

UPSC COACHING THAT GIVES YOU UNIVERSITY DEGREE



TATHASTU

Institute of Civil Services



CURRENT AFFAIRS January Month 2023

Table of Contents

<u>Editorials of the Month</u>	
1.	Uniform Civil Code
2.	Startup20 and the potential for Change
3.	There is hardly any autonomy at Pachayat level
4.	Indian Cinema's soft power
5.	Police Reforms
6.	Judging a Decade of the POSCO Act
7.	Inter-state water disputes

<u>GENERAL STUDIES - 1</u>	
<u>HISTORY & CULTURE</u>	
1.	Savitri Bai Phule
2.	Parasnath and Shatrunjaya Hill
3.	50 ASI-protected monuments disappear
4.	Gujarat's Harappan Necropolis
5.	Assam's Charaideo Moidams
6.	Remembering the Param Virs
7.	Netaji Subhash Chandra Bose
<u>SOCIETY</u>	
1.	17th Pravasi Bharatiya Diwas
2.	Indian Diaspora
3.	Kerala announces Menstrual leave
<u>GEOGRAPHY</u>	
1.	Heat Dome
2.	Why is Joshimath sinking?
3.	Ozone Hole, filling up now
4.	Deep-Water Circulations
5.	Indus Water Treaty

<u>GENERAL STUDIES - 2</u>	
<u>POLITY & GOVERNANCE</u>	
1.	Remote Electronic Voting Machines
2.	Report Card on RTI Responsiveness
3.	Online Gaming: What do MeitY's draft rules say?
4.	Mahadayi Water sharing Dispute
5.	Supreme Court expands Article 19 ambit
6.	Aspirational Block Programme
7.	Census exercise delayed yet again
8.	Delegated Legislation
9.	SC dismisses PIL challenging UCC
10.	6th Schedule of Indian Constitution
11.	Basic Structure Doctrine
12.	Law Minister's suggestion to CJI on MOP
13.	National Commission for Women
14.	India's Football 'Vision 2047'
15.	Chargesheet

16.	Freedom of Speech of Ministers
<u>SOCIAL JUSTICE</u>	
1.	Internationalization of Higher Education
2.	ASER 2022
3.	National Exit Test
4.	NCPCR draft guidelines for assessing minors
5.	Global Report on Child Mortality and Stillbirths
6.	UN World Social Report 2023
7.	Acute Malnutrition risking 30 million children's lives: WHO
8.	Social Progress Index
9.	Women in Command Roles
<u>INTERNATIONAL RELATIONS</u>	
1.	Zelenskiy's 10-point peace plan
2.	Cyprus-India ink 3 agreements
3.	Voice of Global South Summit
4.	India-Maldives Relations
5.	India-Sri Lanka Relations
6.	India's Egypt Opportunity
7.	36th India-France Strategic Dialogue

<u>GENERAL STUDIES - 3</u>	
<u>ECONOMY</u>	
1.	Why the Indian Rupee fell 10% against US Dollar in 2022?
2.	Crypto Awareness Campaign
3.	Sweet Revolution in India
4.	Sovereign Green Bonds
5.	New Industrial Policy
6.	State Finances: A study of Budgets of 2022-23
7.	Demonetisation
8.	Key Takeaways from WEF's Davos Event 2023
9.	Additional Tier-I Bonds
10.	Nuts and Bolts of Union Budget
11.	OXFAM inequality report
<u>SCIENCE & TECHNOLOGY</u>	
1.	5 space missions in 2023
2.	Deep-Fake Technology
3.	National Geospatial Policy 2022
4.	India Science Congress
5.	National Green Hydrogen Mission
6.	Liquefied Natural Gas
7.	Cancer in India
8.	Solitary Waves in Mars
9.	Exoplanet - LHS 475b
10.	Gonorrhoea

11.	Norovirus
12.	Measles and Rubella (MR)
13.	Trans-Fatty Acids (TFA)
14.	Indian Railways AI-based Project
15.	Neuromorphic Computing
ENVIRONMENT & ECOLOGY	
1.	Rhinos in Assam
2.	Forest (conservation) Rules, 2022
3.	Global Risk Report 2023
4.	Eco-Sensitive Zones
5.	Global Glacier Change in 21st century
6.	Indian Star tortoise
7.	Risk of moving from Fossils to Clean Energy
8.	Kelp Forests
9.	M-Sand Project
10.	Inclusive Circular Economy
INTERNAL SECURITY & DISASTER MANAGEMENT	
1.	VSHORADS missile
2.	AK-203 Rifles

GENERAL STUDIES - 4	
1.	Generative AI
2.	Swami Vivekananda
3.	Passive Euthanasia norms eased
4.	Project Sweekruti
SHORT NEWS FOR PRELIMS	
1.	Project Nilgiri Tahr
2.	Prahar App
3.	Strait of Hormuz
4.	Schengen Area
5.	HEFA
6.	The Kotia Dispute
7.	Stay Safe Online and G20 Digital Innovation Alliance
8.	Virovore
9.	Vibrant Village Programme
10.	Abyei Area
11.	SAIME initiative
12.	BIND Scheme
13.	Kala-Azar
14.	Eat Right Station
15.	Goa's Purple Fest
16.	Sagol Kangjei
17.	Parshuram Kund Mela
18.	Vishwa Hindi Diwas
19.	Ganga Vilas
20.	Young Professionals Scheme
21.	Cold Wave
22.	Indian Skimmers
23.	Golden Globes 2023

24.	SPRINT scheme
25.	Corrosion resistant Nickel Alloy Coating
26.	Star Labeling
27.	Digital India Awards
28.	Generalized System of Preferences Status
29.	Center of Excellence in Online Gaming
30.	75th Army Day
31.	Doppler Weather Radar Network
32.	Thiruvalluvar day
33.	Village Defence Committees
34.	Siyom Bridge
35.	Greater Scaup
36.	Bhopal Declaration
37.	Fossilised Dinosaur eggs
38.	Painted Bat
39.	Spot Bellied Eagle Owl
40.	Nature Risk Profile
41.	PARAKH
42.	Education for Democracy
43.	SMART Program for Ayurveda
44.	K9 Vajra
45.	Prithvi II Missile
46.	Exercise Cyclone-I
47.	Hakku Patra
48.	BharOS
49.	Polycystic Ovarian Syndrome
50.	Immune Imprinting
51.	Monument Mitra Scheme
52.	Short Selling
53.	Yellow Band Disease
54.	Open Market Sale Scheme
55.	Ramcharitmanas
56.	National Voters Day
57.	Veer Guardian
58.	Bharat Parv
59.	World Economic Situation and Prospectus Report 2023

Editorials of the Month

Uniform Civil Code

News: The idea of a Uniform Civil Code has been debated in India for decades, and it has been a longstanding demand of some political and social reform movements.

- Recently, SC dismissed PIL challenging UCC committees in Gujarat, Uttarakhand.

What is Uniform Civil Code?

- The UCC calls for formulation of one law to be made applicable to all religious communities in matters such as **marriage, divorce, inheritance, and adoption**.
- The code comes under **Article 44** of the Constitution, which lays down that the state shall endeavor to secure a Uniform Civil Code for the citizens throughout the territory of India.
- It is a divisive issue in India, with proponents arguing that it would promote equality and secularism, and opponents arguing that it would interfere with religious freedoms and cultural practices.



Evolution of UCC in India:

- The idea of UCC was influenced by similar codes drafted in European countries during the 19th century and early 20th century.
- The BN Rau Committee (1941) was formed to codify Hindu law recommended a codified Hindu law, which would give equal rights to women.
- The Special Marriage Act, 1954, provides a form of civil marriage to any citizen irrespective of religion, thus permitting any Indian to have their marriage outside the realm of any specific religious personal law.
- In the Shah Bano Case (1985) the Supreme Court said that Parliament should outline the contours of a common civil code and MS Jordan Diengdeh v. SS Chopra (1985) the Supreme Court emphasized the urgency of implementing a uniform civil code.
- In the Sarla Mudgal Case (1995) the SC reiterated the need for Parliament to frame a Uniform Civil Code.

What are the arguments in favor of UCC in India?

- **Simplicity of Laws** - The code will simplify the complex laws around marriage ceremonies, inheritance, succession, adoptions making them one for all.
- **Promote Gender Equality** - All personal laws, regardless of religion, discriminate against women in one way or the other. For example, Christian women could not obtain divorce on grounds of Adultery committed by husband whereas Christian husbands could simply declare their wife's adulteresses and divorce them.

- **Uniformity and Consistency** – A UCC will ensure consistency in the application of the law, as it would apply equally to everyone. This would reduce the risk of discrimination or inconsistency in the application of the law.
- **Cater to aspirations of Youth** – As the world moves towards digital age, the social attitude and aspirations of the youth are being influenced by universal and global principles of equality, humanity, and modernity. The enactment of UCC will help maximize their potential in nation building.
- **Supported by different judicial pronouncements** - In Shah Bano case (1985), Supreme Court observed that the Parliament should outline the contours of a common civil code as it is an instrument that facilitates national harmony and equality before law. In the 1995 Sarla Mudgal Case, apex court reiterated the need for Parliament to frame a Uniform Civil Code, which would help the cause of national integration by removing ideological contradictions.
- Uniform Civil Code is likely to allow for the **modernization and reform of India's legal system** as it will provide an opportunity to update the laws with contemporary values and principles.

What are the arguments against UCC?

- **Politically sensitive issue** - The issue of UCC has been politicized in the light of continuous communalization of the issue. Political parties have used the issue for political gains which has prevented the issue from being discussed in a constructive manner.
- **Religious and Cultural Diversity** - India is a diverse country with a rich tapestry of religions, cultures, and traditions. A uniform civil code could be seen as a threat to this diversity, as it would require the abandonment of personal laws that are specific to particular religious or cultural communities.
- **Lack of uniformity** even in civil laws relating to non-religious matters - Indian laws do follow a uniform code in most civil matters – Indian Contract Act, Civil Procedure Code, Sale of Goods Act, Transfer of Property Act, Partnership Act, Evidence Act etc. States, however, have made hundreds of amendments and therefore in certain matters, there is diversity even under these civil laws.
- **Against Right to Freedom of Religion** - The right to freedom of religion is protected under the Indian Constitution (Article 25-28). Some argue that a uniform civil code would infringe on this right, as it would require individuals to follow laws that may not be in accordance with their religious beliefs and practices.
- **Law Commission Report (2018)** in a consultation paper held that UCC is neither necessary nor desirable at present. It suggested for the codification of all personal laws so that prejudices and stereotypes in every one of them would come to light and could be tested on the anvil of fundamental rights of the Constitution.

What should be the way forward?

- As there was no consensus on UCC, the Law commission (2018) had specifically underlined the need to eradicate discrimination. They stressed that adopting this approach some of the differences within personal laws which are meaningful can be preserved and inequality can be weeded out to the greatest extent possible without absolute uniformity.
- Given that enactment of a UCC in one go may be counter-productive to unity and integrity of the nation, the goal of a UCC should ideally be reached in piecemeal manner, like the recent amendment on the age of marriage. This could also pave the way for internal reform and change within the religious dispensation.
- Since caste and religious believes are inseparable from the minds of the citizens, educating the individuals regarding the true nature and positive effects of UCC through media support and social media awareness is first step towards making consensus.

Startup20 and the potential for Change

Background:

- India's startup ecosystem has been on a rapid growth trajectory in recent years, with a strong focus on technology and e-commerce.
- The government, through initiatives such as "Startup India", has been actively promoting entrepreneurship and providing support to young companies.
- Private investment in startups has also been on the rise.
- However, challenges continue to persist and that need to be addressed.

What drives the Startup ecosystem in India?

