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போட்டித்தேர்விற்கான மாத இதழ்

Issue : 5



Focus

- COP27 Summit
- NIA Office by 2024
- G20 Summit
- Digital Currency
- Internationalisation of Indian Rupee



TNPSC தேர்வுகளில் வெற்றி பெறுவதற்கான

முக்கிய ஆலோசனைகள்...

1. தேர்வுகளில் வெற்றி பெறுவதற்காக சாத்தியமாகக் கூடிய கால அட்டவணையை முதலில் தயாரித்து, அதை உறுதியாகப் பின்பற்ற வேண்டும்.
2. TNPSC தேர்வுக்கான பாடத்திட்டம் என்ன என்பதை முழுமையாக அறிந்துகொண்டு, அதில் எந்தப் பகுதியையும் விடாமல் படிக்க வேண்டும்.
3. முதன்மை ஆதாரங்கள் அல்லது நூல்களில் இருந்து **தரமான குறிப்புகளைத் தயாரித்து** வைத்துக்கொள்ள வேண்டும்.
4. TNPSC தேர்வு எழுதுவதற்கான அறிவுத் திறனை அடுத்த நிலைக்கு மேம்படுத்த எஸ்.சி.இ.ஆர்.டி (SCERT) எனப்படும் மாநிலக் கல்வியல் ஆராய்ச்சி மற்றும் பயிற்சி நிறுவனக்குழு தயாரிக்கும் பாட நூல்களில் இருந்து அவற்றின் அடிப்படைத் தத்துவத்தை புரிந்துகொள்ள வேண்டியது மிகவும் முக்கியமாகும்.
5. பாடங்களில் இருந்து எவ்வாறு வினாக்கள் எழுப்பப்படும் என்பதை அறிந்து கொள்வதற்காக அவற்றின் தத்துவங்கள், உண்மைகள் போன்றவற்றை தேர்வுக்கானக் கோணத்தில் இருந்து புரிந்துகொள்ள வேண்டும்.
6. முந்தைய ஆண்டின் வினாக்களை நன்றாகப் படித்து, அவற்றை ஆய்வு செய்ய வேண்டும்.
7. அத்தியாயங்கள் வாரியாகவும், பாடங்கள் வாரியாகவும் பயிற்சித் தேர்வுகளை எழுதிப் பார்க்க வேண்டும். அவ்வாறு செய்வதன் மூலம் உண்மையான தேர்வு எவ்வாறு இருக்கும் என்பது குறித்த அனுபவம் நமக்குக் கிடைப்பதுடன், **தவறுகளைத் திருத்திக் கொண்டு** மேம்படுத்திக் கொள்ளவும் முடியும்.
8. கடந்த ஆண்டுக்கான பொது அறிவு வினாத்தாள்களுக்கு விடை அளிக்க முயற்சி செய்ய வேண்டும். **உங்களின் பலவீனம் என்ன என்பதை தெரிந்து கொள்ள** அது உதவும். நீங்கள் எந்த அளவிற்குத் தேர்வுக்கு தயாராக இருக்கிறீர்கள்? உங்களின் அறிவுத் திறன், விடை அளிக்கும் வேகம், துல்லியம் ஆகியவற்றை அளவிடுவதற்கும் இது உதவும்.
9. பாடங்களை ஒருமுறையாவது திருப்புதல் **செய்து பார்ப்பது கட்டாயம் ஆகும்.**
10. அனைத்துப் பாடங்களையும் ஒருமுறை திருப்புதல் செய்து பார்ப்பதும், தயார் செய்து வைக்கப்பட்டுள்ள குறிப்புகளை மூன்றாவது முறையில் படித்துப் பார்ப்பதும் சிறப்பாகும்.
11. தேர்வுக்கு முந்தைய **ஒரு மாதத்தில் புதிய பாடங்களைப் படித்து ஆராய ஒருபோதும் முயற்சி செய்ய வேண்டாம்.** அந்த ஒரு மாதமும் ஏற்கனவே படித்த பாடங்களைத் திருப்புதல் செய்து பார்ப்பதற்கு மட்டுமே ஒதுக்கப்பட வேண்டும். அந்த ஒரு மாதம் முழுவதும் திருப்புதல், திருப்புதல், திருப்புதல் என்பதே மந்திரமாக இருக்க வேண்டும்.
12. **செய்திகளையும், நாட்டு நடப்புகளையும் தொடர்ச்சியாகப் படித்து வரவேண்டும்.** பாடங்களையும், தேசிய மற்றும் சர்வதேச நிகழ்வுகளையும் நன்கு அறிந்துகொள்ள வேண்டும்.
13. **அடுத்த நாள் தேர்வு நடக்க இருப்பதாகக் கருதிக் கொண்டு** அதற்கேற்ற வகையில் தேர்வுக்குத் தயாராகுவதற்கான உத்தி வகுக்கப்பட வேண்டும். அந்த அளவுக்கான தயாரிப்பு அவசியமாகும்.
14. ஒவ்வொரு நாளும் **உறங்கச் செல்வதற்கு முன் அந்த நாள் முழுவதும் படித்த பாடங்களை ஒருமுறை நினைவுபடுத்திக் கொள்ள வேண்டும்.** அது உங்களின் நினைவுத் திறனை வலுப்படுத்தும்.
15. முதல்நிலைத் தேர்வுக்கான பொது அறிவு முதல் தாளுக்கான தயாரிப்பு முதன்மைத் தேர்வையும் மனதில் கொண்டு தொடரப்பட வேண்டும்.

INDEX

I. Profile of State

Gujarat	06
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II. National Symbol

National Animal	09
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III. Eminent Person's and Places, Sports, Book Authors

1. Eminent Person's	10
2. Sport's	14
3. Event's / Award's	15
4. Historic Person's	19
5. Book Author's	21

IV. History – Historical events

- Army Organizes Walong Mela	22
- Megalithic Burial Sites	22

V. Polity – Political Parties and Political system in India

- EWS Quota does not violate the basic structure: SC	23
- Office-of-profit	25
- The Death Penalty & Humanizing Criminal Justice	25
- SC To Examine Law Depriving Undertrials The Right To Vote	27
- Remote Voting Facility for NRIs	30
- Collegium System	31
- Autonomy of Election Commission of India (ECI)	32

VI. Public Awareness and General Administration

- 'Mission DefSpace'	35
- National Curriculum Framework for Foundational Stage (NCF-FS)	35
- Self-reliance in the Defence Sector	38

- Hate Speech	40
- States to have NIA Office by 2024	41
- BCCI announces Pay Parity	43
- National Population Register (NPR)	44
- G-20 Summit 2022	46
- MULTI-MODAL LOGISTICS PARK (MMLP)	47
- Draft Digital Personal Data Protection Bill 2022	48

VII. Welfare Oriented Schemes and their Utility, Problem in Public Delivery System (Central Government & State Government)

1. Central Government

- National Credit Framework	51
- Portal on National Mission on Natural Farming	52
- The Waste-to-Energy Programme	54
- All Employees Can Opt For EPFO Pension Scheme: SC	55
- Agnipath Military Recruitment Scheme	57

2. State Government

- Madhya Pradesh notifies PESA Rules on the occasion of Janjatiya Gaurav Divas	59
- Tamil Nadu Launches Mission To Save Critically Endangered Vultures	60
- Kashi Tamil Sangamam	61
- Honesty Shops in Kerala	62
- Trees Beyond Forests initiative launched in Assam	62
- Lok Adalats	62
- UNESCO : Mawmluh cave in Meghalaya first Indian Geoheritage site	64
- Terai Elephant Reserve in up	64
- Government approved Electronics Manufacturing Cluster at Ranjangaon	65
- Nagaland to undertake first bird count	65
- Tamil Nadu notifies Cauvery South Wildlife Sanctuary as state's 17 th wildlife sanctuary	66
- Madhya Pradesh: Ujjain to Get World's First Vedic Clock	66
- Grama Vandii, from KSRTC, receives accolades on national level	66
- Kerala becomes 1 st State to Introduce Uniform Gold Price Based on Bank Rate	67
- Vadodara issued first-ever municipal bond	67
- Jogighopa Multimodal Logistics Park (Assam) set to become India's first multi-modal logistics park	67

VIII. Geography – Geographical marks

- Nihonshu	69
- Most Popular GI Award	69
- Nicobari Hodi Craft	70

IX. Environment

- Forest Conservation Rules, 2022	70
- Blue Flag Certification	71
- COP 27 SUMMIT	72
- International Solar Alliance releases \$1-t roadmap for scaling solar investment, deployment	75

X. Economy – Economy, Socio-Economic issue

1. Economy

- Ending dominance	75
- Internationalisation of Indian Rupee	77
- C-295 Transport Aircraft Manufacturing Facility	79
- RBI's Digital Currency	81
- Nutrient Based Subsidy Rates Approved	82
- India's First Sovereign Green Bonds Framework	83
- How RBI fell behind the curve in containing inflation	84

2. Socio Economic Issue

- GHAR – Go Home and Re-Unite	85
- Reality Check on India's Hunger Index Rank	86
- World Population Reaches 8 Billion: UN	88

XI. Science and Technology

- Partial Solar Eclipse	90
- LVM3 M2 / OneWeb India-1 Mission	91
- India Plans to Expand Regional Satellite Navigation System	92
- Coronal Holes	94
- India's First Privately developed Launch Vehicle: Vikram-S	94

XII. Miscellaneous

1. Index	97
2. Report.....	98
3. Committee.....	101
4. Minutes: (News in shorts)	102

I. Profile of State

Gujarat

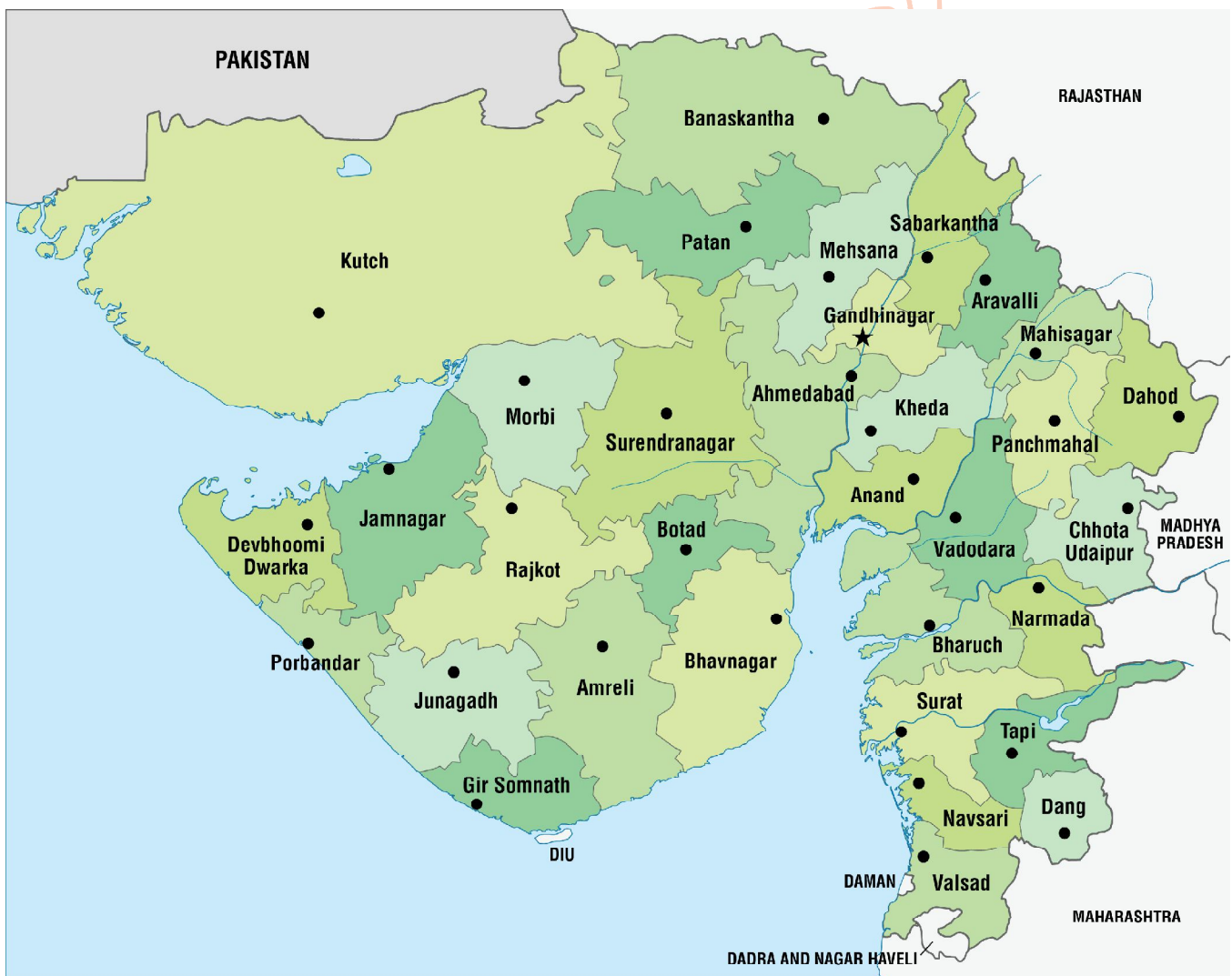
Introduction :

- The state took its name from the Gujjars, who ruled the area during 700's and 800's.
- Gujarat was formed in the year 1960, carved out of the 17

- northern districts of Bombay State when that was split on the linguistic basis (Marathi speaking).
- Gujarat is an industrially advanced state.
- The people of Gujarat are also known to be a successful busi-

ness community.

- Stone age settlements around Sabarmati and Mahi rivers indicate the same time as that of the indus valley civilization while Harappan centres are also found at Lothal, Rampur, Amri and other places.



Capital	Gandhi nagar	
Date of formation	1 st May 1960	
Largest city	Ahmedabad	
State Boundaries	<ul style="list-style-type: none"> • Rajasthan • Madhya Pradesh • Maharastra • UT of Daman & Diu • Dadar & Nagar Haveli 	
International boundary	Pakistan	
Sea borders	Arabian sea	
State animal	Asiatic lion	
State bird	Greater flamingo	
State Tree	Mango	
State flower	Golgotha	
No. of disticts	33	
Languages	Gujarati	
Rivers	<ul style="list-style-type: none"> • Luni • Sabarmati • Mahi • Narmada 	<ul style="list-style-type: none"> • Tapti • Banas • Saraswati • Damanganga
Festivals	<ul style="list-style-type: none"> • Navratri • Kite festival • Kutch utsav • Modhera dance festival 	
Eco systems	<ul style="list-style-type: none"> • Ranges from deserts • Scrublands • Grasslands • Deciduous forests • Wetland to Mangroves • Coral reefs, esturies & gulfs. 	
Rannof Kutch	<ul style="list-style-type: none"> • Seasonal salt march located in that desert in Gujarat • Two parts : Great Rannof Kutch and little Rann of kutch • Mangrove and desert vegetation 	

Mountain ranges	<ul style="list-style-type: none"> • Garda Hills • Barda Hills • Gir range • Raj pipla hills • Chhota Udaipur hills • Black hills • Mandav hills
Arts and crafts	<ul style="list-style-type: none"> • Bandhani or tie and dye fabric • Woven patola fabric • Rich embroidery by Rabari tribals • Soof embroidery
Dance & Drama & Music forms	<ul style="list-style-type: none"> • Dandiya Raas • Garba Dance • Tippani • Padhar dance • Bhavi fold drama • Hallisaka • Dangi Nrita
Major crops	Groundnuts, cotton, Tabacco
Oil & Petroleum & Minerals	Bauxite, Salt, Shale gas
National parks	<ul style="list-style-type: none"> • Gir National Park • Vansda National park • Black Buck National Park • Marine National Park
Biosphere Reserve	Great rann of Kuch Biosphere reserve
Multipurpose project	<ul style="list-style-type: none"> • Sardar Sarovar Project • Kakrapa Project • Mahi Project • Ukai Project
Industries	Diamond cutting and Polishing (Surat), Woolen textile (Jamnagar)

Institutes	<ul style="list-style-type: none"> • Institute for plasma research • National research centre for Groundnut • IIM • National Institute of design • Physical research laboratory • Central salt and marine chemicals research institute • Sardar Vallabhbhai National institute of technology
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- Laxmi Vilas palace, Vadodara is constructed since the Gaekwad, a prominent maratha family.
- Akshardham is a modern
- Gujarat is the only state in India to have a statewide gas grid of 2200km.
- Gujarat is the only home of Asiatic lions. Gujarat is the only present natural habitat of lions outside Africa.
- The British East India company set its first footsteps in Surat in 1818.
- Gujarat is the largest producer of milk in India.
- Surat is considered as the hub of diamond business in the world after Antwerp, Belgium.
- Gujarat International finance Tec-city is a Central business district between Ahmedabad and Gandhinagar. It is India's first International financial service centre.
- AMUL founded in 1946 to stop the exploitation by middlemen in Anand.
- India's first Bullet train project was launched between Ahmedabad & Mumbai with the help of Japan.
- Mehsana, Kalol & Dholka oil resources are found here.
- Gulf of Khambhat, Gulf of Kutch have huge potential of generating tidal energy because of huge variation in tidal range.
- Gujarat also has huge potential for wind energy and solar power generation.

Facts about Gujarat :

- Gujarat is the 7th largest state in India in terms of area.
- Luni mostly flows in Rajasthan and finally ends into Rann of Kutch.
- Luni drains into Rann of Kutch.
- Sabarmati, Narmada, Tapi, Mahi are west flowing river and drains into Arabian sea.
- Indian wild ass Sanctuary is located in Little Rann of Kutch.
- Bauxite is found in Jamnagar district and is also exported.
- Gujarat is largest producer of salt and accounts for more than 60% of the total salt produced in the country.
- Shale Gas is found in the area of Cambay basin.
- Sadhu Bet - Statue of Unity, it is the statue of Sardar Patel.
- The Somnath temple of Gujarat, India is believed to be the first among the twelve Jyotirlinga shrines of Shiva.
- 10 story Hindu temple with an elaborately carved sandstone facade 2 mighty water / laser show.
- Rani Ki Vav is an intricately constructed stepwell situated in the town of Patan in Gujarat, India. It is located on the banks of Saraswati river.
- Jama Mosque, Ahmedabad is the iconic yellow-sandstone mosque built in 1424 by Sultan Ahmed Shah I, whose tomb lies nearby.
- Gujarat has the longest sea-shore compared to any other Indian state.
- India's first port was established at the ancient city of Lothal.
- It is locally known as Jewel of the west.
- Gandhi Nagar is the greenest capital city in the whole of Asia.
- The world's first pure vegetarian subway and Domino's outlet was opened in Ahmedabad.

II. National Symbol

National Animal

Introduction :

- The National symbols define the country and its ethnic culture.
- The National animal of India is chosen to be the Royal Bengal tiger.
- In Hindu mythology and the Vedic era the tiger was a symbol of power.
- It was often depicted as the animal vehicle of the various forms of Goddess Durga.
- India is home to 80% of tigers in the world.
- The Royal Bengal tiger has featured in Indian currency notes as well as postage stamps.

History of National Animal :

National animal of India :

- The national animal of India is the magnificent Royal Bengal Tiger. Its scientific name is *Panthera tigris*.
- The Bengal tiger is a striped animal with a thick yellow coat of fur with dark stripes.
- The Royal Bengal tiger is the symbol of strength, agility, and grace.
- The Royal Bengal tiger is majestic, regal and lothal at the same time which makes it one of the most distinguished carnivores among the Indian fauna.

- It is known for its mystic and charming features that set it apart from the rest of the wild animals found anywhere in India.
- It is these qualities that make it the National animal of India.

Where is it found?

- The National animal of India is mainly found in the following places.
- Grassland and dry scrub land (Ranthambore in Rajasthan)
- Tropical and subtropical rainforests (Corbett in Uttarakhand/Periyar in Kerala).
- Mangroves (Sunderbans)
- Both wet and dry deciduous forests (Kanha in Madhya Pradesh/Simlipal in Odisha).

Life span of a tiger :

- A Bengal tiger has an average life span of 8 to 10 years in the wild.
- The maximum lifespan of the wild specimen is about 15 years.
- Very few tigers reach the 15 years in the wild because they eventually become too weak to hunt large animals.
- In captivity Bengal tigers can live as long as 18 to 20 years.

Project tiger :

- By 1973, the population of the tiger started dwindling at a rapid rate.
- Therefore to preserve the legal and majestic animal project tiger

was initiated in April 1973.

- The project tiger aims at protecting them from extinction, and preserving areas of biological importance as a natural heritage forever represented as close as possible the diversity of ecosystems across the distribution of tigers in the country.
- The National animal of India, the Royal Bengal tiger was adopted as the National animal in April, 1973.
- In 1973, project tiger was initiated to protect the dwindling population of tigers in India during Prime Minister Indira Gandhi's tenure.
- Kailash Sankhala was the first director of Project tiger.
- Prior to 1973, the lion was the National animal of India.
- At present India has 52 tiger reserves which are governed by project tiger.

History of National Animal :

- The tiger is known as the lord of the Jungle and displays India's wildlife wealth.
- Also strength, agility and power are the basic aspects of the tiger.
- The Bengal tiger was declared as the National animal of India in April 1973, with the initiation of project tiger, to protect the tigers in India.
- Prior to this, the lion was the National animal of India.



III. EMINENT PERSONS AND PLACES, SPORTS, BOOK AUTHORS



1. EMINENT PERSONS

First Indian-Origin British Prime Minister : Rishi Sunak

- Rishi Sunak became the United Kingdom's first Indian-origin British Prime Minister.
 - He was previously appointed Chancellor of the Exchequer from 13 February 2020 to 5 July 2022.
 - He was Chief Secretary to the Treasury from 24 July 2019 to 13 February 2020, and Parliamentary Under Secretary of State at the Ministry of Housing, Communities and Local Government from 9 January 2018 to 24 July 2019.
 - Since the Conservative party has a majority in the current U.K. parliament, the winner of the party leadership contest will automatically become prime minister.
 - New Conservative leader selected Under usual circumstances, British prime ministers are chosen in a general election held every five years.
 - Instead of voting for the nation's leader directly, as

is the case in presidential electoral systems, the public chooses between delegates of each party to represent their local area, known as a constituency.

Chinese President Xi Jinping:

- Chinese President Xi Jinping has created history, becoming the first leader of the ruling Communist Party after party founder Mao Zedong to get re-elected for an unprecedented third term in power with the prospect of ruling China for life.
- He was elected as General Secretary of the Communist Party for 3rd five-year tenure by the new seven-member Standing Committee packed with his supporters who appeared before the local and foreign media here to herald the new era, widely termed 'Xi era'.

UNHRC: Ashwini K.P. becomes 1st Indian to be appointed Independent Expert on racism

- The United Nations Human Rights Council appointed the first Asian and first Indian as an

independent experts on racism and related intolerance.

- Dr Ashwini's appointment has been officially made at the UNHRC's session which concluded in Geneva on October 7.
- Three names, including that of Ashwini, were doing rounds for the post.
- Dr Ashwini will take over the UNHCR special rapporteur in Geneva on November 1 for a period of six years.
- She is the first Asian as well as the first Indian to be appointed for the post.

Anna May Wong – First Asian-American to be featured on US currency

- Anna May Wong, a Chinese-American movie star in Hollywood, is set to become the first Asian-American to feature in US currency.
- A quarter-dollar coin depicting a close-up image of Anna May Wong will commence circulation on October 24, 2022.
- This will be the fifth coin in the American Women Quarters (AWQ) Program.
- It will have the Latin phrase

"E PLURIBUS UNUM", which means "out of many, one".

- It is designed to recognize Wong's accomplishments while overcoming challenges and hurdles during her lifetime.
- Wong is regarded as Hollywood's first Chinese-American star, having a decades-long career in motion pictures, television, and theatre amid the widespread racism in the United States.
- As the first Asian female actor, she faced discrimination and was cast aside in favour of non-Asian actresses.
- She was forced to play exoticized stereotypes of East Asians and could not get lead roles in films because of laws prohibiting actors from different races from kissing on screen.
- She is famed for dying a thousand deaths due to the villainous roles she played.
- Wong received a star on the Hollywood Walk of Fame. She was the first Asian American actress to do so.
- Lucy Liu became the second Asian American woman to achieve this feat in 2019.
- Wong was born in Los Angeles to second-generation Taiwanese Chinese-American parents in 1905.
- During the silent film era, she featured in "The Toll of the Sea"

(1922) – one of the first colour films.

World's Dirtiest man' Amou Haji dies in Iran at 94

- Amou Haji, an Iranian man dubbed the "dirtiest man in the world," died at the age of 94 in the village of Dejgah, in the southern province of Fars.
- He was so-called because he had not washed for almost 70 years and he believed that staying dirty kept him alive for so long.
- Owing to his unique record, a short documentary titled 'The Strange Life of Amou Haji' was made in 2013, describing his life.
- A report published in Tehran Times also claimed that Haji would eat roadkill, smoke a pipe filled with animal excrement, and believed that cleanliness would make him ill.
- Haji used to live in an open brick hut and he had faced some "emotional setbacks in his youth" that made him stern about not taking a bath with water or soap.

Shankaracharya Swaroopanand Saraswati Passed Away at the Age of 98

Why In News?

- On September 11, 2022, Swami Swaroopanand Saraswati, the

biggest religious leader of Hindus and Shankaracharya of Dwarka-Sharda Peeth, died at the age of 98 at Paramhansi Ganga Ashram in Jhoteswar, Narsinghpur district of Madhya Pradesh.

Key Points

- Swami Swaroopanand Saraswati was born on September 2, 1924, in a Brahmin family in the village of Dighori near Jabalpur in Seoni district of Madhya Pradesh.
- It is known that 'Shankaracharya' is the eldest Mahant of the four Peethas of Hinduism. Jagadguru Shankaracharya Shri Swami Swaroopanand Saraswati ji was the Shankaracharya of two mathas (Dwarka and Jyotirmath).
- His parents named him Pothiram Upadhyay.
- At the age of nine, he left home and started religious journeys. During this time he reached Kashi and here he took lessons in Vedas, Vedanga and scriptures from Brahmalin Shri Swami Karpatri Maharaj.
- When Gandhiji gave the slogan of Quit India to the British in 1942, he also jumped into the freedom struggle and became famous as a 'revolutionary monk' at the age of 19.
- During this time, he also spent nine months in varanasi jail and

- six months in jail in his home state Madhya Pradesh.
- He was also the president of Karpatri Maharaj's political party 'Ram Rajya Parishad'.
- In 1940, he was made a Dandi Sanyasi and in 1981 he got the title of 'Shankaracharya'.
- In 1950, he took initiation of dand-sanyas from Sharda Peeth Shankaracharya Swami Brahmanand Saraswati and came to be known as Swami Swaroopanand Saraswati.
- Shankaracharya Swami Swaroopanand Saraswati was a freedom fighter, Ram Setu Protector, who declared Ganga a national river and fought for Ram Janmabhoomi, the first Satyagrahi of the cow protection movement, the first president of the RamRajya Parishad, was a strong opponent of hypocrisy.

Steel Man of India' Jamshed Irani passes away at 86

- Jamshed J Irani, also known as the "Steel Man of India", passed away aged 86 at Tata Main Hospital in Jamshedpur.
- He was born on June 2, 1936, in Nagpur to Jiji Irani and Khorshed Irani, Irani completed his BSc from Science College, Nagpur in 1956 and M.Sc in Geology from Nagpur University in 1958.

- Irani retired from the Board of Directors at Tata Steel in June 2011.

Independent India's first voter Master Shyam Saran Negi passes away

- Three days after casting his vote for the 34th time, India's oldest voter Shyam Saran Negi died on November 5, 2022 at his home in Kalpa in Himachal Pradesh.
- He was 106.
- Negi, who was the Election Commission's brand ambassador, voted for the Himachal Pradesh Assembly election through postal ballot on November 2.
- It was the last vote for the man who was 31 when India gained Independence.

Lula da Silva – New President of Brazil

- Luiz Inácio Lula da Silva, popularly known as Lula, served as the President of Brazil for two terms between 2002 and 2010.
- During his previous tenures as the president, Brazil witnessed a massive economic growth and large-scale implementation of social welfare programmes that raised millions of people out of poverty.
- The most popular of these social welfare programmes is the Bolsa Familia.

- It provided cash to poor families if they send their children to schools and get them to undergo regular health check-ups.
- Lula left office since the laws in the country did not allow third consecutive presidential term.

Aruna Miller, 1st ever Indian-American to hold office in Maryland

- Indian-American woman Aruna Miller has become the first immigrant to hold the office of Lieutenant Governor in Maryland, Mid-Atlantic region of the United States.
- She stated that residents of Maryland chose Wes Moore as their Governor while she secured victory in the race to become Lieutenant Governor.
- Ms Miller, who is a former executive director of Indian American Impact, was endorsed by the organization, which supports Indian-American representation at every level of government.
- She also had the support and endorsement by important Indian-American organizations and people.

Nobel laureate Venki Ramakrishnan honoured UK's royal Order of Merit

- India-born Nobel laureate Professor Venki Ramakrishnan has been awarded the prestigious

Order of Merit by Britain's King Charles III in recognition of his distinguished service to science.

- The 70-year-old UK-based molecular biologist is among six appointments made to the historic order by the late Queen Elizabeth II before her death in September and the first to be appointed by Charles.
- The Order of Merit is an exclusive mark of honour conferred by the British sovereign.

Who is Venki Ramakrishnan?

- Professor Venki was born in Chidambaram in Tamil Nadu and studied biology in the US before moving to the UK where he is the Group Leader of the leading research hub MRC Laboratory of Molecular Biology at Cambridge University.
- He received the Nobel Prize in Chemistry in 2009 for his work on ribosomal structure and was knighted by the Queen in 2012.
- He was President of the UK's Royal Society from November 2015 until November 2020.
- More recently, he has been using electron microscopy to visualise ribosomes in action in higher organisms.
- This work has advanced human understanding of how the ribosome works and how antibiotics inhibit it.

- In the past, he has also worked on histone and chromatin structure, which helps understand how DNA is organised in cells.

SEWA founder & women's activist Elaben Bhatt passes away

- Elaben Bhatt, a noted Gandhian, leading women's empowerment activist, and renowned founder of the Self-Employed Women's Association (SEWA) passed away at the age of 89.
- Elaben was the Chairperson of Sabarmati Ashram and recently resigned as the Chancellor of Mahatma Gandhi-founded Gujarat Vidhyapith.
- In 2007, she became the part of a group of world leaders called the Elders, founded by Nelson Mandela to promote human rights and peace across the world.

Elaben Bhatt: Life and career

- Elaben Bhatt was a Member of the Rajya Sabha and of the Planning Commission of India in the 1980s.
- She served in many international organisations, including Women's World Banking, a global network of microfinance organisations, of which she was co-founder and had served as Chairperson.
- She also served as an advisor to the World Bank, and addressed

the United Nations General Assembly.

- Founded by her in 1972, SEWA is one of the largest cooperatives working for women, with a base of over two million members from around 18 States in the country and in neighbouring nations.
- In 2012, she was praised by then U.S. Secretary of State Hillary Clinton.
- "I have a lot of heroes and heroines around the world and one of them is Ela Bhatt, who started an organisation called the SEWA in India many years ago,".
- Elaben was born on September 7, 1933, in Ahmedabad, in a family that engaged in social causes.
- Her father, Sumant Bhatt, was a lawyer who served as a district judge and was later appointed the Charity Commissioner for Bombay and then Gujarat, where he supervised the work of all charitable organisations, trusts and NGOs.
- Her mother, Vanalila Vyas, served as secretary of the Gujarat branch of the All India Women's Conference for some time.
- The organisation, founded by Kamaladevi Chattopadhyay in 1927, worked for educational and social reforms.

2. Sports

Qatar and FIFA World Cup

Context:

- Qatar will host the 2022 FIFA World Cup.
- This will be the 22nd edition of the football world cup.
- This will be the first World Cup to be held in the Arab world, and the second World Cup to be held fully in Asia, following the 2002 tournament in South Korea and Japan.

What is the emblem of Qatar 2022

- This year's emblem design resembles the traditional woollen shawl that men and women wear across the Arab world during the winter months.

What is the Official Mascot:

- La'eeb is the Official Mascot of FIFA World Cup Qatar 2022.
- La'eeb is an Arabic word meaning super-skilled player.

Some facts about FIFA World Cup 2022

- The official ball for the World Cup in Qatar is the Adidas Al Rihla.
- The FIFA World Cup Qatar 2022 will be the first tournament to witness the participation of female referees
- Brazil has won the most titles of FIFA World Cup Winner Men's.

- It has won the FIFA Men's World Cup 5 times.
- In the women's category, The United States leads the most with 4 titles in FIFA Women's WC.
- The country that won the First FIFA WC Men's tournament was Uruguay against Argentina in the year 1930.
- The country that won the First FIFA WC Women's tournament was the United States against Norway in 1991.
- The FIFA WC 2026 will be jointly hosted by Canada, the United States, and Mexico, which will give Mexico the distinction of being the first country to host games in three WCs.
- France is the current World Cup champion.

Jyothi Yarraji becomes first Indian woman to run sub-13s hurdles

- Jyothi Yarraji, an Indian Sprinter made history in the women's 100m hurdles as she became the first Indian woman to run a sub-13s time to win the gold medal at the Nation Games 2022.
- Jyothi Yarraji broke her national record representing Andhra Pradesh by running the final in 12.79s.

- Earlier, Jyothi Yarraji won the women's 100m gold, leaving behind Sprinters lime Dutee Chand and Hima Das.

Indian men's squash team won gold medal in Asian Squash Team Championships

- The Indian men's team, led by the seasoned Saurav Ghosal, clinched its first-ever gold at the Asian Squash Team Championships with a 2-0 win over Kuwait in the final.
- Star player Ghosal sealed the victory after Ramit Tandon had given India the lead with a fluent straight games win over Ali Aramezi (11-5, 11-7, 11-4).
- Ghosal then made short work of Ammar Altamimi 11-9, 11-2, 11-3 to give the team an unassailable lead.
- The third match between Abhay Singh and Falah Mohammad was not played as the tie had been decided following wins for Tandon and Ghosal.

Suryakumar Yadav becomes world's No.1 T20I batter

- Suryakumar Yadav became the world's number-one batter in T20 Internationals, rising to the top on the back of his incredible form in recent times.

- Suryakumar Yadav has overtaken Pakistan opener Mohammed Rizwan to become just the second Indian player to hold the top T20I batter ranking.
- Suryakumar Yadav is now at 863 points while Mohammed Rizwan, whose form has dipped a bit now, is at 842 points.

T20 World Cup 2022 Final: England beats Pakistan by 5 wickets

- England were crowned the champions after they defeated Pakistan by 5 wickets in the final at the iconic Melbourne Cricket Ground (MCG), Australia.
- They are the first team to hold the ODI and T20 World Cups at the same time after their memorable win over New Zealand in the 2019 50-over final at Lord's.
- England also emulated West

Indies to become only the second team in the history of the competition to lift two titles in the T20 World Cup.

IBA Women's World Boxing Championship

- IBA Women's World Boxing Championship is the biennial amateur boxing competition organized by the International Boxing Association (IBA).
- Along with the Olympic boxing programme, it is the highest level of competition for boxing.
- It was held for the first time in 2001 - 25 years after the sporting event was held for men in 1974.
- It was held in even number years between 2006 to 2018 and switched to nominal odd-year schedule since 2019.
- The 2022 edition was hosted by Turkey. Algeria, Kosovo, Lithu-

ania, Mozambique, Spain and Uzbekistan won their first gold medal during this event.

- In the 12 champions played over the years, India won a total of 39 medals, including 10 gold medals.

U23 Asian Wrestling Championships 2022: Deepak Punia won bronze

- Tokyo Olympian Deepak Punia won a bronze medal after defeating Maksat Satybaldy (Kyrgyzstan) in the 86kg freestyle weight category at the U23 Asian wrestling championships 2022 in Bishkek, Kyrgyzstan.
- Despite a win, it was an unimpressive result from him as the Indian contingent was expecting a better outing from the world championships silver medalist in the tournament.

3. Events/Awards

S.No	Title	Content
1	UAE Award for alternative medicine	<ul style="list-style-type: none"> • Professor Wazahat Husain was a leading academic from the Aligarh Muslim university has won on International award for Traditional Alternative and complementary medicine. • This award aims to give recognition to renowned academics and scientist of Traditional complementary and Alternative medicine globally. • Traditional Medicine is the sum total of the Knowledge, practices and skills specific to indigenous experiences and thoughts which are used in the maintenance of health.

