled many pet owners to avoid timely vaccination of their dogs.

- Also, due to the non-implementation of the animal birth control programme, dog vaccination and rabies in the last three years has led to rising parvovirus cases in street dogs in the city.

What is "MicroAge" Experiment?

- An experiment called "MicroAge" is set to be launched to International Space Station on SpaceX Falcon 9 rocket from Kennedy Space Centre in Florida.
- MicroAge Experiment will help people in living a longer and healthier life.
- As the part of this experiment, human cells will be launched to space.
- Experiment will help in understanding what happens to the human cells and why.

What led to this experiment?

It is known for a long time that astronauts in space tend to lose muscle rapidly. So, people have speculated if that is an accelerated ageing phenomenon. Astronauts at the space station had an analogous problem. Each astronaut on space station exercises at least 2.5 hours each day. Despite this fact, they lose a significant amount of muscle. They find it difficult to walk for a while, after they return back to earth. Thus, this experiment will be conducted to study the ageing phenomenon.

James Webb Space Telescope

NASA has announced the launch of the **James Webb Space Telescope** (JWST) on December 24. Webb, the world's premier space science observatory, will succeed the Hubble Space Telescope, NASA's flagship telescope that has been in service for more than three decades now.

JWST is **a joint venture between the US (Nasa), European (Esa) and Canadian space agencies (CSA).** It is an orbiting infrared observatory that will complement and extend the discoveries of **the Hubble Space Telescope,** with longer wavelength coverage and greatly improved sensitivity. Webb was formerly

known as **the "Next Generation Space Telescope" (NGST)** and it was renamed in 2002 after a former NASA administrator, James Webb.

The Hubble Space Telescope orbits around the Earth at an altitude of ~570 km above it. Webb will not actually orbit the Earth, instead it will sit at **the Earth-Sun L2 Lagrange point,**5 million km away. At **the L2 point Webb's solar shield** will block the light from the Sun, Earth, and Moon which will help Webb stay cool, which is very important for an infrared telescope.

Economics

The Pros and Cons of Cryptocurrency

Advantages

- Potential for high returns – with compounded annualised growth rate of 14.5%
- Some have cited cryptocurrencies as an alternative hedging instrument to gold in a portfolio context
- Protection from debased currencies and the threat of rising inflation
- Growing acceptance and usage

Disadvantages

- High volatility and potential for large losses
- Whilst it is true that the number of bitcoins produced will eventually be capped at 21 million and many other cryptocurrencies also have limited supply built into their protocols, there is currently nothing to stop an ever-growing number of new cryptocurrencies from being launched
- Whilst bitcoin and some other cryptocurrencies are now accepted across a growing number of payment platforms, the number of places where one can exchange cryptocurrencies for real goods or services remains very limited
- Cryptocurrencies are wide open to being exploited by criminals as a means to scam unwary investors
- Money Laundering, Drug Trafficking, Terrorist Financing, Weapon Proliferation, Cyber Crime and Sanction evasion are some of the activities for which Virtual currencies are susceptible to misuse.

Current Affairs Update (Dec 26-31)

National

Good Governance Index

Central government issued "Good Governance Index 2020-21". The index has been prepared by Department of Administrative Reforms and Public Grievances (DARPG).

Gujarat, Maharashtra and Goa have topped the list. Gujarat registered an increase of 12% while Goa registered around 25% increase on indicators recorded by these states as compared to 2019.

Uttar Pradesh recorded an incremental growth of around 9% as compared to 2019. Uttar Pradesh has secured the top position in commerce & industry sector.

Northeast and Hill States category: In this category, Mizoram performed strongly in commerce and industry, public health, human resource development and economic governance.

Union territory Category: Delhi emerged as the best among the union territories.

What is the right to be forgotten?

It allows a person to seek deletion of private information from the Internet. The concept has found recognition in some jurisdictions abroad, particularly the European Union.

What is the 'Right to be Forgotten' in the Indian context?

- The Right to be Forgotten falls under the purview of an individual's right to privacy, which is governed by **the Personal Data Protection Bill** that is yet to be passed by Parliament.

- In 2017, **the Right to Privacy was declared a fundamental right (under Article 21)** by the Supreme Court in its landmark verdict **(Puttuswamy case)**.

- The court said at the time that "the right to privacy is protected as an intrinsic part of the right to life and personal liberty under Article 21 and as a part of the freedoms guaranteed by Part III of the Constitution".