- Our large domestic market is by far our biggest strength. We have large market for technology based products and services.
- The government of India has been actively promoting entrepreneurship through initiatives such as "Atma Nirbhar Bharat" and "Digital India," providing support to young companies.
- Private investment in startups has been on the rise in India, with a significant number of venture capital firms and angel investors actively funding and supporting early-stage companies.
- The e-commerce market in India has seen a significant growth in recent years, providing a ready market for startups in the e-commerce space.
- Advancements in technology and internet penetration have enabled startups to scale up quickly, leading to the rise of several unicorns in the ecosystem.
- The major startup hubs in India are Bengaluru, Mumbai, and Delhi-NCR, providing a conducive environment for startups to grow and thrive. Bengaluru, in particular, has been dubbed the "Silicon Valley of India" due to the large number of technology companies based in the city.

How does the Government aid in the startup success story?

- The organization of **National Start-up awards** recognizes and rewards outstanding start-ups.
- The **Start-up India Seed Fund Scheme** (SISFS) gives startup companies financial assistance for proving their concepts, developing prototypes, testing products, and entering the market.
- The recent initiative of **MAARG Portal** - Mentorship, Advisory, Assistance, Resilience and Growth, is a one stop platform to **facilitate mentorship** for startups across diverse sectors, functions, stages, geographies, and backgrounds.
- SCO Start-up Forum - Established in October 2020 as a means of developing and improving start-up ecosystems in SCO member states, the Shanghai Cooperation Organisation (SCO) Startup Forum is the first of its kind.
- National Initiative for Developing and Harnessing Innovations (NIDHI) - It is an end-to-end plan for start-ups to double the number of incubators and start-ups in the duration of five years.
- The Stand-up India scheme was launched to promote entrepreneurship at the grass-root level. It specifically encourages eligible SC/ST and or women entrepreneurs above 18 years of age with loans between Rs. 10 Lakh and Rs. 1 crore to setup greenfield enterprises.

What are challenges associated with Startup ecosystem?

- Many start-ups in India, especially at early stages, are bootstrapped, i.e., self-funded through the founders' own savings, since domestic financing is limited. Consequently, majority of start-ups in India fail within the first five years and the most common reason is – lack of formalised funding.
- Startups often lack access to experienced mentors and guidance, which can make it difficult for them to navigate the business landscape and make informed decisions.
- Startups in India often struggle to retain talented employees, as they can be lured away by larger, more established companies. Thus, startups are unable to compete with established companies.
- The laws and regulations are not always tailored to the needs of startups, which can make it difficult for them to comply. This can be a significant burden for early-stage companies.
- The lack of proper infrastructure and logistics can be a major challenge for startups, especially those operating in the e-commerce space. The inadequate transportation, warehousing and logistics infrastructure can make it difficult for startups to reach customers and deliver their products on time.

Way Forward:

- The government should work to simplify the regulatory environment for startups, facilitating for them to comply with laws and regulations.
- The government and private investors should work together to improve access to funding for early-stage companies.
- The government should invest in infrastructure and logistics, to improve the delivery of products and services.

- The government and private sector should encourage innovation by providing funding and support for research and development. R&D centres can be set-up, tax incentives can be given to companies that invest significantly in R&D.

There is hardly any autonomy at Panchayat level

News: Recently, an up-sarpanch in Telangana's committed suicide due to indebtedness. He had taken out a loan to undertake development works in the village and was unable to pay after the State government's inordinate delay in releasing bill payments.

What are the challenges faced by Panchayats?

- **Concerns over funding**
 - Gram panchayats remain fiscally dependent on grants from the State and the Centre for everyday activities. Broadly, panchayats have three main sources of funds — their own sources of revenue, grants in aid, and discretionary or scheme-based funds.
 - Their own sources of revenue constitute a tiny proportion of overall panchayat funds. In Telangana, less than a quarter of a panchayat's revenue comes from its own sources of revenue.
 - Further, access to discretionary grants for panchayats remains dependent on political and bureaucratic connections.
 - Even when higher levels of government allocate funds to local governments, sarpanchs need help in accessing them. An inordinate delay in transferring approved funds to panchayat accounts stalls local development.
- **Conditional Funding**
 - State governments often impose **spending limits** on various expenditures through panchayat funds. In almost all States, there is a system of double authorisation for spending panchayat funds. Apart from sarpanchs, disbursal of payments requires bureaucratic concurrence.
- **Interference in Daily administration**
 - State governments also bind local governments through the local bureaucracy. Approval for public works projects often requires technical approval from the engineering department and administrative approval from local officials of the rural development department.
 - Higher-level politicians and bureaucrats often intervene in selecting beneficiaries for government programmes and limiting the power of sarpanches further.
- **Limited role and influence of Sarpanch**
 - Sarpanchs need to have good relationships with politicians and local bureaucrats if they want access to discretionary resources, timely disbursement of funds.
 - The ability of sarpanches to exercise administrative control over local employees is also limited. In many States, the recruitment of local functionaries is conducted at the district or block level. Often the sarpanch does not even have the power to dismiss these local-level employees.
- **Uncertain tenure of Sarpanch**
 - Sarpanchs can be dismissed while in office. Gram Panchayat Acts in many States have empowered district-level bureaucrats, mostly district Collectors, to act against sarpanchs for official misconduct.
 - Across the country, there are regular instances of bureaucrats deciding to dismiss sarpanchs from office. In Telangana, more than 100 sarpanchs have been dismissed from office in recent years.

Way Forward:

- Sarpanchs need to have administrative or financial autonomy for meaningful decentralization. The situation in Telangana is a reminder for State governments to re-examine the provisions of their respective Gram Panchayat laws and consider greater devolution of funds, functions, and functionaries to local governments.

Indian Cinema's soft power

Background: This editorial talks about the untapped potential of Indian Cinema. You can use some of the content in your essay paper and GS-I paper.

How does Cinema influence in our daily life?

- It acts as the only **source of information** about other cultures, it acted as a powerful device to build a perception about “others” in the increasingly anxious globalising world.
- From the treatment at the hands of an immigration officer in a foreign airport to making friends at a university abroad, cinema has often unknowingly influenced how foreigners are treated in a host country.

From where did idea of soft power emerge?

- **Joseph Nye**, the noted political scientist, introduced the concept of “soft power” in his book **Bound to Lead: the Changing Nature of American Power**.
- The idea is not to force someone to do something you want him to do, but to make him want what you want him to do.
- Nye’s proposed soft power comes from culture, political values and foreign policies. If a country or its people are regarded or admired more than others, it carries a greater soft power.
- If culture is a crucial ingredient, and cinema a powerful vehicle for spreading awareness about a country’s culture, it in turn becomes a crucial tool for a country’s soft power.
- Scholars have noted the significant role Hollywood has played in helping the US win the ideological battle against communism during the Cold War, spreading American values like liberalism and free market. But America is not alone.
- Korean leaders in the 1990s decided to use their music to build cultural influence after the Asian financial crisis and poured millions of dollars into creating a Ministry of Culture. The result is today’s K-Pop.

How can India leverage Cinema for soft power potential?

- First, it is important to **go beyond Bollywood**. This year, regional cinema has grossed more than Pan-Indian Hindi cinema. This very fact punctures the Mumbai-centric imagination of Indian cinema.
- Second, OTT platforms have shown that **subtitling works**. Indian cinema producers need to tap newer markets by providing subtitled versions in all neighborhood languages. Passionate lovers of Indian movies and movie stars in former Soviet Union areas want Indian movies and TV serials but understandably subtitled in their mother tongues. **AI-assisted technologies** could be leveraged for this.
- Third, Indian film music should find its way into ordinary streets, restaurants and public spaces abroad. Airlines and hotels in India can promote Indian music as formally suggested by a group of Indian music maestros recently to the Civil Aviation Minister.
- Fourth, portrayals of the country need to be balanced **where deprivation is not exploited for business**. There is a need to challenge the deep-rooted colonial consciousness that often surfaces on movie screens, giving rise to what one may call “cinematic colonialism”. In **glorifying poverty and disregarding the ongoing efforts to overcome it**, we show the India that the West wants to see.
- Lastly, the **role of the government and official bodies in the film industry** is important. It would be a good idea to incentivize the production of a special category of movies, say, **movies promoting an understanding of Indian culture** (MPUIC). The Model Film Policy must focus on creating a framework for “ease of filming” in India.



Conclusion

- With the rise of internet-based content, we need to go beyond cinema. The world is changing rapidly and if culture is going to be a valued commodity, it is important to begin investing it constructively in nation-building through various channels of its export.

Police Reforms

News: A conference of the Directors General of Police of all the states and union territories was recently held in Delhi.

Background:

- It covered a wide range of subjects concerning national security. However, there is a serious lacuna. The agenda, year after year, reflects the security-related problems of the country at the macro level.
- But the grass roots problems are seldom taken up. The strength of a chain, as they say, is determined by its weakest link, and the weakest link today is the **police station**. It is in this context we will discuss about the need, issues and way forward as far as Police reforms in India are concerned.

What are Police Reforms?

- Firstly, Police comes under **state list** of **7th Schedule** of Indian Constitution.
- The police reforms aim to transform the values, culture and practices of Police organization.
- It also aims to improve how the police interact with other parts of the security sector, such as courts, executive departments or parliamentary authorities.

What are the issues associated with Police reforms?


- Even at present, the police are based on colonial laws like **Indian Police Act, 1861**. British used police as their instrument to suppress the voice of people and for their personal functions.
- There is also issue of **Politicization of Police force** where Police act according to the whimsies of their political leader.
- **The Model Police Act, 2006** drafted by Soli Sorabjee has not been enacted in letter and spirit across the nation.
- Leaving aside the model police stations and some in the metro cities, the average police station presents a dismal picture — dilapidated building, case property like motorcycles and cars littered all over the compound, no reception room, filthy lockup, ramshackle furniture, police registers kept in clumsy racks, and so on.
- The staff, overworked and fatigued, is generally unresponsive, if not rude. Resources are meagre.
- According to the **Status of Policing in India Report 2019**, police in India work at 77 per cent of their sanctioned strength and these personnel work for 14 hours a day on average. There are close to 5,00,000 plus vacancies of police personnel.
- **United Nations** recommended standard is **222 police per lakh** persons, while actual police strength in India is at around **137 police per lakh** persons.
- **Poor housing conditions** and long working hours have an adverse impact on police performance. The **National Police Commission** had recommended **100 percent family accommodation** for all non-gazetted police personnel. The satisfaction level today is hardly **31.24 percent**.
- State police forces are incapable to tackle internal security challenge. For example, J&K has been witnessing unrest for the last 30 years.
- People in general also do not have confidence in Police. This applies more to lower strata of society who believe that there is one law for the poor and another for the rich and powerful.
- Law and order problems are becoming more complex. Organized Crime has acquired international dimensions. Police in India are seen to be less trained and prepared to tackle issues of arms trafficking, drug trafficking and cyber-crime.

What are the initiatives taken by government?

- **SMART policing** - To encourage innovations and the use of modern technologies, SMART Policing has been introduced. It implies:
 - S – Sensitive and Strict
 - M – Modern and Mobility
 - A – Alert and Accountable
 - R – Responsive and Reliable
 - T – Tech-savvy and Trained
- **Model Police Act, 2016** – Emphasized the need to have professional police ‘service’ in a democratic society.

- **Crime and Criminal Tracking Network System** – Conceptualized by MHA, it aims to create comprehensive and integrated system for enhancing effectiveness and efficient policing at all levels.

SEVEN DIRECTIVES OF SUPREME COURT	
1	Constitute a State Security Commission
2	Fixed two-year tenure for DGP
3	Two-year term for SPs & SHOs
4	Separate Investigation and L&O functions
5	Set up Police Establishment Board
6	Set up Police Complaints Authorities at State & Dist levels
7	Set up National Security Commission at Centre level



What should be the way forward?