2	14 th World Spice congress	<ul style="list-style-type: none"> • 14th edition of world spice congress to be held at Mumbai from 16-18th February 2023. • 14th world spice congress is the world's largest exclusive business platform for the spice sector. • The first ever world spice congress was organized in 1990 and since then 13 successful edition during the last 3 decades have been organized.
3	Lifetime Achievement Award of USISPF	<ul style="list-style-type: none"> • The US - India strategic partnership forum has bestowed the lifetime Achievement Award of HCL founder Shiv Nadar. • This is for his contribution to the technology industry and his initiatives in the sphere of education.
4	National Intellectual Property Award	<ul style="list-style-type: none"> • The national award for intellectual property was given to the Indian Institute of Technology madras for 2021 and 2022. • The prize was established by the Ministry of commerce and Industry's Ministry of Commerce and Industry. • This award has encouraged IIT Madras to produce and safeguard more and more intellectual property with societal effect.
5	EV's 2022 Sakharov Freedom prize	<ul style="list-style-type: none"> • The European Parliament has awarded the people of Ukraine its annual Sakharov prize for freedom of thought of honour fight against Russia's invasion. • The award comes with prize money of 50,000 euros which will be distributed to representatives of Ukrainians civil society.
6	Global digital health summit	<ul style="list-style-type: none"> • The first ever two-day Global digital health summit, Expo and Innovation Awards held in New delhi. • The summit has been organized in association with the world's foremost digital health associations. • Theme of the event is digital health for all.
7	2021 PMAY-U awards	<ul style="list-style-type: none"> • In the awards Uttar Pradesh bagged the first position followed by Madhya Pradesh and TamilNadu at second and third place respectively. • Odisha has been felicitated with the prestigious PMAY-U awards 2021 by the ministry of housing and urban affairs for the best policy initiative under a special category.
8	SJFI medal	<ul style="list-style-type: none"> • The sports Journalists federation of India medal for 2019 was presented to badminton legendary star Prakash Padukone during a cordial ceremony at the Karnataka state Cricket association. • Vijay Amritraj was the inaugural recipient of the award, which was established in 2018.

9	Skoch Award	<ul style="list-style-type: none"> The West Bengal Government's Lakshmir Bhandar Scheme has bagged the Skoch award in the women and child development category. This scheme is to provide financial support to a woman head of a family in the age group of 25-60 years. Rs. 500 is for women in General category / Rs. 1000 per month to women in the SC/ST categories. This award instituted in 2003.
10	Kannada Rajyotsava award	<ul style="list-style-type: none"> Former ISRO Chairman K-Sivan among 67 personalities who will be awarded Rajyotsava award this year by the Karnataka Government. This is the first time that the Karnataka Government formed an expert committee to identify achievers from various fields for the awards given on November 1. The Rajyotsava Awards the second highest civilian honor of the Karnataka state of India are conferred annually by the Karnataka Government on the occasion of the establishment of the state on 1 November celebrated as the Kannada Rajyotsava.
11	Chair of the country's Civil 20	<ul style="list-style-type: none"> Spiritual leader mata Amritanandamay devi (Amma) has been appointed the chair of the country's civil 20 an official engagement group of the 20 by the Union Government. The C20 is its platform for civil society organisations to bring forth non Government and non- business voices to the G20 leaders. India will assume the presidency of the G20 for one year from December 1, 2022 to November 30, 2023.
12	Chevalier Award	<ul style="list-style-type: none"> Carnatic Vocalist, composer, collaborator, humanitarian and speaker Aruna Sairam has been honoured with the french Government highest honour, chevalier de l'ordre des Arts et des award. Aruna sairam has been selected for this award not just for her singing prowess, but also for her contribution towards the development of the Indo-france relationship.
13	Women Inspector general rank	<ul style="list-style-type: none"> For the first time in the history of central Reserve police force, two women officers reached the rank of Inspector general. Two women officers who were recently promoted to the rank of Inspector general are IG seema Dhundiya and IG Annie Abraham. In 1986, the CRPF became the first Central armed police force to induct women in combat.

14	National Florence Nightingale Awards 2021	<ul style="list-style-type: none"> President Draupadi murmu conferred the National Florence Nightingale award 2021 on two nurses Shashikala Pandey and Ganga Joshi from Kumaon Uttarakhand.
15	Pushkar Fair	<ul style="list-style-type: none"> On November 1, 2022 Rajasthan Chief Minister Ashok Gehlot inaugurated the International Pushkar Fair 2022 at Pushkar, Ajmer in the state. Pushkar Dham is the center of faith of all classes and a large number of devotees from all castes and religions come here. Excellent and grand arrangements have been made at the Pushkar fair for the devotees coming here on a large scale.
16	International Kannadiga Rathna Award 2022	<ul style="list-style-type: none"> Member of the erstwhile royal family, Yaduveer Krishnaraja Chamaraja Wadiyar has been selected for the International Kannada Rathna award.
17	India Agribusiness Awards 2022	<ul style="list-style-type: none"> National Fisheries Development Board, Hyderabad, a vibrant organization under the Department of Fisheries, Animal Husbandry and Dairying, Government of India was one of the organizations to be awarded with India Agribusiness Awards 2022 for the best Agribusiness award under fisheries sector. Haryana has received the India Agribusiness Awards 2022 in the best state category for their contribution in the areas of agriculture.
18	Bailey K. Ashford Medal for 2022	<ul style="list-style-type: none"> Prominent Indian physician and Scientist, Dr. Subhash Babu has received the prestigious Bailey K. Ashford Medal for 2022 and the Fellow of the American Society of Tropical Medicine and Hygiene award 2022. Dr. Subhash Babu is the first Indian to receive both the Bailey K. Ashford Medal and the FSTMH award.
19	Indira Gandhi Prize for Peace and Disarmament	<ul style="list-style-type: none"> Former Vice President Hamid Ansari presented the Indira Gandhi Prize for Peace, Disarmament and Development of 2021 to Pratham. Pratham is an NGO functioning in the field of education. The award is in recognition of Pratham's work in ensuring quality education for children of the country, particularly during the COVID-19 pandemic.
20	Indian Ocean Region + Conclave (IOR+ Conclave)	<ul style="list-style-type: none"> Alongside the Def Expo 2022, scheduled to be held in Gandhi Nagar, a separate Indian Ocean Region Plus (IOR+) Conclave will also be held. Indian Ocean Region Plus will consist of approximately 40 countries.

4. Historic persons

Uda Devi

Context:

- On November 16, events to commemorate the martyrdom of Uda Devi, a freedom fighter from the Pasi community, were held at various places in Uttar Pradesh, including Sikandar Bagh in Lucknow.
- Uda Devi The Dalit Women Warrior from Lucknow Who Single-Handedly Killed Over 30 British Soldiers In 1857 Rebellion.

About Uda Devi:

Personal life:

- Uda Devi was born in a small village in Awadh, Uttar Pradesh.
- Seeing the rising anger of the Indian people against the British administration, she reached out to Begum Hazrat Mahal to enlist for war.
- In order to prepare for the battle that was headed their way, the Begum helped her form a women's battalion under her command.
- Uda Devi and her Dalit sisters were the warriors or Veeranginis (amazons/heroines) of the 1857 Indian Rebellion against the British East India Company.

Role in the Revolt of 1857:

- In the centre of an intersection outside Sikandar Bagh in Lucknow, stands a statue of a patina-covered, sexually ambiguous figure carrying a rifle and walking forward with a determined glare.
- The inscription on the base of the statue named the figure as Uda Devi Pasi, a heroine of the Mutiny of 1857.
- In the fall of 1857, northern India was in a state of virtual anarchy.
- A general revolt against the growing hegemony of the British East India Company consumed the cities of Delhi, Jhansi and Kanpur.
- During this 'Second relief of Lucknow,' Campbell's 93rd Highland Regiment advanced along the Southern bank of the Gomti until they reached the Palace of Sikandarbag.
- The British forces met desperate resistance from rebels who had fortified the position.
- In the battle that followed, over 2,000 rebels and many soldiers lost their lives in hand-to-hand combat.

- After the British overran Sikandarbag, an officer noted that many of the British casualties had bullet wounds indicating a steep, downward trajectory. Suspecting that a sniper remained hidden in a nearby pipal tree, British officers fired at the tree and dislodged a rebel who fell to the ground with a thud, dead.
- Further investigation revealed that the rebel was in fact, a non-dominant caste woman named Uda Devi Pasi, who had donned men's clothing to participate in the uprising.

Contemporary Influence:

- Today Uda Devi is an inspiration to women from non-dominant castes.
- Each year, on November 16, members of the Pasi caste gather at the sight of her final plunge and celebrate her as an anti-imperialist rebel who defied convention and struck a blow for the embryonic cause of Indian Independence.
- For Pasis, traditionally a caste of pig-herders and toddy-tappers, Uda Devi Martyrdom Day is the day to revel in the bravery and martial spirit of their ances-

tors and to chant the rousing slogans, Uda Devi amar rahe! (Uda Devi is immortal!) and Uda Devi Zindabad! (Long live Uda Devi!).

Jivatram Bhagwandas Kripalani

- **Context** : Recently, the Prime Minister of India has paid tributes to Acharya Kripalani on his Jayanti.

About J B Kripalani:

- He was born on 11th November 1888 in Hyderabad, Sindh.
- His original name was Jivatram Bhagwandas Kripalani but was popularly known as Acharya Kripalani.
- **Educationist** : From 1912 to 1927, he taught at various places before becoming wholly involved in the freedom movement.
 - He earned the moniker 'Acharya' around 1922 when he was teaching at the Gujarat Vidyapith, founded by the Mahatma a couple of years before.
- **An Environmentalist** : He, along with Vinoba Bhave, was involved in preservation and conservation activities throughout the 1970s.
- **Books** : My Times, his autobiography published posthumously in 2004 and Gandhi: His Life and Thought (1970).

Association with Indian Independence:

- He was associated with Gandhi by 1917 after Gandhi had taken up the cause of indigo workers in Gujarat.
- He was part of the Non-Cooperation Movement (1920-22) and the Civil Disobedience movements (started in 1930) and Quit India Movement (1942).
- He was the President of Indian National Congress (INC) at the time of independence.
- He served in the Interim government of India (1946–1947) and the Constituent Assembly of India.

Post-Independence political career:

- He became one of the founders of the Kisan Mazdoor Praja Party (KMPP) after independence leaving congress.
- He was elected to the Lok Sabha in 1952, 1957, 1963 and 1967 as a member of Praja Socialist Party.
- He moved the first-ever No confidence motion in Lok Sabha in 1963, immediately after the India-China War (1962).
 - In 1963, Sucheta Kripalani, a Congress leader became the Chief Minister of Uttar Pradesh, a first for any woman in the country while

her husband Acharya remained an opponent to the Congress.

- He was a critic of Nehru's policies and Indira Gandhi's rule.
- He was arrested during Emergency (1975).

E.K. Janaki Ammal

- In news: The book, E. K. Janaki Ammal: Life and Scientific Contributions was released in English by Nirmala James, on the scientist's 125th birth anniversary.
- It is the third book by Ms. James. The first two were in Malayalam.

About:

- India's first woman botanist
- Born on November 4, 1897, in Kerala

Achievements:

- Notable work in the areas of cytogenetics and plant breeding.
- Carried out important work on sugarcane, brinjal and magnolias.
- Collaborated with C. D. Darlington to bring out the chromosome atlas of cultivated crops and their wild relatives
- She received the Padma Shri in 1977
- In the 1930s, she had taught botany in the Maharaja's College of Science, Thiruvananthapuram

- Appointed a member of the Travancore Public Recruitment Committee.
 - She strongly raised her voice for women, arguing that married women should not be disqualified from entering or continuing in service.
 - Fulfilled her professional dreams, in spite of the gender and caste barriers (Thiya family) of her time.
 - Accomplished all this in an era when women's education was not considered important.
- Padma Khan.
 - Taj Bibi, also known as the 'Mughal Mirabai', was the daughter of a Muslim nobleman, appointed by the Mughals to protect the Gokul area.
 - Taj Bibi was married to Emperor Akbar.
 - Emperor Akbar had great reverence for Gusain Shri Vitthalnath Ji and he used to come to Govardhan from time to time to have darshan of Gusain Ji.
 - Once Taj Bibi came to Govardhan to see Gusain Ji with permission from Akbar.
 - Taj Bibi returned to Delhi after a few days as per Akbar's orders.
- Raskhan was his takhallus (pen name) in Hindi.
 - He accepted Krishna as the supreme god (Svayam Bhagavan) and became a Vaishnava.
 - He died in 1628 AD.
 - His samadhi is at Mahaban, about six miles east of Mathura.
 - He translated Bhagavata Purana into Persian.
 - The poetry of Raskhan focuses on Lord Krishna.
 - Rachnavali is the collection of Raskhan's poetry
 - His poetry is in the form of Doha, Padawali and Savayya.
 - Raskhan's Khariboli writings are numerous, the five most important being the Sujana Raskhana, the Premavatika, the Danalila, the Astayama and a collection of Padas (rhymed couplets).

Taj Bibi and Raskhan

- **Context** : U.P. promotes tombs of Muslim devotees of Krishna for tourism

About Taj Bibi:

- She was born in the 17th century.
- Taj Bibi's father's name was

About Raskhan:

- Syed Ibrahim Khan (1548-1628) was an Indian Sufi Muslim poet who became a devotee of the Hindu deity Krishna.

5. Book Author's

Book Name	Authored
EK Janaki Ammal : Life and Scientific Contributions	Nirmala Jame
From Dependence to self Reliance	Dr. Bimal Jalan
A confused mind story	IRS Officer Sahil Seth
Winning the Inner Battle	Shane Watson

IV. History – Historical events

Army Organizes Walong Mela

What is the News?

- Indian Army organized Walong Mela in continuation of the Diamond Jubilee celebrations of Battle of Walong.

What is the Battle of Walong?

- Walong is one of India's easternmost villages in Arunachal Pradesh.
- In the 1962 India-China War, the Indian Army defended against China in all sectors except one - Arunachal Pradesh's Walong.
- The Battle of Walong was the only counterattack India could manage in the war.
- The Indian Army held back the Chinese troops for 27 days, which forced the Chinese to deploy its reserve division from Tawang to Walong.

Megalithic Burial Sites

Why in News?

- According to recent findings, Andhra Pradesh has the largest anthropomorphic burial site collection in Tirupati district.
 - Anthropomorphic sites are those marked by a representation of human form above the megalithic burials.

What are Megaliths?

- A megalith is a large stone that has been used to construct a prehistoric structure or monument, either alone or together with other stones.
 - Megaliths were constructed either as burial sites or commemorative (non-sepulchral) memorials.
 - The former are sites with actual burial remains, such as dolmenoid cists (box-shaped stone burial chambers), cairn circles (stone circles with defined peripheries)
- and capstones (distinctive mushroom-shaped burial chambers found mainly in Kerala).
- The urn or the sarcophagus containing the mortal remains was usually made of terracotta. Non-sepulchral megaliths include memorial sites such as menhirs.
 - In India, archaeologists trace the majority of the megaliths to the Iron Age (1500 BC to 500 BC), though some sites precede the Iron Age, extending up to 2000 BC.



- Megaliths are spread across the Indian subcontinent. The majority of megalithic sites are found in Peninsular India, concentrated in the states of Maharashtra (mainly in Vidarbha), Karnataka, Tamil Nadu, Kerala, Andhra Pradesh, and Telangana.

What are the Different Types of Megalithic Structure?

- **Stone Circles:** Stone circles are commonly called "cromlechs" (a word in the Welsh language);

the English word "cromlech" is sometimes used in that sense.

- **Dolmen:** A dolmen is a megalithic structure formed by placing a large capstone on two or more support stones, forming a chamber below, sometimes closed in on three sides. Often used as a tomb or burial chamber.
- **Cist:** Cist is a small stone-built coffin-like box or ossuary used to hold the bodies of the dead. Burials are megalithic forms very similar to dolmens

in structure. These types of burials were completely underground. There were single- and multiple-chambered cists.

- **Monolith:** Any single standing stone erected in prehistoric times. Sometimes synonymous with "megalith" and "menhir"; for later periods, the word monolith is more likely to be used to describe single stones.
- **Capstone style:** Single megaliths placed horizontally, often over burial chambers, without the use of support stones.

V. Polity-Political Parties and Political System in India

EWS Quota does not violate the basic structure: SC

In News

- The Supreme Court recently upheld the 103rd amendment to the Constitution introducing a 10 percent reservation for the Economically Weaker Sections (EWS).

More about the Supreme Court's opinion

- On "Exclusion of the reserved categories from the EWS quota":

Issue:

- Critics believe that the act breaches the basic structure of the Constitution by excluding (Socially and Edu-

cationally Backward Classes)/ OBCs (Other Backward Classes)/ SCs (Scheduled Castes)/ STs (Scheduled Tribes) from the scope of EWS reservation.

Court's opinion:

- Exclusion of the reserved categories from the EWS quota does not violate the equality code.
- According to the court it does not in any manner cause damage to the basic structure of the constitution according to the court.
- On the "Reservation for EWS over and above the 50 percent cap":

Issue:

- In the Indra Sawhney vs Union

of India, popularly known as the Mandal Commission case, the Supreme Court ordered that total reservation should not exceed 50 percent.

- Critics believe that the 50 percent ceiling is a constitutional requirement without which the structure of equality of opportunity would collapse.

Court's opinion:

- It also opined that the reservation for EWS over and above 50 percent cap does not violate the basic structure.
- Ceiling, by itself, is not inflexible and in any case only applies to reservations envisaged by Articles 15(4), 15(5) & 16(4) of the Constitution according to the statement given by the court.

Affirmative action:

- Amendment enabling states to make special provisions for EWS other than Scheduled Castes, Scheduled Tribes and Socially and Educationally Backward Classes is required to be treated as an affirmative action on the part of the Parliament for the benefit and betterment of the EWS category.

On the time span of reservations:

- Though it was envisaged that reservation must have a time span, it has still not been accomplished even after 75 years of Independence.
- Court also opined that the policy needs to be revisited in the larger interest of the society as a whole, as a step forward towards transformative constitutionalism.

Ram Singh v. Union of India(2015):

- In this case, SC asserted that social deficiencies may exist beyond the concept of caste (e.g. economic status/gender identity as in transgenders).

The "quota-for-poor" policy:

- This policy is symptomatic of a larger failure.
- It replaces the principle that welfare should be the basic *raison d'être* of public policy, it hides the colossal failure of the state in handling questions of poverty and deprivation and, at the same time, it indicates a dead-end in policy-making itself.

Arguments against EWS Quota

Reservation based on economic criteria:

- Reservation based entirely on economic criteria is not an all-in-one solution, though family income can be one of the parameters.

Determining economic backwardness:

- Determining economic backwardness is a major challenge as there are concerns regarding the inclusion and exclusion of persons under the criteria.

Equality of opportunity:

- In *M. Nagaraj v. Union of India* (2006), a Constitution Bench ruled that equality is part of the basic structure of the Constitution.

103rd Amendment Act

• **About:**

- The Parliament amended the Constitution of India (103rd Amendment) Act, 2019 to provide for a 10% reservation in education and government jobs in India for a section of the General category candidates.

• **Introduction of Article 15 (6) and Article 16 (6):**

- The amendment introduced economic reservation by amending Articles 15 and 16. It inserted Article 15 (6) and Article 16 (6) in the Constitution to allow reservation for the economically backward in the unreserved category.

◦ **Article 15(6):**

- Up to 10% of seats may be reserved for EWS for admission in educational institutions. Such reservations will not apply to minority educational institutions.

◦ **Article 16(6):**

- It permits the government to reserve up to 10% of all government posts for the EWS.

Arguments favouring EWS Quota

The quota is progressive:

- The economically weaker sections have not reaped the benefits of higher educational institutions and public employment due to their financial incapacity.
- The quota is progressive and could address the issues of edu-

cational and income inequality in India.

Abysmal conditions:

- The reservation criteria should be economic because there are many classes other than backward classes who are living under abysmal conditions but cannot avail reservation and its intended benefits.

Financial burden:

- The implementation of the quota is a challenge in itself as the states do not have the finances to enforce even the present and constitutionally mandated reservations.

Other:

- It washes away the constitutionally permitted gatekeep-

ing mechanism of social and educational backwardness and makes reservation available to everyone irrespective of social backwardness.

- Reservation has also become synonymous with anti-merit, with the extension of reservation, this opinion might get further ingrained in the public psyche.

- It is for the courts to explain the significance and meaning of this concept.

- In 1964, the Supreme Court ruled that the test for determining whether a person holds an office of profit is the test of appointment.

1. whether the government is the appointing authority
2. whether the government has the power to terminate the appointment
3. whether the government determines the remuneration
4. what is the source of remuneration
5. power that comes with the position

- The essence of disqualification under the office of profit law is if legislators holds an 'office of profit' under the government, they might be susceptible to government influence, and may not discharge their constitutional mandate fairly.

Related provisions in the Constitution

- Article 16(1) and 16(2) assure citizens equality of opportunity in employment or appointment to any government office.
- Article 15(1) generally prohibits any discrimination against any citizen on the grounds of religion, caste, sex or place of birth.
- Articles 15(4) and 16(4) state that the equality provisions do not prevent the government from making special provisions in matters of admission to educational institutions or jobs in favour of backward classes, particularly the Scheduled Castes (SCs) and the Scheduled Tribes (STs).
- Article 16(4A) allows reservations to SCs and STs in promotions, as long as the government believes that they are not adequately represented in government services.

Office-of-profit

- **In news:** Jharkhand Governor Ramesh Bais has sought a "second opinion" in a case of office-of-profit that has triggered a political crisis in the State.

About Office of Profit:

- The origin of this term can be found in the English Act of Settlement, 1701.
- This was instituted so that there would not be any undue influence from the royal household in administrative affairs.
- It is a position in the govern-

ment which cannot be held by an MLA or an MP.

- The post can yield salaries, perquisites and other benefits.
- According to Articles 102(1)(a) and 191(1)(a) of the Constitution, an MP or MLA is barred from holding an office of profit as it can put them in a position to gain a financial benefit. Under the RPA 1951 too, holding an office of profit is grounds for disqualification.
- The expression "office of profit" has not been defined in the Constitution or in the Representation of the People Act, 1951.

The Death Penalty & Humanizing Criminal Justice

Why in news?

- A three-judge Bench of the Supreme Court has referred to a five-member Constitution Bench on the issue of giving a meaningful opportunity to those found guilty of a capital offense to present mitigating factors and circumstances so that they can better plead for a life term instead of a death sentence.

What does the law say on sentencing?

- The issue arises from the legal requirement that whenever a court records a conviction, it has to hold a separate hearing on the quantum of the sentence.
- Section 235 of the Code of Criminal Procedure (CrPC) says that after hearing arguments, the judge shall give a judgment; and, "if the accused is convicted, the judge shall hear the accused on the question of sentence and then pass sentence".
 - This process gains significance if the conviction is for an offense that entails either death or life imprisonment.
- Section 354(3) says that when an offense is punishable with death or imprisonment for life, the judgment shall state the reasons for the sentence awarded and if the sentence is death, "special reasons" for the sentence.
- Taken together, these provisions would mean that the sentencing hearing following the conviction of a person for a capital offense is a matter of great importance, as it would decide if the death penalty should be imposed or a life term will be sufficient.
- This would necessarily entail an inquiry into the nature and gravity of the offense & the circumstances in which it took place.

How are judges supposed to choose between life and death sentences?

- In May 1980, when the Supreme Court upheld the constitutional validity of the death penalty in Bachan Singh's case, a framework was developed for future judges to follow when they had to choose between life imprisonment and the death penalty.
- At the heart of that framework was the recognition that the legislature in the Criminal Procedure Code had made it clear that life imprisonment would be the default punishment and judges would need to give "special reasons" if they wanted to impose the death sentence.
- Through the 1980 framework — popularly known as the "rarest of rare" framework — the Supreme Court said that judges must consider both aggravating and mitigating factors concerning the crime and the accused when deciding if the death penalty is to be imposed.
- The judgment also made it clear that life imprisonment as a sentence would have to be "unquestionably foreclosed" before judges imposed the death sentence.
- There was an indicative list of factors that the judge identified as being relevant, but it was clear that it was not meant to be an exhaustive list.

Inconsistency in application:

- The Supreme Court has repeatedly lamented the inconsistency in the application of the Bachan Singh framework.
- Similar concerns have been expressed by the Law Commission of India (262nd Report).
- One of the main concerns has been the crime-centered approach to sentencing, often in violation of the mandate in Bachan Singh that factors relating to both the crime and the accused have to be considered.
- There has been widespread concern that the imposition of death sentences has been arbitrary.
- A study by Project 39A looking at 15 years of death penalty sentencing in trial courts has shown that the Bachan Singh framework has broken down, with judges attributing to it multiple and inconsistent meanings.

What are mitigating circumstances?

- In 'Manoj & others v. State of Madhya Pradesh', the Supreme Court addressed the lack of a legal framework or institutional capacity to handle death penalty sentencing.
- The ruling acknowledged the arbitrariness and subjective patterns in awarding the death sentence.
- Studies also show that largely underprivileged, minorities,

and scheduled castes and tribes are awarded the death sentence.

- Death penalty sentence is largely driven by the crime in question and not the circumstances of the accused.
- For example, the Supreme Court's 1983 ruling in 'Machhi Singh And Others vs State of Punjab' introduced "collective conscience" into the capital sentencing framework
- The SC order referring the issue to a larger bench lists social milieu, age, educational levels, whether the convict had faced trauma earlier in life, family circumstances, psychological evaluation of a convict, and post-conviction conduct, as relevant circumstances that should be accounted for at the sentencing hearing.

What is expected from the reference?

- The Constitution Bench may lay down comprehensive guidelines on the manner in which sentencing decisions can be arrived at.
- It may make it necessary for the trial court to get to know the accused better before passing the sentence.
- Going beyond the reports of jail authorities or parole officers, the courts may draft the help of psychologists and behavioural experts.

- A study into the childhood experiences and upbringing of the accused, mental health history in the family, and the likelihood of traumatic past experiences and other social and cultural factors may be mandated to be part of the sentencing process.
- This may mean that trial courts will be better informed than now when only basic data such as educational and economic status are ascertained before a sentence is imposed.

Conclusion:

- The paths of reforming the death penalty on the one hand and abolishing it on the other, go alongside each other for a very long distance.
- Every instance of engagement in reforming the death penalty throws light on the inherent unfairness of using the death penalty, especially in a system like ours.
- The taking of life through a legal process ought to be very tough and must adhere to the highest standards of fair trial rights and the rule of law.

SC To Examine Law Depriving Undertrials The Right To Vote

Why in the news?

- On 31st October, the Supreme Court issued notice to the Centre and the Election Commission (EC) on a PIL challenging

the vires of Section 62(5) of the Representation of the People Act, 1951, which deprives prisoners of their right to vote.

Background

- On a petition filed by Aditya Prasanna Bhattacharya, a student of National Law School of India University, Bengaluru, the led by Chief Justice of India U.U. Lalit issued notice to the Union of India, Ministry of Home Affairs and the Election Commission of India.
- The Petitioner argued that while convicts out on bail could vote, under trials, whose innocence or guilt has not been conclusively determined, & those confined in civil persons were deprived of their right to vote.
- Denying penitentiary convicts the ability to vote is not a proper form of punishment because it is more likely to transmit messages that undermine respect for the rule of law and democracy than messages that uphold these principles.

What does Section 62(5) of the Representation of the People Act, 1951 mandates?

- Section 62(5) of the Representation of the People Act, 1951, mandates that "no person shall vote at any election if he is confined in a prison, whether under a sentence of imprisonment or transportation or otherwise, or is in the lawful custody of the police".

Arguments by petitioner

- The yardstick of confinement in a prison to disenfranchise persons generates several anomalous and shocking consequences.
- The denial of the right to vote to anyone who has been imprisoned & incarcerated in a civil setting, including judgment-debtors (those who have not paid their debt despite a court ruling).
- Contrary to incarceration for crimes, civil detention is a form of confinement.
- It is discriminatory to deny the right to vote to someone who is housed in a civil prison.
- In contrast to nations like South Africa, the United Kingdom, France, Germany, Greece, Canada, etc., the ban lacks a legitimate classification based on the type of crime committed or the length of the term imposed.
- According to Article 14 (the right to equality), this lack of classification is incompatible with equality.
- Petitioner emphasised, why is the right to vote withheld to a person who is through a legal trial but has not yet been found guilty of a crime by a court of law when that person is convicted and out on bail?
- The petition questioned the reasoning behind the election law, saying that "it cannot be conceived how the provision, which

denies prisoners their right to vote, has any nexus at all with decriminalisation of politics, which is concerned with the right to contest of candidates with criminal antecedents."

Undertrial stats

- According to the most recent National Crime Reports Bureau (NCRB) report, in 2021, 5,54,034 convicts were held in various prisons across the nation as of December 31, 2021.
- At the end of 2021, there were 1,22,852, 4,27,165, and 3,470 reported detenués, undertrial detainees, and convicts, representing 22.2%, 77.1%, and 0.6% of the total population, respectively.
- By 2021, there will be 4,27,165 prisoners awaiting trial, up from 3,71,848 in 2020. a 14.9% increase.
- At the end of the previous year, Uttar Pradesh had the most undertrials in the nation (21.2%, 90,606 undertrials), followed by Bihar (13.9%, 59,577 undertrials), and Maharashtra (7.4%, 31,752 undertrials).

What is the Representation of People Act, of 1951?

- The Parliament passed the Representation of People Act, of 1951 in compliance with Article 327 of the Indian Constitution.
- This statute governs how elections are conducted in the country.

- Representation of People Act is an Act to provide the allocation of seats in, and the delimitation of constituencies for the purpose of election to, the House of the People and the Legislature of States, the qualifications of voters at such elections, the preparation of electoral rolls and matters connected there

Key Provisions

- It regulates how elections and by-elections are held.
- It provides the administrative infrastructure for holding elections.
- It has to do with political party registration.
- It lays out the requirements and disqualifications for House membership.
- It includes laws to combat corruption and other crimes.
- It lays out the method for resolving election-related concerns and controversies.

Qualification for Contesting Election

- A person must be a member of the constituency's electorate.
- If a person wants to contest for a seat reserved for them, he or she must be a member of a Scheduled Caste or Scheduled Tribe in any state/Union Territories.

Minimum Age Qualification

- Parliament and State Legislature is 25 years.

- Panchayat and Municipality levels are 21 years.

NOTA Option

- In the 2013 General Election for State Assemblies, none of the above were included in the ballot papers or Electronic Voting Machines (EVMs).

Right to Vote

- Apart from Article 326 of the Constitution, Section 62 of the RPA, 1951 guarantees that everyone on the electoral roll in that constituency is eligible to vote.
- In any given election, a person can only vote in one constituency and only once.
- A person who is incarcerated, whether on a term of imprisonment or transportation, is not entitled to vote; nevertheless, he is eligible to vote if he is in preventive detention.
- The Election Commission of India had stated in 2014 that people in preventive custody, but not under-trials or convicts, have the right to vote.
- The Act, on the other hand, allows persons serving terms of less than two years to run for office while in prison.

Provision related to Political Parties

- To become a political party, any organisation or group must register with the Election Commission of India, whose decision

on registration will be final.

- Political parties that have been registered can eventually be recognised as a "State Party" or a "National Party."
- Any change in a registered political party's name or address must be reported to the ECI.
- The Election Commission of India is unable to derecognize a political party.

Voluntary Contributions

- The registered political party can accept voluntary contributions from any person or corporation in India (other than a government company).
- Any amount of money can be donated to any political party by a corporation.
- The corporation is under no duty to include such donations in its profit and loss account.
- Political parties are required to furnish a list of donations over Rs. 2,000 to the Election Commission of India.
- Cash donations to political parties are limited to Rs 2000.
- Political parties can now receive contributions from foreign firms that meet the requirements of the Foreign Contribution (Regulation) Act of 2010.

VVPAT

- The Voter Verifiable Paper Audit Trail is a separate machine connected to the EVMs that allows voters to double-check

that their ballots were cast correctly. In the People's Union for Civil Liberties vs. Union of India, 2013 case, the Supreme Court allowed the ECI for the "requirement of free and fair elections".

Declaration of Assets & Liabilities

- Individuals running for office must produce an affidavit detailing their criminal history, financial assets and liabilities, and educational qualifications.
- MPs must file a statement of assets and liabilities with the Speaker of the Lok Sabha and the Chairman of the Rajya Sabha after being elected.
- MPs must make these disclosures within 90 days of taking their seats in Parliament.

Corrupt Practices

- Corruption affects all authorities, whether they are government or non-government.
- Bribery is defined as any gift, offer, promise, or gratification given to someone as a motivator or incentive.
- Unreasonable Influence: Any direct or indirect interference or attempt to interfere with the free exercise of any electoral right on the part of the candidate.
- Any assertion of fact about a candidate's personal character or conduct that is inaccurate is published by that candidate.

- The hiring or obtaining of any vehicle to or from any voting location by a candidate of any elector.

Voting Through Postal Ballot

- The Election Commission of India, in cooperation with the concerned government, can notify any class of person who can vote by postal ballot.

Promoting Enmity

- Anyone who promotes or seeks to foster feelings of hostility or hatred amongst different groups of Indian residents on the basis of religion, race, caste, community, or language can be imprisoned for up to three years.
- Public meetings are prohibited for a period of 48 hours, concluding at the hour set for the poll's conclusion.

Disqualification of MPs & MLAs

- The RPA of 1951 establishes a set of rules for disqualifying MPs and MLAs.
- According to Section 8 (3) of the Act, if an MP or MLA is convicted of any other felony and sentenced to two years or more in prison, he or she will be disqualified for six years from the date of release.
- Even if a person is out on bail after a conviction and his appeal is still pending, he remains ineligible to run for office.
- Section 8(4) enabled convicted

MPs, MLAs, and MLCs to keep their jobs if they appealed their convictions/sentences to higher courts within three months of the trial court's decision.

- In July 2013, the Supreme Court ruled section 8(4) of the RPA, 1951, to be ultra vires, and held that the disqualification begins on the day of conviction.

Ceiling on Expenditure

- In a Lok Sabha election, a candidate in a major state can spend up to Rs 70 lakh, and in an Assembly election, up to Rs 28 lakh.

Section 126 of the RPA, 1951

- The display of any election topic on television or other comparable apparatus in a constituency is prohibited 48 hours before polling ends or closes.
- The print media, news websites, and social media are exempt from Section 126.
- During the time frame stated, Section 126A bans the conduct of an exit poll and the distribution of its results.

Counting of Votes

- The votes are tallied by, or under the supervision of, the Returning Officer, and the contesting candidate, his election agent, and his counting agents at every election when a poll is taken.
- The Returning Officer shall notify the Election Commission of India if any ballot papers

are destroyed, lost, damaged, or tampered with during the counting process.

Right to Information

- Candidates must disclose whether they are currently charged with a crime punishable by a sentence of two years or more in prison or have been convicted of a crime.

Remote Voting Facility for NRIs

Why in News?

- Recently, the Government of India told the Supreme Court that it was considering the remote voting facility for Non Resident Indians (NRIs).

About Remote Voting

- A voting mechanism that allows electors to vote from locations other than polling stations assigned, even abroad.
- In India, voting rights for NRIs were introduced in 2011 with amending the Representation of People Act, 1950.
- But the Section 20A of RPA, 1950 mandates NRI voters to present physically to cast their votes.

Other Voting Mechanisms in India

Electronically Transmitted Postal Ballot:

- Ballot paper is transmitted through Electronic Means to the service voters.

- It is for personnel of armed forces, police, government employees abroad and people under preventive detention.
- Even President and Vice President are also allowed this voting.

Proxy Voting:

- Voting by a delegate of a registered voter; introduced in 2003.
- It is only for "Classified service voters" i.e. personnel of armed forces, BSF, BRO, CRPF etc. can delegate their votes.

Significance

- Universalization of Democratic rights.
- In line with the spirit of Article 326 of the constitution.
- Democracy gets strengthened.

Concerns

- Implementation and administrative challenges.
- Free and transparent voting will be hampered.
- Violates the secrecy of the ballot.

Collegium System

Context:

- The Supreme Court Collegium led by Chief Justice of India D.Y. Chandrachud published its resolution recommending the transfer of seven High Court judges.

What is the Collegium System?

- The Collegium System is a system under which appointments/

elevation of judges/lawyers to Supreme Court and transfers of judges of High Courts and Apex Court are decided by a forum of the Chief Justice of India and the four senior-most judges of the Supreme Court.'

- There is no mention of the Collegium either in the original Constitution of India or in successive amendments.
- The recommendations of the Collegium are binding on the Central Government; if the Collegium sends the names of the judges/lawyers to the government for the second time.

Evolution of the Collegium system

- In the First Judges case (1982), the Court held that consultation does not mean concurrence and it only implies an exchange of views.
- In the Second Judges case (1993), the Court reversed its earlier ruling and changed the meaning of the word consultation to concurrence.

Third Judges Case, 1998:

- In the Third Judges case (1998), the Court opined that the consultation process to be adopted by the Chief Justice of India requires "consultation of a plurality of judges".
- The sole opinion of the CJI does not constitute the consultation process.
- He should consult a collegium of four senior-most judges of

the Supreme Court and even if two judges give an adverse opinion, he should not send the recommendation to the government.