Last week, the Centre told the Delhi High Court that **the "right to be forgotten" is part of the fundamental right to privacy,** but added it has no significant role to play in the matter. Petitions across courts have been seeking enforcement of this "right" — a legal principle that is not yet backed by statute in India.

Golden Visa

Bollywood actor Tusshar Kapoor awarded **Golden Visa.** He joins a growing list of Indian movie stars, including Mohanlal and Shah Rukh Khan, who have received the coveted 10-year residency.

In 2019, **the United Arab Emirates (UAE)** implemented **a new system for long-term residence visas, thereby enabling foreigners to live, work and study in the UAE without the need of a national sponsor** and with **100 per cent ownership of their business.**

The Golden Visa system essentially **offers long-term residency (5 and 10 years) to people belonging to the following groups:** investors, entrepreneurs, individuals with outstanding talents the likes of researchers, medical professionals and those within the scientific and knowledge fields, and remarkable students.

P.N. Panicker

- The President of India recently unveiled the statue of Shri P.N. Panicker at Poojappura, Thiruvananthapuram.
- Puthuvayil Narayana Panicker is known as **the Father of the Library Movement of Kerala.** June 19, his death anniversary, has been observed in Kerala as **Vayanadinam (Reading Day)** since 1996.
- In 2017, PM declared **June 19, Kerala's Reading Day, as National Reading Day in India**. The following month is also observed as National Reading Month in India.
- Panicker led the formation of **Thiruvithaamkoor Granthasala Sangham** (Travancore Library Association) in 1945 with 47 rural libraries. The slogan of the organization was **'Read and Grow'.**
- The association – Grandhasala Sangham won the prestigious **'Krupsakaya Award'** from UNESCO in 1975.

Tolkappiyam

- The Hindi translation of **Tolkappiyam** and the Kannada translations of 9 works of Classical Tamil literature were recently issued by the Minister of State for Education.
- Tamil literature goes back to **the Sangam Era,** named after the assembly (sangam) of poets.
- Tolkappiyam was authored by **Tolkappiyar** and is considered the earliest of Tamil literary work.
- Though it is a work on **Tamil grammar, it also provides insights on the political and socio-economic conditions of the time.**

110th anniversary of the first time Jana Gana Mana sung publicly:

- December 27 marks the 110th anniversary of the first time Jana Gana Mana, **India's national anthem was sung publicly at the Calcutta session of the Indian National Congress in 1911**.
- Jana Gana Mana was later adopted as the national anthem by India's Constituent Assembly on January 24, 1950.

- **Rabindranath Tagore** composed Bharata Bhagyo Bidhata. The first stanza of it, Jana Gana Mana, is now our national anthem.

Renuka dam project

Renuka dam project has been conceived on Giri river, as a storage project. Giri river is a tributary of the Yamuna. The project is being conceived in Sirmaur district of Himachal Pradesh. It envisages making a dam of 148-metre height, which will supply water to Delhi and other basin states. The dam will also generate a power of 40 MW. 90% of the cost of irrigation or drinking water component will be provided by central government while 10% will be provided by rest of the basin States.

Why in news? Prime Minister Narendra Modi laid down the foundation of Renukaji Dam Project in Himachal Pradesh.

ARIIA 2021

- Government has released the "Atal Ranking of Institutions on Innovation Achievement (ARIIA) 2021"
- Top position was achieved by IIT Madras.
- Institutes which are among top 10 institutions include- IIT Bombay, IIT Delhi, IIT Roorkee, IIT Kanpur, IIT Kharagpur, Indian Institute of Science (IISc) and IIT Hyderabad.
- ARIIA is an initiative by the **Ministry of Education.**
- **Implemented by** AICTE and the Ministry's Innovation Cell.
- **Objective:** To systematically rank all major higher educational institutions and universities in India.

Prohibition debate

What are the main grounds raised against prohibition of liquor and in favour of prohibition?

1. **The right of privacy is violated,** which was given voice by the Supreme Court in 2017 in **Puttaswamy judgment**. The Right is associated with the citizens' right to eat and drink as per their choice.

2. **Ground of manifest arbitrariness:** The law grants health permits and temporary permits to out-of-state tourists. The petition says there are no intelligible differences in the classes thus being created by the state on who gets to drink and who does not and violates **the Right to Equality under Article 14 of the Constitution.**

The following arguments indicate that such ban is the need of the hour:

1. The Constitution places a responsibility on all state governments to "at least contain, if not curtail, consumption of alcohol" (**Article 47**).