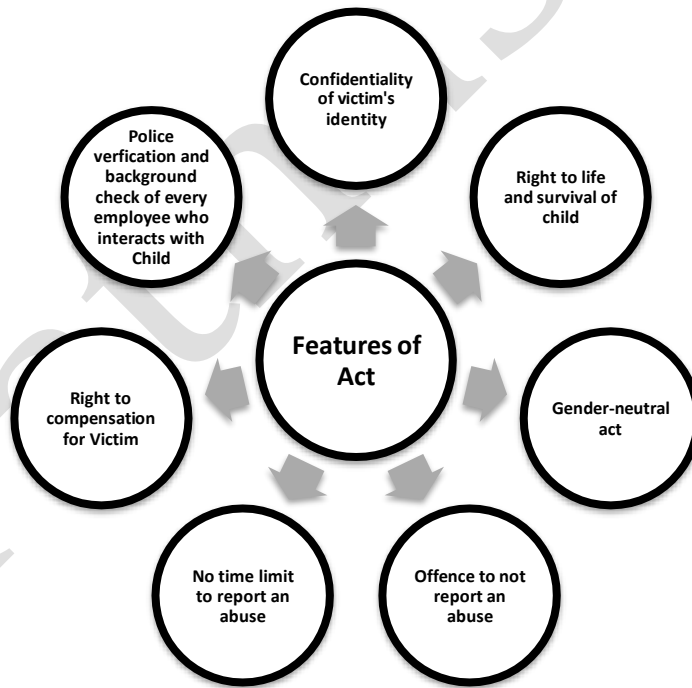
- There is a need for **adequate training** and firing practices to the police personnel on the latest weaponry which is being used by them.
- There is enormous scope for **technological inputs** into the functioning of the police. There is also need to upgrade the existing cyber cells.
- MHA has advised states/UT's to conduct police recruitment drive in mission mode. Also, appointment of Women in police should be done by creating additional posts for them.
- Implement Seven directives of Supreme Court in **Prakash Singh vs Union of India, 2006.**

Judging a Decade of the POSCO Act

News: Ten years have passed since the Protection of Children from Sexual Offences (POCSO) Act, 2012, enacted in consequence to India's ratification of the UN Convention on the Rights of the Child in 1992.

What is the POSCO Act?

- The **Union Ministry of Women and Child Development** led the introduction of the POCSO Act in 2012.
- The Act was designed to protect children from sexual assault, sexual harassment and pornography
- It provides for the establishment of **Special Courts** for the trial of such offenses.
- The Act was amended in 2019 for enhancing the punishments for specific offenses in order to deter abusers and ensure a dignified childhood.



What are issues with POSCO Act?

- Fewer women in Police Force – The POCSO Act provides for recording the statement of the affected child by a woman sub-inspector at the child's residence or place of choice. But it is practically impossible to comply with this provision due to inadequate women in police force.
- Large part of the investigation of offenses under the Act is still guided by the Code of Criminal Procedure (CrPC).
- Recording of the statement of the prosecutrix by a judicial magistrate - Judicial magistrates are neither called for cross-examination during trial nor are those who retract their statement punished.
- Though there is a provision to record statements using **audio-video means**, however, there are still reports of lapses in the investigation and preservation of crime scenes in some cases. In the **absence of proper infrastructure** to ensure the integrity of electronic evidence, the admissibility of evidence recorded using any audio-video means will always remain a challenge.
- Medical examination of the prosecutrix is conducted according to provisions of the CrPC - The medical examination of a girl child is conducted by a female doctor (as specified in the POCSO Act). There are instances where the banned two-finger test is still in use.
- The age determination of a juvenile delinquent is guided by the Juvenile Justice (Care and Protection of Children) Act. No such provision exists under the POCSO Act for juvenile victims.
- In absence of any change in the law or even specific directions the investigating officers (IOs) continue to rely on the date of birth recorded in school admission-withdrawal registers. In most cases, parents (in the absence of hospital or any other authentic records) are not able to defend in the court.
- Age estimation based on medical opinion is wide in scope that in most cases minors are proved to be major. The POCSO Act has made no difference in investigation when it comes to proving juvenility.
- As per the POCSO Act, the investigation of a case under the act is to be completed within a period of one month from the date of the commission of the offence, or from the date of the reporting of the offence. However, in practice, the completion of investigation often takes longer than one month due to various reasons such as lack of adequate resources, delays in obtaining forensic evidence, or the complexity of the case. This can result in delays in the filing of charges and the commencement of trial, which can affect the speed and effectiveness of justice for the victim.

Way Forward:

- The government should provide **adequate resources** such as funding and personnel to investigating agencies handling POCSO cases.
- Investigating officers should be provided with **proper training** on the handling of POCSO cases.
- Setting up special courts for POCSO cases can help to ensure that cases are handled promptly and efficiently. This will also help to speed up the trial process, which can be important for the victim and their family.
- The medical examination of a child victim should be conducted as soon as possible after the abuse, in order to establish recent intercourse.
- Raising awareness amongst public regarding POSCO Act and why it matters to report child sexual abuse as early as possible.
- Improving co-ordination between different agencies such as police, child welfare committees and medical professionals.

Inter-state water disputes

News: Recently, a meeting was held between the Chief Ministers of Punjab and Haryana in the presence of the Union Jal Shakti Minister.

Why was the meeting held and what is the issue?

- It was held to resolve the **Sutlej-Yamuna Link Canal** dispute.
- The dispute between Punjab and Haryana has been festering since the 1960s, and various efforts to resolve the issue have failed. This dispute is not an isolated case. A lot of Inter-State Water Disputes have been festering among various States for a very long time without a possible solution in sight.

What are the arrangements to settle Inter-state water disputes?

- **Schedule 7 of Constitution**
 - It distinguishes between the use of water within a State and the purpose of regulating interstate waters.
 - **Entry 56 in Union List** gives the Union Parliament the power to formulate laws and mechanisms for regulating Interstate rivers.
 - **Entry 17 in State List**, States retain autonomy regarding water utilisation for purposes such as water supply, irrigation and canals, drainage and embankments, water storage and water power subject to provisions of Entry 56 of List 1.
- **Article 262**
 - In case of disputes relating to waters, **Parliament** may by law provide for the adjudication of any dispute or complaint with respect to the use, distribution or control of the waters of, or in, any inter-State rivers.
 - Parliament may, by law also provide that **neither the Supreme Court nor any other court** shall exercise jurisdiction in respect of any such dispute or complaint as mentioned.
- **River Board Act, 1956**
 - The river Boards are supposed to advise on the Inter-state basin to prepare development scheme and to prevent the emergence of conflicts. Till date, no River Board has been created.
- **Inter-State Water Dispute Act, 1956**
 - If a particular State or States approach the Union Government for the constitution of the tribunal.
 - Central Government should try to resolve the matter by consultation among the aggrieved States and in case, consultation does not work, then the Union Government may constitute the tribunal.



Why Inter-state water disputes continue to persist?

- The legislative powers concerning water have been distributed between the Union and the State Governments. This approach of imprecise distribution of power between the Union and the States, has created a Federal-Jurisdictional ambiguity.
- Absence of effective authority for enforcing the orders of tribunals. The Tribunal can only make an award and cannot make it binding.
- Article 262 provides that the Parliament may by law prevent the Supreme Court or any other Court from exercising jurisdiction in inter-State water disputes. However, **under Article 136**, the Supreme Court can hear appeals against the orders of Tribunals.
- There have been **excessive delays** in establishing tribunals and making awards.
- There is a **lack of data** regarding water flows, seasonal variations which results in ambiguities regarding availability of water, surplus water for sharing etc.

What should be the way forward?

- **The Sarkaria Commission** has suggested that the awards of the tribunals be given the same weight as a Supreme Court Judgment.
- **Leverage the Inter-State Council** to enable it to play a more active role in settlement of such disputes.
- Few experts have recommended for **mediation**, (a third party acts as an intermediary between the parties in conflict), can also be explored as a possible option for successful resolution of disputes. Example of **role of the World Bank** as a mediator in the Indus Water Treaty between India and Pakistan is quoted as a success of this model.
- Infrastructure should be created for better collection of the data related to inter-State river basins. Better data will provide clear picture regarding availability of waters, seasonal variations and help in the equitable distribution of water among the States.

General Studies – 1

Indian Heritage and Culture

1. Indian culture will cover the salient aspects of Art Forms, Literature and Architecture from ancient to modern times.

History

2. Modern Indian history from about the middle of the eighteenth century until the present significant events, Personalities, Issues.
3. The Freedom Struggle — Its various stages and Important contributors / contributions from different parts of the country.
4. Post-independence consolidation and reorganization within the country.
5. History of the world will include events from 18th century such as Industrial revolution, World wars, Redrawing of national boundaries, Colonization, decolonization, Political philosophies like communism, capitalism, socialism etc.— their forms and effect on the society

Society

6. Salient features of Indian Society, Diversity of India.
7. Role of women and women's organization, Population and associated issues, Poverty and developmental issues, Urbanization, their problems and their remedies.
8. Effects of globalization on Indian society.
9. Social empowerment, Communalism, regionalism & secularism.

Geography

10. Salient features of world's physical geography.
11. Distribution of key natural resources across the world (including South Asia and the Indian sub-continent) Factors responsible for the location of primary, secondary, and tertiary sector industries in various parts of the world (including India).
12. Important Geophysical phenomena such as earthquakes, Tsunami, Volcanic activity, cyclone etc., Geographical features and their location-changes in critical geographical features (including water-bodies and ice-caps) and in flora and fauna and the effects of such changes

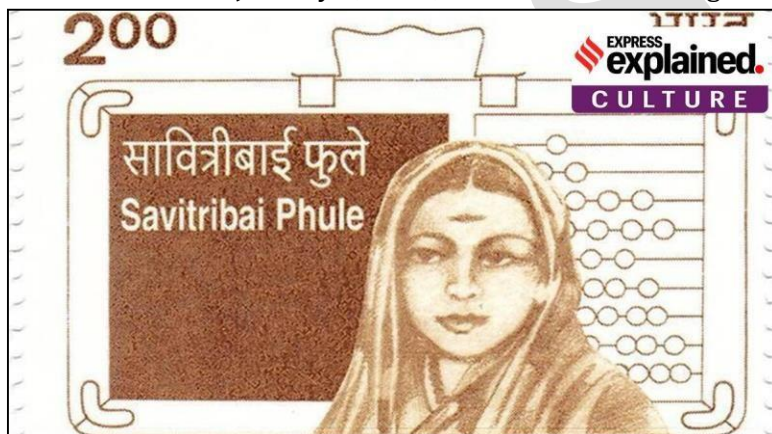
History & Culture

SavitriBai Phule

News: A pioneer who challenged oppressive social norms in her quest for women's education, equality and justice, Savitribai Phule is formally recognized as India's first woman teacher.

Who was SavitriBai Phule?

- A Dalit woman from the Mali community, Savitribai was born on January 3, 1831, in Maharashtra's Naigaon village. Her husband Jyotirao Phule is said to have educated her at home.
- Later, Jyotirao admitted Savitribai to a teachers' training institution in Pune. Throughout their life, the couple supported each other and in doing so, broke many social barriers.
- At a time when it was considered unacceptable for women to even attain education, the couple went on to open a school for girls in Bhidewada, Pune, in 1848. This became the country's first girls' school.



What challenges did she face?