- The court held that the recommendation made by the Chief Justice of India (CJI) without complying with the norms and requirements of the consultation process is not binding on the government.
- The Collegium system was born through the "Third Judges case" and it is in practice since 1998. It is used for appointments and transfers of judges in High courts and Supreme Courts.
- There is no mention of the Collegium either in the original Constitution of India or in successive amendments.

Working of the Collegium System and NJAC

- The collegium recommends the names of lawyers or judges to the Central Government. Similarly, the Central Government also sends some of its proposed names to the Collegium.
- Collegium considers the names or suggestions made by the Central Government and re-sends the file to the government for final approval.
- If the Collegium re-sends the same name again then the government has to give its assent to the names.
- But the time limit is not fixed to reply. This is the reason that

appointment of judges takes a long time.

- Through the 99th Constitutional Amendment Act, 2014 the National Judicial Commission Act (NJAC) was established to replace the collegium system for the appointment of judges.
- However, the Supreme Court upheld the collegium system and struck down the NJAC as unconstitutional on the grounds that the involvement of Political Executive in judicial appointment was against the "Principles of Basic Structure". i.e., the "Independence of Judiciary".

Issues involved in appointment

- **Cumbersome Process:** There are inordinate delays in the appointment of High Court judges & it leads to the pendency of cases.
- **Lack of Transparency :** There is no objective criteria for selection and people come to know about judges only after selection. It also promotes nepotism in the judiciary. The consultations of the Collegium are also not discussed in any public platform.
- **Instances of Politicisation :** In many cases, there is indication that due to the unfavorable judgements of certain judges the political executive hinders their appointments, elevation, or transfer.
- This reflects poorly on the concept of independence of the judiciary.

- **Improper Representation :** Certain sections of societies have higher representation whereas many vulnerable sections have nil representation.

Appointment procedure of HC Judges

- **Article 217 of the Constitution:** It states that the Judge of a High Court shall be appointed by the President in consultation with the Chief Justice of India (CJI), the Governor of the State.
- In the case of appointment of a Judge other than the Chief Justice, the Chief Justice of the High Court is consulted.
- **Consultation Process:** High Court judges are recommended by a Collegium comprising the CJI and two senior-most judges.
 - The proposal, however, is initiated by the Chief Justice of the High Court concerned in consultation with two senior-most colleagues.
 - The recommendation is sent to the Chief Minister, who advises the Governor to send the proposal to the Union Law Minister.

Transfer procedure of HC Judges

- Article 222 of the Constitution makes provision for the transfer of a Judge (including Chief Justice) from one High Court to any other High Court.
- The initiation of the proposal for the transfer of a Judge should be made by the Chief

Justice of India whose opinion in this regard is determinative.

- Consent of a Judge for his first or subsequent transfer would not be required.
- All transfers are to be made in public interest i.e., for promoting better administration of justice throughout the country.

Autonomy of Election Commission of India (ECI)

In News

- Recently, the Supreme Court (SC) held that, "Election Commissioner shouldn't be a 'yes-man'".

Supreme Court's Stand

Present:

- The court gave the government 24 hours to produce the file of appointment of former IAS officer Arun Goel as Election Commissioner.
- The court asked the government how it had appointed Mr. Goel as Election Commissioner when an application questioning the prolonged vacancy was already pending before the Constitution Bench.

Problem:

- SC is looking at the manner in which you are appointing Election Commissioners and whether the manner of appointment can put in a person who can act independently in his post.
- Why Centre only considered bureaucrats for Election Commissioners.

Centre's Stand

- The Election Commission of India had worked "perfectly fine" all these years.
- Elections were held on time and there was no need to question the system of appointment.
- The court should only intervene if a challenge had been raised against any specific appointment of Election Commissioner.
- The independence of the executive was as sacrosanct as the independence of the judiciary.

Election Commission of India

About:

- The Election Commission of India was established in accordance with the Constitution on 25th January 1950.
- It is a permanent and independent body responsible for administering Union and State election processes in India.
 - Power of superintendence, direction and control of elections to parliament, state legislatures, the office of president of India and the office of vice president of India is vested with the election commission.
 - It is not concerned with the elections to panchayats and municipalities in the states.
- For this, the Constitution of India provides for a separate State Election Commission.

Composition:

- The Election Commission of India consists of the chief election commissioner and a number of other election commissioners, as fixed by the President.
- Originally the commission had only a Chief Election Commissioner.
- It currently consists of the Chief Election Commissioner and two Election Commissioners.
- Constitutional Provisions (Article 324 to Article 329 (Part XV))
- **Article 324:** Entails the provisions related to the chief election commissioner and other election commissioners.
 - The President of India appoints the chief election commissioner and other election commissioners.
 - President also determines the conditions of service and tenure of office of the election commissioners and the regional commissioners.
 - The Constitution has not prescribed the qualifications (legal, educational, administrative or judicial) of the members of the Election Commission.
- **Article 325:** No person to be ineligible for inclusion in, or to claim to be included in a special electoral roll on the ground of religion, race, caste or sex.
- **Article 326:** Elections to the Lok Sabha and Legislative As-

semblies of States to be on the basis of adult suffrage.

- **Article 327:** Power of Parliament to make provision with respect to elections to legislature.
- **Article 328:** Power of Legislature of a State to make provision with respect to elections to such Legislature.
- **Article 329:** Bar to interference by courts in electoral matters.

Tenure and Removal:

- The chief election commissioner and other election commissioners hold office for a term of six years or until they attain the age of 65 years, whichever is earlier.
- They can resign at any time or can also be removed before the expiry of their term.
- The process and the grounds for removal of the chief election commissioner are the same as that of a judge of the Supreme Court.
- He can be removed by the president on the basis of a resolution passed to that effect by both the Houses of Parliament with the special majority, either on the ground of proved misbehaviour or incapacity. Thus, he does not hold his office till the pleasure of the president, though he is appointed by him.

Independence:

- The chief election commissioner is provided with the security of tenure.

- The service conditions of the chief election commissioner cannot be varied to his disadvantage after his appointment.
- Any other election commissioner or a regional commissioner cannot be removed from office except on the recommendation of the chief election commissioner.
- Some flaws in safeguarding the independence and impartiality of the election commission are also noted, viz.,
 - The Constitution has not specified the term of the members of the Election Commission.
 - The Constitution has not debarred the retiring election commissioners from any further appointment by the government.

Powers and Functions of the Election Commission:

- Determining the territorial areas of the electoral constituencies throughout the country on the basis of the Delimitation Commission Act.
- Preparing and periodically revising electoral rolls and registering all eligible voters.
- Notifying the dates and schedules of elections and scrutinising nomination papers.
- Granting recognition to political parties and allot election symbols to them.
- Registering political parties for the purpose of elections and granting them the status of national or state parties on the basis of their poll performance.
- Acting as a court for settling disputes related to granting of recognition to political parties and allotment of election symbols to them.
- Appointing officers to inquire into disputes related to electoral arrangements.
- Determining the code of conduct to be observed by the parties and the candidates at the time of elections.
- Preparing a roster for publicity of the policies of the political parties on radio and TV in times of elections.
- Advising the president on matters related to the disqualifications of the members of Parliament.
- Advising the governor on matters related to the disqualifications of the members of the state legislature.
- Cancelling polls in the event of rigging, booth capturing, violence and other irregularities.
- Supervising the machinery of elections throughout the country to ensure free and fair elections.
- Advising the president whether elections can be held in a state under the president's rule in order to extend the period of emergency after one year.

Issues

No law for the appointment of election commissioners:

- The court said Article 324 of the Constitution, dealing with the appointment of election commissioners, had envisaged the enactment of a law to provide for the procedure for such appointments, but the government had not done this yet.
- Chief Election Commissioners' terms have fallen from over eight years in the 1950s to less than three hundred days since 2004.

Issue of Short tenures of Chief Election Commissioners:

- Although the CEC's tenure is six years under 'The Chief Election Commissioner And Other Election Commissioners (Conditions Of Service) Act, 1991', no CEC has completed his tenure since 2004.

Independence:

- Is the independence of the Election Commissioner really there or just in the spirit?
- Election Commissioners may be honest, but can have definite political leaning which makes them less independent.

Way Ahead

- The country needs Election Commissioners (ECs) who would not shirk from even taking on the Prime Minister if required, and not just "weak-kneed" yes-men.

VI. Public Awareness and General Administration

'Mission DefSpace'

In News

- Recently, Prime Minister of India launched 'Mission DefSpace' at the ongoing DefExpo

About 'Mission DefSpace'

- It is an ambitious effort to develop innovative solutions for the three Services in the space domain through Indian industry and start-ups
- Under Mission Def-Space, 75 challenges are being opened to get innovative solutions, based on the defence requirements in the space domain.
- The effort is not meant to develop offensive capabilities in space but to build technology enablers for the Services.

Developments

- There are more than 60 developing countries with whom India is sharing its space science. "
 - The South Asia satellite is an effective example of this. By next year, 10 Association of SouthEast Asian Nations (ASEAN) countries will also get real-time access to India's satellite data. Even developed countries like Europe and America are using our satellite data,

National Curriculum Framework for Foundational Stage (NCF-FS)

Context

- The Union Ministry of Education released the National Curriculum Framework for Foundational Stage (NCF-FS).

Key Points

About:

- The National Curriculum Framework (NCF) for the Foundational Stage is developed based on the vision of the National Education Policy (NEP) 2020, and to enable its implementation.

Curriculum:

- It refers to the entirety of the organised experience of students in any institutional setting towards educational aims and objectives.
- There are other matters that directly affect a Curriculum and its practice or are integrally related while not being within the Curriculum. These include:
 - The Teachers and their capacities,
 - the involvement of parents and communities,
 - Issues of access to institutions,
 - Resources available,

- Administrative and support structures.

Objectives of this NCF:

- To help in positively transforming the school education system of India as envisioned in NEP 2020, through corresponding positive changes in the curriculum including pedagogy.
- It aims to help change practices in education and not just ideas.

Characteristics of this NCF To enable its Objectives:

- While based on the latest research in early childhood care and education, this NCF aims to be understandable and relatable to, and usable by all the stakeholders:
 - Practitioners of education, including Teachers and other educators, school leaders, and functionaries of the education system such as project officers, cluster and block resource persons, block education officers, teacher educators, examination boards, and curriculum/syllabus/textbook development teams.
- To provide the interested reader a reasonable understanding of what education should look like in our new vision for schools, and why, and what role indi-

viduals could play as parents, community members, and citizens of India, who all have a large stake in Indian education.

- This NCF is designed with the Teacher as the primary focus - the reason being that the Teacher is at the heart of the practice of education.
- To enable this, and to communicate ideas with greater clarity, this NCF contains different levels of detail and specificity at the level of practice, with clear real-life illustrations in a variety of contexts.
- To account for the reality of the current typical institution and Teacher, while being entirely in harmony with the imagination of the best-resourced institutions.
- To be deeply rooted in the reality of the country's context, yet aspirational.
- This new framework will help equip young ones with cognitive & linguistic competencies of the 21st century.
- It also lays a clear path for the goal of achieving foundational literacy and numeracy as articulated in NEP 2020, with age-appropriate strategies.

4 Stages:

- NEP has created a 4-stage '5+3+3+4 curricular and pedagogical structure'.

Stages:

- The '5' refers to the first five

years of education from ages 3 to 8, called the Foundational Stage,

- Then ages 8-11 (Preparatory Stage),
- 11-14 (Middle Stage) and
- 14-18 (Secondary Stage).
- The four stages constitute school education and have been determined by the physical (including brain), social and emotional development trajectories of children, which in turn determines what is the most effective educational approach for that stage.

Significance

- It is this holistic overall transformation of the curriculum that will enable to positively transform overall learning experiences for students.
- The transformative nature of this phase of education is expected to qualitatively improve the contents and outcomes of education, thereby, impacting the lives of our children towards a better future.
- All studies and research related to the early period of development of a child, unambiguously leads to the conclusion that high-quality care and education during this period has a lifetime of positive consequences for all individuals and thus, the nation.
- It is based on cutting-edge research from across the world

in multiple disciplines which includes among other things better understanding in the fields of neurosciences, brain study, and cognitive sciences.

- As articulated in NEP 2020, it uses 'play,' at the core of the conceptual, operational, and transactional approaches to curriculum organization, pedagogy, time and content organization, and the overall experience of the child.

Foundational Stage

- The Foundational Stage is driven by the deep and long-term implications of the first eight years of a child's life.
- Most Critical Years: Research from across the world in multiple relevant disciplines shows that these years are the most critical for lifelong well-being and overall development of individuals—physical, cognitive and socio-emotional.
- Fastest Brain Development: Neuroscience research tells that over 85% of an individual's brain development occurs by the age of 6.

Early Childhood Care and Education' (ECCE)“:

- The 'Early Childhood Care and Education' (ECCE), which refers to the care and education of children from birth to eight years, is of central importance to all societies.

- Children of ages 0-3 are mostly taken care of at home; institutional settings take over from age 3 onwards, so the Foundational Stage addresses ECCE for ages 3-8.
- This would include pre-schools, kindergartens, nursery, Aanganwadis, etc—all institutions that take care of children ages 3-6, and classes 1 and 2 across all schools.

Importance of Foundational Stage

- This stage will enable addressing all domains of development—physical, socio-emotional-ethical, cognitive and language as well as literacy, aesthetic and cultural aspects—more effectively.
- Developing foundational literacy and numeracy is critical for all future learning and the NCF-FS enables us to leverage all five years of the Foundational Stage to achieve this.
- The pedagogical approach recommended in the NCF-FS is play-based.
 - It includes conversations, stories, songs and rhymes, music and movement, art and craft, indoor and outdoor games, field trips, being amid nature and playing with materials and toys.
- It emphasizes the need for teaching and learning to be situated in the context of the child.
 - This includes use of the child's home language and usage of content such as local and traditional stories, rhymes, songs, materials, and games.
- It is also about catering to different needs and levels of children, including children with special needs, for learning to be truly inclusive.
- Assessment in the Foundational Stage is seen as an enabler for learning and development.
 - It is an integral part of the everyday classroom process and largely based on systematic and careful observation of children and analysis of their work—such as craft, projects and simple worksheets.
- It focuses on building an enabling ecosystem that's necessary to make it all happen.
 - This includes empowering teachers and enabling a supportive academic & administrative support system.
 - It also emphasizes the need to ensure adequate infrastructure and learning resources in each institution.
- The NCF-FS speaks directly to teachers.
- It focuses on classroom practices with real-life illustrations from a variety of contexts.
- It is hence relatable and provides realistic pathways for teachers and others.

Challenges

- There will be several challenges arising from the needs of developing innovative methods and approaches.
- Problems of access, quality-related deficiencies such as a developmentally inappropriate curriculum, the lack of qualified and trained Teachers, and less-than-optimal pedagogy.
- So, a lot of level up is required and at a faster speed.
- Low enrolment and attendance in preschools compared to primary school.
- National Early Childhood Care and Education requires strong investment.
- The challenges of achieving Foundational Literacy and Numeracy (FLN) have become deeper and more widespread because of the learning loss due to school closure during the pandemic.

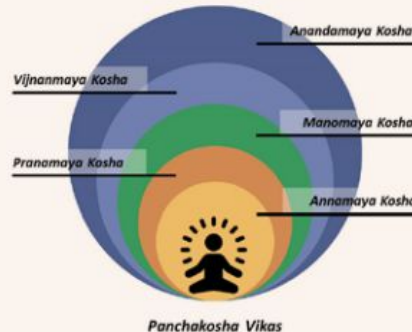
Way Ahead

- NCERT should place this NCF in public domain, take it to SCERTs and to all stakeholders involved in early childhood care and development.
- The framework must be improved with feedback from implementation on the ground, and that we shall do, after a reasonable experience of its implementation.

Panchakosha Vikas

Panchakosha Vikas (Five-fold Development) - A keystone in Indian tradition

The child is a whole being with panchakoshas or five sheaths. The layers are annamaya kosha (physical layer), pranamaya kosha (life force energy layer), manomaya kosha (mind layer), vijnanamaya kosha (intellectual layer) and anandamaya kosha (inner self). Each layer exhibits certain distinct characteristics. The holistic development of a child takes into account the nurturing and nourishment of these five layers.



- The Panchakosha concept and imagination also maps into the different domains of development envisaged in ECCE.
- **Physical Development (Sharirik Vikas)** : Age-specific balanced physical development, physical fitness, flexibility, strength, and endurance; development of senses; nutrition, hygiene, personal health, expansion of physical abilities; building body and habits keeping in mind one hundred years of healthy living in a human being.
- **Development of Life Energy (Pranik Vikas)** : Balance and retention of energy, positive energy and enthusiasm, smooth functioning of all major systems (digestive, respiratory, circulatory, and nervous systems) by activation of the sympathetic and parasympathetic nervous system.
- **Emotional/Mental Development (Manasik Vikas)** : Concentration, peace, will and will power, courage, handling negative emotions, developing virtues (maulyavardhan), the will to attach and detach from work, people and situations, happiness, visual and performing arts, culture, and literature.
- **Intellectual Development (Bauddhik Vikas)** : Observation, experimentation, analytical ability, abstract and divergent thinking, synthesis, logical reasoning, linguistic skills, imagination, creativity, power of discrimination, generalization, and abstraction.
- **Spiritual Development (Chaitisik Vikas)** : Happiness, love and compassion, spontaneity, freedom, aesthetic sense, the journey of 'turning the awareness inwards.'
- Panchakosha is an ancient explication of the importance of the body-mind complex in human experience and understanding.
- This non-dichotomous approach to human development gives clear pathways and direction towards a more holistic education.

Self-reliance in the Defence Sector

In News

- Recently concluded DefExpo22 exposed the need for India to acquire self-reliance in the defence sector.

More about the news

Need of self-reliance in the defence sector:

National security:

- Even as India aspires to become a \$5-trillion economy, it is evident that it faces many national security inadequacies.

Dependency on foreign suppliers:

- The high dependency index on foreign suppliers (traditionally the former USSR now Russia) for major military inventory items is stark.
- This dependency induces a macro national vulnerability and dilutes India's quest for meaningful and credible strategic autonomy.

Combat capacity:

- Furthermore, the current gaps in combat capacity expose the chinks in the Indian ability to safeguard core national security interests.

Meeting targets:

- The government has set a defence export target of \$5 billion (Rs 40,000 crore).
- This is an ambitious target and

will demand mission-mode resolve to be realised.

India's progress in recent years:

- India's defence exports have grown eight times in the last five years.
- India is exporting defence materials and equipment to more than 75 countries of the world.
- In 2021-22, defence exports from India reached \$1.59 billion (about Rs 13,000 crore).

Major defence-related events in the recent period include

- The commissioning of the indigenously-designed and built aircraft carrier INS Vikrant;
- The firing of an SLBM (submarine-launched ballistic missile) from the INS Arihant;
- The radical decision to award the manufacture of a military transport aircraft (C 295) to a major private sector entity;
- The induction of the made in India Prachand LCH (light combat helicopter); and
- The conclusion of a deal with Russia to manufacture a Kalashnikov-type light weapon/small arms in India.

Challenges

Global issues:

- Unexpected exigencies such as the Russian invasion of Ukraine and other factors including the

Covid that disrupted the global economy & related supply chains.

Weakening of rupee:

- The global challenges are further exacerbated by a weakening rupee add to the challenges faced by the Indian defence manufacturing ecosystem.

Manufacturing sector:

- India missed the industrial design and manufacturing bus, a national competence demonstrated by nations like South Korea and China, over the last five decades.
- Technological advances have made the design and manufacture of the semiconductor chip the new currency of national prosperity and military power.
- The US and China are now locked in intense competition in this domain and India is yet to acquire a profile that would be deemed relevant.
- Aatmanirbhar in defence production

Make-I Category:

About:

- Under the Defence Acquisition Procedure 2020, 'Make' Category aims to achieve self-reliance by involving greater participation of Indian industry.
- Projects involving design and development of equipment, systems, major platforms or upgrades thereof by the industry can be taken up under this category.

Financial Support:

- The Ministry of Defence will provide financial support up to 70% of the total cost of prototype development.

Make-II Category:

- It is funded by industry with assured procurement. The following platform has been listed -
 - Anti-jamming Systems for Multiple Platforms

Special Purpose Vehicle (SPV) Model:

- Under this, private industry will be encouraged to take up the design and development of military platforms and equipment in collaboration with the Defence Research and Development Organisation (DRDO) and other organisations.
- Following two platforms have been identified under this category.
 - Long Range Unmanned Aerial Vehicles (UAVs) [High Altitude Long Endurance (HALE)]
 - Indian Multi Role Helicopter (IMRH)

iDEX:

- Projects of Start-ups, MSMEs etc. involving high-end innovation would be pursued under the iDEX category and the following platform has been selected under this category -
 - Low Orbit Pseudo Satellites.

New Developments at DefExpo2022

- **HTT-40 aircraft:**
 - The HTT-40 indigenous trainer aircraft was unveiled at the India Pavilion during the Expo.
 - It is designed and developed by Hindustan Aeronautics Limited (HAL).
- **Deesa airfield:**
 - The foundation stone for the Deesa airfield in Gujarat which will be a forward Air Force base was also unveiled.
 - Forward air force base would add to the security architecture of the country.
- **Mission DefSpace:**
 - "Mission DefSpace" is launched for developing innovative solutions for the Armed Forces.
- **Indian Ocean Region plus (IOR+) conclave:**
 - The 2nd Indian Ocean Region plus (IOR+) conclave was also held during the Expo,
 - This will provide a stage for a comprehensive dialogue to promote defence cooperation amongst IOR+ nations to foster peace, growth, stability and prosperity.
 - It is in line with the Prime Minister's vision for Security and Growth for All in the Region (SAGAR).
- **India-Africa Defence Dialogue:**
 - India-Africa Defence Dialogue was held on the sidelines of DefExpo 2022.
 - Gandhinagar Declaration was adopted to enhance cooperation in the fields of training & military exercises.
 - The theme of the second India-Africa defence dialogue was:
 - "Adopting strategies for synergising and strengthening defence and security cooperation".
- This is the first defence expo where only Indian companies are participating and it features only Made in India equipment.

Way Ahead

- To become a major defence manufacturer, India needs to reexamine its structure of governing defence production, as the Chinese did in 2000.
- Progressively changing this techno-strategic landscape in India's favour should be accorded the highest priority in the national policy debate.
 - This will give a chance to employing more people in

India and thereby increasing the Growth parameters of the Economy.

Hate Speech

- **In News:** A Supreme Court bench directed the police chiefs of Delhi, Uttar Pradesh and Uttarakhand to take "immediate" suo motu action against any hate speech, by lodging criminal cases without waiting for formal complaints.
- While India does not have a formal legal framework for dealing with hate speech, a set of provisions of the Indian Penal Code (IPC), loosely defining hate speech, are invoked. These are primarily laws to deal with offences against religions.

IPC Sec 295A & others:

- Section 295A was brought in 1927 and is one of the main provisions in the IPC chapter to penalise religious offences.
- The chapter includes offences to penalise damage or defilement of a place of worship with intent to insult the religion (Section 295); trespassing in a place of sepulture (Section 297); uttering, words, etc, with deliberate intent to wound the religious feelings of any person (Section 298); and disturbing a religious assembly (Section 296).
- The state often invokes Section 295A along with Section 153A, which penalises promoting enmity between different groups on grounds of religion,

race, place of birth, residence, language, etc, and doing acts prejudicial to maintenance of harmony and Section 505 of the IPC that punishes statements conducing to public mischief.

- Section 66A of the Information Technology Act, that punishes sending offensive messages through communication services is added when such speech is made online.

Judicial references:

- In 1927, Rangeela Rasool case, examined the question whether targeting religious figures is different from targeting religions.
- While the magistrate had convicted the publisher Rajpaul under Section 153A, the Lahore High Court held that a "scurrilous and foul attack" on a religious leader would prima facie fall under Section 153A — although not every criticism.
- This debate in interpretation prompted the colonial government to enact Section 295A with a wider scope to address these issues.
- In 1957, the constitutionality of Section 295A was challenged in Ramji Lal Modi v State of Uttar Pradesh
- The Supreme Court upheld the law on the grounds that it was brought in to preserve "public order" – an exemption to the fundamental right to freedom of speech and expression and

the right to religion recognised by the Constitution.

- In a 1960 ruling, in Baba Khalil Ahmed v State of Uttar Pradesh, the Supreme Court said that "malicious intent" of the accused can be determined not just from the speech in question but also from external sources.
- In 1973, in Ramlal Puri v State of Madhya Pradesh, the Supreme Court said the test to be applied is whether the speech in question offends the "ordinary man of common sense" and not the "hypersensitive man".
- In Baragur Ramachandrappa v State of Karnataka, a 2007 decision of the Supreme Court, "a pragmatic approach" was invoked in interpreting Section 295A.
- The state government had issued a notification banning Dharmakaarana, a Kannada novel written by award-winning author P V Narayana, on the ground that it was hate speech, invoking a gamut of provisions including Section 295A. The pragmatic approach was to restore public order by "forfeiture" of a book over individual interest of free speech.

Concerns:

- The broad, vague terms in the laws are often invoked in its misuse.
- Lower conviction rates for these provisions indicate that the pro-

cess — where a police officer can arrest without a warrant — is often the punishment.

- these laws are intended for the state to step in and restore "public order" rather than protect free speech.

States to have NIA Office by 2024

Why in News?

- Recently, Union Home Minister announced all states in the country will have National Investigation Agency (NIA) offices by 2024 as a strategy to counter terrorism.
 - The Minister was addressing a two-day 'Chintan Shivir' organised with the objective to prepare an action plan for the implementation of 'Vision 2047' and 'Panch Pran' announced by India's Prime Minister during the Independence Day Speech.

What are the Highlights of the Address?

NATGRID:

- States have been urged to utilise the National Intelligence Grid (NATGRID) that was operational now.
 - NATGRID brings datasets of 11 agencies on a common platform.

Revamping Criminal Justice System:

- Parliament will soon be presented with amendments to the

Indian Penal Code (IPC) & Code of Criminal Procedure (CrPC).

One Data One Entry:

- In order to ensure border and coastal security, border states should coordinate with Central agencies and security forces.
- There was a need for optimal and rational utilisation of internal security resources to fight challenges before the nation.

One Data One Entry:

- Following the principle of "one data, one entry", the NIA had been entrusted to maintain a national terror database, the Enforcement Directorate a dataset on financial crimes and the Narcotics Control Bureau (NCB) on narco crimes.

Amendments to FCRA:

- The amendments to the Foreign Contribution Regulation Act (FCRA) in 2020 successfully prevented the misuse of foreign funding and effective monitoring became possible.
- The FCRA was a mandatory requirement to receive foreign funds.

What are the Issues with the Law-and-Order Situation in India?

General Administration:

- Various government agencies lack coordination.
- Poor enforcement of laws and general failure of administration

Problems Related to Police:

- Organisational, infrastructure, and environmental problems
- Unwarranted political interference
- Lack of empowerment of the cutting-edge functionaries
- Lack of modern technology/ methods of investigation

Organisational Behaviour:

- A lack of training
- Entrenched attitudes of arrogance, insensitivity and patronage

Ethical Issues:

- Different levels of corruption, collusion, and extortion
- Insensitivity to human rights
- Absence of transparent recruitment and personnel policies

Issues related to Prosecution:

- Public prosecutors do not attract the best talent
- Lack of coordination between the investigation and the prosecution agencies
- Mistrust of police in admitting evidence.

Problems Related to the Judicial Process:

- A large number of cases are pending
- Low conviction rates

What are the Related Constitutional and Legal Provisions?

- Law and order is a State subject under the Seventh Schedule,

the Constitution provided that the Ministry of Home Affairs (MHA) could intervene in matters concerning national security and the Ministry from time to time sent advisories to States.

- It is the primary duty of the State Governments to prevent, detect, register and investigate crime and prosecute the criminals.

- Central Government, however, supplements the efforts of the State Governments by providing them financial assistance for modernization of their Police Forces.

- Further, intelligence inputs are regularly shared by the Central Security and Intelligence Agencies with the State Law Enforcement Agencies to prevent crime and law and order related incidents.

- The National Crime Records Bureau (NCRB), a nodal agency under the MHA, is engaged in the process of collecting, compiling and analysing the crime statistics with a view to help the States to evolve appropriate strategies for better prevention and control of crime.

- Further, the Bureau has established computerized systems at every District Crime Records Bureau (DCRB) and State Crime Records Bureau (SCRB), across the country, under a project viz., 'Crime Criminal Information system (CCIS)'.

What is the National Investigation Agency (NIA)?

About:

- The NIA is the Central Counter-Terrorism Law Enforcement Agency of India mandated to investigate all the offences affecting the sovereignty, security and integrity of India. It includes:
 - Friendly relations with foreign states.
 - Against atomic and nuclear facilities.
 - Smuggling of arms, drugs and fake Indian currency and infiltration from across the borders.
 - The offences under the statutory laws enacted to implement international treaties, agreements, conventions and resolutions of the United Nations, its agencies and other international organisations.
- It was constituted under the National Investigation Agency (NIA) Act, 2008.
- The agency is empowered to deal with the investigation of terror related crimes across states without special permission from the states under written proclamation from the Ministry of Home Affairs.
- **Headquarters:** New Delhi

Way Forward

- The nature of crimes is changing, and they are becoming borderless, that is why all States will have to battle these by having a common strategy.
- To formulate and implement this under the spirit of 'Cooperative Federalism,' Cooperation, Coordination and Collaboration between the Centre and the States is required.

BCCI announces Pay Parity

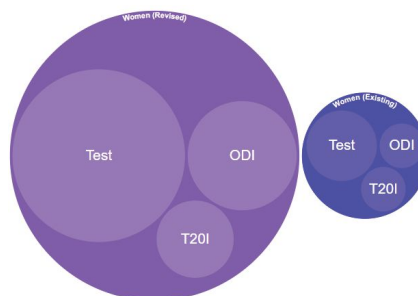
In News

- Recently, the Board of Control for Cricket in India (BCCI) announced a "pay equity policy", saying that its centrally-con-

tracted men and women players would get the same match fees.

Key Points

- This is the first step towards tackling discrimination.
- Pay equity policy is being implemented for contracted women cricketers.
- Both men and women cricketers will be paid:
 - 15 lakh for Tests,



- 6 lakh for one-day internationals and
- 3 lakh for Twenty20 internationals.

Gender Pay Gap in India

- Gender pay gap refers to the difference in earnings between women & men in the paid employment and the labour market.
 - It is a measure of the gap in the overall earnings of men and women.
 - It is calculated by considering several parameters applied to the total number of employed members of both genders.
 - This means that it does not account for women who have voluntarily stayed out of the workforce or have taken a sabbatical.
- There are two distinct numbers:
 - **The unadjusted pay gap:** It differentiates between mean and median wages of the two genders
 - **The adjusted pay gap:** It takes into account differences in factors such as occupation, education and job experience.
 - So, the difference is starker if you consider the unadjusted figure.
- Unequal pay refers to situations where women are paid less than men for doing the same work.
 - To counter this, equal pay is legally enforced in most organized sectors.

Reasons for Pay Gaps in India

- Poor access to the education system and work experience:
 - Girl children are sometimes kept out of schools or made to drop out of school early.
 - Even if they are educated, many women are not allowed to work by their families.
- A large segment of the well qualified women want to join the workforce because of household responsibilities or social status:
 - Women who do join the workforce often need to take extended leaves for maternity and child care, and even the healthcare of other family members.
- Drop in employment:
 - A massive drop in casual employment for women in urban areas during the first quarter of the pandemic.
- Social stigma:
 - Till India's social stigma against women in the workforce and the general environment of social injustice against women is not tackled, the gender pay gap may not show any sign of closing
 - Societal and Employers prejudices are responsible for women's lower wages.

Constitutional Provisions and Efforts Taken to Address the Pay Gap

- The Supreme Court recognised the right to equal pay for equal work to be a constitutional goal

under Articles 14, 16, and 39 (d) of the Constitution of India.

- Article 39(d) of the Constitution of India for instance seeks to achieve social justice through the principle of equal pay for equal work.
- Social justice and equality go hand in hand and therefore it can be said that this principle has evolved as a socio-legal imperative.
- The rule of equality under Article 14 of the Indian Constitution in the first instance prohibits any special treatment or privilege and ensures that equal people are treated alike in equal circumstances.
- The Supreme Court has identified several grounds which were held proper for creating wage differences.
 - Educational qualification was held to be a valid ground for wage difference.
 - Even for similar posts, if there is a difference in nature of work done and extension of reliability and responsibility of one more than the other person.
 - A rational basis to give a higher wage to a junior is also identified under the test of reasonable classification.
 - If duties and responsibilities are not the same, even though functions are similar.

Way Ahead

- Actively enforce legislation for the protection of the right to

equal wages and work.

- Need for work to actively incentivise the participation of women in the workforce, including enhancements in pay, upskilling, job reservations, easy return-to-work options, particularly after maternity leave, and the option to work from home, wherever possible.
- Need to ensure a more equitable distribution of household work and childcare duties between women and men.
- Implementing "living wages" as opposed to minimum wages, particularly for all informal workers, and formalise contractual, temporary, and casual labour as much as possible.
- This decision will inspire young talents to pursue their passion for the sport and that other sports organisations would follow the example established by the BCCI.

National Population Register (NPR)

Why in News?

- The Ministry of Home Affairs (MHA) has recently highlighted the need to update the National Population Register (NPR) database across the country.
 - This is to incorporate the changes due to birth, death, and migration for which demographic and other particulars of each family and individual are to be collected.

What is NPR?

About:

- NPR is a database containing a list of all usual residents of the country.
 - A usual resident for the purposes of NPR is a person who has resided in a place for six months or more and intends to reside there for another six months or more.
- Its objective is to have a comprehensive identity database of people residing in the country.
 - It is generated through house-to-house enumeration during the "house-listing" phase of the Census.
 - The NPR was first collected in 2010 and then updated in 2015.

Legal Backing:

- The NPR is prepared under the provisions of the Citizenship Act 1955 and the Citizenship (Registration of Citizens and Issue of National Identity Cards) Rules, 2003.
- It is mandatory for every "usual resident of India" to register in the NPR.

Significance:

- It will streamline data of residents across various platforms.
 - For instance, it is common to find a different date of birth of a person on different government documents. NPR will help eliminate that.

- It will help the government formulate its policies better and also aid national security.
- It will help to target government beneficiaries in a better way and also further cut down paperwork and red tape in a similar manner that Aadhaar has done.
- It will help in implementing the idea of 'One Identity Card' that has been recently floated by the government.
 - 'One Identity Card' seeks to replace duplicate and siloed documentations of Aadhaar

card, voter ID card, banking card, passport, and more.

NPR and NRC:

- According to Citizenship Rules 2003, NPR is the first step towards compilation of a National Register of Citizens (NRC). After a list of residents is created (i.e., NPR), a nationwide NRC could go about verifying the citizens from that list.
- However, unlike the NRC, the NPR is not a citizenship enumeration drive as it records even a foreigner staying in a locality for more than six months.

What is the National Register of Citizens?

- National Register of Citizens (NRC) is a register prepared after the conduct of the Census of 1951 in respect of each village, showing the houses or holdings in a serial order and indicating against each house or holding the number and names of persons staying therein.
- The NRC was published only once in 1951 and since then, it has not been updated for the nation until recently.
 - It has been updated in Assam only for now and the government plans to update it nationally as well.

What is the Difference between NPR and Census?

- Objective:
 - The census involves a detailed questionnaire - there were 29 items to be filled up in the 2011 census - aimed at eliciting the particulars of every person, including age, sex, marital status, children, occupation, birthplace, mother tongue, religion, disability and whether they belonged to any Scheduled Caste or Scheduled Tribe.
 - On the other hand, the NPR collects basic demographic data and biometric particulars.
- Legal Basis:
 - The census is legally backed by the Census Act, 1948.
 - The NPR is a mechanism outlined in a set of rules framed under the Citizenship Act, 1955.

What is the Citizenship Act, 1955?

About:

- The Citizenship Act, 1955 provides various ways in which citizenship may be acquired.
 - It provides for citizenship by birth, descent, registration, naturalisation and by incorporation of the territory into India.
- In addition, it regulates the registration of Overseas Citizen of India Cardholders (OCIs) and their rights.
 - An OCI is entitled to some benefits such as a multiple-entry, multipurpose lifelong visa to visit India.
- **CAA 2019** : The Citizenship (Amendment) Act (CAA) was introduced in 2019 to amend the Citizenship Act, 1955.
 - It provides citizenship on the basis of religion to six undocumented non-Muslim communities (Hindus, Sikhs, Buddhists, Jains, Parsis and Christians) from Pakistan, Afghanistan and Bangladesh who entered India on or before 31st December, 2014.
 - It exempts the members of the six communities from any criminal case under the Foreigners Act, 1946 and the Passport Act, 1920.
 - The two Acts specify punishment for entering the country illegally and staying here on expired visas and permits.

G-20 Summit 2022

Why in News?

- Recently, the 17th annual summit of G-20 was hosted by the Indonesian G20 presidency in Bali under the theme 'Recover Together, Recover Stronger'.
- Now, India has assumed the charge of the G20 presidency and the 18th summit will be held in India in 2023.