2. Strict state regulation is imperative to discourage regular and excessive consumption of alcohol.

3. Alcohol denudes family resources and reserves and leaves women and children as its most vulnerable victims. A social stigma at least as far as the family unit is concerned is still attached to the consumption of alcohol.

4. Vulnerable persons, either because of age or proclivity towards intoxication or as a feature of peer pressure, more often than not, succumb to this temptation.

Kendu Leaves

- Kendu leaf is called **the green gold of Odisha.** It is a nationalised product like bamboo and sal seed. It is one of the most important non-wood forest products in Odisha.
- The leaves are used to wrap bidis, a popular smoke among the locals.
- The Uniqueness of Odisha's Tendu (kendu) leaf is in processed form whereas the rest of the states in India produce in Phal Form.
- Traditional medical practitioners use these tiny fruits of Kendu to treat malaria, diarrhoea and dysentery.
- Kendu leaves are the major source for tribal villages, since it is the most prominent Minor Forest Produce of the state.
- Odisha is the third-largest producer of kendu leaf, after Madhya Pradesh and Chhattisgarh.

Why in news? Hundreds of **kendu leaf** pluckers, binders and workers recently staged a demonstration in Sambalpur, Odisha demanding the abolition of GST on kendu leaves.

Govt Policies of 2021 to Help Boost EV Adoption

India aims to switch 30 percent of private cars, 70 percent of commercial vehicles, and 80 percent of two and three-wheelers to **EV** by the year 2030. For this, both Central and state governments are offering various incentives to buyers and manufacturers. Various measures undertaken include:

PLI Scheme For Auto Sector: In September this year, the Union Cabinet approved a Rs 26,058 crore production-linked incentive (PLI) scheme to accelerate domestic manufacturing of electric and fuel cell vehicles and drones in India.

FAME II Amendment: Under FAME-II (Faster Adoption and Manufacturing of Electric Vehicles-II) scheme, the government significantly reduced the price gap between petrol-powered two-wheelers and electric ones by increasing the subsidy rate for electric two-wheelers.

Scrappage Policy: In August this year, the government launched the Vehicle Scrappage Policy virtually at the Gujarat Investor Summit. The policy aims to phase out unfit and polluting vehicles in an environment-friendly manner.

Along with Centre, state governments are also leaving no stone unturned to promote faster adoption of EVs in India. To increase penetration and adoption of battery electric vehicles (BEVs), governments of around 20 states in India, including Delhi, Gujarat, Goa, Maharashtra and Rajasthan have already come up with either a draft or final state level EV policies.

Sahitya Akademi Award 2021- Winners

It is a literary honour in India, conferred annually by the Sahitya Akademi. Award is conferred on writers of most outstanding books of literary merit, which are published in any of 24 major Indian languages and 22 languages which are listed in the Eighth Schedule of Indian Constitution. The award was established in 1954.

The Sahitya Akademy Award 2021 was given in 20 Indian languages. Namita Gokhale received it in English for her novel titled 'Things to Leave Behind'.

Other winners include:

1. Anuradha Sarma Pujari (Assamese)

2. Bratya Basu (Bengali)

3. Daya Prakash Sinha (Hindi)

4. Wali Mohd Aseer Kashtawari (Kashmiri)

5. Khalid Hussain (Punjabi)

6. Vindeshwari prasad Mishr "Vinay" (Sanskrit)

International

UNSC Resolution 2615

- The United Nations Security Council (UNSC) has unanimously passed this resolution to permit a carve-out in sanctions against the Taliban to facilitate the delivery of humanitarian aid to Afghanistan.
- This carve-out covers urgently needed humanitarian assistance and other activities that support basic human needs in Afghanistan.
- The resolution (2615) mandates a review of the carve-out every six months.
- It also requests that an Emergency Relief Coordinator brief the UNSC every six months on the delivery of assistance and any obstacles to implementation.
- It also "calls on all parties" to respect human rights and observe international humanitarian law.

World Press Freedom Index

The Centre has disagreed with India's low rank on **the World Press Freedom Index** prepared by media watchdog **Reporters Without Borders.** In March, Reporters Without Borders had said that India ranked 142 out of 180 countries when it comes to press freedom. It had added that the nation was classified as "bad" for journalism. It had said that India was among the five most dangerous nations in terms of journalists killed across the world this year.

Norway topped the index for the fifth year in a row. The report labelled 132 countries as "very bad", "bad" or "problematic".