- While they opened up schools for Shudras, Ati Shudras it led to discontent among several Nationalists who cited educating girls and Non-Brahmins as "loss of nationality".
- When serving as the headmistress of the first school in Bhide Wada, upper-caste men often pelted stones and threw mud and cow dung on her. It is said that Savitribai would have to carry two saris when she went to school.
- A report from 1852 in The Poona Observer states, "The number of girl students in Jyotirao's school is ten times more than the number of boys studying in the government schools. This is because the system for teaching girls is far superior to what is available for boys in government schools"

Her role as Social Reformer:

- Along with Jyotirao, Savitribai started the **Balhatya Pratibandhak Griha** ('Home for the Prevention of Infanticide') for pregnant widows facing discrimination.
- Savitribai Phule also advocated inter-caste marriages, widow remarriage, and eradication of child marriage, sati and dowry systems, among other social issues.
- In 1873, the Phules set up the **Satyashodhak Samaj** ('Truth-seekers' society'), a platform open to all, irrespective of their caste, religion or class hierarchies, with the sole aim of bringing social equity.
- At her husband's funeral procession, Savitribai again defied convention and carried the **titve** (earthen pot). Walking ahead of the procession, Savitribai was the one who consigned his body to the flames, a ritual which is still predominantly carried out by men.

About her Literary works:

- Savitribai Phule published her first collection of poems, called **Kavya Phule** ('Poetry's Blossoms'), at the age of 23 in 1854.
- She published **Bavan Kashi Subodh Ratnakar** ('The Ocean of Pure Gems'), in 1892.
- Besides these works, **Matushri Savitribai Phlenchi Bhashane va Gaani** (Savitribai Phule's speeches and songs'), and her letters to her husband have also been published.

Parasnath and Shatrunjaya Hill

News: Members of the Jain community have been staging protests across the country for the past two weeks over demands related to two holy sites - Sammed Shikhar on Parasnath hill in Jharkhand and Shetrunjay hill in Palitana of Gujarat.

About Parasnath Hill:

- Parasnath hill is home to Sammed Shikhar, considered among the most important Jain pilgrimage sites, where 20 of the 24 Jain Tirthankars are believed to have attained salvation.
- **Sammed Shikharji**, located on the Parasnath Hills in the Giridih district of Jharkhand, is the biggest pilgrimage of the Jain community.
- The Hill is named after Parasnath (the 23rd Tirthankar)



About Shatrunjaya Hill:

- One of Jainism's holiest pilgrimage sites, Shatrunjaya is an incredible hill studded with temples, built over 900 years. It is said that Adinath (also known as Rishabha), the founder of Jainism, meditated beneath the rayan tree at the summit. The temples are grouped into tunks (enclosures), each with a central temple flanked by minor ones.
- The sacred site contains hundreds of shrines that were sanctified when Rishabha, the first Tirthankara of Jainism, gave his first sermon in the temple on the hilltop.
- The Palitana temples on Shatrunjaya Hill were built over a period of 900 years starting from the 11th century. It was **Kumarpal Solanki**, a great Jain patron, who built the first temples on this site. The temples were destroyed by Turkish Muslim invaders in 1311 AD, when the saint **Jinaprabhasuri**, who was then 50 years old, presided over the temples, but later restored them to their glory.



Why were Jains protesting?

- In Jharkhand, the issue is about Parasnath hill being declared a tourist spot and an eco-sensitive zone, neither the Centre nor the state consulted the main stakeholder
- In Gujarat, the row is over the vandalizing of a shrine and related security concerns, the Jains are demanding that Shatrunjaya hill and the area around it be protected so as to maintain its holiness. They also want further probe into the vandalism case.

What is the latest update?

- The central government however stepped in after nationwide protest with an order to stop all "tourism and ecotourism" activities on the Parasnath Hills, where the shrine is located.

50 ASI-protected monuments disappear

News: The Ministry of Culture recently told Parliamentary Standing Committee that 50 of India's 3,693 **Centrally Protected Monuments** (CPM) were missing.

What are protected monuments?

- A protected monument means an ancient monument which is declared to be of national importance by or under the Ancient Monuments and Archeological Sites and Remains (AMASR) Act, 1958.
- The Act regulates the preservation of monuments and archaeological sites of national importance. It protects monuments and sites that are **more than 100 years old**, including **temples, cemeteries, inscriptions, cannons**, etc.
- According to the provisions of the AMASR Act, **ASI officials** are supposed to regularly inspect the monuments, assess their conditions, issue show cause notices for removal of any encroachment, etc.

When does a Monument go missing?

- Government focus on the social issue rather than heritage - In the decade following the independence, the focus of successive governments was on health, education and infrastructure, rather than protecting heritage. Even within the scope of heritage, the aim was to uncover more monuments and sites, instead of conservation.
- Rapid urbanization - 14 monuments have been lost to rapid urbanization
- Submergence by reservoir/dams - 12 are submerged by reservoirs/dams
- Difficulties in tracing in remote locations - 24 are untraceable

What recommendations were given by PSC?

- ASI had previously admitted that a comprehensive physical survey of all monuments has never been conducted after Independence.
- Provide budgetary allocation and assess security requirements
- Involving local community including local Panchayats and Police
- ASI currently faces an acute manpower shortage to physically man all the big and small monuments which may fall under a particular region
- Facilitating Geo-Tagging of monuments so that they can be traced.

Which monuments went missing?

- Barakhamba Cemetery (Delhi), Guns of Emperor Sher Shah, Tinsukia (Assam) the Ruins of Copper Temple, Paya, Lohit (Arunachal Pradesh) etc.

About ASI:

- Archeological Survey of India (ASI) is an **attached office** of the **Ministry of Culture (MoC)** and is in charge of the protection and maintenance of **centrally protected monuments**.
- The ASI was founded in 1861 by **Alexander Cunningham**.
- **Lord Curzon** (1899-1905) passed the law in 1904 (Ancient Monuments Preservation Act, 1904) that made the destruction of Ancient Monuments as an offence and directed officials to collect and preserve ancient monuments.
- **National Monuments Authority (NMA)** (set up under the AMASR Act, 2010) also comes under Ministry of Culture and is responsible for the protection of such sites through regulation of areas around the CPM.

Gujarat's Harappan Necropolis

News: Excavations at one of the biggest necropolises at **Juna Khatiya village** (Kutch, Gujarat) show rows of graves with valuable items such as Ceramic pots, beaded jewellery, animal bones etc.

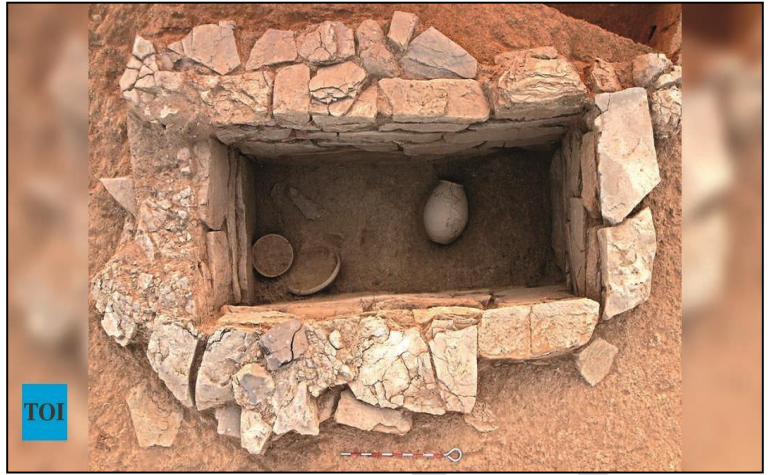
What is a necropolis?

- A necropolis is a large, designed cemetery with elaborate tomb monuments. The name stems from the Ancient Greek meaning "city of the dead".
- The pyramid at Giza, in Egypt, is an example of a necropolis — it's the tomb of an Egyptian pharaoh.

About Juna Khatiya:

- It is located about 30 km from Lakhpat in Kutch district, Gujarat.
- It has emerged as one of the biggest Harappan burial sites with the possibility of 500 graves of which about 125 have been found so far.

- The archaeologists found rows of graves with skeletal remains, ceramic pots, plates and vases, beaded jewellery and animal bones.
- The burials discovered at this site date from 3,200 BCE to 2,600 BCE, **predating Dholavira**—a UNESCO World Heritage Site—and several other Harappan sites in the state.
- The site is important because others like Dholavira have a cemetery in and around the town, but no major habitation has been discovered near Juna Khatiya.
- The site demonstrates the **transition from earth-mound burials to stone graves**. The pottery from the site has features and styles similar to those excavated from early Harappan sites in Sindh and Balochistan.



What does study of Burial site reveal?

- A study of its burial rites, rituals and customs has revealed many details about life in this culture.
- They demonstrate that around the world- ancient afterlife items are buried along with the body in almost all the civilizations
- **Gender difference** - A higher number of votive pots (offering pots) in male graves indicates women were not considered equal to male citizens.
- **Shows multiple classes** - Ornaments were found on women of multiple social classes, including necklaces and bangles made of copper, shell, and gemstones.
- **Connection with other civilizations** - Archeologists currently presume the objects in votive pots were to serve the individuals in the afterlife. Some burial customs are similar to their contemporary Egyptian civilization.

Assam's Charaideo Moidams

News: Recently, Assam Chief Minister Himanta Biswa Sarma announced that the central government has decided to put forth the name of Assam's Charaideo moidams burial sites for addition to UNESCO World Heritage Sites list.

Background:

- The Charaideo moidams are royal burial sites of the Ahom dynasty, which ruled over much of Assam and the North East from 1228 to 1826 AD.
- Located around 30 km from Sivasagar town in eastern Assam, even today, the tumuli in Charaideo are considered sacrosanct by many locals.

What are Moidams?

- A moidam is a tumulus – **a mound of earth raised over a grave** – of Ahom royalty and aristocracy.
- A typical moidam at Charaideo contains one or more chambers in a vault. On top of these is a hemispherical earthen mound, rising high above the ground, covered in grass. On top of this mound, there is a pavilion, known as the chow chali. A low octagonal wall surrounds the mound with one entrance.
- Ahom kings and queens were buried inside these moidams. Unlike Hindus who cremate their dead, the predominant funerary method of the Ahoms, originating from the Tai people, was the burial. The height of a moidam is typically indicative of the power and stature of the person buried



inside.

Why was Charaideo important?

- The word Charaideo has been derived from three Tai Ahom words, Che-Rai-Doi. “Che” means city or town, “Rai” means “to shine” and “Doi” means hill. In short, Charaideo means, “a shining town situated on a hilltop.”
- While the Ahoms shifted capitals multiple times over their 600-year history, Charaideo is considered to be their **first capital city** established in 1253 AD by **king Sukaphaa**.

Remembering the Param Virs

News: With the renaming of 21 Andaman Islands after decorated soldiers, the islands have become more than just distant outposts of a vast country.

Background:

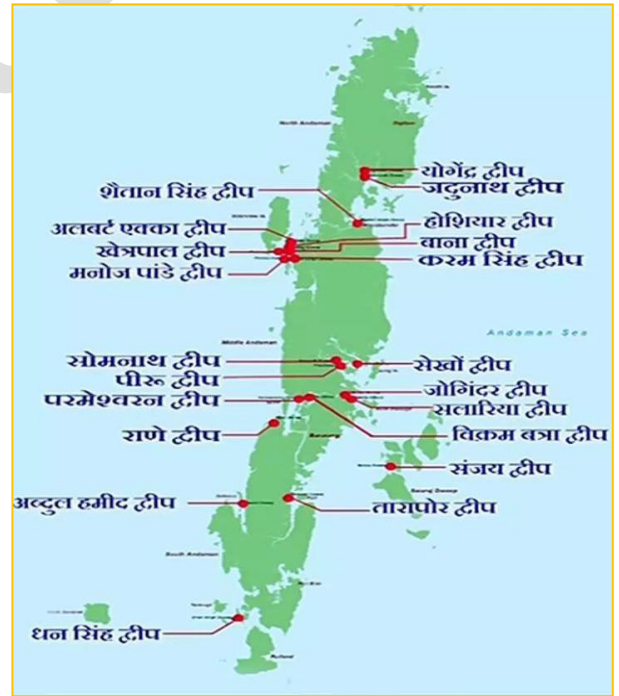
- On January 23, the birth anniversary of Subhas Chandra Bose, 21 of the largest unnamed islands in the Andaman and Nicobar Islands were named after soldiers who have been awarded India’s highest military honour, the Param Vir Chakra.