What are the Outcomes of the Summit?

Condemning Russian Aggression:

- Member countries adopted a declaration deploring Russia's aggression in Ukraine "in the strongest terms" and demanding its unconditional withdrawal.
- They also recognised that while most members condemned the war in Ukraine, "there were other views and different assessments of the situation and sanctions".

Focus on Global Economy:

- The G20 economies agreed in their declaration to pace interest rate rises carefully to avoid spillovers and warned of "increased volatility" in currency moves, a sea change from last year's focus on mending the scars of the Covid-19 pandemic.

Food Security:

- The leaders promised to take coordinated action to address

food security challenges and applauded the Black Sea grains initiative.

Climate Change:

- G20 leaders agreed to pursue efforts to limit the global temperature increase to 1.5 degrees Celsius - confirming they stand by the temperature goal from the 2015 Paris Agreement on climate change.

Digital Transformation:

- Leaders recognised the importance of digital transformation in reaching the sustainable development goals.
- They encouraged international collaboration to further develop digital skills and digital literacy to harness the positive impacts of digital transformation, especially for women, girls, and people in vulnerable situations.

Health:

- Leaders also expressed their continuous commitment to promoting a healthy and sustainable recovery which builds towards achieving and sustaining universal health coverage.
- They welcomed the establishment of a new financial intermediary fund for pandemic prevention, preparedness and response (the 'Pandemic Fund') hosted by the World Bank.
- Leaders reaffirmed their commitment to strengthen global health governance, with the leading and coordination role of World Health Organisation

(WHO) and support from other international organisations.

What are the Challenges before the G-20 Member Countries?

Impact of Russia's Invasion of Ukraine:

- Russia's invasion of Ukraine has not only created massive geopolitical uncertainty but also spiked global inflation.
- The associated sanctions by the West have further queered the pitch.
 - Persistently high inflation - at historic highs in several countries - has eroded purchasing power across these countries, thus dragging down economic growth.

Impact of Rising Inflation:

- In response to high inflation, central banks across countries have raised interest rates, which, in turn, have dampened economic activity further.
- Some of the biggest major economies such as the US and the UK are set to face a recession; others, such as those in the euro area, are likely to slow down to almost a halt.

Slowdown of Major Economies:

- China, one of the major engines for global growth, is witnessing a sharp slowdown as it struggles with a real estate crisis.

Rising Geopolitical Rifts:

- The world economy is struggling with geopolitical rifts

such as the tensions between the US and China, the two biggest economies in the world, or the decline in trade between the UK and the euro area in the wake of the Brexit decision.

What is the G20?

About:

- The G20 was formed in 1999 in the backdrop of the financial crisis of the late 1990s that hit East Asia and Southeast Asia in particular.
- It aims to secure global financial stability by involving middle-income countries.
- Together, the G20 countries include 60% of the world's population, 80% of global GDP, and 75% of global trade.

Members:

- Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Republic of Korea, Mexico, Russia, Saudi Arabia, South Africa, Turkey, the United Kingdom, the United States and the EU.

Way Forward

- The first job at hand for the G-20 Countries is to contain raging inflation.
 - But at the same time, governments have to find ways to help the vulnerable without necessarily ballooning the debt levels. A key concern in this regard would be to ensure that external risks are carefully monitored.

- A strong, sustainable, balanced, and inclusive recovery requires joint action by the G-20 and this kind of joint action, in turn, requires not just securing peace in Ukraine but also "help prevent further fragmentation".
- On trade, the G20 leaders need to push for a "more open, stable, & transparent rules-based trade" that would help address global shortages of goods.
 - Strengthening the resilience of global value chains would help protect against future shocks.

MULTI-MODAL LOGISTICS PARK (MMLP)

In news

- The Ministry of Road Transport & Highways said it has awarded the contract for setting up India's first multi-modal logistics park (MMLP) near Chennai to Reliance Industries (RIL).

Background

- A systematic logistics network is crucial to economic growth. To develop this sector, the Cabinet Committee on Economic Affairs, in October 2017, under the 'Bharatmala Pariyojana', mandated the Ministry of Roads Transport and Highways (MoRTH) to develop Multi Model Logistics Parks (MMLP) across the country.

Description of MMLP

- MMLP typically acts as an inter-

modal freight-handling facility with mechanised material handling provisions, which contains warehouses, specialized cold chain facilities, freight/container terminals and bulk/break-bulk cargo terminals.

- MMLPs include inter-modal connectivity, such as dedicated railway line, access from the prominent highway(s)/ expressway(s) to allow movement of commercial vehicles, and connectivity to an airport or a seaport (or inland waterway terminal).

Proposed MMLPS

- For the purposes of reduction in congestion on proposed corridors under the 'Bharatmala Pariyojana', and to enhance logistics efficiency and reduce costs related to freight movements, MoRTH has identified 35 locations across India, for the development of MMLPs under the public-private partnership model (PPP).
- Thus, under the PM Gati Shakti National Master Plan (NMP), launched in October 2021, the Road Ministry is developing 35 MMLPs, of which 15 MMLPs are being prioritized in the next three years.
- These MMLPs are proposed to be implemented by the National Highways Authority of India (NHAI) and the National Highways and Infrastructure Development Corporation Limited ((NHIDCL) in North-East India).

- Since 2017, work has progressed significantly in the implementation of MMLP projects in India.

India's first MMLP at Mappedu

- The MMLP is strategically located at around 52 km from the Chennai Port, 80 km from Ennore Port and 87 km from Kattupalli Airport and will be a focal point of logistics in the southern region. It is estimated to cater to around 7.17 million tonnes (mt) cargo over 45 years.
- Chennai is an important centre for supply chain and logistics in south India. Also, it has international and domestic connectivity, which makes the MMLP a game-changer for the region.
- The park will offer facilities such as warehouses, cold storages, cargo terminals, custom facilities, truck terminals, accommodation and boarding facilities for truckers. It will allow shippers to choose between different modes of transportation based on their requirements.
- The project being close to Chennai Peripheral Ring Road will connect the Chennai airport, and also the ports of Chennai, Kamarajar and Kattupalli.
- The project will also serve as secondary market clusters of Ranipet, Ambur, Tirupur and Bengaluru which is home to industries like leather, heavy machinery parts, automobiles, cement, sugar & chemicals, according to a pre-feasibility report.

Significance of MMPLs

- MMPLs will play a crucial role in reducing logistics costs. India's logistics cost as a percentage of GDP is very high at 16 per cent, while in developed countries such as the US and Europe, it is around 8 per cent. China's logistics costs are 10 per cent. The government wants to bring down the logistics cost to 10 percent of GDP.

Draft Digital Personal Data Protection Bill 2022

In News

- Recently, the latest draft of the data protection law, the Digital Personal Data Protection Bill, 2022 (DPDP Bill, 2022), has been made open for public comments.

Key Points

Background:

- The data protection Bill has been in the works since 2018 when a panel led by Justice B N Srikrishna had prepared a draft version of the Bill.
- It is India's first attempt to domestically legislate on the issue of data protection.
- The government made revisions to this draft and introduced it as the Personal Data Protection Bill, 2019 (PDP Bill, 2019) in the Lok Sabha in 2019.
- Due to delays caused by the pandemic, the Joint Committee on the PDP Bill, 2019 (JPC) submitted its report on the Bill after two years in December, 2021.

- The report was accompanied by a new draft bill, namely, the Data Protection Bill, 2021 that incorporated the recommendations of the JPC.
- However, in August 2022, citing the report of the JPC and the “extensive changes” that the JPC had made to the 2019 Bill, the government withdrew the PDP Bill.
- Now, the government is expected to introduce the Bill in Parliament in the budget session of 2023.

Aim:

- Regulating online space including separate legislation on data privacy, the overall internet ecosystem, cyber security, telecom regulations, and harnessing non-personal data for boosting innovation in the country.

Reason for so many changes:

Harm to privacy:

- Constant interactions with digital devices have led to unprecedented amounts of personal data being generated round the clock by users (data principals).
- When coupled with the computational power available today with companies (data fiduciaries), this data can be processed in ways that increasingly impair the autonomy, self-determination, freedom of choice & privacy of the data principal.

Inadequate present laws:

- The current legal framework for privacy enshrined in the Information Technology Rules, 2011 (IT Rules, 2011) is wholly inadequate to combat such harms to data principals, especially since the right to informational privacy has been upheld as a fundamental right by the Supreme Court (K.S. Puttaswamy vs Union of India [2017]).
- It is inadequate on four levels;
 - The extant framework is premised on privacy being a statutory right rather than a fundamental right and does not apply to processing of personal data by the government;
 - It has a limited understanding of the kinds of data to be protected;
 - It places scant obligations on the data fiduciaries which, moreover, can be overridden by contract
 - There are only minimal consequences for the data fiduciaries for the breach of these obligations.

Scope of Present Bill

- The DPDP Bill, 2022 applies to all processing of personal data that is carried out digitally.
- This would include both personal data collected online and personal data collected offline but is digitised for processing.
- In effect, by being completely inapplicable to data processed

manually, this provides for a somewhat lower degree of protection as the earlier drafts only excluded data processed manually specifically by “small entities” and not generally.

- As far as the territorial application of the law is concerned, the Bill covers processing of personal data which is collected by data fiduciaries within the territory of India and which is processed to offer goods and services within India.

Major provisions of the revamped Bill

High penalties:

- Companies dealing in personal data of consumers that fail to take reasonable safeguards to prevent data breaches could end up facing penalties as high as around Rs 200 crore.
 - Penalties are expected to vary on the basis of the nature of non-compliance by data fiduciaries (entities that handle and process personal data of individuals).
- Companies failing to notify people impacted by a data breach could be fined around Rs 150 crore.
- Those failing to safeguard children’s personal data could be fined close to Rs 100 crore.
- In the previous version of the Bill, withdrawn earlier this year, the penalty proposed on a company for violation of the law was Rs 15

crore or 4 percent of its annual turnover, whichever is higher.

The Data Protection Board

- It is an adjudicating body proposed to enforce the provisions of the Bill which is likely to be empowered to impose the fine after giving the companies an opportunity of being heard.

Personal data

- The new Bill will only deal with safeguards around personal data and is learnt to have excluded non-personal data from its ambit.
 - Non-personal data essentially means any data which cannot reveal the identity of an individual.

Significance of the revamped Bill

- **Strong safeguards:** Fines for data misuse prescribed in the previous version of the Bill were not seen as an effective deterrent.
- The higher penalties being proposed now will prompt entities to build strong safeguards to protect data and enforce fiduciary discipline.
- Companies would face punitive actions in the nature of financial penalties in the event of misuse of data and data breaches.
- The upcoming data protection Bill will put an end to misuse of customer data with companies facing financial consequences.

Data Protection Bill, Globally

About:

- An estimated 137 out of 194 countries have put in place legislation to secure the protection of data and privacy.
- Africa and Asia showing 61% (33 countries out of 54) and 57% adoption respectively
- Only 48% of Least Developed Countries (22 out of 46) have data protection and privacy laws.

EU Model:

- The General Data Protection Regulation (GDPR) focuses on a comprehensive data protection law for processing of personal data.
- It has been criticised for being excessively stringent, and imposing many obligations on organisations processing data, but it is the template for most of the legislation drafted around the world.
- In the EU, the right to privacy is enshrined as a fundamental right that seeks to protect an individual's dignity and her right over the data she generates.
- The European Charter of Fundamental Rights recognises the right to privacy as well as the right to protection of personal data, and is backed by a comprehensive data protection framework, which applies to processing of personal data by any means, and to processing activities carried out by both the government and private entities.
- There are certain exemptions such as national security, defence, public security, etc, but they are clearly defined and seen as exclusions on the periphery.

US Model:

- Privacy protection is largely defined as "liberty protection" focused on the protection of the individual's personal space from the government.
- It is viewed as being somewhat narrow in focus because it enables collection of personal information as long as the individual is informed of such collection and use.
- The US template has been viewed as inadequate in key respects of regulation.

- There is no comprehensive set of privacy rights or principles in the US that, like the EU's GDPR, addresses the use, collection, and disclosure of data. Instead, there is limited sector-specific regulation.
- The approach towards data protection is different for the public and private sectors.
- The activities and powers of the government vis-a-vis personal information are, however, sufficiently well-defined and addressed by broad legislation such as the Privacy Act, the Electronic Communications Privacy Act, etc.

- There will also be a strict or purpose limitation of data collected by companies and the time till which they can store it under the new Bill.
- Data fiduciaries will be required to stop retaining personal data & delete previously collected data after the initial purpose for which it was collected was fulfilled.

Way Ahead

- While protecting the rights of the data principal, data protection laws need to ensure that the compliances for data fiduciaries are not so onerous as to make even legitimate processing impractical.
- The challenge lies in finding

an adequate balance between the right to privacy of data principles and reasonable exceptions, especially where government processing of personal data is concerned.

- Given the rate at which technology evolves, an optimum data protection law design needs to be future proof - it should not be unduly detailed and centred on providing solutions to contemporary concerns while ignoring problems that may emerge going forward.
- The law needs to be designed for a framework of rights and remedies that is readily exercisable by data principals given their unequal bargaining power with respect to data fiduciaries.

VII. Welfare Oriented Schemes and their Utility Problem in Public Delivery System (Central Government and State Government)

1. Central Government

National Credit Framework

Why in News?

- The Ministry of Education recently unveiled a draft 'National Credit Framework' (NCrF) which aims to bring the entire education system, from school to university, into the academic 'credit' regime and has sought public view.

What is the National Credit Framework (NCrF)?

- **About :** The new framework is a part of the National Education Policy.
 - According to the framework, an academic year will be defined by the number of hours a student puts in. Credits will be provided to

them accordingly at the end of each academic year.

- The framework has been formulated under the University Grants Commission (Establishment & Operation of Academic Bank of Credits in Higher Education) Regulations, notified in July 2021.
- **Credit System:** The report of

the high-level committee on the NCrf, put out in public domain, proposes credit levels from class 5 onward itself - which will be credit level 1, going up to credit level 7 and 8 with post-graduation and a doctorate, respectively.

- Credit levels will increase by 0.5 for every year of learning.
- **Earning Credit:** The total 'Notional Learning hours in a year' for assignment of Credits will be 1200 hours. A minimum of 40 credits may be earned for 1200 hours of learning every year with 20 credits per semester of six months. Each Credit will come with 30 hours of learning- 30 hours per credit.
 - Notion learning hours in the context of NCrf means time spent not just in classroom teaching, but also in a range of co-curricular and extra-curricular activities. The list of such activities includes sports, yoga, performing arts, music, social work, NCC, vocational education, as well as on-the-job training, internships or apprenticeships.
- **Easy Entry and Exit:** The credit transfer mechanism will also enable a student/ learner to enter and exit the educational ecosystem, both general and vocational, at any point of time. In such cases due weightage is given to work experience gained or any other training undertaken by the learner.
- **Due Attention to Co-Curricular Activities:** The new credit framework will not have any hard separation between Curricular and Co-Curricular, or various discipline and will count in performance on -classroom teaching/learning/laboratory work/class projects; Sports and games, etc.
- **Aadhaar-enabled student registration :** An Aadhaar-enabled student registration will take place. After student registration, an Academic Bank of Credit (ABC) account will be opened. The deposit of degree and credits will take place in those accounts. There will be a knowledge locker along the lines of DigiLocker.
- **Academic Bank of Credit:** The recently introduced Academic Bank of Credit (ABC) for higher education will be expanded to allow for end-to-end management of credits earned from school education onwards and will also include vocational education and trainings, it is envisaged.

Significance:

- It would work as 'an umbrella framework for skilling, re-skilling, up-skilling, accreditation & evaluation' encompassing educational & skilling institutions and workforce.
- The credits for knowledge acquisition, hands-on training, and positive social outcomes will be a key step for achieving

100% literacy in the next 2-3 years and go towards making India a \$5 trillion economy.

Portal on National Mission on Natural Farming

In news

- The Union Agriculture Minister recently launched a portal on the National Mission on Natural Farming (NMNF) for the benefit of farmers.

Important Points about The NMNF website:

- The Agriculture Ministry is in charge of its development.
- It was launched here at the National Natural Farming Mission's first steering committee meeting.
- The portal contains all of the mission's information, implementation outline, resources, implementation progress, farmer registration, blog, and other useful information for farmers.

Authorities working together:

- The officers are responsible for coordinating with state governments and central departments in order to facilitate market linkage and make it easier for farmers to sell their products.

Ministry of Jal Shakti:

- It has developed a road map to promote natural farming and has identified 75 Sahakar Ganga villages in the first phase by signing an MoU with Sahkar Bharti, and farmers have received training.

- More than 4.78 lakh hectares of additional land have been brought under natural farming in 17 states beginning in December 2021.
- Natural farming has been initiated by 7.33 lakh farmers.
- **Training:** Approximately 23,000 programmes for farmer sanitation and training have been organised.
- Natural farming is being practised on 1.48 lakh hectares of land along the Ganga's banks in four states.

Organic farming:

- Masanobu Fukuoka, a Japanese farmer and philosopher, popularised this farming method in his 1975 book *The One-Straw Revolution*.

About:

- It is a farming method that avoids or limits the use of synthetically compounded fertilisers, pesticides, growth regulators, genetically modified organisms, and livestock food additives.
- Crop rotations, crop residues, animal manures, legumes, and green manures are all used in this system.

Features:

- **Chemical Free:** Natural farming is a type of agriculture that avoids the use of chemicals such as pesticides, fertilisers, growth regulators, food additives, and genetically modified organisms.

- **Utilization of Alternative Systems:** Natural farming employs methods such as crop rotation, the use of green manures and compost, biological pest control, and mechanical cultivation in place of chemical-based inputs.
- **Additional Practices:** To increase yields in a field, natural farming systems can be supplemented with practises such as crop rotation (planting different crops sequentially), mulching (see inset), intercropping (planting different crops simultaneously in a field), and seed soaking with liquid manure.

Significance:

- **Reduced reliance:** The mission will aid in the promotion of natural farming in the country. Natural farming will reduce reliance on purchased inputs and help to relieve credit burdens on smallholder farmers.
- **Crop Yield:** Natural farming is more productive than chemical farming.
- **Cost Savings:** Because the inputs are produced on the farm itself, the costs would be significantly reduced.
- **Income and livelihood:** This approach not only reduces cultivation costs (because inputs are produced on-site), but it also results in a higher price for the produce.
- **Soil Health:** Unlike conventional chemical-based practises, natural farming promotes

soil health by not depleting macronutrients (nitrogen, phosphorus, and potassium), micronutrients (iron, manganese, zinc, and copper), organic carbon, and the rhizosphere microbiome.

- **Environment:** Natural farming reduces carbon emissions while also promoting carbon sequestration. It also promotes soil respiration, the growth of beneficial organisms such as earthworms and soil enzymes, and the increase of microbial biomass.
- **Water-use efficiency:** Using natural farming methods results in more efficient use of soil moisture, which leads to an increase in water table levels, prevents over-extraction of groundwater, and promotes aquifer recharge.
- **Food Quality:** It promotes the growth of nutrient content and improves the physical characteristics of vegetables such as tomato, cabbage, and cowpea, resulting in higher market prices.

Natural Farming's Difficulties

- **Yields are declining:** Sikkim, India's first organic state, has seen a decline in yields over the last few years.
- **Policymakers' Conviction:** At the moment, policymakers are concerned about the nation's food security and are unwilling to commit to major changes in the agriculture sector.

- **Chemical inputs-based industry opposition:** Chemical-based farming has strong support from the multibillion-dollar agro-chemical industry, which has fought tooth and nail to keep the use of chemicals in agriculture.
- **There is a lack of agreement among scientists:** While scientists agree on the health and environmental benefits of natural agriculture, they disagree on the impact on crop yields.

Way Forward

- With everyone's help, the country's mission of natural farming can be realised.
- India must continue on the path of natural farming while also capitalising on emerging global opportunities.
- The villages of India have demonstrated that villages can not only bring about change, but also lead it.

The Waste-to-Energy Programme

Why in News?

- Recently, the Central Government has issued guidelines for rolling out its waste-to-energy programme, paving the way for companies to produce biogas and bioCNG, and electricity from urban, industrial and agricultural waste and residues.

What is the Waste-to-Energy Program?

About:

- The program is part of an

umbrella scheme, the National Bioenergy Programme.

- The government will offer financial assistance to project developers, while implementing agencies, including inspection firms, will be paid service charges for commissioning the waste-to-energy plants.

Implementing Agency:

- Indian Renewable Energy Development Agency (IREDA) will be the implementing agency for the program.
- IREDA will be paid a service charge of 1% of Central Financial Assistance (CFA) to process applications, besides 1% for the CFA (minimum Rs.50,000) for implementing, and monitoring the performance once the plants are commissioned.

Financial Assistance:

- The Centre will provide financial assistance of Rs 75 lakh per MW for new biogas plants & Rs 50 lakh per MW for existing units.
- If the waste-to-energy plants are set up in special category states, such as the North East, Himachal Pradesh, Sikkim, Jammu and Kashmir, Ladakh, Lakshadweep, Uttarakhand, and Andaman & Nicobar Islands, the eligible CFA will be 20% higher than the standard CFA pattern.

What is National Bioenergy Programme?

About:

- The Ministry of New and Re-

newable Energy (MNRE) has notified the National Bioenergy Programme.

Sub-Schemes:

- Waste to Energy Programme.
- Biomass Programme:
 - Scheme to Support Manufacturing of Briquettes & Pellets and Promotion of Biomass (non-bagasse) based cogeneration in Industries to support setting up of pellets and briquettes for use in power generation and non-bagasse-based power generation projects.
- Biogas Programme:
 - To support setting up of family and medium size Biogas in rural areas.

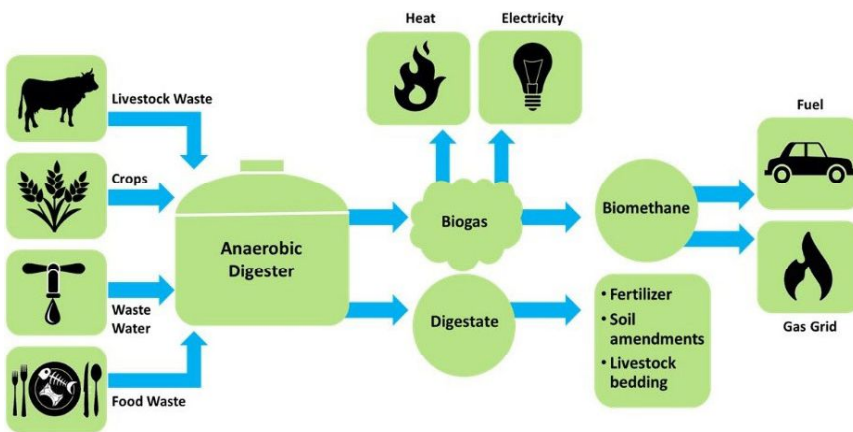
What is Biogas & BioCNG?

Biogas:

- It mainly comprises hydro-carbon which is combustible and can produce heat and energy when burnt.
- Biogas is produced through a biochemical process in which certain types of bacteria convert the biological wastes into useful bio-gas.
- Since the useful gas originates from a biological process, it has been termed as bio-gas.
- Methane gas is the main constituent of biogas.

BioCNG:

- Bio-CNG is a renewable fuel obtained by purifying biogas – in



contrast to Compressed Natural Gas (CNG), a non-renewable source of energy.

- Biogas is produced when microbes break down organic matter like food, crop residue, waste water, etc.
- It is similar to natural gas in terms of its composition and properties, & is a cleaner alternative to fuels such as petrol & diesel.

What are the Benefits of Bio Energy?

Pollution Free Cities:

- The biogas solution can help make our cities clean and pollution-free.
- Leaching of toxic substances from landfills contaminates the groundwater.
- Decomposing organic matter releases huge amounts of methane into the environment, causing air pollution and global warming as methane is a very potent GHG.

Handling Organic Waste:

- Installing large-scale municipal biogas systems can help cities handle organic waste efficiently

to overcome the environmental and socio-economic challenges posed by overburdened landfills.

- Municipal waste can be fed into these plants to create clean and green fuel, along with biofertilizers, while keeping the cities clean and hygienic.

Helpful for Women:

- Switching to biogas could be good for women because they won't be exposed to harmful smoke and pollution.
- The female members of a household are affected by indoor pollution as they spend more time inside the house.

Will Transform Energy Dependence:

- Biogas can play a critical role in transforming the energy dependence of rural and agricultural communities, which majorly depends on burning wood, dung, charcoal, coal and other fossil fuels for their energy needs.
- The high dependence on non-renewable sources is the leading cause of the long-standing

energy problems in the country.

- What are Government's Initiatives for Promoting Biogas & Waste Management?

Biogas:

- **SATAT Scheme**
- The Indian government and Niti Aayog have outlined roadmaps to hasten our transition towards green fuels and promote LNG, hydrogen and methanol.

Waste Management:

- National Dashboard on Elimination of Single Use Plastic and Plastic Waste Management
- Project REPLAN
- Solid Waste Management Rules, 2016

What is IREDA?

- Indian Renewable Energy Development Agency (IREDA) is a mini ratna company under the Ministry of New and Renewable Energy (MNRE).
- It was set up in 1987 as a specialized non-banking finance agency for the renewable energy sector.
- IREDA plays a key role in the renewable energy project financing which gives confidence to the financial institutions/banks to lend in the sector.

All Employees Can Opt For EPFO Pension Scheme: SC

Why in the news?

- Recently, the Supreme Court upheld the Employees' Pension

(Amendment) Scheme, 2014 of the Employees' Provident Fund Organisation as "legal and valid" while reading down specific provisions.

- The court used its extraordinary powers under Article 142 of the Constitution to allow eligible employees who had not opted for enhanced pension coverage prior to the 2014 amendments, to jointly do so with their employers within the next four months.

Background

- The legal dispute mainly concerned the controversial amendments to clause 11 of the EPS-1995.
- The verdict came in after EPFO challenged the decisions of the Kerala, Rajasthan, and Delhi High Courts quashing the 2014 amendments on the "determination of pensionable salary" under the Employees Pension Scheme (EPS) of 1995.
- Prior to the introduction of the amendments, the EPS was available to all employees who joined the Employees Provident Fund Scheme of 1952 as of November 16, 1995.
- The highest pensionable salary in the pre-amended EPS-1995 was Rs. 6,500. However, members whose salaries exceeded this cap could also opt, along with employers, to contribute up to 8.33% of their actual salaries to the pension fund.

Highlights of judgment

- Both exempt and non-exempt

establishments must abide with the 2014 changes to the EPS.

- The 2014 amendments mandated that employees who earn more than Rs. 15,000 per month must make monthly contributions to the pension plan equal to 1.16% of their earnings.
- The additional 1.16 percent contribution from the employees was invalidated by the supreme court. However, this portion of the ruling has been put on hold for a period of six months while the authorities raise money or modify the scheme as needed.
- Additionally, the court granted four months to employees who were eligible but were unable to enroll in the plan.
- The cap was increased from Rs. 6,500 to Rs. 15,000 as a result of the 2014 amendments to the EPS, which also included adjustments to Clause 11(3) & the addition of paragraph 11(4).
- Only employees who were current EPS members as of September 1, 2014 (extendable by another six months), were permitted to continue to make contributions to the pension fund based on their real salaries, pursuant to paragraph 11(4).
- Employees who retired without exercising any options prior to September 1, 2014, would not be eligible to benefit from this decision.

Impact

- It will lead to newly enrolled

employees will have their pensions capped without the ability to enhance their payments to the plan.

- After retirement, the pension they will receive would be so meager when calculated on the basis of a dismal Rs 15,000—that it will hardly be able to maintain them in their old age.
- This could mean that workers, particularly those in high-pay categories, will need to invest in market-available financial products to save for retirement.
- Regardless of their wages and financial needs, this decision has put all employee groups on an equal footing.
- On the other hand, many workers covered by the EPS would benefit.

Employees' Pension Scheme

- The Employees' Provident Funds and Miscellaneous Provisions Act, 1952 (the Act), which establishes a provident fund account in the name of each employee of a covered establishment, applies to workers at various establishments.
- Both the employee and the employer each contribute 12% of the employee's base salary to this account.
- The Act was amended to include Section 6A, which permits the development of a pension plan for employees.
- The Employees' Pension Scheme, 1995, was created as a result.

- According to the scheme, the maximum salary on the basis of which pension was to be calculated was Rs 6,500 per month.
- An amount of 8.33 percent of the employer's contribution (12 percent) would go to the employee's pension fund.
- On March 16, 1996, a proviso was added to the EPS, giving the employer and employee a choice to increase their pension fund contributions, up to 8.33 percent of the employee's basic pay.
- The EPS was amended with effect from September 1, 2014, capping the maximum pensionable salary at Rs 15,000 per month.

Agnipath Military Recruitment Scheme

Context:

- India's military has historically been an all-volunteer force. Unlike in the West, India's armed forces are perceived as a lodestar of patriotism and a source of pride as well as critical to nation-building.
- There is no dearth of potential recruits for military service. Working in the military is a matter of social prestige. Many communities in India rely heavily on the military for employment.
- At the same time, the challenges faced by Western militaries in implementing such an enlistment mechanism hold lessons for India as it puts the

Agnipath scheme into practice.

- In introducing the Agnipath scheme, India is pursuing a global trend, as militaries respond to changes not only in the national security threat landscape but the job market dynamics as well.

About the scheme:

- It is a radical departure from India's past recruitment policies.
- Announced in June 2022, it is a short-term military enlistment scheme seeking to recruit young Indians into the military with four-year tenure.
- These, called 'Agniveers', will form a rank in the Indian military that is distinct from existing ones.
- Indians in the age group of 17.5 to 21 years will be eligible for recruitment.
- 46,000 combatants or 'Agniveers' will be recruited annually: 40,000 for the Army and 3,000 each for the Navy and the Air Force.
- They will receive military training and learn leadership and other skills.
- Monthly compensation and benefits like insurance and a retirement package.
- Every retiring Agniveers can apply for permanent enrolment in the military, but only a maximum of 25 percent of Agniveers will be retained from every batch & will have to serve for a minimum of 15 years thereafter.

- They will be governed by the existing terms and conditions of service of junior commissioned officers/other ranks in the Indian Army and their equivalent in the Indian Navy and Indian Air Force (IAF), as well as that of non-combatants in the IAF.
- The Ministry of Home Affairs has opened an additional recruitment opportunity for retiring Agniveers by reserving 10 percent of vacancies for them in the central armed police forces and the Assam Rifles.
- 10-percent reservation for Agniveers in the coast guard, defence civilian posts, and defence public sector units.

Significance:

- Agnipath promises a structural overhaul by reopening the debate on 'affordable defence'.
- The heavy costs of maintenance of the soldiers in the armed forces have raised concerns.
- Indian defence planners are expected to devote more resources for modernisation and increased investments in areas such as cyber, space, and emerging technologies.
- If the scheme succeeds in its initial phase, it will guarantee its efficacy in the coming years and shape the perception of potential recruits.
- With the provision to retain 25 percent of the Agniveers permanently, Indian defence planners will be able to retain the best talent catering to these requirements.

- Moreover, the four-year service period envisioned under the scheme could make it attractive to wider segments of the population, including those young people who are hesitant to make a long-term commitment to the military.
- **France** : The military does get a sufficient number of recruits and it faces challenges in retaining them for additional contracts. This is a critical issue, as soldiers spend most of their first contract receiving training and reach their optimum potential only from the second contract.
- **US** : To attract young people away from civilian jobs, the US Army offers incentives such as college funding, enlistment bonuses, retirement pension for recruits and sign-up bonus.
- US shifted from compulsory draft to the volunteer-based recruitment began in 1973 due to following factors of change:
 - A mismatch between the population eligible for conscription and the military's requirements
 - Diminished threat perception of the West following the end of the Cold War.
 - Changing nature of the job market, where employable youth are not predominantly dependent on government jobs especially for STEM graduates.
 - Shrinking pool of potential enlistees – 71 percent of American youth are ineligible for military service due to obesity, use of narcotics, physical and mental health problems, misconduct, or lack of aptitude.
- **Benefits** : The militaries saved millions in draftee turnover (recruits leaving the military after their mandatory service) and their training costs.

Western Militaries context:

- Conscription or draft was the norm for military recruitment across the world, and India was among the few exceptions.
- For example, Russia and China
- China has created a new category of non-ranking cadres called 'contract civilians', who perform civilian jobs for the military such as research, translation, and engineering.
- Additionally, recent military recruitment reforms have focused on STEM graduates and those with "skills needed for war preparedness".
- European countries are transitioning to voluntary recruitment which has resulted in a dramatic downsizing of the armed forces.
- **Germany** : the volunteers, who must be at least 17 years old, are offered initial contracts from seven to 23 months, without any longer-term obligation.
- **UK** : The minimum length of service for those above 18 is four years, and for those below, until they turn 22. its military's struggle to find new recruits is reflected in the army's refusal to raise the minimum age of recruitment i.e. 16.
- However, rise in simultaneous disinclination to serve in the military due to rise in average incomes and general economic prosperity, better pay in the civilian sectors, and the growing desire for a comfortable life.
- The value system had also begun to change, problematising violence and viewing the military as a bastion of conservative values.
- In Germany, military service had become a contentious issue given the legacy of the Nazi regime during the Second World War.

Concerns:

- Combat potential and operational preparedness of the military, given the short six-month training period.
- The difficulties and inability in getting suitable jobs post-military service.
- However, the scheme's potential ability to attract STEM talent remains debatable, given the average take-home monthly salary of INR 21,000 (approximately US\$ 250) of an Agniveers with no gratuity or pension.

Suggestions:

- Personnel-centric concerns such as value addition, by filtering the long-term recruits from the short-term ones.
- Bringing in more technology for training purposes, includ-

ing more simulations, can help achieve 'more in less'.

- Expand quotas for Agniveers in select government services and a change in mindsets by considering former service personnel as 'skill-centred managers'.
- Invest more significant financial resources, ensure better service conditions, and devise an entry scheme for the tech savvy (perhaps as the subset of Agnipath) that will attract STEM talent. (In China, defence planners plan to offer science & engineering students, long-term enlistments

rather than letting them leave the military after serving for two years).

Way forward:

- Militaries have implemented structural reforms in response to geopolitical shifts, and the changing nature of warfare and the national security threat landscape.
- The Indian experience of Agnipath scheme will be unique given the size of its armed forces and its young demography.
- As India seeks to reorient its

strategic outlook to find a continental-maritime balance, it is important that technology gains centre space, even as the demands of combat, capacities, and training are changing.

- The scheme's real test will lie not only in its capacity to offer military service experience to young people but also in its ability to reintegrate the Agniveers into civilian life after their four-year tenure. It will bring a bigger proportion of youth with military experience into the job market than seen previously.

2. State Government

Madhya Pradesh notifies PESA Rules on the occasion of Janjatiya Gaurav Divas

Why in news?

- Recently, Madhya Pradesh has notified its PESA Rules on the occasion of Janjatiya Gaurav Divas on 15th November, 2022.
- At the State Level Janjatiya Gaurav Divas Sammelan at Shahdol in Madhya Pradesh, Governor of Madhya Pradesh handed over the first copy of the Panchayats (Extension to Scheduled Areas) Act (PESA Act) Manual to the President of India.

Why it matters?

- The PESA Act, now under imple-

mentation in Madhya Pradesh, will empower the Gram Sabhas to take decision on the rules and regulations with regard to all natural resources in the forest areas.

- The PESA Act will give more constitutional rights to the tribal people to reap the benefits of natural resources from the forest areas where they live.

Implementation of PESA:

- With the objective of effective implementation of PESA, Ministry of Panchayati Raj circulated Draft Model PESA Rules in 2009.
- Based on continuous advocacy and persuasion by the Ministry of Panchayati Raj eight States namely; Andhra Pradesh,

Chhattisgarh, Gujarat, Himachal Pradesh, Maharashtra, Madhya Pradesh, Rajasthan and Telangana have notified their State PESA Rules under their respective State Panchayati Raj Acts.

- Recently, State of Chhattisgarh has notified their PESA Rules on 8th August, 2022. In the States of Jharkhand and Odisha the process of inter-Departmental consultation is still in progress.
- Nine PESA States, except Rajasthan, have incorporated the provisions of PESA 1996 in their respective State Panchayati Raj Acts.
- The tenth State, Rajasthan, has notified "The Rajasthan Panchayat Raj (Modification of Pro-

visions in their Application to the Scheduled Areas) Act 1999”

- Presently, 10 States viz. Andhra Pradesh, Chhattisgarh, Gujarat, Himachal Pradesh, Jharkhand, Madhya Pradesh, Maharashtra, Odisha, Rajasthan and Telangana, have Fifth Schedule Areas in their respective States.