Archbishop Desmond Tutu

- South African anti-apartheid icon Archbishop **Desmond Tutu,** described as the country's moral compass, died recently.
- The Archbishop won **the Nobel Peace Prize in 1984** for combating white minority rule in South Africa.
- He coined the term **"Rainbow Nation"** to describe South Africa when Nelson Mandela became the country's first black President in 1994.

Golan Heights

The Golan Heights is a rocky plateau with an area of 1,800km² **on the border between Israel and Syria** in south-western Syria. The Golan Heights were captured by Israel from Syria in the 1967 conflict and annexed in 1981 — a move not recognized internationally.

International Recognition of Golan Heights:

- The European Union said its position on the status of the Golan Heights was unchanged and it did not recognize Israeli sovereignty over the area.
- The Arab League, which suspended Syria in 2011 after the start of its civil war has said the move is "completely beyond international law".
- Egypt, which made peace with Israel in 1979, said it still considers the Golan as occupied Syrian territory.
- India has also not recognized Golan heights as Israel territory and has called for the return of Golan Heights to Syria.

SAGAR Mission

Indian Naval Ship (INS) Kesari reached Port of **Maputo, Mozambique** carrying 500 tonnes of food aid as part of SAGAR Mission, which is dubbed as "**Security and Growth for All in the Region**" Mission.

The Security and Growth for All in the Region (SAGAR) Mission was launched in **2015**. This mission is India's strategic vision for the Indian Ocean Region (IOR). Through this mission, India aims to strengthen

economic and security cooperation with its maritime neighbours as well as seeks to assist in building their maritime capabilities.

India further seeks to safeguard its national interests and ensure IOR to become inclusive & collaborative in accordance with the international law. Mission SAGAR is significant for India when it is seen in conjunction with other policies by India like Project Sagarmala, Project Mausam, Act East Policy etc.

India's Chairship at UNSC Counter Terrorism Committee

In January 2022, India will chair the UNSC counterterrorism committee, after 10 long years. India last chaired the committee in **2012.** India will chair three important communities at the UNSC in 2021-22. The three committees are- Taliban Sanctions Committee, Counter-terrorism Committee and Libya Sanctions Committee.

Counter-Terrorism Committee is a subsidiary body of United Nations Security Council. It is a 15-member committee, established in the aftermath of 9/11 attack in United States to monitor the UNSC resolution 1373. The resolution was adopted mandates all States to criminalize assistance for terrorist activities, share information on groups planning terrorist attacks and deny financial support & safe haven to terrorists.

Regional Comprehensive Economic Partnership (RCEP)

It is **a trade deal** between the 10-member Association of Southeast Asian Nations (ASEAN) and China, Japan, South Korea, Australia and New Zealand. The **RCEP** will **come into effect on January 1, 2022,** marking **the formation of the world's largest free trade zone in terms of trade volume.**

Objectives of RCEP:

1. To lower tariffs, open up trade in services and promote investment to help emerging economies catch up with the rest of the world.

2. To help reduce costs and time for companies by allowing them to export a product anywhere within the bloc without meeting separate requirements for each country.

3. It also touches on intellectual property, but will not cover environmental protections and labour rights.

Significance:

*   RCEP will cover about 30% of global gross domestic product (GDP), worth $26.2 trillion (€23.17 trillion), and nearly a third of the world's population, some 2.2 billion people.

*   Under RCEP, around 90% of trade tariffs within the bloc will eventually be eliminated.

- RCEP will also set common rules around trade, intellectual property, e-commerce and competition.

Science-Tech & Environment

Pralay Missile

- DRDO recently successfully conducted maiden flight test of a new **indigenously developed surface-to-surface missile 'Pralay'**.
- Pralay' is **India's first conventional quasi-ballistic missile**. A quasi-ballistic missile has a low trajectory, and while it is largely ballistic, it can maneuver in flight.
- The missile has been developed in a way that it is able to defeat the interceptor missiles and also has the ability to change its path after covering a certain range mid-air.
- It is powered with a solid propellant rocket motor and many new technologies.
- **Range:** The missile has a range of 150-500 kilometre and can be launched from a mobile launcher.
- Pralay will be **the longest-range surface-to-surface missile in the inventory of the Army.**

What are flexible fuel vehicles (FFVs)?

An FFV is a modified version of vehicles that could **run both on gasoline and doped petrol with different levels of ethanol blends.**

- FFVs will allow vehicles to use all the blends and also run on unblended fuel.

- FFVs have compatible engines to run on more than 84 percent ethanol blended petrol.