What message was given by the PM on this occasion?

- Prime Minister Narendra Modi said the renaming conveyed a message about the “immortality of the sacrifices” that the soldiers of the Indian Army, all from different states, speaking different languages and dialects and leading different lifestyles had made, as they united “in the service of Maa Bharti”
- Earlier in 2018, Ross Island had been renamed Netaji Subhas Chandra Bose Island, and Neil Island and Havelock Island were, respectively, renamed Shaheed Dweep and Swaraj Dweep.

Significance of renaming the Islands:

- The islands have become more than just distant outposts of a vast country — they become a way of making those 21 soldiers a part of the very geography of this land, memorialised in earth and water.
- It will remind us of stories of **Second Lieutenant Rama Raghoba Rane** who, in the 1948 war with Pakistan, helped navigate a safe path for Indian tanks by crawling beneath one across a minefield.
- The story of **Major Shaitan Singh** who, despite grievous injury continued to motivate his men and fight the enemy in 1962 war; of Company **Quartermaster Abdul Hamid** who, in 1965, helped destroy several Pakistani tanks before succumbing to injuries.
- It will remind us of **Captain Vikram Batra** who On July 7, 1999, along with his company was tasked to capture a feature on **Point 4875** in Ladakh. In a fierce hand-to-hand fight, he killed five enemy soldiers. Despite sustaining grave injuries, **he led his men from the front** in the face of heavy enemy fire, before attaining martyrdom. **Inspired by his courageous act**, his troops annihilated the enemy and captured Point 4875.



Conclusion:

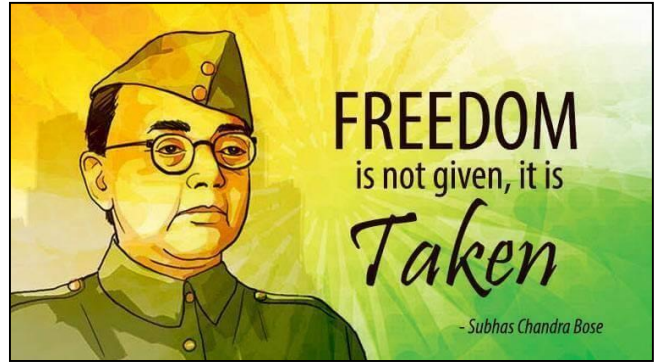
- Across the country and around the world, the sacrifices made by soldiers in the performance of their duties have been honoured in monuments and plaques. The naming of 21 Indian islands after 21 soldiers is an imaginative new way of continuing this tradition.

Netaji Subhash Chandra Bose

News: Parakram Diwas is celebrated on 23rd January on the occasion of birth anniversary of Netaji Subhash Chandra Bose.

Who was Netaji SC Bose?

- Born on January 23, 1897 in Cuttack, Orissa, to father Janaki Nath Bose (lawyer) and mother Prabhavati Devi.
- He was strongly influenced by Swami Vivekananda's teachings.
- In 1920 he qualified the Indian Civil Service competitive examination. However, Jallianwala Bagh massacre shocked Netaji and he returned to India quitting his apprenticeship midway.
- His political Guru was Deshbandhu Chittaranjan Das.



Netaji's role in India:

- After returning to India, Netaji came under the influence of Mahatma Gandhi and joined the Indian National Congress.
- Netaji along with J. Nehru were firm on their idea of India and were against the Dominion status that Nehru Report (1928) sought for. They asserted complete Independence for India.
- In 1931, he protested against the Gandhi-Irwin pact and opposed the suspension of Civil Disobedience movement specially when Bhagat Singh and his associates were hanged.
- On his Presidency at Haripura session (1938) he was vocal for the need to have a comprehensive scheme of industrial development under state-ownership and state-control.
- He emphasized on the Planning approach and was instrumental in setting up the National Planning Committee.

When did relations with INC deteriorate?

- In the backdrop of World War II, he brought a resolution to give British six months to hand India over to Indians or else face revolt.
- This was opposed by many following which Netaji resigned as president and formed a progressive group known as the **Forward Bloc**.

What was his contribution in establishing Indian National Army?

- He reached Japanese-controlled Singapore from Germany in July 1943, issued from there his famous call, '**Delhi Chalo**', and announced the formation of the **Azad Hind Government** and the **Indian National Army** on 21st October 1943.
- The INA was first formed under Mohan Singh and Japanese Major Iwaichi Fujiwara and comprised Indian prisoners of war of the British-Indian Army captured by Japan in the Malayan (present-day Malaysia) campaign and at Singapore.
- The INA was able to win back **Rangoon, Imphal** and **Andaman and Nicobar Islands**. Netaji renamed Andaman and Nicobar (A&N) Island as Shaheed and Swaraj.
- However, defeat of Japan and Germany in World War II, forced INA to retreat.

Other important contributions:

- He edited newspaper "**Forward**" and started his own newspaper "**Swaraj**" He authored the book '**The Indian Struggle**', which covered the country's independence movement in the years 1920–1934.
- He worked for "**Gender equality**" by establishing All Women regiment named "The Rani Jhansi Regiment"
- He also promoted "**Secularism**" in INA through having common worship prayers and celebration of all religious festivals together.

Conclusion:

- Bose was a pragmatic leader who wanted to work with Germany and Japan to destabilize the British.
- He had a gigantic personality and was ambitious and brave in his approach and his contributions to Indian independence cause are revered by all in India.

Society

17th Pravasi Bharatiya Diwas

News: Over 3,500 diaspora members from nearly 70 different countries have registered for the PBD Convention, which will also see the government facilitate some members with the Pravasi Bharatiya Samman Award.

Why is Pravasi Bhartiya Day celebrated?

- A High-Level Committee on Indian Diaspora, headed by jurist and Parliamentarian **LM Singhvi**, had recommended in January 2002 that the government must renew and strengthen linkages of overseas Indians to their place of origin, and with each other.
- The committee recommended that a **Pravasi Bharatiya Bhavan** should be set up to emerge as the focal point for networking between India and its overseas Indian community; and as a suitable place which to commemorate the stories of the Indian Diaspora. The idea of a day to have the government recognise the community flowed from this, and was held in 2003.
- **January 9** was selected as it was the date when **Mahatma Gandhi returned to India from South Africa** in 1915.
- Since 2015, the centenary year of Gandhi's return, the format was revised for the meeting to be held **once every two years**. Since the pandemic, this will be the first in-person meeting.

What is this year's theme?

- "Diaspora: Reliable partners for India's progress in Amrit Kaal"
- The Special Guest of Honour is **Suriname President** Chandrikapersad Santokhi and the Chief Guest is Dr. Mohamed Irfaan Ali, **President of Guyana**.

What award is presented?

- An award called **The Pravasi Bharatiya Samman Award** is given out as part of the programme. According to the official website, "It is the **highest honour** conferred on a Non-Resident Indian, Person of Indian Origin; or an organisation or institution established and run by them."
- A jury-cum-awards committee, with (the) **Vice President as the chairman** and **External Affairs Minister as the vice-chair** and **other distinguished members** from various walks of life considered the nominations...and unanimously selected the awardees.

What are government initiatives for Overseas Indians?

- **Know India Program** - It familiarizes Indian-origin youth (18-30 years) with their Indian roots and contemporary India.
- **E-migrate System** - It is a foreign employers database. It ensures the welfare and check on exploitation met to emigrants.
- **VAJRA** (Visiting Advanced Joint Research Faculty) Scheme - It formalizes a rotation program wherein top NRI scientists, engineers, doctors, managers and professionals serve Indian public sector organizations for a brief period, lending their expertise.
- **Pravasi Kaushal Vikas Yojana (PKVY)** - To institutionalize the process of skill development of emigrant Indian workers.
- 100 scholarships per annum are granted to PIO and NRI students for undergraduate courses under **Scholarship Programme for Diaspora Children**.

Indian Diaspora

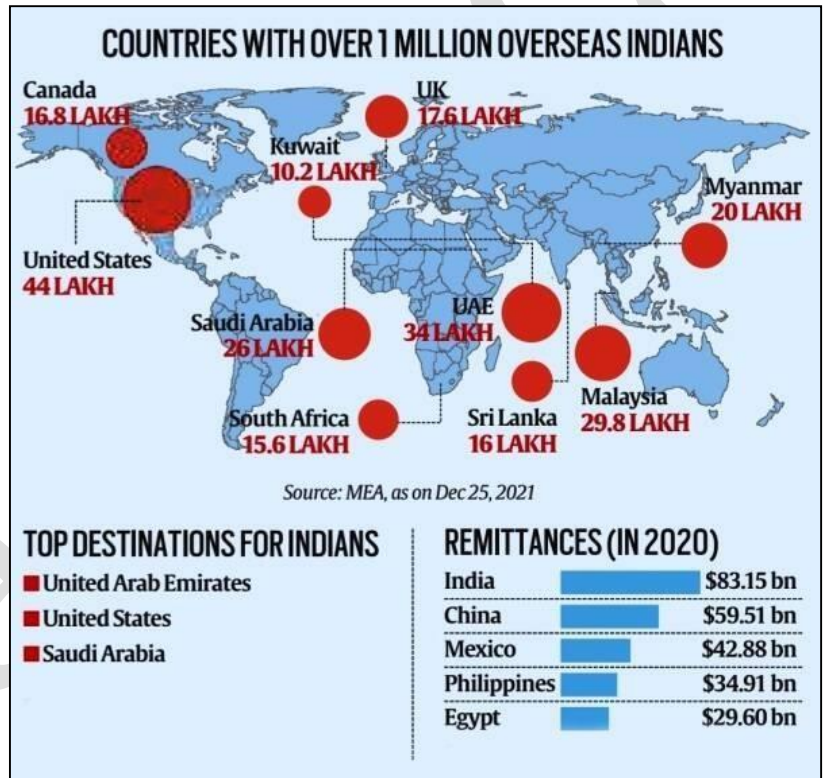
News: Prime Minister Modi recently inaugurated the 17th Pravasi Bharatiya Diwas convention in Madhya Pradesh on the occasion of Pravasi Bhartiya Diwas (PBD).

What is Diaspora?

- The term diaspora traces its roots to the Greek diaspeiro, which means dispersion. The Indian diaspora has grown manifold since the first batch of Indians were taken to counties in the eastern pacific and the Caribbean islands under the 'Girmitiya' arrangement as indentured labourers.
- The Indian Diaspora is classified into three categories – Non Resident Indians (NRI), Person of Indian Origin (PIO) and Overseas Citizen of India (OCI).
- According to the **World Migration Report, 2022**, India has the largest emigrant population in the world in 2020, making it the top origin country globally, followed by Mexico, Russian and China.
- According to the **World Bank Migration and Development Brief**, released in 2022, **for the first time** a single country, India, is on track to receive **more than USD 100 billion** in yearly remittances.
- The World Migration Report notes that India, China, Mexico, the Philippines and Egypt are (in descending order) among the top five remittance recipient countries.

What is the role of Diaspora in country's progress?

- Diasporas are symbol of a nation's pride and represent their country internationally. They help in **building country's value internationally** through their huge success stories.
- Many emigrants make **huge investments into their home countries** in domestic financial, real estates, services and technological sectors helping in **huge inflow of capitals** that boost **local economy** and create **huge jobs**.
- One of the greatest economic contribution of Indian diaspora has been in terms of remittances. Remittances make an invaluable contribution by aiding in **socio-economic development, poverty reduction** and changes in consumption behavior in rural areas.
- An important advantage in having a large emigrant group is furthering of nation's diplomacy through people to people contact. For example, ethnic Indians in the USA successfully lobbied for Indo-US nuclear deal.
- Diaspora play important role in **influencing policies and politics of its host country** in favour of its country of origin and also, development of good ties and relations between both countries. The Indian diaspora is not just part of India's soft power but also a fully transferable political vote bank as well.
- They can potentially help in **technology transfer** as well which will facilitate innovation and enhance our competency in variety of sectors.