About PESA:

- To bring the people residing in Fifth Schedule Areas in the mainstream, the Parliament, in terms of Article 243M(4) (b) of the Constitution, has enacted “the Provisions of the Panchayats (Extension to the Scheduled Areas) Act, 1996” (PESA) to extend Part IX of the Constitution, relating to Panchayats, to the Fifth Schedule areas, with certain modifications and exceptions. States, having Fifth Schedule Areas, have been empowered to make Panchayat Laws for these areas.
- Under “The Provisions of the Panchayats (Extension to the Scheduled Areas), Act 1996” (PESA), State Legislatures have been empowered to frame all laws concerning the extension of the provisions of Part IX of the Constitution relating to the Panchayats in Fifth Scheduled Areas, subject to such exceptions and modifications as are provided in section 4 of the Act.
- PESA is an Act to provide for the extension of the provisions of Part IX of the Constitution relating to the Panchayats to the Scheduled Areas.

- In terms of section 2 of this Act, “Scheduled Areas” means the Scheduled Areas as referred to in clause (1) of article 244 of the Constitution.
- Out of the ten PESA States, eight States namely; Andhra Pradesh, Chhattisgarh, Gujarat, Himachal Pradesh, Maharashtra, Madhya Pradesh, Rajasthan and Telangana have framed and notified their State PESA Rules under their respective State Panchayati Raj Acts.

Tamil Nadu Launches Mission To Save Critically Endangered Vultures

Why in the news?

- A State-level Committee has been established to set up an institutional framework for the effective conservation of vultures, which almost went extinct in the nation at the beginning of the 21st century.
- Concerned by the 96% reduction in the population of vultures in India between 1993 and 2003, the Central government established two action plans in 2006 & 2020–2025 to safeguard the species nationally.
- The creation of State-level committees to conserve the critically endangered vulture population is one of the crucial action objectives in this national plan.

Species of Vulture Found in Tamil Nadu

- The Oriental white-backed vulture, the long-billed vulture,

the red-headed vulture, and the Egyptian vulture are the four vulture species found in Tamil Nadu.

- The first three are residents and can be found in the landscapes of the Nilgiris and Sathyamangalam. Only one location in Dharmapuri has Egyptian vulture breeding evidence.

Challenges

- Vulture fatalities were earlier reported after the species was exposed to the drug, when the birds consumed carcasses of animals treated with Diclofenac for ailments.
- Other threats responsible for hitting Vultures include persecution, poisoning, electrocution, habitat loss and decline in food availability. The availability of food is a key factor determining vulture populations.

Steps taken by the government to protect Vultures

- The Wild Life (Protection) Act of 1972 has moved the White-backed, Long-billed, and Slender-billed Vultures’ protection status from Schedule IV to Schedule I.
- The production of Diclofenac for use on animals was prohibited by a Gazette Notification from the Ministry of Health on April 7, 2008.
- To conserve three vulture species, the State Governments have been advised to establish vulture care facilities.

- The Indian government created a National Action Plan on Vulture Conservation in 2006. The Action Plan outlines methods and measures for ex-situ, in-situ vulture conservation to stop the vulture population from declining.
- Through the Central Zoo Authority, captive breeding facilities have also been established at the zoos in Bhopal, Bhubaneswar, Junagadh, and Hyderabad.
- Additionally, the ministry has taken steps to increase public education and awareness of vulture protection.

Action plan (2020–25)

- The action plan (2020–25) with an estimated budget of Rs. 207 crore includes the establishment of five additional Vulture Conservation Breeding Centers, one in each of Uttar Pradesh, Tripura, Maharashtra, Karnataka, and Maharashtra,
- In addition to disposing of dead animals in a scientific manner to prevent vultures from coming into contact with the carcasses of animals that died during treatment.
- Additionally, it contains a plan for the establishment of four rescue centres, one each in Hyderabad in the south, Pinjore (Haryana) in the north, Bhopal in the center, and Guwahati in the northeast of India.
- In accordance with the 2020–25 strategy, the ministry will also

work on a conservation breeding program for and assist states in establishing at least one ' ' in each state for the conservation of the remnant population.

Way Forward

- Vultures being specialized scavengers play a vital role in quickly disposing of carcasses that could harbor millions of pathogenic bacteria and fungi and cause severe implications for human and animal health.
- The presence of scavengers such as vultures also signifies a healthy ecosystem.

Kashi Tamil Sangamam

Why in News?

- Prime Minister of India inaugurated the month-long Kashi Tamil Sangamam in Varanasi, Uttar Pradesh.
 - This programme is an initiative by Government of India as a part of "Azadi ka Amrit Mahotsav" and to uphold the Spirit of Ek Bharat Sreshtha Bharat .

What is Kashi Tamil Sangamam?

About:

- Kashi Tamil Sangamam celebrates many aspects of the historical and civilisational connection between India's North and South.
- The broader objective is to bring the two knowledge and cultural traditions (of the North and South) closer, create an understanding of our shared

heritage and deepen the people-to-people bond between the regions.

- It is being organized by the Ministry of Education in collaboration with other ministries like Culture, Textiles, Railways, Tourism, Food Processing, Information & Broadcasting etc. & the Government of Uttar Pradesh.
- The endeavour is in sync with National Education Policy (NEP), 2020's emphasis on integrating the wealth of Indian Knowledge Systems with modern systems of knowledge.
- IIT Madras and Banaras Hindu University (BHU) are the two implementing agencies for the programme.

Cultural Significance:

- King Parakrama Pandya, who ruled over the region around Madurai in the 15th century, wanted to build a temple to Lord Shiva, and he travelled to Kashi (Uttar Pradesh) to bring back a lingam.
- While returning, he stopped to rest under a tree — but when he tried to continue his journey, the cow carrying the lingam refused to move.
- Parakrama Pandya understood this to be the Lord's wish, and installed the lingam there, a place that came to be known as Sivakasi, Tamil Nadu.
- For devotees who could not visit Kashi, the Pandyas had built the Kasi Viswanathar Temple in what is today Tenkasi

in southwestern Tamil Nadu, close to the state's border with Kerala.

Honesty Shops in Kerala

Honesty Shops has been opened in Kerala:

- In order to teach students the value of honesty, the Student Police Cadets (SPC) of Ramamangalam High School in Ernakulam is starting an 'Honesty Shop' in the school where students can pick up stationery items on their own and pay the price without anyone to monitor.
- The Honesty Shops are a part of the Student Police Cadet (SPC) project which aims to provide valuable lessons on truth, and integrity for students.
- In these honesty shops there is no salesman at the counters and students can drop the money for each item in the collection box kept in the shop.

Key Points related to Honesty Shops

- The honesty shops have been launched under the Student Police Cadet (SPC). The SPC project was conceived to inculcate better civic sense among students and mold them as responsible youth.
- The objective of the Honesty shops is to provide students a chance to experience the virtue of honesty.
- The schools have switched off the CCTV facilities towards the shop to instill confidence among the students.

- The honesty shop has mainly school-based items such as notebooks, pens, pencil boxes, erasers, chart papers, and other essentials.
- Cynthia Poulse, Community Police Officer at the Government Higher Secondary School in Chowara informed that they have kept items below Rs.10 to encounter more students to participate in the project.

Trees Beyond Forests initiative launched in Assam

- Trees Beyond Forests initiative: The "trees outside forests in India (TOFI)" programme was introduced by the Assam government and the US Agency for International Development (USAID) with the goal of bringing together farmers, businesses, & private institutions to increase the amount of trees in the State's non-traditional forests.

Key Points

- The Trees outside forests in India, new programme aims to increase carbon sequestration, aid local populations, and boost agriculture's climate resilience, supporting global climate change mitigation and adaptation goals.
- Assam has given increasing the tree cover outside of forest regions great priority, as evidenced by the State Action Plan on Climate Change and the recent creation of the Assam Agroforestry Development Board (AADB).

- The goal is to add 2.8 million hectares of tree cover outside of traditional forests, helping India reach its nationally set contribution target of adding 2.5 to 3 billion tonnes of carbon dioxide equivalent in additional "carbon sinks" by 2030.

Trees outside forests in India (TOFI): Aim

- TOFI would increase farmers' income in Assam while enhancing the resilience of farming systems, according to Ravi Shankar Prasad, the State's Additional Chief Secretary in charge of Environment and Forest.
- TOFI would use India's private sector to promote and grow tree-based businesses and the sale of carbon credits, helping to increase incomes, generate jobs, & assist Assamese households in overcoming the financial effects of the pandemic.
- One of the seven States to receive up to \$25 million from the US under the TOFI programme is Assam. Andhra Pradesh, Haryana, Odisha, Rajasthan, Tamil Nadu, and Uttar Pradesh make up the remaining States.

Lok Adalats

Why in News?

- Recently, the Chhattisgarh government had launched Lok Adalat in jails for the speedy disposal of cases for the prisoners of the state.
 - These courts will be held every working Saturday and

provide relief to undertrials, and in some cases convicted prisoners, by explaining their rights and legal options such as plea bargaining and settlement.

What is Lok Adalats?

About:

- The term 'Lok Adalat' means 'People's Court' and is based on Gandhian principles.
- As per the Supreme Court, it is an old form of adjudicating system prevalent in ancient India and its validity has not been taken away even in the modern days too.
- It is one of the components of the Alternative Dispute Resolution (ADR) system and delivers informal, cheap & expeditious justice to the common people.
- The first Lok Adalat camp was organized in Gujarat in 1982 as a voluntary and conciliatory agency without any statutory backing for its decisions.
- In view of its growing popularity over time, it was given statutory status under the Legal Services Authorities Act, 1987. The Act makes the provisions relating to the organization and functioning of the Lok Adalats.

Organization:

- The State/District Legal Services Authority or the Supreme Court/High Court/Taluk Legal Services Committee may organize Lok Adalats at such intervals and places and for exercising such

jurisdiction and for such areas as it thinks fit.

- Every Lok Adalat organized for an area shall consist of such number of serving or retired judicial officers and other persons of the area as may be specified by the agency organizing.
 - Generally, a Lok Adalat consists of a judicial officer as the chairman and a lawyer (advocate) and a social worker as members.
- National Legal Services Authority (NALSA) along with other Legal Services Institutions conducts Lok Adalats.
 - NALSA was constituted under the Legal Services Authorities Act, 1987 which came into force on 9th November 1995 to establish a nationwide uniform network for providing free and competent legal services to the weaker sections of the society.
- The Legal Services Authorities Act, 1987 was amended in 2002 to provide for the establishment of the Permanent Lok Adalats to deal with cases pertaining to the public utility services.

Jurisdiction:

- A Lok Adalat shall have jurisdiction to determine and to arrive at a compromise or settlement between the parties to a dispute in respect of:
 - Any case pending before any court, or

- Any matter which falls within the jurisdiction of any court and is not brought before such court.
- Any case pending before the court can be referred to the Lok Adalat for settlement if:
 - Parties agree to settle the dispute in the Lok Adalat or one of the parties applies for referral of the case to the Lok Adalat or court is satisfied that the matter can be solved by a Lok Adalat.
 - In the case of a pre-litigation dispute, the matter can be referred to the Lok Adalat on receipt of an application from any one of the parties to the dispute.
- Matters such as matrimonial/family disputes, criminal (compoundable offenses) cases, land acquisition cases, labor disputes, workmen's compensation cases, bank recovery cases, etc. are being taken up in Lok Adalats.
- However, the Lok Adalat shall have no jurisdiction in respect of any case or matter relating to an offense not compoundable under any law.

Powers:

- The Lok Adalat shall have the same powers as are vested in a Civil Court under the Code of Civil Procedure (1908).
- Further, a Lok Adalat shall have the requisite powers to specify its own procedure for the determination of any dispute coming before it.

- All proceedings before a Lok Adalat shall be deemed to be judicial proceedings within the meaning of the Indian Penal Code (1860) & every Lok Adalat shall be deemed to be a Civil Court for the purpose of the Code of Criminal Procedure (1973).
- An award of a Lok Adalat shall be deemed to be a decree of a Civil Court or an order of any other court.
- Every award made by a Lok Adalat shall be final and binding on all the parties to the dispute. No appeal shall lie to any court against the award of the Lok Adalat.

Benefits:

- There is no court fee and if court fee is already paid the amount will be refunded if the dispute is settled at Lok Adalat.
- There is procedural flexibility and speedy trial of the disputes. There is no strict application of procedural laws while assessing the claim by Lok Adalat.
- The parties to the dispute can directly interact with the judge through their counsel which is not possible in regular courts of law.
- The award by the Lok Adalat is binding on the parties and it has the status of a decree of a civil court and it is non-appealable, which does not cause the delay in the settlement of disputes finally.

Conclusion

- Lok Adalats can be functional at

larger levels if people are willing & aware of its advantages.

- Further, more provisions and innovative utilisation is needed that could empower permanent lok adalats and are made supplementary form of litigation for people who cannot or should not resort to courts.

UNESCO : Mawmluh cave in Meghalaya first Indian Geoheritage site

- The International Union of Geological sciences one of the largest scientific organisations of UNESCO, has recognised the mawmluh cave, located in the East Khasi hills district of Meghalaya, as one of the first 100 IVGS geological heritage sites.
- The society of Earth scientists had submitted the proposal to recognise mawmluh cave for consideration under the first 100 Global Geoheritage sites.
- More than 200 specialists from almost 40 nations and 10 International organisations helped identify and short list the sites.

Measurements and dimensions of Mawmluh cave :

- With a length of 7.2kms mawmluh cave is the fourth longest cave in the Indian subcontinent.
- The cave is a long maze with many openings and is decorated with stalactities, stalagmites, columns, drapes and moon milk.
- Set at an altitude of 4503m, the cave is known for its stalagmite formations.

- Another prime feature of the cave is the pool inside the cave that is formed from five different rivers that pass through the cave.

Terai Elephant Reserve in up

- The Ministry of environment forest, climate change has approved the establishment of Terai Elephant reserve as part of project elephant in Lakhimpur Kheri district of Uttar Pradesh.
- The Terai Elephant reserve will cover an area of 3049.39 square kilometres, encompassing the dudhwa Tiger Reserve, and Pilibhit. Tiger reserve in up.
- The TER would be the 2nd elephant Reserve in Up and the 33rd overall in India.
- The proposal for TER was drafted by Dudhwa Tiger Reserve authorities.

Terai Elephant Reserve (TER), Up

- The TER would comprise forest areas of dudhwa Tiger Reserve and pilibhit Tiger Reserve, as well as the Dudhwa National park and two adjoining sanctuaries, Kishanpur wildlife Sanctuary, Katar niaghat wildlife Sanctuary, the Dudhwa Buffer zone, and parts of the South Kheri forest division.
- The Terai Elephant Reserve is situated on the Nepal - India border.
- Migrant elephants used to frequent these places from neighbouring areas, including

Nepal, due to their enriched habitat conditions, and now become residents of these area.

- Therai Elephant Reserve will monitor the conservation of four wild species across the entire area, including Tiger, Asian Elephant, Swampdeer & one-horned Rhinoceros.
- For decades, the Dudhwa Tiger Reserve has drawn wild elephants through domestic and Trans border corridors such as Basanta - Dudhwa, Lalj hadi (Nepal) - Sathiyana, and the Shuklafanta (Nepal) - Dhaka - pilibhit - Dudhwa buffer zone corridor.
- In 2022, on the occasion of the 30th anniversary of project elephant, which began in 1992, the Government of India approved 3 Elephant Reserve in India, including Terai Elephant Reserve.

Government approved Electronics Manufacturing Cluster at Ranjangaon

In news

- Union Minister of State for Electronics and Information Technology Rajeev Chandrasekhar announced that an Electronics Manufacturing Cluster is to be developed in the Ranjangaon area of Maharashtra.
- The Electronics Manufacturing Clusters will be developed for Rs.500 crores. Electronics Manufacturing Clusters are expected to generate thousands of jobs in the coming years and

will attract an investment of over Rs.2,000 crores.

Key Points related to Electronics Manufacturing Clusters in Maharashtra

- Union Minister Rajeev Chandrasekhar informed that the Electronics Manufacturing Clusters have been approved to make Maharashtra into an electronics hub.
- The government will invest upto Rs.500 crore in this project.
- The Electronics Manufacturing Clusters project has joined Tamil Nadu, Noida, and Karnataka in making an aggressive pitch to emerge as a powerful electronic hub.
- The government to contribute Rs.207.98 crores in the development of the Electronics Manufacturing Clusters in Ranjangaon.
- The overall cost of development of the EMC is likely to be Rs.492.85.
- The Central Government will contribute Rs.207.98 crores and the rest will be contributed by the Maharashtra Industrial Development Corporation (MIDC), the State Industrial Agency of the Maharashtra Government.

Nagaland to undertake first bird count

Context

- Nagaland is undertaking the first avian documentation exercise to go beyond Amur falcons, the migratory raptor that put

the State on the world birding map.

About

Exercise Name: Tokhü Emong Bird Count (TEBC)

- The exercise entails watching and counting birds from anywhere in Nagaland for at least 15 minutes and uploading the avian names on eBird (www.ebird.org/india), the bird recording platform.
- The TEBC falls within the Salim Ali Bird Count, a nationwide event conducted by the Bombay Natural History Society.

Knowing the Species

- Amur falcon (Falcon amurensis) is the world's longest-travelling raptor.
- The species is protected under the Wildlife Protection Act 1972 and included under Schedule IV.
- It comes under the category of Least Concern under the International Union for Conservation of Nature (IUCN) Red List.

Tracking the Journey:

- **Duration:** October-November
- Amur falcons migrate to their wintering grounds in South Africa, usually arriving in large numbers during October in Nagaland and Manipur besides other places in the northeast, undertaking a yearly journey of about 20,000 km.
- They leave the region in November after having enough food for their non-stop flight to

Africa where they spend their winters.

- From the Indian coast, they start crossing the Indian Ocean, a journey that takes about 4 days.
- The front between the two main atmospheric pressure systems in the region, The Inter-tropical Convergence Zone, is moving southwestward at this time, bringing with it, prevailing southwestward winds.
- The falcons are thought to use these winds to carry them towards Africa.

Tamil Nadu notifies Cauvery South Wildlife Sanctuary as state's 17th wildlife sanctuary

What is the News?

- The Tamil Nadu government has notified the Cauvery South Wildlife Sanctuary as the state's 17th wildlife sanctuary.

What is Cauvery South Wildlife Sanctuary?

- Cauvery South Wildlife Sanctuary is the 17th Wildlife Sanctuary of Tamil Nadu.
- **Geographical area:** The sanctuary will connect Cauvery North Wildlife Sanctuary of Tamil Nadu with the Cauvery Wildlife Sanctuary in neighbouring Karnataka thereby forming a large, contiguous network of protected areas for wildlife.
- Two important and large elephant corridors namely, the Nandimangalam-Ulibanda Corridor

and the Kovaipallam-Anebidahalla Corridor fall in this area.

- This landscape maintains further continuity to the Nilgiri Biosphere through Malai Mahadeshwara Wildlife Sanctuary, Billigiri Rangaswamy Temple(BRT) Tiger Reserve in Karnataka & Sathyamangalam Tiger Reserve in Tamil Nadu.
- **Fauna :** The sanctuary is home to 35 species of mammals, and 238 species of birds. Leith's softshell turtles, smooth-coated otters, marsh crocodiles and four-horned antelopes are some of the species found here.
- **Note:** Recently, the Tamil Nadu government has notified Kazhuveli Bird Sanctuary in Villupuram and Cuddalore districts, Nanjarayan Bird Sanctuary in Tiruppur district, Kadavur Slender Loris Sanctuary in Karur and Dindigul districts and Dugong Conservation Reserve in Palk Bay.

Madhya Pradesh: Ujjain to Get World's First Vedic Clock

In news

- Madhya Pradesh's Ujjain, the city of Mahakal will soon boast the world's first Vedic clock which will be synced with the position of the Sun.
- After laying the foundation stone at the 300-year-old Jiwaji Observatory in Ujjain, the state higher education minister Mohan Yadav said through this project, people will become familiar with the Vedic time calculation.

- The state government has allocated Rs 1.62 crore for this mega project as it is working to restore the ancient glory of Ujjain. The minister said the (Vikramaditya) Vedic clock will be divided into 24 muhurats (hours).

About the Vedic clock:

- This clock will be fixed on the basis of the principles of Vedic time calculation. Changes in the sunrise and sunset at different times in different places in the country and the world will also be synchronised.
- The application of the Vedic Clock will be for Vikram Panchang, Vikram Samvat month, planetary position, yoga, Bhadra position, moon position, festival, auspicious time, constellation, birth anniversary, fast, festival, Choghadiya, solar eclipse, lunar eclipse, major holidays, celestial planets, constellations and comets etc.
- The citizens will be able to access the Vedic clock through their smartphone, computers, TVs and other electronic gadgets. The vedic clock background will feature Jyotirlingas, Navagrah etc.

Grama Vandī, from KSRTC, receives accolades on national level

- Grama Vandī receives accolades on national level: The KSRTC's "Grama Vandī," which was introduced in collaboration with State-level local self-government organisations, also took

home the Award of Excellence in Urban Transport.

- The Kerala Road Transport Corporation's (KSRTC) city circular service took home the national "Commentation Award in Urban Transport" for "City with the Best Public Transport System."

Key Points

- For the awards established by the Union Housing and Urban Affairs Ministry, projects intended to improve public transportation in all Indian cities were taken into consideration.
- Governor Arif Mohammad Khan will give the prizes alongside Union Minister of State for Housing and Urban Affairs Kaushal Kishore at the Urban Mobility India (UMI) conference on November 6 in Kochi.

Kerala becomes 1st State to Introduce Uniform Gold Price Based on Bank Rate

- Kerala becomes the first state in India to launch uniform gold prices based on the bank rate. The decision to introduce a uniform price on 916 purity 22-carat gold has been taken at a meeting between officials of Malabar Gold and Diamonds and key members of the All Kerala Gold and Silver Merchants Association.
- Kerala becomes 1st State to Introduce Uniform Gold Price Based on Bank Rate- Key Points
- Being a top gold-consuming state in the country, Kerala can

set the stage for a countrywide roll-out of uniform gold prices.

- The selling price of gold should be unified everywhere in the country. The gold rate should be uniform across the country based on the bank rates.
- Gold is priced at Rs 150-300 per gram extra over the bank rate. In Kerala, gold used to be sold at different prices on a particular day.
- Uniform gold price based on bank rate offers an opportunity for consumers to purchase gold at a reasonable & transparent price.
- Bank rates on gold, GST, and other taxes including import duty are the same across India.

Vadodara issued first-ever municipal bond

- Vadodara became the second city in India to issue a municipal bond with assistance from the US Treasury Department's Office of Technical Assistance.
- The US Embassy and US Treasury officials joined counterparts from India's Ministry of Housing and Urban Development, the city of Vadodara, and the Securities and Exchange Board to celebrate the successful issuance of Vadodara's first-ever municipal bond.
- Pune was the first city to issue such a bond in 2017.

Key Points

- The bond will provide funds for infrastructure projects in Vadodara.

- The bond was oversubscribed by 10 times and was priced at a low yield of just 7.15%.
- A written case study will also be published sharing lessons learned from Vadodara's bond issuance that will benefit other Indian cities issuing their municipal bonds in the future.
- Municipal finance can help to pay for vital capital projects including roads, energy, water, sanitation, and other essentials.
- Municipal finance also represents a form of empowerment.
- As cities start to finance their own projects, municipal officials are called upon to be good financial stewards, who make the best possible use of funding to achieve the best possible results for those they represent.

Jogighopa Multimodal Logistics Park (Assam) set to become India's first multi-modal logistics park

- Union Minister for Road Transport and Highways Shri Nitin Gadkari will virtually lay the foundation stone for the first-ever multi-modal logistic park of India in Assam on 21st October. Jogighopa Multimodal Logistics Park (MMLP) is established in Bongaigaon district of Assam.
- The multi-modal logistics park will be constructed at an estimated cost of Rs. 694 crore. The multi-modal logistic park will be developed under the ambitious Bharatmala Pariyojna. It will provide direct connectivity



through air, road, rail and waterways to the people.

What is Bharatmala pariyojna ?

- Bharatmala Pariyojana is a new umbrella program for the highways sector that focuses on optimizing efficiency of freight and passenger movement across the country by bridging critical infrastructure gaps through effective interventions like development of Economic Corridors, Inter Corridors & Feeder Routes, National Corridor Efficiency Improvement, Border & International connectivity roads, Coastal & Port connectivity roads & Green-field expressways.

Why Bharatmala pariyojna is important ?

- The development of any nation depends on the transportation networks & the ways in which they are being maintained.
- The same holds true for the development of a huge and

populous nation like India. For connecting the areas and maintaining smooth flow of traffic, the construction of new and developed roads are a must.

- The same will be achieved with the implementation of the Bharatmala project.
- Under the scheme, a host of new roads will be laid down in the nation.

What are the features of Sagar-mala pariyojna ?

- **Total road construction** - As per the draft of the scheme, government and the ministry will strive to complete new roads, which will add up to a whopping 34, 800 kms.
- **Improving the quality of roads**- The launch of the scheme has been done for bring a new wave of development in the nation in the form of well-maintained and developed roads. Under this project, the construction of

roads, in all parts of the nation will be undertaken.

- **Segmentation in phases** - Due to the sheer magnitude and spread of the scheme, it will be divided into seven distinct phases. As of now, the first phase is under construction.
- **Integrated scheme** - The Bharatmala is the name that is given to the road development and it will include many other related schemes as well. With the completion of all the schemes, the overall success of the scheme will be guaranteed.
- **Total tenure of the program** -The central government has the plans of finishing the scheme within a span of five years. Thus, all is set for finishing the first phase before the end of 2022.
- **Constriction on a daily basis** - To finish the first phase in time, the respective department has made efforts of constructing at least 18 km of path on a daily basis. To beat the clock, continued efforts are being made to raise it to 30 km/day.
- **Different categories of road construction** - It has been highlighted in the official draft of the scheme that to provide better connectivity, the construction of various categories of roads will be undertaken.
- **Multi-source of finding** - One source will not be enough for funding a mammoth project. Thus, the government will have to depend on other sources for generating adequate money to meet the expenses.

VIII. Geography-Geographical marks

Nihonshu

Why in News?

- The Embassy of Japan, New Delhi, has filed an application seeking a Geographical Indication (GI) tag for Nihonshu/ Japanese sake.
 - This is the first time a product from Japan has filed for a tag at the Geographical Indication Registry.

What is Nihonshu?

- In Japan, Nihonshu is regarded as a special and valuable beverage made from fermenting rice.
- People traditionally drink nihonshu on special occasions, such as festivals, weddings or funerals, but it is also consumed on a daily basis.
- Thus, it is an integral part of the lifestyle and culture in Japan.
- The sake market (almost all are nihonshu) is the second largest brewed liquor (such as beer) market in Japan.

What is a Geographical Indication (GI) Tag?

About:

- Geographical Indication (GI) is an indication used to identify goods having special characteristics originating from a definite geographical territory.
- The Geographical Indications

of Goods (Registration and Protection) Act, 1999 seeks to provide for the registration and better protection of geographical indications relating to goods in India.

- It is governed and directed by the WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS).
 - It was decided and also stated under Articles 1 (2) and 10 of the Paris Convention that the protection of industrial Property and Geographical Indication are elements of Intellectual Property.
- It is primarily an agricultural, natural or a manufactured product (handicrafts and industrial goods).

Validity:

- This tag is valid for a period of 10 years following which it can be renewed.

Significance:

- Once a product gets this tag, any person or company cannot sell a similar item under that name.
- GI registration of a product provides it legal protection and prevention against unauthorised use by others.
- GI tag helps in promoting the exports of the product.

- It also provides comfort to customers about the authenticity of that product.

Most Popular GI Award



- Union Ministry of Commerce and Industry recently conferred the 'Most Popular GI' award to Hyderabadi Haleem and other GI products.
- Hyderabadi Haleem received the 'Most Popular GI' award under the food category and agriculture category.
- It received the award by beating dishes like Rasgulla, Bikaneri Bhujia, and Ratlami Sev.
- The award was presented to the director of Pista House & president of Hyderabad Haleem Makers Association MA Majeed
- Under the handicraft category, Thanjavur Art Plate from Tamil Nadu won the award.
- Mysore Sandal Soap from Karnataka received the award under the manufacturing category and Uttar Pradesh's Chuna Balua Patthar won in the natural category.

- The winners of this award were chosen based on the popular vote.

Nicobari Hodi Craft

In News

- The Geographical Indications Registry has received an application from the Tribal Development Council, Andaman & Nicobar Islands, seeking the Geographical Indication (GI) tag for the Nicobari hodi craft.

- This is the first application from the Union Territory seeking a tag for one of its products.

About Nicobari Hodi Craft

- The hodi is the Nicobari tribe's traditional craft. It is an outrigger canoe, very commonly operated in the Nicobar group of islands.
- The technical skills for building a hodi are based on indigenous

knowledge inherited by the Nicobarese from their forefathers.

- The hodi is built using either locally available trees or from nearby islands, and its design varies slightly from island to island.
- The tuhet, a group of families under a headman, consider the hodi an asset. Hodi races are held between islands and villages.

IX. Environment

Forest Conservation Rules, 2022

Context:

- The National Commission for Scheduled Tribes (NCST) has asked the Centre to put the new Forest Conservation Rules, 2022, on hold.

What are the Forest Conservation Rules?

- The Forest Conservation Rules deal with the implementation of the Forest Conservation Act (FCA), 1980.
- They prescribe the procedure to be followed for forest land to be diverted for non-forestry uses such as road construction, highway development, railway lines, and mining.
- The broad aims of the Forest Conservation Act are to pro-

tect forest and wildlife, put brakes on State governments' attempts to hive off forest land for commercial projects and striving to increase the area under forests.

What do the updated rules say?

- The rules make a provision for private parties to cultivate plantations and sell them as land to companies who need to meet compensatory forestation targets.
- This, according to the government, will help India increase forest cover as well as solve the problems of the States of not finding land within their jurisdiction for compensatory purposes.
- While this has invited its own controversy, the latest point of contention is the absence of wording, in the updated Forest Conservation Rules, of what

happens to tribals and forest-dwelling communities whose land would be hived off for developmental work.

Prior to the updated rules

- State bodies would forward documents to the FAC that would also include information on the status of whether the forest rights of locals in the area were settled.
- After 2009, the Environment Ministry passed an order mandating that proposals would not be entertained by the FAC unless there was a letter from the State specifying that the forest rights in the place had been "settled" and the gram sabha, or the governing body in villages in the area, had given their written consent to the diversion of forest.
- However, there have been a se-

ries of orders by the Environment Ministry over the years, and frequently opposed by the Ministry of Tribal Affairs, that have sought to skirt the necessity for consent from the gram sabha.

New Rules

- It formally codify this and say that a project, once approved by the FAC, will then be passed on to the State authorities who will collect the compensatory fund and land, and process it for final approval.
- Only in passing, is it mentioned that the States will ensure "settlement" of Forest Rights Acts applicable.

Other Provisions of Forest (Conservation) Rules, 2022

- It constituted an
 - Advisory Committee
 - Regional empowered committee at each of the integrated regional offices
 - Screening committee at State/Union Territory (UT) government-level.

Advisory Committee:

- The Advisory Committee's role is limited to providing advice or making recommendations regarding the grant of approval under applicable sections with regard to proposals that have been referred to it as well as any matter relating to the conservation of forests that has been referred to it by the Central government.

Project Screening Committee:

- For an initial examination of plans including the diversion of forest land, the MoEFCC has directed the establishment of project screening committees in each state and the UT. The five-member committee will meet at least twice a month and provide time-bound project advice to the state governments.
- Within 60 days for all non-mining projects with a size of 5 to 40 hectares, and within 75 days for all such mining projects.
- The committee is given greater time for projects covering larger areas: 150 days for mining projects and 120 days for non-mining projects involving more than 100 hectares.

Regional Empowered Committees:

- All linear projects (roads, highways, etc), projects involving forest land up to 40 hectares and those that have projected a use of forest land having a canopy density up to 0.7 — irrespective of their extent for the purpose of survey — shall be examined in the Integrated Regional Office.

Compensatory Afforestation:

- The applicants for diverting forest land in a hilly or mountainous state with green cover covering more than two-thirds of its geographical area, or in a state/UT with forest cover covering more than one-third

of its geographical area, will be able to take up compensatory afforestation in other states/UTs where the cover is less than 20%.

Blue Flag Certification

- **Context:** Recently, the globally recognized and coveted eco-label "blue flag" has been accorded to two Indian beaches- Minicoy Thundi and Kadmat-both in Lakshadweep. The total number of beaches which has been given Blue Flag Certification stands at 12.

About Blue Flag Certification for Beaches:

- It is a globally recognized eco-label that is accorded to a beach on fulfillment of 33 criteria. These criteria are further divided under 4 headings, namely:
 - Bathing water quality
 - Environment education and information
 - Environmental Management
 - Conservation and safety services in the beaches
- The Blue Flag is being given by jury members composed of Foundation for Environmental Education (FEE), International Union for Conservation of Nature (IUCN), United Nation Environment Program (UNEP), United Nations World Tourism Organization (UNWTO).
- They are characterized as cleanest beaches on world. The Blue Flag tag also boost promotes tourism which promote sustain-

able development of the area.

About Blue Flag Certified beaches

- The Thundi Beach is one of the most pristine and picturesque beaches in the Lakshadweep archipelago where white sand is lined by the turquoise-blue water of the lagoon. It is a paradise for swimmers and tourists alike.



Pic : The Thundi Beach

- The Kadmat Beach is especially popular with cruise tourists who visit the island for water sports. It is a paradise for nature lovers with its pearl white sand, blue lagoon waters, its moderate climate and friendly locals.



Pic : The Kadmat Beach

- The other Indian beaches in the blue list are Shivrajpur-Gujarat, Ghoghla-Diu, Kasarkod and Padubidri-Karnataka, Kappad-Kerala, Rushikonda- Andhra Pradesh, Golden-Odisha, Radhanagar- Andaman and Nicobar, Kovalam in Tamil Nadu and Eden in Puducherry beaches.
- In order to qualify for this prestigious award, a series

of stringent environmental, educational, safety-related and access-related criteria must be met and maintained.

- The mission of Blue Flag is to promote sustainability in the tourism sector, through environmental education, environmental protection, & other sustainable development practices.

COP 27 SUMMIT

In News

- Egypt's coastal city of Sharm el-Sheikh is hosting the 27th session of the Conference of Parties (COP27) of the United Nations Framework Convention on Climate Change (UNFCCC) from 6 to 18 November 2022. Heads of State, ministers, and negotiators, along with climate activists, mayors, civil society representatives, and CEOs will converge together in one of the largest annual gatherings on climate action. There are nearly 45,000 registered participants from 195 member countries.

UNFCCC COP 27

- Confronted by the growing energy crisis, expanding greenhouse gas concentrations, and rising number of extreme weather events, COP27 seeks renewed solidarity among member countries, to deliver on the landmark Paris Agreement, for people and the planet.
 - COP27 will build on the outcomes of COP26 and deliver action on a series of issues

that are critical to tackling the climate emergency. This would include reducing greenhouse gas emissions, building resilience, adapting to the inevitable climate change impacts, and delivering on the commitments to finance climate action in developing countries.

- COP27 was termed an 'implementation CoP' by the Egyptian Foreign Minister and President.

- This implies effective implementation of all the provisions of the Paris Agreement, and Nationally Determined Contributions (NDCs) to keep the temperature goal within reach and prevent further negative impacts.

- COP27 must send the message, loud and clear, that be it war or peace, poverty or plenty, securing the world's future comes at a price that only gets costlier every passing day.
- For more than a decade, wealthy nations have rejected official discussions on what is referred to as loss and damage, or funds provided to support poor countries in dealing with the consequences of global warming. However, the issue has been put on the formal agenda for the first time in COP27.

Highlights of the meeting:

- United Nations Secretary-Gen-

eral exclaimed that humanity faces a stark choice: work together now to cut emissions or condemn future generations to climate catastrophe.

- He also called for a pact between the richest & poorest countries of the world to accelerate the transition from fossil fuels & funding to ensure poorer countries can reduce emissions and cope with the impacts that have already occurred.
- It was reiterated that the planet is fast approaching tipping points that will certainly make the climate chaos irreversible.

COP 27 Agenda

Sharm-El-Sheikh Adaptation Agenda:

- The Sharm-El-Sheikh Adaptation Agenda outlines 30 Adaptation Outcomes to build resilience for four billion people that are most vulnerable to climate, by 2030. Each outcome provides a global solution that can be adopted at a local level in response to local climate risks like rising climate hazards in the form of floods, heat-waves, droughts, etc.
- These outcomes together present the first comprehensive global plan for both State and non-State actors on a shared set of adaptation actions that are required to be adopted by the end of this decade across five impact systems: food and agriculture, water and nature, coastal and oceans, human settlements, and infrastructure,

and including enabling solutions for planning and finance.

1. Food Security and Agriculture Systems

- a. Climate-resilient, sustainable agriculture increases yields by 17% and reduces farm-level GHG emissions by 21%, without expansion of the agricultural frontier.
- b. Halve the share of food production lost, and per capita food waste (with respect to 2019).
- c. Healthy alternative proteins capture 15% of the global meat and seafood market.
- d. The global consumption of fruits, vegetables, seeds, nuts, and legumes increase by 1.5 times.