Benefits:

- FFVs are aimed at reducing the use of polluting fossil fuels and cutting down harmful emissions.

- Alternative fuel ethanol is Rs 60-62 per litre while petrol costs more than Rs 100 per litre in many parts of the country, so by using ethanol, Indians will save Rs 30-35 per litre.

- For India, FFVs will present a different advantage as they will allow vehicles to use different blends of ethanol mixed petrol available in different parts of the country.

- Also, these vehicles are a logical extension of **the Ethanol Blended Petrol (EBP) programme** launched by the Union Ministry of Petroleum and Natural Gas in January 2003.

- Since India has surplus produce of corn, sugar and wheat, the mandatory blending of ethanol programme will help farmers in realising higher incomes.

- For the overall Indian economy, higher usage of ethanol as an automobile fuel will help save import costs as the country meets more than 80 per cent of its crude oil requirements through imports.

Disadvantages/challenges of using FFVs:

1. **Customer acceptance** will be a major challenge since the cost of ownership and running cost are going to be very high compared with 100 per cent petrol vehicles.

2. **Running cost** (due to lower fuel efficiency) will be higher by more than 30 per cent when run with 100 per cent ethanol (E100).

3. **Flex Fuel Engines cost more** as ethanol has very different chemical properties than petrol. Ethanol has very low (40 per cent) Calorific value as compared to Gasoline, very High Latent heat of vaporization causing cooling of charge/combustion etc.

4. **Ethanol also acts as a solvent and could wipe out the protective oil film inside the engine** thereby could cause wear and tear.

What is EAST?

Top scientists from China have claimed to have successfully created **a 'fake Sun'.** The artificial Sun created by China is about **ten times hotter than the real Sun, around which our planet revolves.** It is called the **Experimental Advanced Superconducting Tokamak (EAST),** also known as **'Artificial Sun' experiment.**

In June, it set **a new record,** where it achieved a plasma temperature of 216 million Fahrenheit (120 million C) for 101 seconds.

The artificial Sun experiment is being developed through a reactor, with the help of nuclear fusion. The mission mimics **the energy generation process of the sun.** The reactor consists of **an advanced nuclear fusion experimental research device** located in Hefei, China.

It is **one of three major domestic tokamaks** that are presently being operated across the country. The EAST project is part of **the International Thermonuclear Experimental Reactor (ITER)** facility, which will become **the world's largest nuclear fusion reactor when it becomes operational in 2035.**

The ITER project includes the contributions of several countries, including India, South Korea, Japan, Russia and the United States.

Why is fusion better than fission?

- While fission is an easier process to carry out, it **generates far more nuclear waste.**

- Unlike fission, **fusion also does not emit greenhouse gases** and is considered a safer process with lower risk of accidents.
- Once mastered, **nuclear fusion could potentially provide unlimited clean energy and very low costs.**

China- Elon Musk Space Tussle

Recently, Chinese citizens lashed out against Elon Musk's space programme, after China complained that its space station had to take evasive action in order to avoid collision with satellites launched by Musk's Starlink programme. As per China, satellites from Starlink Internet Services had two close encounters with Chinese Space Station on July 1 and October 21.

Starlink is a satellite internet constellation. It is operated by SpaceX. The satellite provides Internet access, covering most of the Earth. The constellation has grown to around 1900 satellites as of 2021. It will eventually comprise of more of mass-produced small satellites in low Earth orbit (LEO).

About 30,000 satellites and other debris are believed to be orbiting the planet. So, scientists have urged governments to share data for reducing the risk of space collisions. SpaceX has deployed around 1,900 satellites for serving its Starlink broadband network and has planned more such launched.

Quantum Laboratory

The Indian Army recently established the "Quantum Laboratory" at **Mhow in Madhya Pradesh**, highlighting its steady and significant strides in emerging technology domains.

Indian Army's research in the field of Quantum Technology will help in leapfrogging into next generation communication and transforming the current system of cryptography in Indian Armed Forces to Post Quantum Cryptography (PQC). Key thrust areas include Quantum Computing, Quantum Key Distribution, Quantum Communication, and Post Quantum Cryptography.

Nilgais

- The Bihar government has announced that it will not cull **the Blue Bull,** locally known as **the nilgai or ghurparas,** anymore. It will, instead, sterilise them to control their increasing population in the state.
- The nilgai is **the largest Asian antelope and is ubiquitous across the northern Indian subcontinent**.
- The nilgai is **the sole member of the genus Boselaphus and placed in the family Bovidae**.
- It occurs in India, Nepal, and Pakistan. Significant numbers occur in the Terai lowlands in the foothills of the Himalayas.
- **IUCN status:** Least Concern.