Kerala announces Menstrual leave

News: Kerala government has announced that it will grant menstrual leave for female students in all state universities under the Department of Higher Education.

How will the recent move help women? What are concerns surrounding it?

- It is an important step towards acknowledging and addressing the pain and discomfort faced by women.
- Period leave would help create workplaces and classrooms that are more inclusive and more accommodating.

- In a traditional society like India, where menstruation remains a taboo, it is possible that a special period leave could become another excuse for discrimination.
- For example, in similarly traditional societies like South Korea and Japan (both allow Menstrual leave) but fewer women are availing of it, citing the social stigma against menstruation
- There is the risk of medicalizing a normal biological process, which could further entrench existing biases against women
- The possibility that the perceived financial and productivity cost of mandatory period leaves could make employers even more reluctant to hire women.

Have previous attempts been made in this direction?

- In 1992, Bihar government two days of menstrual leave a month
- Menstrual Benefits Bill 2017 was introduced in Parliament to provide monthly two days of menstrual leave to both public and private employees during menstruation.
- Zomato introduced menstrual leaves for up to ten days a year for its women and transgender employees. Since then, similar policies are also followed by other private companies like Swiggy and Byjus.

Conclusion:

- Kerala government's effort is commendable and a positive step towards a gender-just society.

Geography

Heat Dome

News: At least seven countries have recorded their hottest January weather ever. These included Poland, Denmark, the Czech Republic, the Netherlands, Belarus, Lithuania and Latvia.

Background:

- Several parts of Europe witnessed an unprecedented winter heat wave over New Year's weekend, The Washington Post reported on Monday. Calling it an "extreme event", experts said that temperatures increased 10 to 20 degrees Celsius above normal.
- The continent is experiencing an extreme warm spell because of the formation of a **Heat Dome** over the region.

What is the Heat Dome?

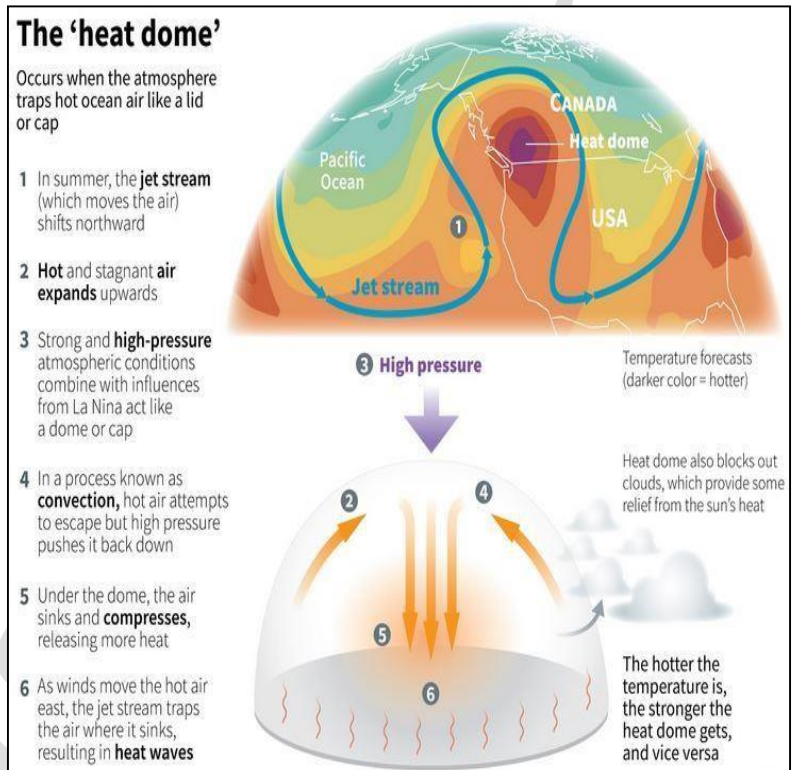
- A heat dome occurs when an **area of high-pressure traps warm air over a region**, just like a lid on a pot, for an extended period of time. The longer that air remains trapped, the more the sun works to heat the air, producing warmer conditions with every passing day.
- Heat domes generally stay for a few days but sometimes they can extend up to weeks, which might cause deadly heat waves.
- Scientists suggest that any region of high pressure, whether a heat dome or not, forces air to sink and once it reaches the ground, it gets compressed and becomes even warmer. Moreover, when air sinks, it gets drier and further raises the temperature of the area.

What is relationship between Heat Dome and Jet Stream?

- The heat dome's formation is related to the **behavior of the jet stream** - an area of fast-moving air high in the atmosphere. The jet stream is believed to have a wave-like pattern that keeps moving from north to south and then north again. When these waves get bigger and elongated, they move slowly and sometimes can become stationary. This is when a high-pressure system gets stuck and leads to the occurrence of a heat dome.
- Although heat domes are likely to have always existed, researchers say that climate change may be making them more intense and longer. They suggest with the rising temperatures, it is expected that the jet stream will become more wavy and will have larger deviations, causing more frequent extreme heat events.

What are previous instances of Heat Dome?

- In 2021, a heat dome formed over western Canada and the US, causing deadly heat waves. In Lytton in British Columbia, temperatures soared to over 46 degree Celsius.
- According to media reports, hundreds of people are believed to have died due to this extreme weather event.



Why is Joshimath sinking?

News: Due to land subsidence, Joshimath which forms a key transit point for tourists travelling to Badrinath and Hemkund Sahib developed cracks, causing panic and protests among the local population.

What is Land Subsidence?

- According to the **National Oceanic and Atmospheric Administration (NOAA)**, subsidence is the “**sinking of the ground** because of **underground material movement**”.
- It can happen for a host of reasons, man-made or natural, such as the removal of water, oil, or natural resources, along with mining activities.
- Earthquakes, soil erosion, and soil compaction are also some of the well-known causes of subsidence.



Why is Joshimath sinking?

- While the exact reason behind Joshimath land subsidence is still unknown but experts suggest that the incident might have occurred because of unplanned construction, over-population, obstruction of the natural flow of water and hydel power activities.
- Not only this, the area is a seismic zone, which makes it prone to frequent earthquakes.
- According to experts, Joshimath city has been built on **an ancient landslide material** — meaning it rests on a deposit of sand and stone, not rock, which doesn't have high load-bearing capacity. This makes the area extremely vulnerable to ever-burgeoning infrastructure and population.
- **MC Mishra committee report** (around 50 years ago) was published and it cautioned against “unplanned development in this area, and identified the natural vulnerabilities.”
- Reports have pointed out that subsidence in Joshimath might have been triggered by the **reactivation of a geographic fault** — defined as a fracture or zone of fractures between two blocks of rock where the Indian Plate has pushed under the Eurasian Plate along the Himalayas.
- The Border Roads Organisation (BRO) is building the **Helang bypass** that will reduce the distance to Badrinath shrine by about 30 km, using heavy machinery.
- Hydroelectric (HE) schemes have been sanctioned around Joshimath and Tapovan, including the **Vishnugad Hydro-Electric** Project and a tunnel boring machine (TBM) was employed for excavating the tunnel for the project.
- In 2009, it punctured a water-bearing strata and experts had warned that this sudden and large-scale dewatering of the strata had the potential of initiating ground subsidence in the region.

What could be the preventive measures?

- Firstly, relocating of residents to a safer place is necessary. The government has put in an order for 4,000 prefabricated homes to help the residents of Joshimath.
- Experts recommend that all development and hydroelectric projects in the region be halted completely.
- **Drainage planning** forms crucial factor that needs to be studied and redeveloped. The city is suffering from poor drainage and sewer management as more and more waste is seeping into the soil, loosening it from within.
- Experts have also suggested **replanting** in the region, particularly in vulnerable areas, to retain soil capacity.
- The state government also needs to take **scientific studies more seriously**, which clearly spell out the reasons for the current crisis. Only then will the state put an end to its development frenzy.
- Lastly, the locals had been raising the issue of cracks seen in their homes since a while especially after heavy rains the place witnessed in October. The reaction of the officials was to turn a blind eye. Residents' concerns need to be taken seriously as well by the government.

Way Forward:

- The misfortune of Joshimath and its residents has delivered a stern warning: It cannot be business as usual anymore. Sweeping changes need to be made for survival. Actions must be taken today so that other small towns in the region do not meet similar fate as Joshimath.

Ozone Hole, filling up now

News: The ozone 'hole', once considered to be the gravest danger to planetary life, is now expected to be completely repaired by 2066, a scientific assessment has suggested.

- This is stated in an UN-backed scientific team report titled 'Scientific Assessment of Ozone Depletion 2022'.

Key findings:

- The ozone layer is predicted to return to 1980 levels over Antarctica by 2066, 2045 for the Arctic, and 2040 for the remainder of the planet.
- The ozone hole has been steadily improving since 2000, thanks to the Montreal Protocol's (1987) effective implementation.
- The **Montreal Protocol** mandates countries to phase out production of all main **ozone depleting substances** (ODSs).
- **The Kigali Amendment** (2016) to the Montreal Protocol aims to **phase down** 80-90% of the **hydrofluorocarbons** (HFCs) currently in use by 2050. HFCs have replaced chlorofluorocarbons (CFCs) in industrial use and the amendment seeks to prevent additional 0.3 to 0.5 degree Celsius of global warming by the end of the century.
- HFCs do not cause much ozone layer damage, which is why they were not originally prohibited, but they are extremely powerful greenhouse gases (GHGs).
- **Nearly 99%** of the Montreal Protocol-banned substances have now been phased out of usage, resulting in a slow but steady rebuilding of the ozone layer.
- The eradication of ODSs has a significant climate change co-benefit because these compounds are also potent GHGs, expected to prevent 0.5 to 1 degree Celsius of warming by 2050.

Can this success story help with reducing Global warming?

- The success of the Montreal Protocol in closing the ozone hole is widely mentioned as a model for climate action.
- However, the parallels between the eradication of ODSs and the reduction of GHGs are limited because the usage of ODSs (though widespread) was limited to a few specific industries and their replacements were readily available. With some incentives, these sectors have recovered from the initial disruption and are thriving again.
- The case of fossil fuels is very different. Emission of carbon dioxide is inextricably linked to the harnessing of energy. Almost every economic activity leads to carbon dioxide emissions. Even the so-called renewable energies, like solar or wind, have considerable carbon footprints right now, because their manufacturing, transport, and operation involves the use of fossil fuels.
- The emissions of methane, the other major greenhouse gas, comes mainly from agricultural practices and livestock. The impact of restraining greenhouse gas emissions is not limited to a few industries or economic sectors, but affects the entire economy, and also has implications for the quality of life, human lifestyles and habits and behaviours.

Conclusion:

- Climate change, no doubt, is a far more difficult and complex problem than dealing with ozone depletion.

Key Term you must know from Prelims perspective – Dobson Unit

- The Dobson Unit is the most common unit for **measuring ozone concentration**.

Deep-Water Circulations

News: New studies have shown that the global overturning circulation controls ocean heat distribution and atmospheric carbon dioxide levels, thus playing a critical role in global climate.

Key Findings:

- Studies suggest that changes in ocean routes caused by tectonics, like the closing of the Central American Seaway, had a big effect on ocean circulation. Central American Seaway is a body of water that once separated North America from South America,
- These changes may have led to the creation of two distinct water bodies - **Northern component water** in the North Atlantic Ocean and **Antarctic Bottom Water (AABW)** in the Southern Ocean.
- Consequently, it is also hypothesized that there would have been large-scale changes in the Deep-Water Circulation (DWC) in the oceans across the world, impacting global climate and heat exchanges.