2. Water and Nature Systems

- a. Protection of 45 million hectares (lands and inland waters), 2 billion hectares sustainable management, and 350 million hectares restoration of land securing legal indigenous and local communities with the use of nature-based solutions to improve water security and livelihoods.
- b. By 2025: financial institutions contribute to halting land conversion by eliminating commodity-driven deforestation from portfolios and tap into nature-based solutions investment opportunities of USD 354 billion/year needed by 2030.

- c. Water systems are smart, efficient, and robust with a reduction in water loss through leakage.
- d. Wastewater systems maximize recycling and reuse alongside natural wetland filtration with zero environmental spillage.
- e. Sustainable irrigation systems are implemented across 20% of global croplands to preserve water availability whilst supporting yield growth.

3. Human Settlements Systems

- a. 1 billion people have better design, construction, and access to finance to live in decent, safe homes.
- b. Smart & early warning systems reach 3 billion people.
- c. USD 1 trillion investment in nature-based solutions for communities in urban areas.
- d. Harden social infrastructure to ensure access to basic and essential community services.
- e. Increased use of waste as a secondary resource boosts the livelihoods of informal workers and reduces open waste burning by 60%, lowering pollution levels and improving the health of local communities.

4. Ocean and Coastal Systems

- a. Invest USD 4 billion to secure the future of 15 million hectares of mangroves glob-

ally through collective action on halting mangrove loss, restoring half of the recent losses, doubling the protection of mangroves globally, and ensuring sustainable long-term finance for all existing mangroves.

- b. Halt loss, protect and restore coral reefs to support people in tropical communities.
- c. Halt loss, protect, and restore seagrass, marshes, & kelp forests to support people in temperate communities.
- d. The urban coastline is protected by grey and hybrid solutions.

5. Infrastructure Systems

- a. A diverse set of energy generation sources enable affordable access to electricity for 679 million unconnected people and higher quality access for 1 billion underserved people through climate-resilient energy systems.
- b. 4 billion people with access to clean cooking through at least USD 10 billion/year in innovative finance for clean cooking action worldwide.
- c. 585 GW of battery storage capacity and extension of transmission and distribution networks enable decentralized generation and consumption.
- d. 2 billion people access low-cost, clean vehicles and mobility solutions through

the expansion of affordable public and private transport services.

- e. Transport infrastructure is resilient to climate hazards through the adoption of new technology, design, and materials.

6. Planning

- a. 10,000 cities and 100 regional governments have evidence-based, actionable adaptation plans.
- b. 2,000 of the world's largest companies develop actionable adaptation plans.
- c. Universal access to the tools and information required to integrate climate risks into decision-making from local to global levels.
- d. Operationalization of National Adaptation Plans and Locally-Led Principles, enabling adaptation in a country-driven localized, and consultative manner.

7. Finance

- a. The private sector integrates physical climate risks into investment decisions and continues to innovate mechanisms for financing adaptation and resilience so as to enable the mobilization of the USD 140 to USD 300 billion that will be needed across both public and private sources.
- b. Public finance actors increase the provision of climate finance and allocate

50% of climate funds to adaptation and resilience.

- c. The global property and casualty insurance sector has an industry capabilities framework, actively supports project implementation, & institutionalizes a longer-term industry approach to climate adaptation.

Major initiatives announced in the COP 27 meeting:

- **International Climate Change University:**
 - The President of Sri Lanka Ranil Wickremesinghe has proposed to set up an international climate change university in Sri Lanka, with an ancillary institution in the Maldives. It was reiterated that Sri Lanka and Maldives as island nations are vulnerable to the adverse impacts of climate change.
- **UAE-Egypt Deal:**
 - The United Arab Emirates (UAE) and Egypt have struck a deal on the sidelines of the summit to develop one of the world's largest wind farms.
 - Once completed, the 10 GW onshore wind project in Egypt will produce approximately 47,790 GWh of clean energy annually. This would offset nearly 9% (23.8 million tonnes) of Egypt's current carbon dioxide emissions.

India's Participation in COP27:

- The Environment Minister of

India Shri Bhupender Yadav is leading the Indian delegation to COP-27.

- India would press developed countries to fulfil their commitment to delivering \$100 billion of climate finance annually.
- It would also press for enhanced transparency and more institutional mechanisms to make these funds available to developing countries that are most vulnerable to climate change.

International Solar Alliance releases \$1-t roadmap for scaling solar investment, deployment

- The International Solar Alliance (ISA), said it has released a roadmap to mobilise \$1 trillion by 2030 to meet the investment

requirements for scaling up deployment of solar power projects.

- **The roadmap — Our Solar Future:** Roadmap to Mobilise \$1 trillion by 2030 — was made at the COP27 meet in Sharm El Sheikh by the ISA, World Resources Institute (WRI) & Bloomberg Philanthropies, to meet the urgent need for a massive & more equitable scale-up of investment in solar energy.

About:

- Based in Gurugram, Haryana ISA was launched jointly by India and France at COP-21 in Paris in 2015 to provide a dedicated platform for cooperation among solar resource rich countries and the wider global community.
- It is guided by its 'Towards

1000' strategy which aims to mobilise USD 1,000 billion of investments in solar energy solutions by 2030.

- Delivering energy access to 1,000 million people using clean energy solutions.
- Installation of 1,000 GW of solar energy capacity.
- UN General Assembly conferred Observer Status to the ISA in 2021.

Need for investment:

- Average annual investment in solar solutions needs to double from 2021 through 2030 to achieve the Paris climate goals and SDGs.
- Falling Costs for solar energy & battery energy storage have made solar technologies cost-competitive with fossil fuels.

X. Economy-Economy, Socio-Economic issue

1. Economy

Ending dominance

Why in news?

- The Competition Commission of India (CCI) has imposed a provisional penalty of Rs 1,337.76 crore (\$162 million) on Google for "abusing its market dominant position" in multiple categories related to the Android mobile device ecosystem in the country
- The antitrust watchdog said Google had abused its dominance in the licensing of its

operating system for smart mobile devices, app store market for Android smart mobiles, general web search services, non-operating system-specific mobile web browsers, and online video hosting platforms.

Competition Commission of India (CCI)

- The Competition Commission of India (CCI) is the chief national competition regulator in India.
- It is a statutory body within the

Ministry of Corporate Affairs and is responsible for enforcing the Competition Act, of 2002 to promote competition and prevent activities that have an appreciable adverse effect on competition in India.

- The CCI looks into cases and investigates them if the same has a negative impact on competition
- CCI also approves combinations under the act so that two merging entities do not overtake the market.

- The commission was established on 14 October 2003. It became fully functional in May 2009.

Composition:

- CCI consists of a Chairperson and 6 Members appointed by the Central Government.

What is the issue?

Android operating system (OS):

- According to Counterpoint research, 97% of India's 600 million smartphones are powered by Google's Android OS.
- Google operates and manages the Android OS and licenses other Google proprietary applications such as Chrome & Play Store.
- Original Equipment Manufacturers (OEMs) or smartphone companies like Samsung then use this OS & through it, Google's apps on their mobile phones.
- Now, while the Android source code is openly accessible & covers the basic features of a smartphone, it does not include Google's proprietary applications.
- To access and use these applications in their mobile handsets, manufacturers have to enter into agreements with Google that govern their rights and obligations such as the Mobile Application Distribution Agreement (MADA), Anti-fragmentation Agreement (AFA), etc. Android Compatibility Commitment Agreement (ACC), Revenue Sharing Agreement (RSA), etc.

Dominance in the app store market:

- Google is the dominant player

in the app store market for Android OS worldwide (except in China).

- According to the EU, the Google Play Store accounts for more than 90% of apps downloaded on Android devices globally.
- The CCI held that through the mandatory pre-installation of the Google Suite (which includes Play Store), consumers did not have the option of side-loading or downloading apps outside of the play store.

Dominance in the internet search market:

- The company has dominance in the general internet search market and the non-OS specific browser market (meaning engines like Chrome, Firefox, etc.).
- As of last year, Google has a 92% share in the global search engine market. Therefore, by having Revenue Sharing Agreements (RSAs) with mobile manufacturers, Google was able to "secure exclusivity" for its search services to the "total exclusion of competitors".

What has the CCI told Google to change in the Android smartphone ecosystem?

- Apart from the "cease and desist" order against Google for indulging in anti-competitive practices, the CCI has directed it to take certain measures with regard to the Android OS ecosystem. Some of the major directions include:
 - Smartphone makers should

be allowed to choose which of Google's proprietary apps they want to install and should not be forced to pre-install the whole bouquet.

- The licensing of Play Store to manufacturers should not be linked with requirements to pre-install Google search services, Chrome browser, YouTube, Google Maps, Gmail, or any other Google apps
- Google should allow users, during the initial device setup, to choose their default search engine for all search entry points, etc.
- Google shall not deny access to its Play Services APIs (which allow two programs to interact with each other) to disadvantage manufacturers, app developers, and its existing or potential competitors. This, the Commission said, would ensure interoperability of apps between Google Android OS as well as alternate versions or forks of Android, and by virtue of this remedy, the app developers would be able to port their apps easily onto Android forks.
- Google should not offer any monetary/ other incentives to OEMs such as those given in revenue-sharing agreements for ensuring exclusivity for its search services.
- Google shall not impose anti-fragmentation obligations on OEMs, which means

those manufacturers using an alternate Android version should be able to get access to Google's proprietary apps and vice versa.

- Google shall not restrict un-installing of its pre-installed apps by the users.

Conclusion:

- This decision, both the penalty and the regulator's direction to Google "to modify its conduct", will be welcomed by everyone who realizes the power of the big IT platforms to shut out competition and, therefore, choice for the users.
- While the option of legal review is open, it is to the regulator's credit that Google's anti-competitive practices have been called out.
- What the mobile users of a potential digital powerhouse such as India need is an environment of real choice.

Internationalisation of Indian Rupee

Context

- With the pride of being the world's largest democracy on the infertile soil of the world's most hierarchical society, 2047 will mark 100 years of India's Independence. Along with nostalgia, it brings some questions. Are the next 25 years going to make us a global power with long-dreamed aspiration of having Indian rupee as global currency?

Present Status of Indian Rupee

- Currently, Indian rupee totals upto 74.15 against USD.
- Over the last three weeks since 22nd March 2021, Rupee has lost 4.2% against the USD.
- India, at present, does not permit the rupee to be officially used for international transactions, except those with Nepal and Bhutan, though there are indications of the Indian rupee gaining acceptability in other countries like Singapore, Malaysia, Indonesia, Hong Kong, Sri Lanka and the UK.
- In the past, India attempted rupee trade with the USSR. Today rupee trade arrangements are being made with Iran.
- Our economic skills have a strong opening balance as India has never defaulted and the 1991 reforms have been accelerated by big reforms like GST, IBC, inflation targeting, education, labour, and agriculture.
- A secret internal assessment by Britain's ministry of defence (MoD) has pegged the Indian rupee to be the major reserve currency that will be traded internationally in the next two decades.
- A further assessment says that by 2040, the Rupee will challenge China's Renminbi as the strongest global currency.

Dollar-The Global Currency

- Eighty per cent of the world's trade takes place in dollars. The dollar as the currency of trade,

store of value & central bank reserves all over the world offers many advantages to the US.

- The study titled, "Internationalisation of Currency: The case of the Indian Rupee and the Chinese Renminbi" by RBI also said it is quite unlikely that the dollar will lose its predominance as the global reserve currency in the foreseeable future.

Reasons for the acceptance of dollar as global currency

- According to the International Standards Organizations list, there are a total of 185 currencies worldwide. However, most of these currencies are used within their own country.
- Thus, USA, being the biggest economy in the world, enjoys the most global acceptance.
- 80% of world trade takes place in dollars. About 39% of the world's loans are given in US dollars & 65% of dollar supply is used outside of the United States.
- As per the rule of the IMF, each of the 189 member countries have to deposit a certain percentage of their quota in the US dollars, which ultimately increases the demand of the dollar internationally.
- Foreign Exchange Reserves in central banks around the world account for 64% of the US dollar.
- The value of US dollar doesn't fluctuate often. Thus, increasing dependency.
- The US contributes the most in

the treasures of the World Bank Group and the International Monetary Fund.

Stepping Up of Chinese Renminbi as Global Currency

- China's wealth and power - per capita GDP rising 80 times in the last 40 years has lifted 800 million Chinese out of poverty.
- The renminbi is being used for trade with Vietnam, Myanmar, Laos, Central Asian Republics and so on.
- It is aimed to become a major currency in the local region, in Asia and then globally.

Efforts taken by China to internationalise Renminbi :

- The most important was the inauguration of several offshore centers for transactions with the Chinese RMB.
- The location of these centers reveals careful attention for regional distribution, with centers in Asia, Oceania, Africa, Western and Eastern Europe, North and South America.
- A pilot project for the denomination and settlement of international trade in RMB.
- Focusing on local neighbours by having bilateral agreements with several countries (notably in Asia) to stimulate trade in the local currencies, circumventing the necessity of using the US dollar.
- Another pilot project was launched in 2011, for the settlement of Foreign Direct Investment in RMB.

- CIPS (Cross-Border Interbank Payment System) was launched in 2015, with the explicit aim of facilitating cross-border RMB business and creating an alternative to the widely used – and Western-controlled – SWIFT.
- Denomination of oil barrels prices in RMB.
- Additionally, the Belt and Road Initiative (BRI) is potentially a far-reaching vector for increasing the international usage of the RMB
- China is a major player in new multilateral banks – namely, the New Development Bank (NDB) & the Asian Infrastructure Investment Bank (AIIB) – which may also provide credit lines in RMB.

Benefits and Constraints in Making Indian Rupee as a Global Currency

Benefits

- Becoming a global reserve currency is a wholesome goal because it indirectly aligns fiscal, monetary, and economic policy.
- The use of the rupee would reduce foreign currency risk for Indian businesses and stabilise trade.
- Trade in rupees means reduced dependence on the dollar and foreign currency
- It will also mean liquidity in financial markets and closer ties which augment employment in the non-farm sector.
- It will provide easy access to capital and help lower the cost of borrowings for Indian firms.

- Facilitate greater degree of integration of Indian economy with rest of the world in terms of foreign trade and international capital flows.
- Savings on foreign exchange transactions for Indian residents, reduced foreign exchange exposure for Indian corporate, reduction in dependence on foreign exchange reserves for balance of payment stability etc.

Constraints

- Indeed, full convertibility could bring with itself higher volatility, an increased burden on foreign debt and an effect on balance of trade (especially exports).
- Withdrawal of short-term funds and portfolio investments by non-residents could also be a major potential risk of internationalization of the Indian rupee.

Suggestions

- Capital account convertibility, as suggested by the Tarapore Committee in 1997.
- The rupee is substantially convertible for foreigners. A 2030 deadline for finishing the agenda could be a nice interim milestone.
- Trading partners should be encouraged to start
 - rupee invoicing,
 - raising corporate rupee borrowing offshore & onshore,
 - accelerating our CBDC (central bank digital bank currency) plans,

- o taking our UPI payment technology to the world.
- Fiscal policy must raise our tax to GDP ratio, raise the share of direct taxes in total taxes, and keep our public debt to GDP ratio under 100 per cent.
- Monetary policy must control inflation while moderating central bank balance sheet size.
- Economic policy must raise the productivity of our regions, sectors, firms, and individuals.
- These goals must be complemented by reinforcing institutions that signal rule of law; cooperative federalism, press freedom, civil service effectiveness, & judicial independence.
- The RBI commissioned two studies in 2010
- **Internationalisation of Currency**: The case of the Indian Rupee & Chinese Renminbi by Rajiv Ranjan and Anand Prakash
- An internationalised rupee? by Shyamala Gopinath
- Both recommended that policy-makers should start by increasing the role of the INR in its local region.
- Indian goods should be made a major part of global trade i.e. Increase exports
- We need to recognise that the regime of globalisation is over, now trade will happen through trade-blocks and we must participate in some of the trade blocks that the US, UK and EU organise.
- The only trade blocks that

must be a strict no-go for India should be the ones with China in them.

- Systematically relax restrictions on foreign capital.
- More conducive taxation policy for taxes on capital, irrespective of whether it is foreign or Indian
- Investments in India, either Foreign Portfolio Investment or Foreign Institutional Investment should be as simple as opening a bank account.

Conclusion

- India stands a good chance at a rupee inclusion in the list of SDR or globally traded currencies. But for that to happen, we must make our economy so robust that nations wish to trade with us and our currency is thereby more frequently transacted.
- India's strong financial sector which is very transparent combined with a rules-based regime makes it a much better contender than China to be used widely as a global currency.

C-295 Transport Aircraft Manufacturing Facility

In News

- Recently, the Prime Minister of India laid the foundation stone for the C-295 transport aircraft manufacturing facility in Vadodara, Gujarat.

About

- **Set up by:** Airbus Defence and Space and Tata Advanced Systems Limited (TASL).

- This is the first time a private sector company would be manufacturing a full aircraft in the country.
- This is a huge step forward for India in the global aircraft manufacturing domain.

About C-295MW Transporter

- The C295 was originally produced by a Spanish aircraft manufacturer named Construcciones Aeronauticas SA.
- This company is now part of Airbus and the aircraft's manufacturing takes place at Airbus's plant in Spain.

Capacity:

- The C-295MW is a transport aircraft of 5-10 tonne capacity.

Request For Proposal (RFP):

- It was issued to global firms in May 2013 and the sole bid by Airbus and TASL was approved by the Defence Acquisition Council in May 2015.

Agreement:

- In September 2021, India signed a Rs 21,935 crore deal with Airbus Defence and Space to procure 56 C295 aircraft to replace the IAF's ageing Avro-748 planes, which entered service in the early 1960s.

Delivery:

- Of the 56 aircraft contracted, 16 will come in fly-away condition from Spain between September 2023 and August 2025.
- The remaining 40 will be manufactured here to be delivered bet-

ween September 2026 & 2031 at the rate of eight aircraft per year.

Training and skilling:

- Nearly 240 engineers will be trained at the Airbus facility in Spain for the project, the MoD said.

Feature:

- The C-295 has very good fuel efficiency.
- It can take off and land from short as well as unprepared runways.

India's Image:

- With the procurement of these aircraft, India has become the 35th C-295 operator worldwide.
- With 285 aircraft ordered and 38 operators in 34 different countries, the aircraft has achieved more than 5,00,000 flight hours
- The Navy and the Coast Guard have also expressed interest in the C-295 and it can be used in civilian roles as well as exported in the future.
- The C-295 is also a potential replacement for the AN-32 aircraft, the workhorse of the IAF with over 100 of them in service.
- The AN-32s will be in service upto 2032 and beyond.

Effect on the domestic aircraft manufacturing ecosystem

Background:

- Over the last two decades, Indian companies, both public and private, have steadily expanded their footprint in the global supply chains of major defence & aerospace manufacturers sup-

plying a range of components, systems and sub-systems.

Good force :

- As U.S. and India pursue the Indo-Pacific strategy, India's strengths coupled with U.S. and European technology prowess can be a force for good in the world.

Manufacturing boost :

- The domestic defence manufacturing ecosystem will get a boost with the C-295 project as it will lead to the development of a strong private industrial aerospace ecosystem not only in and around Vadodara but across the country.
- Bengaluru and Hyderabad already have developed such aerospace and defence domains over the years.

Skilled jobs created:

- The C-295 project is expected to create more than 15,000 skilled direct and indirect jobs across the aerospace ecosystem, with more than 125 suppliers qualified on global quality standards across India.

Assembly & production functions

- Manufacturing of over 13,400 detail parts, 4,600 sub-assemblies and all the seven major component assemblies will be undertaken in India, along with tools, jigs and testers, Tata said.

India's Civil Aviation Sector

- India has a much bigger foot-

print in civil aviation manufacturing than defence, in addition to being a major market itself. Both Airbus and Boeing do significant sourcing from India for their civil programmes.

- According to Airbus every commercial aircraft manufactured by them today is partly designed and made in India.
- Since 2007, Airbus has had a wholly domestic-owned design centre in India which has more than 650 engineers who specialise in high-tech aeronautical engineering and work across both fixed- and rotary-wing Airbus aircraft programmes.
- Another major growing area is Maintenance, Repair and Overhaul (MRO) for which India can emerge as the regional hub.

Way Ahead

- The private defence sector is still nascent and a conducive and stable regulatory and policy environment will be an important enabler.
- With the right momentum, a realistic roadmap and enabling policy framework, India can become a hub for aircraft manufacturing akin to the automobile clusters which turned India into a major exporter of cars to the world..
- India is moving ahead with the mantra of 'Make in India' and 'Make for the Globe', and continues to enhance its potential by becoming a major manufacturer of transport planes.

RBI's Digital Currency

Introduction:

- RBI has commenced India's first Digital Rupee pilot project has commenced in the wholesale segment.
- The use case for this pilot is settlement of secondary market transactions in government securities and nine banks have been identified for participation in this pilot project. According to the Central Bank, use of digital rupee in wholesale segment is expected to make the inter-bank market more efficient and reduce transaction costs by pre-empting the need for settlement guarantee infrastructure or for collateral to mitigate settlement risk. RBI also plans to launch the first pilot in Digital Rupee-Retail segment within a month in select locations in closed user groups comprising customers and merchants.

CBDC or National Digital currency

- A Central Bank Digital Currency (CBDC), or national digital currency, is simply the digital form of a country's fiat currency. Instead of printing paper currency or minting coins, the central bank issues electronic tokens. This token value is backed by the full faith and credit of the government.

SC Garg Committee recommendations (2019)

- Ban anybody who mines, hold, transact or deal with cryptocurrencies in any form.

- It recommend a jail term of one to 10 years for exchange or trading in digital currency.
- It proposed a monetary penalty of up to three times the loss caused to the exchequer or gains made by the cryptocurrency user whichever is higher.
- However, the panel said that the government should keep an open mind on the potential issuance of cryptocurrencies by the Reserve Bank of India.

Need for a CBDC:

- The growth of cryptocurrencies such as Bitcoin, Ethereum etc has raised challenges to fiat currencies.
- Along with their other vulnerabilities made the central bank of each country explore the possibility of introducing their own digital currencies.
- A 2021 BIS survey of central banks, which found that 86% were actively researching the potential for such currencies, 60% were experimenting with the technology, and 14% were deploying pilot projects.
- The need for inter-bank settlement would disappear as it would be a central bank liability handed over from one person to another.

Viability of a CBDC:

- An official digital currency would reduce the cost of currency management while enabling real-time payments without any inter-bank settlement.
- India's fairly high currency-to-

GDP ratio holds out another benefit of CBDC - to the extent large cash usage can be replaced by CBDC, the cost of printing, transporting and storing paper currency can be substantially reduced.

- As the currency in digital form, it can provide an efficient way for financial transaction. Further, digital currency also solves the challenges with Cash and coins. Cash and coins require expenses in storage and have inherent security risks like the recent heist in the RBI currency chest.
- There are about 3,000 privately issued cryptocurrencies in the world. According to IMF, the key reason for considering national digital currency is to counter the growth of private forms of digital money.
- There is a possibility of these companies going bankrupt without any protection. This will create a loss for both investor and creditor. But the National Digital currency has government backing in case of any financial crisis.
- As the state-backed digital currency can provide investor/consumer protection, the private can confidently invest in the associated infrastructure without any doubts over its regulation. This will improve the services to people.
- The national digital currency will be regulated by the RBI. So, there will be less volatility compared to other digital currencies

- Current RBI's work on inflation targeting can be extended to national digital currency also. Since India is planning to ban other cryptocurrencies, the RBI can better regulate digital and fiat currency.
- Thus upgrading to digital currency and balancing the macroeconomic stability.
- With the introduction of CBDC in a nation, its central bank would be able to keep a track of the exact location of every unit of the currency, thereby curbing money laundering.
- Criminal activities can be easily spotted and ended such as terror funding, money laundering, and so forth

Concerns posed:

- India is already facing many cyber security threats. With the advent of digital currency, cyberattacks might increase and threaten digital theft like Mt Gox bankruptcy case.
- According to the Digital Empowerment Foundation in 2018 report, around 90% of India's population is digitally illiterate. So, without creating enough literary awareness introduction of digital currency will create a host of new challenges to the Indian economy.
- Introduction of digital currency also creates various associated challenges in regulation, tracking investment and purchase, taxing individuals, etc.
- The digital currency must col-

lect certain basic information of an individual so that the person can prove that he's the holder of that digital currency.

- This basic information can be sensitive ones such as the person's identity, fingerprints etc.

Conclusion:

- There are crucial decisions to be made about the design of the currency with regards to how it will be issued, the degree of anonymity it will have, the kind of technology that is to be used, and so on.
- There is no doubt that the introduction of National Digital currency prevents the various threats associated with the private-owned cryptocurrencies and take India the next step as a digital economy. But the government has to create necessary safeguards before rolling out. India needs to move forward on introducing an official digital currency.

Nutrient Based Subsidy Rates Approved

Why in News?

- Recently, the Union Cabinet approved Nutrient Based Subsidy (NBS) rates for Phosphatic and Potassic (P&K) fertilisers for Rabi season 2022-23 from 1st October, 2022 to 31st March, 2023.
 - All Non-Urea based fertilisers are regulated under NBS Scheme.

What is NBS Regime?

- Under the NBS regime – fertiliz-

ers are provided to the farmers at the subsidized rates based on the nutrients (N, P, K & S) contained in these fertilizers.

- Also, the fertilizers which are fortified with secondary and micronutrients such as molybdenum (Mo) and zinc are given additional subsidy.
- The subsidy on P&K fertilizers is announced by the Government on an annual basis for each nutrient on a per kg basis – which are determined taking into account the international and domestic prices of P&K fertilizers, exchange rate, inventory level in the country etc.
- NBS policy intends to increase the consumption of P&K fertilizers so that optimum balance (N:P:K= 4:2:1) of NPK fertilization is achieved.
- This would improve soil health and as a result the yield from the crops would increase, resulting in enhanced income to the farmers.
- Also, as the government expects rational use of fertilizers, this would also ease off the burden of fertilizer subsidy.
- It is being implemented from April 2010 by the Department of Fertilizers, Ministry of Chemicals & Fertilizers.

What are the Issues Related with NBS?

Imbalance in Price of Fertilisers:

- Urea is left-out in the scheme and hence it remains under price

control as NBS has been implemented only in other fertilizers.

- The MRP of urea is today officially fixed at Rs 5,628 per tonne.
- There is technically no price control in other fertilisers.
- The prices of the other fertilizers which were decontrolled have gone up that has led the farmers to use more urea than before. This has further worsened fertilizer imbalance.

Costs on Economy and Environment:

- Fertilizer subsidy is the second-biggest subsidy after food subsidy, the NBS policy is not only damaging the fiscal health of the economy but also proving detrimental to the soil health of the country.

Black Marketing:

- Subsidised urea is getting diverted to bulk buyers/traders or even non-agricultural users such as plywood & animal feed makers.
- It is being smuggled to neighbouring countries like Bangladesh and Nepal.

Way Forward

- In order to address the imbalance in the fertilizer use, urea has to come under NBS.
- A feasible way to do it is by hiking urea prices and simultaneously reducing the NBS rates of phosphorus, potash & sulphur to make other fertilisers cheaper.
- Considering that all three nutrients namely N (nitrogen), P

(phosphorus) and K (potassium) are critical to increasing crop yields and quality of produce, the government must necessarily go for a uniform policy for all fertilisers.

- In the long run, NBS itself should be replaced by a flat per-acre cash subsidy that could be used to purchase any fertiliser.
- This subsidy must include value-added & customised products containing not just other nutrients, but delivering even nitrogen more efficiently than urea.

India's First Sovereign Green Bonds Framework

Why in News?

- Recently, the Union Minister for Finance & Corporate Affairs has approved the final Sovereign Green Bonds Framework of India.
 - Sovereign Green Bonds will be issued for mobilising resources for green projects.

What is Sovereign Green Bonds Framework?

- The Framework comes close on the footsteps of India's commitments under "Panchamrit" as elucidated by the Prime Minister at Conference of Parties (COP) 26 at Glasgow in November 2021.
- It will further strengthen India's commitment towards its Nationally Determined Contribution (NDCs) targets, adopted under the Paris Agreement.
- Green Finance Working Committee (GFWC) was constituted to validate key decisions on issu-

ance of Sovereign Green Bonds.

- The framework has been rated 'Medium Green', with a "Good" governance score by a Norway-based independent second opinion provider CICERO.
 - The 'Medium Green' rating is assigned 'to projects and solutions that represent significant steps towards the long-term vision, but are not quite there yet.'
- All fossil fuel-related projects have been kept out of the framework, along with bio-mass-based renewable energy projects that rely on feedstock from 'protected areas'.

What are Sovereign Green Bonds?

About:

- Green bonds are issued by companies, countries and multilateral organisations to exclusively fund projects that have positive environmental or climate benefits and provide investors with fixed income payments.
- The projects can include renewable energy, clean transportation and green buildings, among others.
- Proceeds from these bonds are earmarked for green projects. This is unlike standard bonds, the proceeds of which can be utilized for various purposes at the discretion of the issuer.
- By the end of 2020, 24 national governments had issued Sovereign Green, Social and Sustainability bonds totalling a cumulative USD 111 billion dol-

lars, according to the London-based Climate Bonds Initiative.

Benefits of Sovereign Green Bonds:

- Sovereign green issuance sends a powerful signal of intent around climate action and sustainable development to governments and regulators.
- With the International Energy Agency's (IEA) World Energy Outlook 2021, estimating that 70% of the additional USD 4 trillion spending to reach net-zero is required in emerging/developing economies, sovereign issuance can help kickstart these large inflows of capital.
- Development of a sovereign green benchmark could eventually lead to the creation of a vibrant ecosystem of raising green bonds from international investors.

Status:

Global Status:

- The Environmental, Social and Governance (ESG) funds are estimated at USD 40 trillion with Europe accounting for about half this.
- It is estimated that by 2025, ESG assets will account for about one-third of the total global assets under management.
- The ESG debt funds pie is around USD 2 trillion, of which over 80% is "environmental" or green bonds, and the rest social and sustainability bonds.

National Status:

- According to the Climate Bonds Initiative, an international organization working to mobilize global capital for climate action, Indian entities have issued green bonds for over USD 18 billion.

What are Other Measures on Climate Action announced in the Budget?

- The budget included several measures on climate action such as:
 - Battery swapping policy.
 - Additional allocation under the Performance Linked Incentive (PLI) scheme for manufacturing high efficiency solar modules.
 - The government is introducing a new bill that aims to provide a regulatory framework for Carbon Trading in India to encourage penetration of renewables in the energy mix.

How RBI fell behind the curve in containing inflation

- **Context:** Very soon, the Monetary Policy Committee (MPC) of the Reserve Bank of India (RBI) will convene to formulate its response to the Government of India about the high rate of inflation in the country.

What is inflation?

- The general rise in the price level of goods and services is called inflation. The Reserve Bank of India is the authority to control inflation under RBI Act 1934.
- **Inflation targeting by RBI:**

The RBI is by law responsible for maintaining price stability.

- Under the "inflation-targeting" regime that began in 2016, RBI has to retain the inflation target of 4%, with a tolerance band of +/- 2 percentage
 - Thus, for any given month, RBI's comfort zone for inflation lies between 2 per cent and 6 per cent.
- Under the RBI Act, 1934, if the central bank fails to meet the inflation target for three consecutive quarters, it is required to provide the following information to the government:
 - reasons for the failure to achieve the inflation target;
 - remedial actions proposed to be taken; and
 - an estimate of the period within which the inflation target shall be achieved pursuant to the timely implementation of the proposed remedial actions.

How does the MPC target inflation?

- **Composition of MPC:** The MPC has six members including the RBI Governor — three each nominated by the RBI and the government, who meet every two months (starting from February every year).

What is the repo rate and How does movement in the repo-rate influence inflation?

- **Repo rate;** – (it is the rate at which RBI lends money to commercial banks).
- For instance, at times of high

inflation RBI increases the repo rate ("dear money policy") which results in costlier borrowing both for consumers & producers & effectively slows down economic activity in the economy.

How did RBI fail to check inflation?

- **Time lag:** MPC's knowledge of inflation typically lags by two months — which means as it deliberates in October, it works with data until August.
- **Accommodative stance of RBI (growth more priority than inflation control):** RBI despite being aware about the inflation level has kept the repo rate unchanged at 4 per cent and to continue with an accommodative stance as long as necessary to revive and sustain growth on a durable basis.

Limitation of monetary policy in curbing inflation

- **Incomplete transmission;** – it means that the cumulative easing in policy rates by RBI is not being reflected in the lowering of their lending rates by banks.
- **Policy rates are not market linked;** – the repo rates decided by monetary policy committees are not truly market linked which results in banks many times negating these policy rates set by RBI.
- **Cost-push inflation;** – due to disruption in the supply chain of the produce e.g. Russian-Ukraine war.
- **Ineffective against supply shocks;** – RBI's policies can stabilize inflation only caused due to demand shocks and they are ineffective against supply shocks.
 - For instance, food inflation is prone to supply-side bottlenecks and is out of the scope of any remedy under the aegis of the monetary policy of RBI.
- **Limited financial inclusion;** – India suffers from limited financial inclusion. Indians, unlike Americans, earn before spending and do not live by credit. This limits the success of RBI's credit control policy.
- **Fiscal policy;** – The Central and State Governments can play a progressively active role to help curb inflation by framing new policies or altering the old ones.
 - Many times there is no synchronisation between monetary and fiscal policy.
- **Globalisation;** – With the current uncertainty about the global economy, especially in the United States of America & the Eurozone due to the Russia –Ukraine war, RBI should not rely on monetary tools alone to combat inflation.

2. Socio-economic

GHAR – Go Home and Re-Unite

Context

- On November 20, the National Commission for the Protection of Child Rights (NCPCR) launched a web portal called "GHAR – Go Home and Re-Unite."
- The portal will serve as a digital tracking & monitoring platform for children from every district, easing the process of their repatriation and restoration.

- NCPCR also launched the – Training Modules for Child Welfare Committees (CWCs) in order to implement the Juvenile Justice Act amendments.
- Protocols for Child Restoration and Repatriation

About NCPCR

- It is an Indian statutory body that was established in 2007 under an Act of Parliament – the Commission for Protection of Child Rights Act, 2005 – and works under the auspices of the

Union Ministry of Women and Child Development (WCD).

- Its mandate is to ensure that all laws, policies, programmes, and administrative systems conform to the vision of children's rights (ages 0 to 18 years) as enunciated in the Indian Constitution and the UN Convention on the Rights of the Child.
- The Commission envisions a rights-based approach that pervades national-state-local policies and programmes.

- As a result, the Commission envisions the state playing an indispensable role in ensuring
 - Children & their well-being,
 - Strong institution-building processes,
 - Respect for local bodies and decentralisation at the community level, and greater social concern in this direction.
- Some NCPCR portals –
 - MASI Portal (Monitoring App for Seamless Inspection for managing inspections at shelter homes)
- The Baal Swaraj Portal (for online tracking & digital real-time monitoring mechanism of children in need of care & protection)

Concerning the Juvenile Justice (Care or Protection of Children) Act of 2015:

- The Juvenile Delinquency Law & the Juvenile Justice (Care & Protection of Children) Act, 2000 were repealed by the WCD.
- One of the main provisions of the Act is that juveniles in conflict with the law between the ages of 16 & 18 can be tried as adults
- A Juvenile Justice Board was to determine the nature of the crime and whether the juvenile should be tried as a minor or a child (JJB).
- The Act also streamlined adoption procedures for orphans, abandoned, and surrendered children, which is the second major provision.
- To enable it to perform its function more effectively, the existing Central Adoption Resource

Authority (CARA) has been made a statutory body.

- By notification, the State Government may establish one or more Child Welfare Committees (CWC) for each district or group of districts to exercise the powers granted by this Act.
- The Committee has the final say in cases involving child care, protection, treatment, development, and rehabilitation, as well as basic needs provision and human rights protection.

Need for the GHAR Portal

- The portal will allow for the digital transfer of cases involving children to the appropriate authorities.
- It will ensure that children's rights to restoration and repatriation are realised, which has been a challenge due to a lack of convergence and information sharing among authorities.
- Many children who were taken before JJBs and CWCs were discovered to be from another country, but repatriation was difficult due to a lack of information on their native country.
- A step toward significantly reducing the number of children incarcerated in child care institutions (CCIs).

Reality Check on India's Hunger Index Rank

Context

- For the second time in two years, the Ministry of Women and Child Development re-

jected the Global Hunger Index (GHI) that ranked India 107 among 121 countries.

- India was accorded a score of 29.1 out of 100 (with 0 representing no hunger), placing it behind Sri Lanka (66), Myanmar (71), Nepal (81) and Bangladesh (84). It referred to the index as "an erroneous measure of hunger".