Economics

Difference between CECA and CEPA

1. **CECA –** Comprehensive Economic Cooperation Agreement.

2. **CEPA –** Comprehensive Economic Partnership Agreement.

The major "technical" difference between a CECA and CEPA is that CECA involve only "tariff reduction/elimination in a phased manner on listed/all items except the negative list and tariff rate quota (TRQ) items.

CEPA also covers the trade in services and investment and other areas of economic partnership". So CEPA is a wider term that CECA and has the widest coverage. Usually CECA is signed first with a country and after that negotiations may start for a CEPA.

The suspension of futures trading in agri products

The **Securities & Exchange Board of India (SEBI)** has issued directions to stock exchanges in commodity derivatives segment for immediately suspending **trading in derivative contracts in key farm commodities** namely paddy (non-basmati), wheat, chana, mustard seeds and its derivatives, soya bean and its derivatives, crude palm oil & moong for a year. It is being suspended to reign in the rising prices of these essential commodities which is fuelling inflation.

Derivative contracts are contracts between two or more parties where **the derivative value is based upon an underlying asset,** in this case agri commodities. The price of the derivatives are established by the price fluctuations of the underlying assets. Derivatives can be **traded on an exchange or over the counter (OTC).**

BRICS Bank

On December 29, 2021, the BRICS New Development Bank (NDB) announced to add **Egypt** as its new member. Egypt is the fourth new member admitted into NDB, following Bangladesh, United Arab Emirates (UAE) and Uruguay.

NDB is a multilateral development bank. It was jointly founded by the BRICS countries in **2014,** at the 6th BRICS Summit in **Fortaleza, Brazil**. But it was formally opened on July **2015**. The bank was set to support the infrastructure and sustainable development efforts in BRICS grouping and other underserved & emerging economies for a faster development through cutting-edge technology and innovation. Its headquarter is at **Shanghai, China**.

DECODING CARD TOKENISATION

From January 1, 2022, sensitive credit or debit card information such as card number, CVV and expiry date cannot be stored by merchants while processing online transactions.

RBI has directed all sellers in India such as Amazon, Flipkart and Zomato to delete card information stored earlier to enhance the security of online transactions. The regulator has allowed card networks like Visa, Mastercard or RuPay to issue tokens on request on behalf of the card-issuing banks or companies. This new system, called tokenisation, will be safer as actual card details will not be allowed to be stored by the merchants thereby reducing the possibility of data theft and fraud. However, the success of this scheme will depend on the preparedness of the merchants.

What is tokenisation?
It is a process by which card details are replaced by a unique code or token, allowing purchases to go through without exposing sensitive details.

Is this a new concept?
No, it already exists in India. United Payment Interface uses the tokenisation concept, making it one of the safest online payment systems.

Who will benefit?
Consumers who use online payments will benefit. However, it is not mandatory. Customers, who had earlier allowed merchants to store sensitive details, will have to register their card details afresh, while the card networks will issue tokens against these details. Consumers who don't want their card details to be stored or enter their details for a one-time purchase don't require to follow this.

When not available...
Customers will have to enter card details every time they shop.

Will the token system eliminate frauds?
RBI has told merchants to create a 'token reference number' against each token. Only these reference numbers are stored by the merchants. Once a fraud is detected, the same token cannot be used again. Users will have to request for a new token.

Managing tokenised cards
Banks will create a portal for card holders. Card holders can also delete tokens.

And the challenges
Not many users are aware of it. There are also apprehensions that this may reduce online card payments volume and may give a fillip to wallet payments.

International transactions
Tokenisation is only for domestic transactions.

No Charges
No fee will be charged

No need to remember token info
Tokens will also be 16-digit numbers like in case of credit or debit cards, but consumers do not have to remember these. In fact, they won't even get to know their token details.

Who will issue the tokens?
Card networks – Visa, Mastercard or RuPay – will issue tokens and will inform card-issuing banks. Some banks may ask card networks to take approval before issuing tokens.

Can a card issuer refuse permission for tokens against a particular card?
Yes, they can refuse based on the risk perception of customers

Will there be one token for all merchants?
No. Tokens will be unique for a combination of card and merchant. If a consumer has a single card but makes online purchases from three different merchants, three different tokens to be issued. That means tokens will be merchant specific.

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