What is Deep Water Circulation?

- It refers to the movement of water in the deep ocean. It is driven by the density differences between water masses caused by variations in temperature and salinity.
- In the Earth's polar regions ocean water gets very cold, forming sea ice. As a consequence, the surrounding seawater gets saltier, because when sea ice forms, the salt is left behind.
- As the seawater gets saltier, its density increases, and it starts to sink. Surface water is pulled in to replace the sinking water, which in turn eventually becomes cold and salty enough to sink. This creates a circulation pattern that is known as the thermohaline circulation.

Significance:

- It helps to distribute heat around the globe, which helps to regulate the Earth's temperature and keep different regions from becoming too hot or too cold.
- It is responsible for shaping the ocean's currents and the circulation patterns of the world's oceans. These currents in turn influence the marine ecosystem, weather patterns, and coastal regions.
- It plays a critical role in controlling atmospheric carbon dioxide levels by helping to transport carbon from the surface to the deep ocean, where it can be stored for long periods of time.
- It also has an impact on sea level, as warm water is less dense than cold water, therefore it can also affect sea level by redistributing heat and thermal expansion.

Deep Water circulations and Indian Ocean:

- The Indian Ocean does not produce its own deep water, it only receives it from other sources such as the North Atlantic and Antarctic.
- The northern part of the Indian Ocean is located far away from the areas where deep water is formed and ocean routes, making it a good place to study the impact of ocean circulation changes.
- Studies have been done in the Indian Ocean to understand past Deepwater circulation using records from iron-manganese crusts and authigenic neodymium isotope composition of sediment cores.
- These records have few limitations:
 - Iron-manganese crusts are found at deeper depths and are only bathed by Antarctic Bottom Water (AABW), so they can only provide information about the history of AABW.
 - Authigenic neodymium isotope records are only available from the Bay of Bengal region, but they are also not accurate as the Himalayan rivers that flow into the Bay bring in a lot of neodymium particulates which can interfere with the results.
- However, recently Scientists have generated an authigenic neodymium isotope record from the Arabian Sea and reconstructed the DWC record of the Indian Ocean for the period from 11.3 million years ago (Miocene era) to 1.98 million years ago (Pleistocene era).

Indus Water Treaty

News: New Delhi has issued a notice to Islamabad seeking modification of the more than six-decade-old Indus Waters Treaty (IWT) that governs the sharing of waters of six rivers in the Indus system between the two countries.

Background:

- The notice appears to be a fallout of a longstanding dispute over two hydroelectric power projects that India is constructing – one on the Kishanganga river, a tributary of Jhelum, and the other on the Chenab (Ratle Hydroelectric project).
- In 2015, Pakistan asked that a Neutral Expert should be appointed to examine its technical objections to the Kishanganga and Ratle HEPs. But the following year, Pakistan **unilaterally retracted this request**, and proposed that a **Court of Arbitration** should adjudicate on its objections.

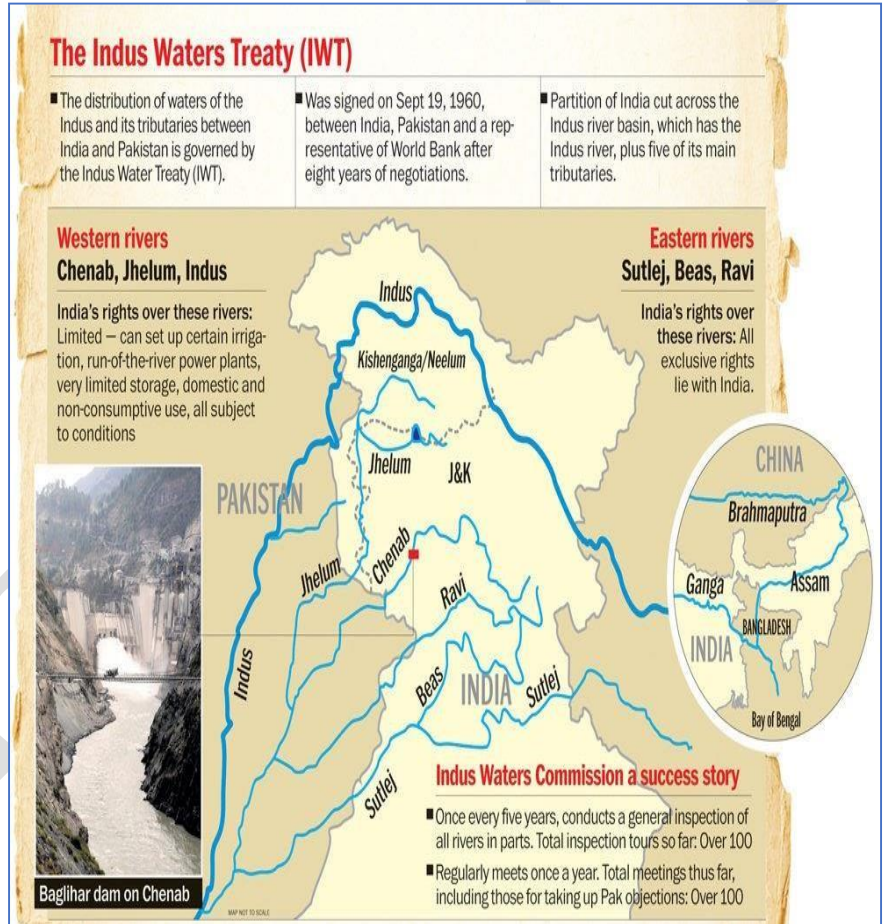
What is the Indus Water Treaty (IWT)?

- IWT is a water-distribution treaty between India and Pakistan, brokered by the **World Bank (WB)**, to use the water available in the Indus River and its tributaries. It was signed in Karachi in **1960** by then-Indian **PM Jawaharlal Nehru** and then-Pakistani president **Ayub Khan**.

- The Treaty gives control over the waters of the three “**eastern rivers**” – the Beas, Ravi and Sutlej (BRS)- to India, while control over the waters of the three “**western rivers**” – the Indus, Chenab and Jhelum -has been given to Pakistan.
- India has about 20% of the total water carried by the Indus system while Pakistan has 80%.
- The treaty allows India to use the western river waters for limited irrigation use and unlimited non-consumptive use for such applications as power generation.
- India has the **right to generate hydroelectricity** through **run-of-the-river (RoR)** projects on the western rivers which, subject to specific criteria for design and operation, is unrestricted.
- The dispute redressal mechanism provided under the IWT is a graded 3-level mechanism.
- Under the IWT, whenever India plans to start a project, it has to inform Pakistan. The concerns have to be cleared at the levels of the **Indus Commissioners** → **Neutral Expert** → **Court of Arbitration**, in a graded manner.

What are the main concerns at the moment?

- Pakistan’s refusal to discuss on issues and find mutually agreeable solutions during the course of Regular meetings of Indus Water Commissioners since 2017.
- The World Bank’s decision (March 2022) to resume the process of appointing a Neutral Expert and a Chairman for the Court of Arbitration. India believes that such **parallel consideration of same issues is not provided** for in any provisions of the Treaty, and India has been repeatedly citing the possibility of the



two processes delivering contradictory rulings, which could lead to an unprecedented and legally untenable situation, which is unforeseen in Treaty provisions.

What is India's notice and what are its possible implications?

- First, it seeks to address the issue of two parallel mechanisms.
- **Article XII (3)** of the Treaty that India has invoked is not a dispute redressal mechanism. It is in effect, a provision to amend the Treaty.
- However, an amendment or modification can happen only through a “duly ratified Treaty concluded for that purpose between the two governments”. Pakistan is under **no obligation** to agree to India's proposal.
- As of now, **it is not clear** what happens if Pakistan does not respond to India's notice within the 90-day period.
- The next provision in the Treaty, **Article XII (4)**, provides for the **termination of the Treaty** through a similar process — “a duly ratified Treaty concluded for that purpose between the two governments”.

IWT as a strategic tool?

- While India may not have spelled out exactly what it wants to be modified in the Treaty but since Uri Attack at Pak's behest, there has been a growing demand in India to use the IWT as a strategic tool.

How has India utilized its right over river waters?

- We have not fully utilized our rights of waters in three-east flowing rivers over which we have full control. Also, we have not adequately utilized the limited rights over three West flowing rivers which are meant for Pakistan.

We recommend you to watch our You Tube content on IWT by clicking on this link
<https://youtu.be/yp1Ql5 fic8>

General Studies – 2

Polity & Constitution

1. Indian Constitution—historical underpinnings, evolution, features, amendments, significant provisions and basic structure.
2. Functions and responsibilities of the Union and the States, issues and challenges pertaining to the federal structure, devolution of powers and finances up to local levels and challenges therein.
3. Separation of powers between various organs dispute redressal mechanisms and institutions
4. Comparison of the Indian constitutional scheme with that of other countries.
5. Parliament and State legislatures—structure, functioning, conduct of business, powers & privileges and issues arising out of these.
6. Structure, organization and functioning of the Executive and the Judiciary—Ministries and Departments of the Government; pressure groups and formal/informal associations and their role in the Polity.
7. Salient features of the Representation of People’s Act.
8. Appointment to various Constitutional posts, powers, functions and responsibilities of various Constitutional Bodies.
9. Statutory, regulatory and various quasi-judicial bodies.

Social Justice

10. Government policies and interventions for development in various sectors and issues arising out of their design and implementation.
11. Development processes and the development industry —the role of NGOs, SHGs, various groups and associations, donors, charities, institutional and other stakeholders.
12. Welfare schemes for vulnerable sections of the population by the Centre and States and the performance of these schemes; mechanisms, laws, institutions and Bodies constituted for the protection and betterment of these vulnerable sections.
13. Issues relating to development and management of Social Sector/Services relating to Health, Education, Human Resources.
14. Issues relating to poverty and hunger.

Governance

15. Important aspects of governance, transparency and accountability, e-governance, applications, models, successes, limitations, and potential; citizens charters, transparency & accountability and institutional and other measures.
16. Role of civil services in a democracy.

International Relations

17. India and its neighborhood- relations.
18. Bilateral, regional and global groupings and agreements involving India and/or affecting India’s interests.
19. Effect of policies and politics of developed and developing countries on India’s interests, Indian diaspora.
20. Important International institutions, agencies and fora- their structure, mandate

Polity & Governance

Remote Electronic Voting Machines

News: The Election Commission recently announced that it has developed a prototype for a Multi-Constituency Remote Electronic Voting Machine (RVM), amid concerns over migration-based disenfranchisement, to boost voter turnout and strengthen India's democratic process.

What led to it?

- As per the 2011 census, there are nearly 45.36 crores (forty-five point three six) migrants in India (both intra and interstate) – nearly 37% of the country's population.
- These migrants are unable to travel to vote, denying a large chunk of the population its franchise, going against the EC's motto – "No voter left behind".
- The EC had formed a Committee of Officers on Domestic Migrants, which recommended (in 2016) internet voting, proxy voting, early voting and postal ballots for migrant workers (rejected due to concerns like lack of secrecy of the vote, the lack of sanctity of one person one vote principle, issues of accessibility, etc.)
- Thus, a technological solution was proposed which allows voters to vote remotely, in a safe and controlled environment.

How will RVM help?

- RVMs were developed by Bharat Electronics Limited (BEL) and the Electronics Corporation of India Limited (ECIL).
- The RVMs are stand-alone, non-networked systems, allowing voters from multiple constituencies to vote using the same machine.
- They will be set up in remote locations outside the state under similar conditions as current polling booths.

Key Features:

- A single Remote Ballot Unit (RBU) - To cater to multiple constituencies (as many as 72) by using a "dynamic ballot display board" instead of the usually printed paper ballot sheet on EVMs.
- Ballot Unit Overlay Display (BUOD) - It will show the requisite candidates based on the constituency number read on the voter's Constituency card, which can be read by a barcode scanning system.