All you need to know about Global Hunger Index

- **Annual report:** The GHI is a peer reviewed annual report that endeavours to "comprehensively measure and track hunger at the global, regional, and country levels". Authors of the report primarily refer to the United Nations' Sustainable Development Goal 2 (SDG 2) that endeavours to achieve 'Zero Hunger' by 2030.
- **Four Indicators:** According to them, the report attempts to "raise awareness and understanding of the struggle against hunger". The GHI score is computed using four broad indicators under nourishment (measure of the proportion of the population facing chronic deficiency of dietary energy intake), child stunting (low height for age), child wasting (low weight for height) and child mortality (death of a child under the age of five).

Why these four Indicators are considered?

- **To acknowledge undernourishment:** As per the authors,

it provides a basis to measure inadequate access to food and is among the lead indicators for international hunger targets, including the UN SDG 2. Child stunting and mortality, offers perspective about the child's vulnerability to nutritional deficiencies, access to food and quality of nutrition.

- **To address urgent requirement of nutrition:** Since children (especially below five) are at a developmental age there is a greater and urgent requirement for nutrition with results particularly visible. This forms the basis of assessing nutritional requirement among children. Adults are at a sustainable age they are not growing but rather subsisting on nutrition for healthy survival. And lastly, on the same rationale, child mortality indicates the serious consequences of hunger.
- **Uses data provided by Government:** It explains that while FAO uses a suite of indicators on food security, including two important indicators - prevalence of undernourishment and prevalence of moderate or severe food insecurity. The GHI only uses the data obtained through food balance sheets based on data reported by member countries, including India.
- **Shows a picture of food supply chain:** A food balance sheet provides a comprehensive picture of the pattern of a country's food supply during

a specified reference period. It lists down the source of the supply and its utilisation specific to each food category.

- **Takes into account three child specific indicators:** On why the GHI uses three child specific indicators out of the four to calculate hunger for a country's population, the website explains, By combining the proportion of undernourished in the population (1/3 of the GHI score) with the indicators relating to children under age five (2/3 of the GHI score), the GHI ensures that both the food supply situation of the population as a whole and the effects of inadequate nutrition within a vulnerable subset of the population are captured.
- **International recognition:** A Senior Policy Officer at the GHI said that, "All four indicators used in the calculation of the global hunger are recognised by the international community, including India, and used for measuring progress towards the UN SDGs."

What are the Objections of Government of India?

- **Very small sample size of the Index:** As per the Ministry for Women and Child Development, the report lowers India's rank based on the estimates of the Proportion of Undernourished (PoU) population. It elaborates that the U.S. Food and Agriculture Organisation (FAO) estimate is based on the 'Food Insecurity Experience

Scale (FIES)' survey module conducted using the Gallup World Poll that bears a sample size of 3,000 respondents being asked eight questions. It stated that the data represented a miniscule proportion for account of India's size.

- **Counter assertion by India's dietary supply is increasing:** It countered the assertions in the report pointing to India's per capita dietary energy supply increasing year on year due to enhanced production of major agricultural commodities in the country over the years.
- **Index doesn't reflect the actual ground reality:** According to the Ministry, the report is not only disconnected from ground reality but also chooses to ignore the food security efforts of the Central government especially during the pandemic.
- **Efficient PMGKAY:** The Union Cabinet through the Pradhan Mantri Garib Kalyan Ann Yojana (PMGKAY) provisioned an additional 5 kg ration per person each month in addition to their normal quota of food grains.

What are the Government efforts to address the hunger issue so far?

- **The Midday Meal Scheme:** The Midday meal is a school meal programme in India designed to better the nutritional standing of school-age children nationwide.
- **The programme supplies free lunches on working days for children in primary and upper primary classes in government,**

government aided, local body, Education Guarantee Scheme, and alternate innovative education centres, Madrasa supported under Sarva Shiksha Abhiyan, and National Child Labour Project schools run by the ministry of labour.

- Serving 120 million children in over 1.27 million schools & Education Guarantee Scheme centres, the Midday Meal Scheme is the largest of its kind in the world.
- **PM-POSHAN:** The name of the scheme has been changed to PM-POSHAN (Pradhan Mantri Poshan Shakti Nirman) Scheme, in September 2021, by MoE (Ministry of Education), which is nodal ministry for the scheme.
- The Central Government also announced that an additional 24 lakh students receiving pre-primary education at government & government-aided schools would also be included under the scheme by 2022.

Conclusion

- No country becomes great by dwarfing its people. India has certainly improved its poverty and hunger problems but there is still lot of ground yet to cover. Global hunger index may have exaggerated the India's hunger issue but hunger problem in India is real if not substantial.

World Population Reaches 8 Billion: UN

In News

- Recently, the United Nations Population Fund, stated that

the world's population has reached 8 billion.

More about the news

Reasons for the growth:

- This unprecedented growth is due to the gradual increase in human lifespan owing to improvements in public health, nutrition, personal hygiene and medicine.
- It is also the result of high and persistent levels of fertility in some countries, the United Nations said.

Reaching 9 billion:

- The UN said that it took the global population 12 years to grow from 7 billion to 8 billion.
- It will take approximately 15 years - until 2037 - for it to reach 9 billion.
 - It is a sign that the overall

growth rate of the global population is slowing.

Projections of the peak:

- The UN-FPA projects world population to peak at 10.4 billion in the 2080s and stay there until the end of the century.

Trends of growth:

Slowing growth:

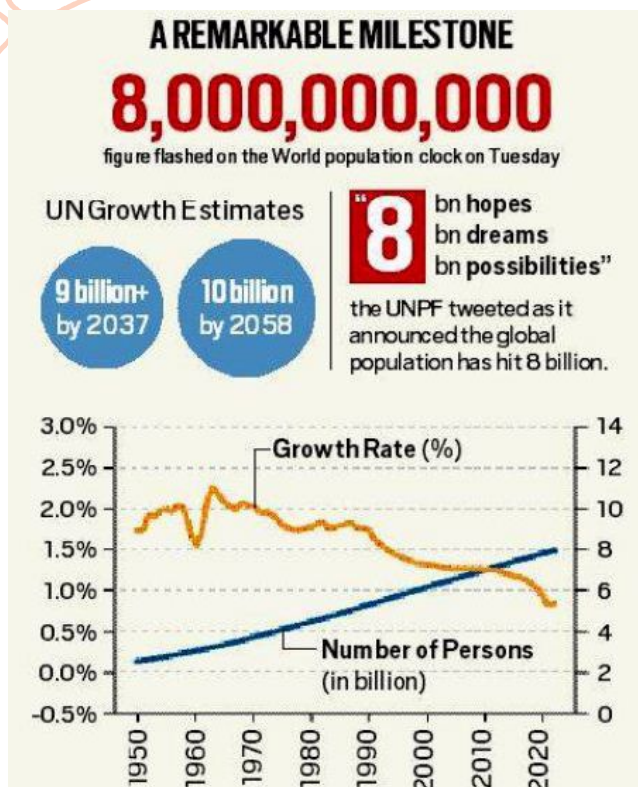
- According to the UN, falling mortality rate first led to a "spectacular population growth, but as fewer children were born generation to generation, growth started to slow.

Impact of Per Capita income:

- Countries with the highest fertility levels tend to be those with the lowest income per capita as per UN.

International migration:

- International migration is now the driver of growth in many countries, with 281 million people living outside their country of birth in 2020.
- All South Asian nations — India, Pakistan, Nepal, Bangla-



desh and Sri Lanka — have seen high levels of emigration in recent years.

India's "youth bulge":

- UNFPA has noted that India has its largest ever adolescent and youth population.
- According to UNFPA projections, India will continue to have one of the youngest populations in the world till 2030 and is currently experiencing a demographic window of opportunity, a "youth bulge" that will last till 2025.
- It noted that India's fertility rate has hit 2.1 births per woman -

replacement-level fertility - and is falling.

India surpassing China:

- As of 2022, more than half the world's population lives in Asia, China & India being the two most populous countries with more than 1.4 billion people each.
- According to the United Nations Population Fund, while India's population growth is stabilising, it is "still growing at 0.7% per year" and is set to surpass China in 2023 as the world's most populous country.
- China's population is no longer growing & "may start declining as early as 2023", the UN stated.

Challenges:

- Rapid population growth can make challenges of hunger and poverty steeper.
- Rapid population growth makes eradicating poverty, combating hunger and malnutrition, and increasing the coverage of health and education systems more difficult.

Challenges for India & Way ahead:

- A population of more than 1.4 billion will require the unflinching focus of policymakers on areas fundamental to human well-being - education, nutrition, health-care, housing, & employment.

Productivity and economy:

- The youth will have to be equipped with skills that are indispensable to the knowledge economy.
- People's productivity will have to increase for any given per capita income.
- Will need policies to increase jobs so that labour force participation rate increases for both men and women.

Climate change:

- The climate crisis and other ecological imperatives will mean that the footprints of many activities are kept light.

Democratic challenges:

- Most importantly, the challenges will spur debate, discussion, even dissension, and require that diverse voices are heard.

India set to become the world's most populous

< 1 BILLION
for millennia until 1800
2.5 BILLION
by 1950

1 billion
added to world
population in
last 12 yrs

1990	2022	2050
China (1,144*)	China (1,426*)	India (1,668*)
India (861)	India (1,412)	China (1,317)
USA (246)	USA (337)	USA (375)
Indonesia (181)	Indonesia (275)	Nigeria (375)
Brazil (149)	Pakistan (234)	Pakistan (366)

* figures in million



"Unless we bridge the yawning chasm between the global haves and have-nots, we are setting ourselves up for an 8-billion-strong world filled with tensions and mistrust, crisis and conflict."

ANTONIO GUTERRES, UN SECRETARY-GENERAL

- India's democratic traditions and the strength of its institutions will be needed to navigate the way forward from here.

Elderly population:

- The 65+ category is going to grow quite fast and it faces several challenges. Provisioning of social security is obviously a big challenge. This will stretch the resources of future governments.
- If the aged stay within the family set-up, the burden on the government could be reduced. "If we go back to our roots and stick around as families, as against the western tendency to go for individualism, then the challenges would be less

State-wise focus:

- Much more needs to be done on this, of course, in large parts

of the country, including in Uttar Pradesh, Bihar and Madhya Pradesh, whose TFR is higher than the national average and where gender discrimination has deep social roots.

Choice to women:

- To actually realise Population

Control, educating women and giving them freedom to make choice and implement it, should be first to have attention by the Government.

- State must ensure contraceptives are accessible, affordable and available in a range of forms acceptable to those using them.

World Population Day

- World Population Day is observed annually on July 11 every year
- It aims to highlight the problems of overpopulation and raise awareness about the effects of overpopulation on the environment and development.
- This year's World Population Day [July 11, 2022] falls during a milestone year, when we anticipate the birth of the Earth's eight billionth inhabitant.
- World Population Day was established by the Governing Council of the United Nations Development Programme in 1989.
 - It was inspired by the public interest in Five Billion Day, the approximate date on which the world's population reached five billion people on July 11, 1987.

XI. Science and technology

Partial Solar Eclipse

In News

- Recently, for the first time in over a decade, a partial solar eclipse was visible in several parts of India on October 25.
- It also marks the last solar eclipse of the year.

About Solar eclipse

What is a solar eclipse?

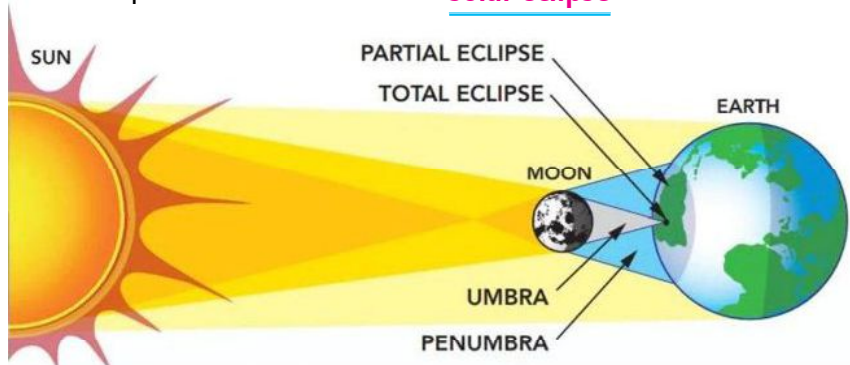
- During a solar eclipse, the

Moon passes between the Sun and the Earth, stopping some of the Sun's light from reaching our planet.

- An eclipse never comes alone.

Typically, a solar eclipse happens around two weeks before or after a lunar eclipse.

Visibility of the recent Partial solar eclipse



- The eclipse was visible from parts of Europe, Northern Africa and large parts of western and central Asia.
- It was visible for most of India apart from some parts in the Northeast.

Kinds of solar eclipses

- **Total solar eclipse:** During a total eclipse, the Moon will completely cover the Sun.
- **Annular eclipse:** During an annular solar eclipse, the Moon will not fully cover the Sun but will leave an edge visible.
- **Partial solar eclipse:** A partial solar eclipse occurs when the sun, moon, and earth are not exactly aligned and the sun appears to have a dark shadow on a small part of its surface.
- There are three phases of a partial solar eclipse, which include a beginning, a maximum, & an end.
- The initial phase involves the moon beginning to move over the sun's disk, followed by it reaching a maximum when the maximum part of the sun's disk is covered.
- The third phase is when the moon starts moving away from the sun, unblocking the sunlight.
- The unique feature of the Partial Solar Eclipse is that it happens only on a new moon.

What makes the recent event rare?

- The partial solar eclipse was last seen in India in 2007 and that makes this event rare since

it will only be seen in India on November 3, 2022.

- In 2025, there will be another partial solar eclipse but India won't be able to witness it.

How often do partial solar eclipses occur?

- Partial eclipses occur about twice a year somewhere in the world. The number of partial eclipses each year can vary.
- Sometimes they occur in conjunction with a total solar eclipse, in which the partial eclipse is visible before and after totality, but sometimes they occur on their own.

Concerns

- It is not recommended to see an eclipse with the naked eye, even for a brief period. Although the Moon blocks most of the Sun, it will still damage the eyes permanently and result in blindness.
- Although the eclipse may be visible to the naked eye, the ultraviolet rays can cause damage to the retina.

LVM3 M2 / OneWeb India-1 Mission

In News

- Recently, the Indian Space Research Organisation's (ISRO) heaviest rocket Launch Vehicle Mark 3 (LVM3 or GSLV Mark 3) has successfully orbited 36 satellites of U.K.-based One Web.
- The launch is also the first for LVM3-M2 to place the satellites in

the Low Earth Orbit (up to 1,200 km above the earth) unlike Geosynchronous Transfer Orbit (GTO).

About LVM3-M2/One Web India-1

- LVM3-M2 is the dedicated commercial satellite mission of NewSpace India Limited (NSIL).
- It is a Central Public Sector Enterprise (CPSE) under the Department of Space, Government of India.

Specifications:

- LVM3-M2 is a three-stage launch vehicle consisting of two solid propellant S200 strap-ons on its sides and core stage comprising L110 liquid stage and C25 cryogenic stage.
- The 43.5 metre LVM3 weighing around 644 tonnes carried 36 satellites weighing 5,796 kg or about 5.7 tonnes.
- With this launch, LVM3 has made its entry into the global commercial launch service market.

Significance:

- The mission will enable the company to start offering satellite broadband services in the country by 2023.
- Provide high-speed internet services in remote areas, where terrestrial networks cannot be set up — middle of the ocean, the Himalayas (even on top of Mount Everest).

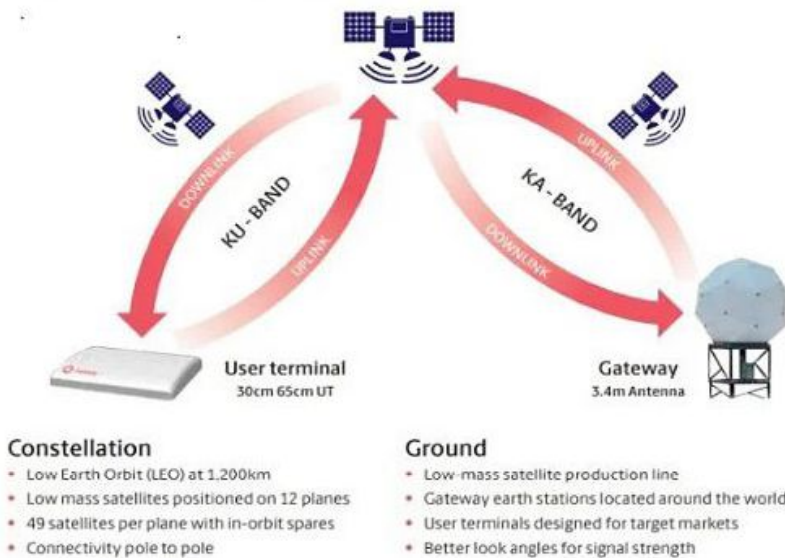
What is OneWeb?

- It is a joint venture between India's Bharti Enterprises and the U.K. government.

- This is OneWeb's 14th launch, bringing the constellation to 462 satellites.
- This launch represents more than 70% of its planned 648 Low Earth Orbit (LEO) satellite fleet that will deliver high-speed, low-latency connectivity worldwide.
- With only four more launches to go, OneWeb remains on track to activate global coverage in 2023, while its connectivity solutions are already live in regions north of 50 degrees latitude.

OneWeb Satellites Connectivity

How our connectivity works



India Plans to Expand Regional Satellite Navigation System

In News

- The Indian Space Research Organisation (ISRO) is working on a series of improvements to the Navigation with Indian Constellation (NavIC).

Key Points

Not in Regular Use:

- Though NavIC is available for use in mainland India as well as a range of 1,500 km around it, it isn't in wide regular use in India.
- Primary reason for the latter is

because mobile phones haven't been made compatible to process its signals.

Newer Additions:

- The L1 band into NavIC.
- This bandwidth is part of the GPS and is the most used for civilian navigational use.
- Currently NavIC is only compatible with the L5 and S bands and hasn't easily penetrated into the civilian sector.
- The other major step would be to increase the "safety" of the signals.

Replacement of defunct satellites

- There are five more satellites in the offing to replace defunct

NavIC satellites that would be launched in the coming months.

About NavIC (Navigation with Indian Constellation)

Indigenous technology:

- NavIC is an Indian Regional Navigation Satellite System (IRNSS).
- It is a constellation of seven satellites that can be used to track location.

First satellite:

- The first of these satellites (IRNSS-1A) were launched in 2013 and the latest in 2018.

Project Cost:

- It was originally approved in 2006 at a cost of \$174 million.

Operational timeline:

- It became operational in 2018 though missing the completion timeline of late 2011.

Orbit:

- Currently, NavIC satellites orbit earth in a geostationary or geosynchronous (GEO) orbit, or about 36,000 km from earth.

Coverage:

- It covers the Indian mainland (primary coverage area) and a region extending up to 1,500 km beyond the mainland with plans of extension.

Position:

- Aims for better than 10 meters throughout Indian landmass & 20 meters in the Indian Ocean.
- **Timing:** Better than 50 nano-seconds(20).

- **Applications:** NavIC provides two levels of service.
 - **The standard positioning service:** Open for civilian use. For example- transport, map applications, timekeeping etc.
 - **A restricted service (encrypted):** For authorized users such as the military.
 - **Current Usage:** Limited for-
 - Public vehicle and commercial vehicles tracking (NavIC based trackers)
 - Emergency warning alerts to fishermen navigating into the deep sea without adequate terrestrial network connectivity
 - Tracking and providing in-
- formation related to natural disasters

Other Navigation Systems:

Global:

- Global Positioning System (GPS) of the U.S.A.
- Galileo from the European Union
- Russian GLONASS
- China's Beidou

Regional:

- QZSS covers the Asia-Oceania region, with a focus on Japan.

NavIC in Smartphones: Benefits

Self-reliance:

- NavIC aims to remove dependence on foreign satellite

systems for navigation service requirements, especially for strategic sectors.

- NavIC will further the goal of Atmanirbhar Bharat and 'vocal for local'.

Indian Control & Risk Aversion:

- Reliance on GPS and GLONASS may not always be reliable as they are operated by the respective defense agencies.
- For e.g. The U.S. denied GPS data for Kargil region to the Indian military in 1999.
- As NavIC is an indigenous positioning system, there is no risk of the withdrawal of service in similar situations.

Promotion of Local Industry:

- Ministries can use NavIC applications to promote local industry to develop indigenous NavIC-based solutions.

Global Precedents:

- In 2021, 94.5% of smartphones manufactured in China were Beidou supported.
- Russia mandates inclusion of GLONASS system in locally manufactured & sold smartphones
- Apple's devices support five global and regional navigational systems like GPS, GLONASS, Beidou etc.

Smartphone Companies Response

- **Existing Support:** Major mobile chipset manufacturers like Qualcomm, MediaTek & Broadcom already support NavIC across various chipset platforms.

IRNSS
Indian Regional Navigation Satellite System

IRNSS (NavIC) is designed to provide accurate real-time positioning and timing services to users in India as well as region extending up to 1,500 km from its boundary

NAVIGATION CONSTELLATION CONSISTS OF SEVEN SATELLITES
3 in geostationary earth orbit (GEO) and
4 in geosynchronous orbit (GSO) inclined at 29 degrees to equator

Each sat has three rubidium atomic clocks, which provide accurate locational data

IT WILL PROVIDE TWO TYPES OF SERVICES

- 1 Standard positioning service** | Meant for all users
- 2 Restricted service** | Encrypted service provided only to authorised users (military and security agencies)

Applications of IRNSS are: Terrestrial, aerial and marine navigation; disaster management; vehicle tracking and fleet management; precise timing mapping and geodetic data capture; terrestrial navigation aid for hikers and travellers; visual and voice navigation for drivers

While **American GPS** has **24 satellites** in orbit, the number of sats visible to ground receiver is limited. In **IRNSS**, **four satellites** are always in geosynchronous orbits, hence always visible to a receiver in a region **1,500 km** around India

Geostationary earth orbit
Geosynchronous orbit

- **Widening Ambit:** A few recently launched mobile handsets can be enabled to receive NavIC.
- For example, the Redmi Note 9 series from Xiaomi, the Realme 6 series, the OnePlus Nord etc.

Concerns:

- **Additional costs:** Xiaomi and Samsung reported higher research and production costs (hardware changes-Dual band chipsets) might cause losses in a price sensitive market like India.
- **Tight time frame:** Testing clearances can take more time possibly missing the 1 January 2023 deadline for making smartphones NavIC-complaint.
- **Technical complexities:** Mobile phone chipsets at present support L1 frequency band (used by GPS and GLONASS). NavIC is available in L5 band, making immediate compliance to it difficult.

Way Ahead

- **Enhancing Reach with More Satellites:** To make NavIC truly "global" like GPS, more satellites would need to be placed in an orbit closer to earth than the current constellation. Satellite navigation draft policy 2021 plans to expand the NavIC coverage from regional to global, so it should be expedited.
- **Using Long Code:** Currently (NavIC) only provides short code. This has to become Long Code for the use of the strategic sector. This prevents the signal from being breached. This

had been part of the original scheme for NavIC but less work has gone into it so far.

- **Push for Manufacturers:** The Indian government has been pressing manufacturers to add compatibility and has set a deadline of January 2023 but media reports suggest this is unlikely before 2025. The manufacturers need to be incentivized properly.
- **Utilising Medium Earth Orbit (MEO):** Right now, NavIC's reach is only 1,500 km beyond Indian territory. But for ships and aeroplanes travelling beyond that satellites in Medium Earth Orbit (MEO) are needed.

Coronal Holes

In News

- Recently, NASA Solar Dynamics Observatory Captured dark patches on the sun's surface resembling eyes and a smile
- NASA explained that the patches are called coronal holes.



About Coronal Hole

- It is a patch of the Sun's atmosphere with much lower density than elsewhere.
- In ultraviolet views of the Sun, coronal holes appear as dark splotches.

- These are regions where the Sun's magnetic field lines are connected directly to interplanetary space, allowing solar material to escape out in a high-speed stream of solar wind, leaving a dark "hole" near the surface of the Sun.
- Coronal holes appear throughout the solar cycle, but can last for much longer periods of time during solar minimums, when the Sun is less active.
- **Importance :** "These 'coronal holes' are important to understanding the space environment around the earth through which our technology and astronauts travel.

India's First Privately developed Launch Vehicle: Vikram-S

In News

- Hyderabad-based Skyroot's Vikram-S is all set to make its maiden flight from the country's only spaceport in Sriharikota making it India's first privately developed launch vehicle.
- The mission is code named 'Prarambh'.

About the Prarambh mission

- It will mark the beginning of private sector launches in India.
- The development of privately built rockets and satellites received a boost especially after the finance minister opened the space sector to private participation in 2020.
- Skyroot will be the first private company to launch its rocket.

On the launch pad

Hyderabad-based Skyroot's satellite launch vehicle is called Vikram and Chennai-based Agnikul's is called AgniBaan. A look at their payloads



- Among the three payloads is a 2.5kg satellite of another space startup, Space Kidz India, which has been built by students from India, the US and Indonesia.
- Sub-orbital flight are those vehicles which are travelling slower than the orbital velocity, meaning it is fast enough to reach outer space but not fast enough to stay in an orbit around the Earth.
- It is roughly defined as a distance of more than 80 km from the Earth's mean sea level.
- **Examples:** the ones undertaken by Jeff Bezos and Richard Branson.

Other companies and missions:

- Agnikul Cosmos tested its semi-cryogenic Agnilet engine.
- ISRO's Small Satellite Launch Vehicles (SSLV) is also likely to be manufactured and operated by private players soon.

Private satellite missions launched by ISRO:

- ISRO's heaviest launch vehicle Mark III launched 36 OneWeb satellites (India's Bharti is a stakeholder).
- ISRO will be launching another fleet of 36 satellites for the company as well.
- The space agency has also launched at least four satellites made by students.

Vikram-S rocket

- It is a single-stage sub-orbital launch vehicle.
- It will carry three customer payloads in a sub-orbital flight.

India's first privately developed rocket

Skyroot's Vikram series of space launch vehicles is named after Dr. Vikram Sarabhai, founder of the Indian Space Program

Naga Bharath Daka **Pawan Chandana**

Vikram - i
480 kg to 500 km Low Inclination Orbit

Vikram - ii
595 kg to 500 km Low Inclination Orbit

Vikram - iii
815 kg to 500 km Low Inclination Orbit

- It will help test and validate technologies in the Vikram series space launch vehicles.
- The company is designing three Vikram rockets that will use various solid and cryogenic fuels to carry between 290 kg and 560 kg payloads to sun-synchronous polar orbits.
- Vikram-I can carry 480 kilograms of payload to Low Earth Orbit. It will be powered by a Kalam-100 rocket.
- Vikram-II is equipped to lift off with 595 kilograms of cargo.
- Vikram-III can launch with 815 kg to 500 km Low Inclination Orbit.
- In comparison, India's PSLV can carry up to 1,750kg to such an orbit while the newly-developed small satellite launch vehicle meant for carrying smaller commercial satellites can carry up to 300 kg to sun-synchronous orbit.
- **Quick decision making:** There is quick decision making in private companies while the same process in a public enterprise would have to pass through a number of stages.
- **Low costs:** It has allowed companies like SpaceX, Blue Origin, etc. to cut their costs substantially and perform operations like launching a rocket to ISS at merely \$57 million per seat as compared to \$80 million per seat if aboard a Russian shuttle and \$450 million each mission before NASA ended its space shuttle program.
 - Making reusable landing rocket launchers, improve-
- **Better employment opportunities:** The growth in the space industry also provides employment to millions all over the world, and the rise in the number of private space companies promotes competition amongst them and encourages constant improvements and advancements.
- **Creating widespread interest:** The publicity of their operations, like live streaming launches, has sparked widespread interest in space exploration among the general public.

Skyroot

- The company is based in Hyderabad.
- It builds state-of-the-art space launch vehicles for launching commercial satellites to space.
- It aims to disrupt entry barriers to cost-efficient satellite launch services and space-flight by advancing its mission to make space flights affordable, reliable and regular for all.

Source: IE

Tribute to Vikram Sarabhai

- Skyroot's launch vehicles are named 'Vikram' as a tribute to the founder of the Indian space programme and renowned scientist Vikram Sarabhai.

Significance of privatization of space sector

- **Higher autonomy:** private companies have a greater degree of autonomy in making decisions, which enables them to take up new projects.



XII. Miscellaneous

1. Index

Name	Released by	Content
Performance Grading Index 2020 - 2021	Ministry of education	<ul style="list-style-type: none"> Objective of this index is to promote evidence based policy making and highlight course correction to ensure quality education for all. Their pro comprehensive analysis of the school education system across states and union territories. Their performance is assessed on a total of 70 indicators in five domains. <ul style="list-style-type: none"> Learning outcome Access Infrastructure and facilities Equity Governance process Gujarat is now among the top performers in school education. Ladakh - Best improver. No state figured in the bottom three grades.
Rule of law index 2022	International civil society organisation, world Justice project	<ul style="list-style-type: none"> India has been ranked 77/140 countries with the score of 50. Top - ranked country Norway, Finland, Sweden. 4 Principles, 8 factors.
Law and order index of 2022	Global analytics firm called Callup	<ul style="list-style-type: none"> India has scored 80 points and has secured the both rank on the index. East Asia (most secure region) Afghanistan (least secured country)

2. Report

Name	Released by	Content
Climate Transparency report	The report was developed by experts from 16 partner organizations from the majority of the G20 countries.	<ul style="list-style-type: none"> • This report highlight the link between the climate emergency and energy crisis. • India green gas emissions have increased by 1827. • Per capita emissions of India are approximately 30% of the G20 average. • India energy mix was still dominated by fossil fuels in 2021 (74%), around 9% lower than the G20 average. • India is the third largest producer of electricity after China and the US.
Global status report on physical activity	World health organisation	<ul style="list-style-type: none"> • The report revealed that regular exercises can minimise the health risks by almost 30%. • It estimated that the lack of exercise and healthy physical activities can cost Government around the world more than 27 billion USD each year.
Climate change amplifying health impacts	Lancet report	<ul style="list-style-type: none"> • The duration of the growing season for maize has decreased by 2% compared to a 1981 - 2010 baseline, while rice and wheat have each decreased by 1%. • Increased heat wave events and heat related deaths by 55% in India. • Loss of labour hours • Vector borne diseases.
NDC synthesis report	United Nations framework convention on climate	<ul style="list-style-type: none"> • Current NDC will increase GHG emissions by 10.6%, by the end of this decade compared to 2010 levels. • 2021 analysis showed that the projected GHG emissions will continue to spike beyond 2030. • The report found that while countries are minimising their GHG emissions, their combined climate pledges could put the world on track for around 2.5°C of warming by the end of the 21st.

<p>Action provisional state of the Global climate Report 2022</p>	<p>World meteorological organization</p>	<ul style="list-style-type: none"> • The report is produced on an annual basis, complementing the most recent long assessment cycle provided by the sixth IPCC Assessment report. • The concentrations of three main green house gases CO₂, CH₄, NO₂ were all at record highs in 2021. • The emissions of methane, which is 25 times more potent than CO₂ in causing global warming, in fact increased at the fastest pace ever. • The global average temperature in 2022 is estimated to be about 1.15°C above the 1850-1900 average. • 2015 to 2022 are likely to be the eight warmest years on record.
<p>Global TB report</p>	<p>World health organization</p>	<ul style="list-style-type: none"> • An estimated 10.6 million people fell ill with TB in 2021, an increase of 4.5% from 2020 and 1.6 million people died from TB. • With 28% cases, India was among the 8 countries accounting for more than two-third (or 68.3%) of the total TB patient count.
<p>World energy outlook</p>	<p>International energy agency</p>	<ul style="list-style-type: none"> • World is in the middle of a global energy crisis of unprecedented depth and complexity. • This report provides, critical analysis and insights on trends in energy demand and supply, energy security, environmental protection and economic development. • India will witness the largest increase in energy demand of any country. • Government programmes such as the Gati Shakti National master plan and the Atmanirbhar Bharat Abhiyaan could promote a robust growth in renewables and electric mobility, notably for two/three wheelers.
<p>Emissions Gap report 2022</p>	<p>United Nations Environment Programme</p>	<ul style="list-style-type: none"> • We are far from the Paris agreement goal of limiting global warming to well below 2°C, preferably 1.5°C. • Policies currently in place point to a 2.8°C temperature rise by the end of the century. • Top seven emitters are China, the EU, India, Indonesia, Brazil, the Russian Federation, and the United States of America. • The area under organic farming is increasing on all continents with close to 75 million hectares globally in 2020 compared to 11 million hectares in 1999.

<p>Unified district Information system for Education plus (UDI-SET)</p>	<p>Union education Ministry</p>	<ul style="list-style-type: none"> • In 2021-22, around 12.29 Crore girls enrolled in primary to higher secondary education. This is an increase of 8.19 lakh when compared with the 2020-21 report. • In 2021-22, 95.07 lakh teachers are involved in school education of these more than half of them are female teachers. • The ST, OBC, SC, enrollment are increased.
<p>Adaptation Gap report</p>	<p>UNEP (United Nations Environment Program)</p>	<ul style="list-style-type: none"> • This report has been published each year since 2014. • The current global efforts in adaptation planning, financing and implementation are insufficient to address the growing climate related risks. • According to researchers, if global warming is above 2°C, it could cause catastrophic climate crisis.
<p>State of food and Agriculture Report 2022</p>	<p>UN food and Agriculture organization</p>	<ul style="list-style-type: none"> • The report assessed various drivers of agricultural automation, including the recently developed digital technologies. • It provides comprehensive insights into the various issues related to the field of food and agriculture based on science-based assessment. • It covers topics that are important for rural and agricultural development as well as global food security.
<p>Dynamic Ground water Resource assessment 2022 Report</p>	<p>Ministry of JAL SHAKTI</p>	<ul style="list-style-type: none"> • The annual ground water extraction is 239.16 BCM, while the total annual groundwater recharge is 437.60 BCM. • According to the assesment, ground water recharge has increased. • The usage of irrigation accounts for around 87% of the total annual ground water extraction, or 208.49 bcm only 30.69 bcm, or roughly 13% of the total extraction, is for domestic and industrial usage. • 60.08% of the nation's ground water is currently being extracted. • In the states of Haryana, Punjab, Rajasthan, Dadra & Nagar.

<p>Municipal finances</p>	<p>Reserve Bank of India</p>	<ul style="list-style-type: none"> • The Report complies and analyses the budgetary data for 201 municipal corporations across all states. • Theme : The Report explores Alternative sources of financing for municipal corporations. • Municipal should adopt sound and transparent accounting practices with proper monitoring and documentation of various receipts and expenditure item. • In order to improve the buoyancy of Municipal revenue, the centre and the states may share one-sixth of their GST revenue with them.
<p>Global Carbon Budget</p>	<p>Global Carbon Project</p>	<ul style="list-style-type: none"> • The global carbon emissions, are expected to reach 40.6 billion tonnes of carbon dioxide into the atmosphere 2022. • This projection is close to the highest - ever annual total of 40.9 billion tonnes of CO₂ emitted in 2019. • If the current emission levels continue there is a 50% that the warming of 1.5°C exceed in the next 9 years. • The report estimates a decrease in the carbon emissions in 2022 in China (0.9%) and the EV (0.8%). However, there will be a 1.5% increase in the US and a 6% increase in India.

3. Committee

Purpose	Headed by	Content
<p>Higher education institutions</p>	<p>K. Radha Krishnan</p>	<p>The Ministry of education set up a committee.</p> <ul style="list-style-type: none"> • It is a 16 - member committee of the Union Government with a mandate to devise plan for setting up offshore campuses of Indian institutions. • The Action plan is divided into five parts. <ul style="list-style-type: none"> ○ Section of location and mentor higher education institutions ○ Selection of campus sites, and academic programmes ○ Recruitment of faculty and staff ○ Outreach ○ Mobilisation of the seed fund

4. Minutes : (News in Shorts)

A1 Qaeda sanctions Committee

- China has blocked a Joint move by India and United states to sanction Lashkar - e - Taiha (LeT) leader at United Nations Security Council, the fourth time since June this year.
- The move was proposed under the 1267-A1 Qaeda sanctions committee of the UNSC.
- This committee was formed in 1999 under the UNSC resolution 1267 to impose a limited air embargo and assets freeze on the Taliban.

Endosulfan :

- The Kerala Government has provided more clarity on expert treatment, special medical camps, and day-care centres for the victims of endosulfan.
- Endosulfan an organochlorine insecticide, is a persistent organic pollutant banned under the stockholm convention.
- In India it was used in Karnataka and Kerala to protect crops such cashew, rubber, coconut etc. from pests and mites.
- In 2011, the SC of India banned its manufacture, sale, use and export throughout India.

Section 10 (23c) of the Income Tax Act :

- Three Judge bench of the SC held that profit mined institu-

tions cannot claim exemption under section 10(23c) of the Income tax Act.

- Section 10(23c) of Act provides that the income earned by any university or educational institutions existing solely for educational purpose and not for the purpose of profit shall be exempt from tax.

Wolf warrior diplomacy :

- Wolf warrior diplomacy is a tactic used by Chinese diplomacy to defend China's national interest and ideology beyond China and also to counter west.
- From China's perspective wolf warrior diplomacy is a direct response to unfair approaches by other countries especially the US toward China and Chinese people.

China - Plus one strategy :

- China plus one is a strategy in which companies avoid investing only in China and diversify their business to alternative destinations.
- Companies started to think of alternative locations to invest because of the supply chain disruptions during the past year caused by the Pandemic and China's Zero - Covid policy.
- Countries such as India, Vietnam, Thailand and Malaysia

are seen as the alternative destinations.

Pillars of Creation :

- NASA's James Webb Space Telescope has captured the iconic POC where new stars are forming within dense clouds of Gas and dust.
- The three dimensional pillars are made up of cool interstellar gas and dust that appear at times semi transparent in near infrared light.
- The POC are located 6500 light years from earth, in the Eagle Nebula of our Milky Way galaxy.

Price stabilization fund :

- This fund was set up in 2014-15 under the department of Agriculture, cooperation and farmers welfare.
- In 2016, the PSF scheme was transferred to the department of consumer affairs from the department of Agriculture cooperation and farmers welfare.

The Scheme provides for :

- Maintaining a strategic buffer of commodities such as pulses, onion, potato for subsequent calibrated release.
- This would moderate price volatility.
- Discourage hoarding and speculation.

- It promotes direct purchase from farmers as sociation at farm gate/mandi.

Transit bail

- When a person is apprehending arrest by the police of a state other than where they are at present, they approach the nearest competent court for a transit anticipatory or pre-arrest bail.
- In such case, court does not have jurisdiction over the place where the case is registered or where crime has been alleged to have been committed.
- But since question of personal liberty is involved, this bail provides temporary protection from arrest and simultaneously get time to approach appropriate court.

National Real estate development Council (NAREDCO)

- NAREDCO has set up a finance committee to enable member developers to easily access funds from banks and financial institutions.
- It is an autonomous self regulatory body established in 1998, Under ministry of Housing and Urban Affairs.
- It act as premier real estate Government industry association of India.
- Union Minister for housing and urban affairs serves as chief patron of NAREDCO.
- It aims to provide Government, real estate industry and general

public a legitimate platform to address their concerns and find effective solutions for issues plaguing the real estate sector.

State Government cannot enter into broadcasting on their own :

- Ministry of Information and Broadcasting issued an advisory stating that.
- No ministry or department of Government at centre, states and UTs should enter into broadcasting or distribution of broadcasting activities in future.
- Those already broadcasting their content have been told to get it done through the public broadcaster, prasar Bharaticpb).
- PB is a statutory autonomous body established under PB Act.
- It held that I & B ministry is the nodal agency for all the related to broadcasting, Earlier TRAI has recommended the same.

Scorched Earth Tactics :

- Russia is being accused of using scorched earth tactics in ongoing was against Ukraine.
- Scorched earth tactics form part of a millitary starategy which seeks to destroy anything that could be of use to enemy including energy supplies, bridges, agricultural fields, road and railway links, etc.
- Russia has used missiles to destroy civillian infrastructure, including power and water supply lines.

- Strategy seeks to deplete the enemy's as well as its own resources to sustain warfare and also break their morale.
- Harming civilians as part of this strategy has been banned under the 1977 Geneva convention.
- In India, Maratha armies were known for their scorched earth tactics.

Sampurnanand Optical Telescope (SOT) :

- SOT located at ARIES, manora Peak, nainital (Uttarakhand) completed 50 years operations.
- Aryabhata research institute of observational sciences specializes in observational Astromomy & Astrophysics and Atmospheric sciences.
- **SOT's major instruments :** Cassegrain plate holder, meinel camera, photoelectric photometer, polarimeter etc.
- SOT has been used for optical observations of comets, occulation by planets and asteroids, star forming regions and star clusters, active galactic nuclei, etc.
- **Important discovery made :** detection of rings of uranus, detection and discovery of rings around Saturn, discovery of rings of Neptune, first of optical after glows of Gamma-ray-bussts (GRBS), micro-lensing event, discovery of quakes in various stars (under Nainital-cape survey program) etc.

Global methane pledge (GMP)

- Australia joined Global Methane Pledge.
- GMP was launched at cop 26 in 2021 to catalyse action to reduce methane emissions.
- It is led by United States and European union.
- It now has more than 100 country participants who together are responsible for 45% of global human caused methane emissions.
- Members commit to collectively reduce methane emissions by at least 30% below 2020 levels by 2030.
- India did not sign the pledge because of its concerns over the impact on trade, on the country's vast farm sector, and the role of livestock in the rural economy.

Sandal wood

- Sandal wood spike disease which hitherto was confined mainly to forest areas, has also started spreading to commercial fields.
- SSD is caused by phytoplasma and there is no cure as of now for it.
- Sandalwood is an evergreen tree.

Kashi Tamil Sangamam

- Ministry of education will organise Kashi Tamil Sangamam a month long programme to rediscover the centuries old bond of knowledge and ancient

civilisational linkage between Varanashi and TamilNadu.

- It aims to bring to light deep academic, economic, social and cultural relationships between Varanasi and TamilNadu.
- Indian Institute of Technology, Madras and Banaras hindu university will serve as knowledge partner for event.

Ayurveda day

- Dhanawantri Jayanti or Dhanteras has been celebrated as Ayurveda day since 2016 to propagate ayurveda practices and to put emphasis on using natural resources in living a healthy life style.
- Ayurveda is a traditional system of healthcare that focuses on prevention of disease and maintenance of health as well.
- It is based on biological mechanism of consciousness, mind, physiology, behaviour and environment.
- Theme of this year's Ayurveda day is "Har Din Har Ghar Ayurveda" with the motive to propagate benefits of Ayurveda to masses and grass root communities.

Provisions related design of rupee notes and coins :

- Any change in design of a currency note has to be approved by the RBI's Central Board and the central Government.
- RBI Act 1934, gives RBI the sole right to issue banknotes in India.

- The coinage Act 2011 gives the central Government the power to design and mint coins in various denominations.

Greenhouse Gas Bulletin

- It is an annual report of the UN's world meteorological organization (WMO).
- WMO is the specialised agency of the UN for meteorology (weather and climate) operational hydrology and related geophysical sciences.

Key findings of 2022 report :

- Atmospheric levels of the 3 main greenhouse gases warming our planet - CO₂, methane and nitrous oxide - all reached new records highs in 2021.
- This is the result of both biological and human induced processes.
- Emission will also increase by 10.6% by 2030 from 2010 levels.

Dirty bomb

- Russia has claimed that Ukraine is planning to use a dirty bomb.
- Dirty bomb is a bomb that contains radioactive material, such as Uranium, which is scattered through the air when its conventional explosive detonates.
- It doesn't need to contain highly refined radioactive material as is used in a nuclear bomb.
- Instead it uses radioactive materials from hospitals, nuclear power stations or research laboratories.

- This makes them much cheaper and quicker to make than nuclear weapons.

Semi confined unreinforced brick masonry (SC-URBM)

- It is new technology can resolve the problem of spread of settlements in earthquake prone areas with constructions that have been built without following earthquake - preventive building codes.
- It involves embedding of reinforced concrete bands through the partial thickness of the wall and can be retrofitted in old buildings.
- It can significantly enhance the energy dissipation capacity and ductility of the retrofitted building.
- It is important as major parts of India are under seismic zone III or above and most of the buildings are old and structurally deficient.

Neanderthals

- They are group of archaic humans who emerged at least 2,00,000 years ago during the Pleistocene Epoch.
- They were replaced or assimilated by early modern human populations between 35,000 and perhaps 24,000 years ago.
- Recently first known family of Neanderthals were found in Russian cave.

Glyphosate

- Government has restricted use

of glyphosate except for pest control operators.

About

- It is a non selective herbicide (It will kill most plants), used to clear all kind of weeds from agricultural fields.
- It prevents the plants from making certain proteins that are needed for plant growth.
- The major consumption is done in orchards and plantation crops.

Dance - Drama

- Ministry of Culture organized a Dance - drama titled "STREEDESH" based on the lives of 13 women who ruled Jammu and Kashmir.
- The dance drama showcased gender equality that has been in existence for long in the Indian society.

Darbuk - Shyok - Daulat Begoldie Road

- The 225 km road connects Leh to the Karakoram pass separating Ladakh from China's Xinjiang province.
- DS - DBO road provides connectivity to the India's northern most outpost of Daulat Beg Oldi.
- It has the world's highest airstrip originally built during the 1962 war but abandoned until 2008.
- The DSDBO highway provides the Indian military access to the section of the Tibet - Xinjiang highway that passes through

Aksaichin. The road runs almost parallel to the LAC at Aksai Chin

Just Energy Transition Partnership (JETP)

- The G7 countries have urged India to join the JETP.
- JETP was launched at COP 26 (at Glasgow) by France, Germany, UK, USA, and EU (the international partners group, or IPG) with South Africa to support phasing out of coal in South Africa.
- G7 seeks to launch similar partnerships with other nations such as India, Indonesia, Vietnam etc.
- It involves financing clean energy projects in these nations to reduce the dependence on coal.

NHAI InVIT non-convertible debenture

- National Highways Authority of India Infrastructure Trust's (NHAI InVIT) issues listed on the BSE stock exchange.
- It aims to raise Rs. 1500 crore NCDs offered to both retail and institutional investors.
- NCD is a debt instrument used by a company to raise money from the public.
- An infrastructure investment trust is like a mutual fund, which enables direct investment of small amounts of money from possible individual / institutional investors in infrastructure to earn a small portion of the income as return.

The investor Education and protection fund Authority

- It was established by GOI in 2016 under the aegis of the ministry of corporate affairs.
- The IEPFA Authority is entrusted with the responsibility of
 - Administration of the Investor Education protection fund.
 - Making refunds of shares, unclaimed dividends, matured deposits / debentures etc to investors.
 - Promoting awareness among investors, and protecting the interests of the investors.

Kalanamak rice

- Indian Agriculture Research Institute has successfully developed two dwarf varieties of Kalanamak rice named as
 - Pusa Narendra Kalanamak 1638 and Pusa Narendra Kalanamak 1652.
 - These varieties resolve the issue of lodging.

About Kalanamak rice

- Also known as Buddha rice, Kalanamak is a scented, one of the finest and ghost grain rice with an unusual black husk.
- Rice in micronutrient such as iron and zinc and can help prevent Alzheimer's.
- Awarded GI tag in 2013.

Deinococcus radio durans

- Researchers have discovered that the Deinococcus radio

durans microbe could survive under the surface of mars for 280 million year.

About

- One of the world's toughest microbes, capable of surviving in radiation strong enough to kill any other known life form.
- Has ability to withstand extreme dryness, UV light, acidic conditions etc.
- Known as an obligate aerobic chemoorganoheterotroph (i.e) it uses oxygen to get its energy from compounds containing organic material.

Sickle cell Anaemia

- Researchers of Indian Institute of Science and Bengaluru have designed a low - cost method of detect sickle cell anaemia.

About

- Occurs due to a genetic mutation that causes haemoglobin in red blood cells to clump together.
- Affects the shape of RBCs, RBCs are usually round and flexible so they move easily through blood vessels.
- In sickle cell anaemia, some RBCs are shaped like sickles or crescent moons.
- They become rigid and sticky, which can slow or block blood flow.

Curcumin

- Researchers validate immunity boosting ability of curcumin

compound against mastitis in cattle.

- Mastitis is a disease which cause severe inflammation of the mammary gland and udder tissue of dairy cattle.

About Curcumin

- It is a pigment isolated from plant curcuma longa, commonly known as turmeric, with a variety of pharmacologic properties.
- Turmeric is a rhizomatous herbaceous perennial plant of the ginger family.
- It is a potent antioxidant agent and free radical scavenger.
- Possesses anti - inflammatory properties.

Black Sea Grain Initiative (BSGI)

- Global wheat prices have risen following Russia's withdrawal from Black sea Grain initiative.
- BSGI was launched by Russia, Turkey, Ukraine, and United Nations, to reintroduce Vital food and fertilizer exports from Ukraine to the rest of world.
- Following Russia - Ukraine conflict, huge stock of grains built up in silos, with ships unable to secure safe passage to and from Ukrainian ports.
- Aim is to contribute to prevention of global hunger, to reduce and address global food insecurity, and to ensure safety of merchant ships delivering grain and foodstuffs.

SC stops use of invasive rape test

- Terming two-finger test as unscientific and re-victimisation, SC stated that anybody who conducts the test on rape survivors would be guilty of misconduct.
- Also referred to as a virginity test, two-finger refers to an inspection of the female genitalia to determine whether a girl or woman has had vaginal intercourse.
- SC in 2013, ruled that two-finger test on rape victim violates her right to privacy and stated that test has no scientific basis and neither proves nor disproves allegations of rape.

Gangetic River Dolphin

- Dolphins have started coming back to Ganga river with improvement in the quality of its water through Namami Gange programme.

About

- It is India's national aquatic animal.
- Found in India, Bangladesh, and Nepal.
- Endangered, schedule I animal under wildlife (protection) Act, 1972.

National Indicator Framework (NIF)

- Ministry of Statistics and programme implementation has developed NIF as the backbone for facilitating monitoring of SDGs at the national level.

- It consists of several indicators along with identified data source and periodicity and provides appropriate direction to the policy makers and implementing agencies.
- It is in sync, with the Global indicator framework adopted by the UNGA in 2017.

Rampur tiger Reserve

- Rampur tiger Reserve in UP has become the 53rd tiger reserve of India.

Breathe life Campaign

- It is a global campaign that mobilizes cities and individuals to take action to bring air pollution to safe levels by 2030 to protect our health and climate.
- It is led by WHO, UN Environment Programme (UNEP) and climate clean Air coalition.
- Several cities (Bengaluru, Bhubaneswar, Dehradun etc) from India are also its member.
- Strategies used by breathe-life include connect cities (to share best practices), increasing monitoring, accelerating solutions by building demands and empowering individuals.

Suspension bridges

- A suspension bridge collapsed in Morbi, Gujarat.
- Suspension bridge is a type of bridge in which the deck is hung below suspension cables on vertical suspenders.
- The main cables are suspended between the towers and are

connected to the anchorage or the bridge itself.

PLI scheme for Telecom and Networking products

- Ministry of communications granted approval to 42 companies under the scheme.
- To create a robust domestic value chain, union budget of FY 2022-23 announced designed PLI Scheme for telecom and Networking products.
- Scheme is open for Both MSMEs and non MSMEs including domestic and global companies.
- Scheme requires an investment threshold of Rs. 10 Crore for MSMEs and Rs. 100 Crore for non-MSMEs, excluding land and building cost.

Global climate observing system

- It regularly assesses the status of global climate observations of atmosphere, land and ocean and produces guidance for its improvement.
- It is co-sponsored by
 - World meteorological organization
 - Intergovernmental oceanographic commission of United Nations Educational, Scientific and cultural organization.
- United Nations Environment programme and International science council.

Invasive species

- *Senna spectabilis*, an exotic tree, has taken over the buffer

zones of the Mudumalai Tiger Reserve.(Tamil Nadu)

- An invasive species is an organism that causes ecological or economic harm in a new environment where it is not native.

Acelofenac

- Indian Veterinary Research Institute has demanded a ban on using aceclofenac in cattle.
- Aceclofenac is a veterinary pain killer.
- This is because study showed that aceclofenac metabolised into diclofenac in water buffaloes and cows which eventually threatens vulture populations in the country.

New asteroid 2022 APT discovered

- Astronomers discovered new PHA named 2022 AP7.
- It is the largest object that is potentially hazardous to Earth to be discovered in the last eight years.
- It is 1.5 kilometer wide. Any asteroid over 1km in size is considered a planet killer.

International counter Ransomware initiative :

- In the face of enhanced ransomware attacks globally, CRI has decided to deepen its institutional collaboration.
- CRI is a grouping of 36 countries and European union that aims to disrupt ransomware attacks and strengthen Inter-

national cybersecurity agenda.

- In the recent summit CRI also decided to establish an international counter Ransomware Task force to coordinate resilience, disruption, and counter illicit finance activities.

Civil Air Navigation Services Organization (CANSO)

- CANSO Asia Pacific conference was inaugurated in Goa.
- CANSO is the global voice of air traffic management industry, its members support over 90% of the world's air traffic.
- CANSO has five regions which support members. Africa, Asia Pacific, Europe, Latin America and Caribbean and Middle East.
- Organisation looks on global Air Traffic management performance by connecting the industry to share knowledge, expertise and innovation.

Pig iron

- Russia has emerged as the biggest exporter of Pig iron to India for April - September period of FY23.
- Pig iron, also known as crude iron, is produced by smelting iron ore or ilmenite.
- Pig iron has a very high carbon content along with silica, manganese sulphur, Phosphorous, Titanium and other trace elements.

Steel Slag

- Processed steel slag railway track was flagged off to Bor-

der Road Organizations (BRO) 'Project Arunank' in Itanagar, Arunachal Pradesh.

- It is a joint initiative of CSIR - Central Road Research Institute, TATA steel and BRO.
- Steel Slag is a by-product of steel making produced during the separation of the molten steel from impurities in steel-making furnaces.

Child welfare police officer

- The Ministry of Home Affairs has asked the states / UTs to appoint a CWPO in every police station to exclusively deal with children, either as victims or perpetrators.
- The Juvenile Justice (Care and Protection of Children) Act 2015, calls for designating at least one officer not below the rank of an Assistant Sub-Inspector, CWPO in every police station.
- The Act has provisions for children alleged and found to be in conflict with law and children in need of care and protection.

Cordy gold nanoparticles :

- It has been developed to make drug delivery in the human body faster and surer.
- These nanoparticles have been derived from the synthesis of the extracts of cordyceps militaris (a high value parasitic fungus) and gold salts.
- It is the outcome of a collaborative experiment by scientists from four Indian institutions.

RISAT - 2 satellite :

- ISRO's RISAT satellite, has made an uncontrolled re-entry into the earth atmosphere.
- RISAT is a radar - imaging satellite which was part of RISAT Programme of ISRO.

Shyama Prasad Mukheriji Rurban Mission (SPMRM)

- Aibawk cluster in the Aizwal district of mizoram has become the first cluster to be completed under the SPMRM.
- SPMRM was launched in 2016 to develop rural areas by provisioning of economic, social and physical infrastructure facilities.
- A Rurban cluster is a cluster of geographically contiguous villages with a population of about 25000 to 50000 in plain and coastal areas and with a population of 5000 to 15000 in desert, hilly or tribal areas.
- The mission aims at development of 300 Rurban clusters.

Doctors without Borders (Medicines Sans Frontiers or MSF)

- MSF has warned that proposals on intellectual property rights in draft India - UK Free Trade Agreement (FTA) can hurt global supply of generic medicines.
- MSF is an international, independent medical humanitarian organisation that provide medical assistance to people affected by conflict, epidemics,

disasters, or exclusion from healthcare.

- It was founded in 1971 in Paris.
- It was awarded Nobel Peace Prize in 1999 for its humanitarian work on several continents.

Antiquities and Art Treasures Act (AATA), 1972 :

- Delhi high court rejected a petition claiming philatelic material around 100 years and older is not an antiquity under the AATA.
- This Act regulates the export trade in antiquities and art treasures, to prevent smuggling of and fraudulent dealings in antiquities.

Anthropological Survey of India (AnSI)

- AnSI has built tribal hut replicas to promote unique heritage.
- AnSI is a premier institute for anthropological in bio-cultural studies.
- It is the only institute of its kind anywhere in the world to pursue Anthropological in a Governmental setup.

Apis Karinjodian

- Indian black honeybee has been discovered in the Western Ghats.
- Indian black honeybee has ability to produce higher quantities of honey which is thicker in consistency.
- The new find has increased the species of honeybees in the world to 11.

International drought Resilience Alliance :

- Spain and senegal led 30 countries and 20 organisation to launch IDRA at COP 27 to UNFCCC.
- India is not a part of IDRA.
- Alliance will function as a collaborative platform that catalyzes political momentum and mobilizes resources for targeted actions to enhance drought resilience.
- Droughts have increased in frequency by 29% since 2000, with around 55 million people affected every year.
- Alliance will also collaborate with other platforms like WMO to achieve universal coverage of early warning systems.

Mother Tongue survey of India (MTSI)

- Ministry of home affairs recently completed MTSI.
- MTSI surveys the mother tongues, which are returned consistently across two and more census decades and analyses their linguistic features.
- As per analysis of 2011 linguistic census data. More than 19500 languages or dialects are spoken in India as mother tongue.

Prarambh (the beginning) mission

- Prarambh is maiden mission of Hyderabad based space startup "Skyroot Aerospace" that is set

for launch from ISRO's launch pad at Sriharikota.

- With this mission, skyroot aerospace is set to become the first private space company in India to launch a rocket (named Vikram - S rocket) into space.

Submersible Platform for Acoustic Characterization & Evaluation (SPACE)

- It is a state of the art testing and evaluation facility (launched by DRDO) for sonar systems developed for used by Indian Navy.
- Sonar (sound navigation and Ranging) is helpful for exploring and mapping ocean because sound waves travel farther in water than do radar and light waves.
- SPACE is one of a kind facility in the world with specially designed submersible platform, which can be lowered up to depths of 100 meters.

Lab grown blood

- In first such clinical experiment ever conducted, researchers in UK have infused blood that has been in a laboratory into human subjects.

How?

- Process starts with a normal donation of a pint of blood (around 470ml).
- Magnetic beads are used to fish out flexible stem cells that are capable of becoming a red blood cell.
- These stem cells are encour-

aged to grow in large numbers in the labs.

- And are then guided to become red blood cells.

Significance

- To manufacture vital, but ultra-rare, blood groups, for people who depend on regular blood transfusions etc.

Blood moon

- Blood Moon was witnessed in parts of India.
- Blood Moon commonly known as total lunar eclipse, occurs when Moon passes through darkest part of earth's shadow, known as the Umbra.
- It is called blood Moon because of reddish hue.

Electoral Bond Scheme (EBS)

- EBS amended to allow sale for additional 15 days in year of general elections to assembly of states and UTs with legislature.
- The bonds are usually made available for a period of 10 days each in the months of January, April, July and October.
- EBS introduced in 2018, are interest free bearer instruments used to donate money anonymously to political parties.
- They can be purchased by a citizen of India (or) entities incorporated or established in India.
- State Bank of India is only bank authorised to sell them.

Transport 4 all challenge stage - 2

- The 'Transport 4 All' Challenge is an initiative of ministry of housing and urban affairs.
- It aims at enhancing the mobility experience of citizens and focuses on digital innovation to improve mobility needs of all citizens.
- It is organised in partnership with institute for Transportation and development policy and World Bank, Startup India etc.

Extradition

- UK high court allowed Nirav Modi's extradition to India.
- India - UK Extradition treaty was signed in 1992.

About :

- India SC defined extradition as delivery on part of one state to another of those whom it is desired to deal with for crimes of which do they have been accused or convicted and are Justifiable in courts of other state.
- MEA is central authority that handles all extradition requests.
- Extradition act 1962 Governs extradition of a fugitive from India to a foreign country, or Vice Versa.

Atal New India Challenge

- Atal innovation mission has launched women centric challenges under its ANIC program to address the major issues faced by women from all spheres of life.

ANIC is a flagship program of AIM, NITI Aayog

- It aims to seek, select, support and nurture technology - based innovations that solve sectoral challenges of national importance and societal relevance.
- It provides funds up to crore through a grant based mechanism and open for :
 - Any Indian company incorporated under companies Act.
- Any company registered as a start - up, recognized by department for promotion of industry and Internal Trade.

Indian Biological Data Center

- Ministry of Science and Technology launched India's first national repository for life science data IBDC at faridabad.
- IBDC is mandated to archive all life science data generated from publicly funded research in India.

9th schedule of the Constitution

- Jharkhand Assembly cleared a bill to increase reservation in vacant Government posts and services to 77%.
- However, Government stated that it will come into force only after centre include it in 9th Schedule.
- 9th Schedule was added by the 1st Amendment (1951) to protect the laws included in it from Judicial scrutiny on the ground of violation of funda-

mental rights.

- However in IR Coelho Vs state of TamilNadu case, SC ruled that laws cannot escape the basic structure test if inserted into 9th schedule after 1973.

Art 142

- Rajiv Gandhi assassination case convicted set free.
- SC in exercise of its Jurisdiction may pass such decree or make such order as is necessary for doing complete Justice in any cause or matter pending before it.
- Any decree so passed or order so made shall be enforceable throughout the territory of India in such manner as may be prescribed.

MARS (Methane Alert and Response System)

- MARS launched at COP 27, is new satellite - based system that will alert Government, companies and operators about large methane sources to foster rapid mitigation action.
- Methane released by human activities is responsible for around 25% anthropogenic climate change.
- It will scale up global efforts to detect and act on major emissions sources in a transparent manner and accelerate implementation of the global methane pledge.
- MARS is setup as part of the UNEP International methane emissions observatory strategy.

- IMEO aims to catalyse reduction of methane emissions, starting with fossil fuel sector.

Competition Act 2002

- Amendments were proposed to Competition Act 2002 to reduce the time limit for approval of combinations to 150 days from the current 210 days.
- Generally mergers and acquisitions are referred to as combinations in Competition Act Parable.
- Competition Act 2002, was enacted to promote and sustain competition in markets, protect the interest of consumers and ensure freedom of trade for market participants.

Cauvery South Wildlife Sanctuary

- Tamil Nadu Government has notified the Sanctuary as state's 17th wildlife sanctuary.
- It was notified under wildlife (protection) Act 1972.
- It will connect cauvery North wildlife sanctuary of TamilNadu with Cauvery wildlife Sanctuary in neighbouring Karnataka.
- It is an important elephant habitat comprising of two elephant corridors.
- Sanctuary is declared for protecting, propagating or developing wildlife or its environment. Certain rights of people living inside the Sanctuary could be permitted.
- It can be declared by both centre and state.

Marwari horses

- For the first time, Marwari horses have been exported from Jodhpur to Bangladesh.
- Marwari is the original desert horse breed of marwar Region of Rajasthan.

Jaga mission

- Tata steel foundation partnered with Odisha State Government to implement Jaga mission.
- It is a unique land titling project of Government of Odisha to assign land rights to eligible residents and upgrade the physical infrastructure with roads, drains, streetlights, sanitation and clean water supply.
- It aims at transforming slums into liveable habitat.

Superabrasive tools

- An IIT Madras team developed a new technology that can produce a new generation of superabrasive tools for advanced grinding applications.
- Superabrasive are a class of tools used in precision grinding for many industries.
- Team used advanced chemical bonding technology to meet high productivity and energy efficient material removal requirements of such tools.

District Judges

- Chief Justice of India said that district Judges aren't subordinates, they belong to district judiciary.

About

- Highest judicial authority in district
- Possesses original and appellate jurisdiction in both civil as well as criminal matters.
- Appointment, posting and promotion are made by Governor of state in consultation with high court for appointment.

DRR Dhan 60

- Scientists at Indian institute of Rice Research have developed paddy varieties that require atleast 30% lower phosphorous.

About

- It is first rice variety in country with low phosphorous tolerance for any crop.
- DPR Dhan 66, DRR Dhan 65, and WGL - 1487 are the other varieties which offer same benefits.

Leadership Group for industry transition (Lead IT)

- Lead IT summit was hosted on the side - lines of COP 27.
- Lead IT gathers countries and companies that are committed to action to achieve the paris agreement.
- Lead IT members consider that energy - intensive industry can and must progress on low - carbon pathways, aiming to achieve net zero carbon emissions.

AWARe

- AWARe initiative was launched at COP 27, to address water related challenges and solutions across climate change adaptation.
- It will have an Africa - first focus.
- AWARe will address water security as part of climate change adaptation and will focus on three priorities.
- Decrease water losses worldwide and improve water supply.
- Promote mutually agreed, cooperative water adaptation action.
- Promote cooperation and interlinkages between water and climate action.
- It is a collaboration between various stakeholders including african union and world meteorological organization.

UK India Young Professional Scheme

- It was announced recently by United Kingdom Prime Minister.
- Under the scheme, UK will offer 3,000 places to 18-30 years old degree holding Indian nationals to live and work in the UK for up to two years.
- This scheme will commence in early 2023 and be on a reciprocal basis.

Additive manufacturing or 3D printing

- Indian army will conduct modu-

lar 3D printed next generation bunkers to provide better protection in front-line soldiers.

- AM uses computer - aided designing to make prototypes or working models of objects by laying down successive layers of materials such as plastic, resin, thermoplastic, metal, fiber or ceramic.

Language in higher Judiciary

- Article 348(1) of the constitution provides that all proceeding in the SC and in every HC shall be in the English language until Parliament by law otherwise provides.
- No law has been made in this regard by the Parliament so far.
- Article 348(2) provides that Governor of the state may with the previous consent of the President, authorize the use of the hindi language or any other language used for any official purpose of the state, in the proceedings of the highcourt.

Kashi Tamil Sangamam

- It is being organized in Varanasi by GOI as part of Azadi Ka Amrit Mahotsav and to uphold spirit of Ek Bharat Shreshtha Bharat.
- Objective is to rediscover, real firm and celebrate the age-old links between Tamil Nadu and Kashi.
- Both are also connected by Shiva temples, like Kasi Viswanathar temple in Tenkasi (Tamil Nadu)

- It was built by parakrama pandyan in Dravidian style, for devotees who could not visit Kashi.
- Tenkasi is known as Kasi of south.
- The near by river chittar is considered equivalent to Ganga.

Toilets 2.0 Campaign

- Launched by Swachh Bharat mission - Urban 2.0 ministry of housing & urban affairs.
- It aims to change face of public and community toilets in urban India through collective action involving citizens and urban local bodies.

Kameng hydro power station

- Ministry of power has built a 600MW Kameng hydropower station in Arunachal Pradesh.
- It has been built by NEEPCo Ltd a mini patna power PSU.

Donyi polo Airport Itanagar

- It is Arunachal Pradesh's first greenfield airport.
- The name of airport reflects age - old indigenous reverence for sun (Donyi) and moon (polo).

Kati Bihu

- The Kati Bihu is an auspicious festival of Assam which is a harvest festival. It is celebrated on 18th October 2022 and the day is marked on the first day of Kati month according to the Assamese calendar.
- The Kati Bihu is one of the harvest festivals of Assam and the

other two mark the key dates in the harvest.

- Kati means cutting and it signifies the time of the year when the granaries are usually empty and there is not much to eat at this time of the year.

SARANG - The festival of India in Republic of Korea

- Starting in 2015, SARANG has emerged as a prominent Indian cultural festival, introducing India's colorful and diverse heritage and has since then, grown in size, scale and popularity promoting India's soft power in its truest sense and contributing to its rich civilizational legacy and cultural vibrantly.
- The word SARANG has a very meaningful Interpretation of both Koreans and Indians. SARANG in Korean means 'Love' and for Indians it refers to 'diversity representing different colors of India'.

Raja Raja Chola's birth anniversary

- The TamilNadu Government issued a statement saying Raja Raja Chola's birth anniversary, on November 3, would be celebrated as a Government event from this year onwards.
- Also, the Raja Raja Chola's memorial will be renovated and embellished soon.
- His birth anniversary is already celebrated as Sadhaya Vizha by several organisations in Thanjavur district.

முதன்மைத் தேர்வுக்கான உத்தி

1. முதன்மைத் தேர்வுக்குப் படிப்பதற்கு முறையானத் திட்டத்தை வகுத்து அதை முழுமையாகப் பின்பற்ற வேண்டும்.
2. நாட்டு நடப்புகள் குறித்த விவரங்களை தினமும் தயார் செய்ய வேண்டும். புதிய தகவல்களைத் தொடர்ந்து தெரிந்து கொள்ள வேண்டும்.
3. தேர்வுக்குத் தயாராவதில் உறுதியாக இருக்க வேண்டும்.
4. ஒவ்வொரு பாடத்திற்கும் ஒதுக்கப்பட்டுள்ள மதிப்பெண்களைக் கருத்தில் கொண்டு அனைத்துப் பாடங்களுக்கும் தயாராவதற்கு போதிய நேரத்தை ஒதுக்க வேண்டும்.
5. தேர்வுக்குத் தயாராவது அலுப்பூட்டும் வகையில் இல்லாமல் இருப்பதை உறுதி செய்யும் வகையில் கால அட்டவணை தயாரிக்கப்பட வேண்டும்.
6. திருப்புதலின் போது நேரத்தை மிச்சப்படுத்துவதற்காக, முதல் முறை அல்லது இரண்டாவது முறை பயிலும் போது முக்கிய அம்சங்களை அடிக்கோடிட்டு வைத்திருக்க வேண்டும் / முன்னிலைப்படுத்த வேண்டும். நாம் முதன்முறை படிப்பதன் நோக்கம் தேவையற்ற விசயங்களை விலக்கி, நாம் படிக்க வேண்டிய பாடங்களின் அளவைப் பாதியாகக் குறைப்பதுதான். இரண்டாவது முறை பயிலும் போது, நாம் படிக்க வேண்டிய பகுதிகளை, தேர்வுக்கு முன் உள்ள இரண்டு நாட்களில் திருப்புதல் செய்யும் வகையில், மேலும் குறைக்க வேண்டும்.
7. முந்தைய ஆண்டு வினாத்தாள்களின் அடிப்படையில் விடைகளை எழுதிப் பயிற்சி செய்ய வேண்டும்.
8. தேர்வை எதிர்கொள்வதற்கு ஒரு விண்ணப்பதாரர் எந்த அளவுக்குத் தயாராகியிருக்கிறார் என்பதைப் புரிந்துகொள்வதற்காக அடிக்கடி மாதிரித் தேர்வுகளை எதிர்கொள்ள வேண்டும்.
9. பயிற்சியே ஒருவனை முழுமையாக்குகிறது என்பதே முதன்மைத் தேர்வுக்கான மந்திரமாக இருக்க வேண்டும்.
10. எந்தவொரு பாடத்திற்குமான பயிற்சியில் சேரும் தேர்வர்கள், அதற்கான மாதிரித் தேர்வுகளில் முழு ஈடுபாட்டுடன் பங்கேற்க வேண்டும். முதன்மைத் தேர்வுக்கும், முதல்நிலைத் தேர்வுகளுக்கும் இடையிலான முக்கியமான வேறுபாடு என்னவென்றால், முதல்நிலை தேர்வுக்கான மாதிரித் தேர்வுகளை மூன்றாவது நபரின் துணை இல்லாமல் ஆன்லைனிலோ, ஆஃப்லைனிலோ தனித்தே எழுதலாம். ஆனால் முதன்மைத் தேர்வைப் பொறுத்தவரை மூன்றாவது நபரைக் கொண்டு மதிப்பீடு செய்வது மிகவும் அவசியமாகும். மதிப்பீடு செய்யும் மூன்றாவது நபர் ஒரு வல்லுநராகவோ, அல்லது சிறந்த ஒரு பயிற்சி நிறுவனமாகவோ இருக்கலாம்.
11. முதன்மைத் தேர்வு என்பது தேர்வர் அறிந்துள்ள தகவல்களையும் அவரது நினைவுத் திறனையும் மட்டுமே சோதிப்பதாக இல்லாமல், அவர்களின் புரிதலின் ஆழம், அறிவுசார் திறன்கள் ஆகியவற்றை மதிப்பிடுவதை நோக்கமாகக் கொண்டது ஆகும். பொதுபாடத் தாள்களில் அனைத்து வினாக்களுக்கும் விடை அளிக்க வேண்டும். வினாக்களின் தன்மை ஒவ்வொரு தாள்க்கும் மாறுபடும். ஆனால், அதிக வினாக்கள் இருக்கும் என்பதால் தேர்வர் விடைகளை வேகமாக எழுத வேண்டும். விடையளிக்க வேண்டிய வார்த்தைகளின் வரம்பும் அதிகமாக இருக்கக் கூடும்.
12. முதன்மைத் தேர்வைப் பொறுத்தவரை, வார்த்தைகளின் எண்ணிக்கையை கவனத்தில் கொள்ளப்பட வேண்டிய மிக முக்கியமான அம்சமாகும்.
13. முதன்மைத் தேர்வுகளை எழுதுவதற்கான அணுகுமுறையில் தேர்வர்கள் மிகவும் தெளிவாக இருக்க வேண்டும். தேர்வு அறையில், வினாத்தாளைப் பெற்ற பிறகு, விடைகளை வேகமாக எழுத வேண்டி இருக்கும் என்பதால், சிந்திப்பதற்கு நேரம் இருக்காது. எனவே, வினாக்களை புத்திசாலித்தனமாகத் தேர்வு செய்து விடை அளிக்க வேண்டும்.
14. வினாக்களில் தரப்பட்டுள்ள கருத்துரை கொடு, கருத்து தெரிவி, விரிவாகச் சொல், காட்சிப்படுத்து, தெளிவுப்படுத்து போன்ற வார்த்தைகளின் பொருளைப் புரிந்துகொண்டு, அதற்கேற்ற வகையில் உங்கள் எழுத்துத் திறனை வெளிப்படுத்த வேண்டும்.



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