How will voting process be carried out?

- After verifying a voter's identity, their constituency card will be read with a public display showing the constituency details and candidates.
- This will also be displayed privately (on the BUOD in the RVM's RBU) and the voter will then vote and each vote will be stored constituency-wise in the control unit.
- The voter-verifiable paper audit trail (VVPAT) system is expected to work along the same lines as the new technology.

What are the challenges?

- Providing controlled environment and ensuring secrecy of voting at remote locations.
- Provision of polling agents at remote voting booths and ensuring identification of voters to avoid impersonation.
- Familiarity of voters with the newer methods and RVM's as such will be a big task and counting of votes cast at remote booths and transmit to RO located in other state.
- Legal challenges that may pertain to defining migrant voter, remote voting etc.

What is an RVM?

The machine allows migrant voters living outside their home constituencies to vote from their current residence

- The remote voter must register online/offline within a pre-notified time before the elections with their home constituency Returning Officer
- After successful verification at their home constituency, the voter will be approved for the remote voting facility
- Booths will be set up near their current homes



EVMs being sealed after an election

- In an RVM, a single ballot unit can cater to many constituencies at a single polling station by using dynamic ballot display instead of the usual printed paper ballot sheet

- The system has issues, some of which the EC has itself acknowledged. For example, Migrants are not a uniform and defined class, with fluid identities, locations and situations.
- As various countries reject EVMs for paper-based ballots, this move may have the potential to raise further questions on the sanctity of the electoral process itself.
- Remote voting can theoretically provide an added edge to bigger parties and richer candidates who can campaign across the constituency and beyond.

The EC has invited all recognized national parties and state political parties on January 16 to demonstrate the functioning of the RVM and has asked for their written views by January 31.

Report card on RTI Responsiveness

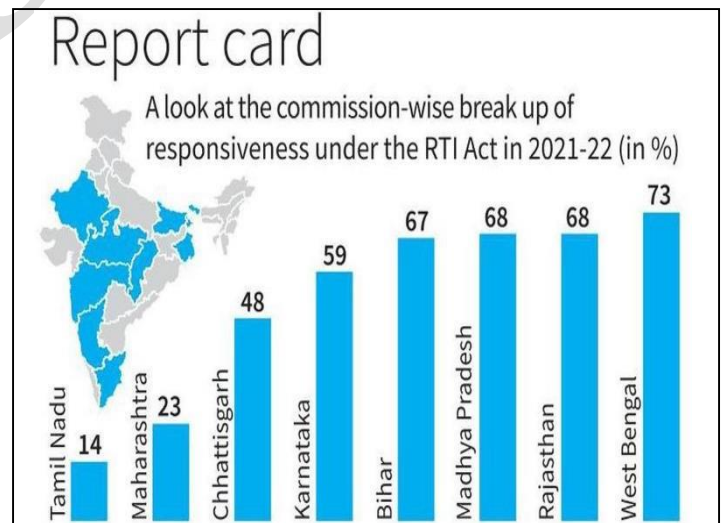
News: Satark Nagrik Sangathan (SNS) has released a report card of Responsiveness under RTI (Right to Information) Act 2021-22, which shows that Tamil Nadu has been the worst performing RTI responsiveness, furnishing only 14% of the information sought.

What is RTI Act?

- The Right to Information Act 2005 mandates timely response to citizen requests for government information.
- The basic object of the Right to Information Act is to empower the citizens, promote transparency and accountability in the working of the Government, contain corruption, and make our democracy work for the people in a real sense.

Key Findings:

- Maharashtra was second-worst, sharing 23% of the information asked for.
- Only 10 ICs provided full information in response to the RTI applications filed as part of this assessment. These included Andhra Pradesh, Haryana, Jharkhand and northeastern States of Sikkim, Nagaland and Tripura.
- The SIC of Bihar, which had failed to provide any information under the RTI Act for the assessments published in 2020 and 2021, significantly improved its performance and furnished 67% of the information sought.
- A large number of ICs across the country were returning cases without passing orders. For example, Uttar Pradesh and Andhra Pradesh returned around 40% of the appeals or complaints received by them. Of the 18 Information Commissioners the assessment found that 11 had returned appeals or complaints without passing any orders.
- Several ICs have an extremely low rate of disposal per commissioner. For instance, the SIC of West Bengal had an annual average disposal rate of 222 cases per commissioner - each commissioner effectively disposing of less than one case a day - even though more than 10,000 cases were pending.
- Of all the 29 ICs, only the CIC has adopted a norm regarding the number of appeals or complaints to be disposed of by each commissioner in one year.



Online Gaming: What do MeitY's draft rules say?

News: A self-regulatory body, grievance redressal mechanism and mandatory know-your-customer norms for verification are among the key proposals in the draft rules for online gaming, released by the Ministry of Electronics and IT (MeitY) on Monday.

What do the Draft rules say?

- Online games will have to register **with a self-regulatory body**, and only games that are cleared by the body will be allowed to legally operate in India.
- The proposed rules, aimed at safeguarding users against potential harm from skill-based games, have been introduced as an amendment to the **Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021**.
- As per the principles laid under the rule, **wagering on the outcome** of a game will not be allowed.
- Similar to social media and e-commerce companies, online gaming platforms will also have to appoint a **compliance officer** who will ensure that the platform is following norms, a **nodal officer** who will act as a liaison official with the government and assist law enforcement agencies, and a **grievance officer** who will resolve user complaints.
- Online gaming firms will be required to undertake additional due diligence, including KYC of users, transparent withdrawal and refund of money, and a fair distribution of winnings. For KYC, they will have to follow norms laid down for entities regulated by the Reserve Bank of India (RBI).
- Gaming companies will also have to secure a **Random Number Generation Certificate**, which is typically used by platforms that offer card games to ensure that game outputs are statistically random and unpredictable. They will also have to get a **"no bot certificate"** from a reputed certifying body.

What will be the structure of self-regulatory body?

- The self-regulatory body will have a board of directors with **five members** from diverse fields including online gaming, public policy, IT, psychology and medicine.
- It must ensure that the registered games don't have anything "which is not in the interest of sovereignty and integrity of India, defence of India, security of the state, friendly relations with foreign states or public order, or incites the commission of any cognizable offence relating to the aforesaid.
- There could be **more than one self-regulatory body** and all of them will have to inform the Centre about the online games they have registered, along with a report detailing the criteria for registering a certain game.

What was the need to regulate the sector?

- There was need to keep gaming ecosystem safe as around 40 to 45 per cent of the gamers in India are women.
- To encourage growth and innovation in the online gaming sector.
- Online gaming is described as "a very important piece of the start-up ecosystem and a part of the goal of the 1-trillion-dollar economy."
- The revenue of the Indian mobile gaming industry is expected to exceed \$1.5 billion in 2022 and is estimated to reach \$5 billion in 2025.
- The industry grew at a CAGR (compound annual growth rate) of 38 per cent in India between 2017-2020, as opposed to 8 per cent in China and 10 per cent in the US.

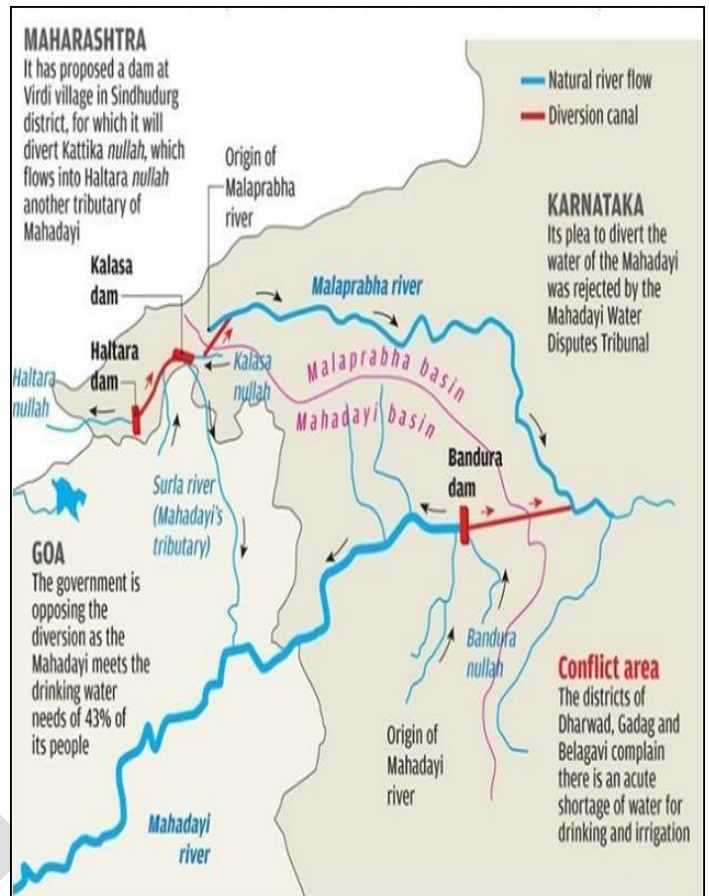
Mahadayi Water sharing Dispute

News: Karnataka's decision to go ahead with a water diversion project on river Mahadayi has escalated its long-standing dispute on the issue with neighbouring Goa.

What is the Kalasa-Banduri Nala project, and why the dispute?

- The Kalasa Banduri Nala project aims to divert water from Mahadayi to satisfy the drinking water needs of Belagavi, Dharwad, Bagalkot and Gadag districts.

- Though the project was first proposed in the early 1980s, it has remained on paper owing to a dispute between **Karnataka, Goa and Maharashtra**. As per plans, barrages are to be built against **Kalasa** and **Banduri streams** — tributaries of Mahadayi — and water diverted towards Karnataka's parched districts.
- In 2002, the Karnataka government decided to implement the project, after the Centre cleared it. Goa, under its then CM Manohar Parrikar, approached the Centre, urging it to assess the available resources in the river and allocate water to the three basin states — Goa, Maharashtra and Karnataka.
- Due to the protests in Goa and also due to concerns over ecological damage, the project was put on hold by the then NDA government. The dispute gained steam in 2006, when the JD(S)-BJP coalition government in Karnataka decided to start work on the project. Goa then approached the Supreme Court, seeking the creation of a Tribunal to settle the water sharing dispute.
- A Tribunal was finally set up by the UPA government in November 2010.



What did the Tribunal say?

- The Tribunal in 2018 awarded 13.42 TMC water from Mahadayi river basin to Karnataka, 1.33 TMC to Maharashtra and 24 TMC to Goa. In Karnataka's share, 5.5 TMC was to meet drinking water needs and 8.02 TMC was for hydro-electricity generation.
- However, after the Tribunal award, Goa filed a Special Leave Petition in the Supreme Court in July 2019, challenging the quantum of allocation. Subsequently, in October 2020, it filed a contempt petition before the SC, accusing Karnataka of illegally diverting water from the Mahadayi basin.
- The project has been a long-standing demand of Karnataka residents set to benefit from it. With Assembly elections due this year, the state government, despite the petitions pending in the SC, has decided to go ahead with the project, after securing a go-ahead from the Central Water Commission (CWC). A clearance from the Ministry of Environment, Forest and Climate Change (MoEF) is still awaited.

What should we know from Prelims perspective?

- Mahadayi originates inside the **Bhimgad Wildlife Sanctuary** in the Belagavi district of Karnataka and flows into the Arabian Sea in Goa.
- **Article 262** of the Constitution provides for the adjudication of inter-state water disputes. It makes 2 provisions:
 - Parliament may by law provide for the adjudication of any dispute or complaint with respect to the use, distribution and control of waters of any inter-state river and river valley.
 - Parliament may also provide that neither the Supreme court nor any other court is to exercise jurisdiction in respect of any such dispute or complaint.
 - Under this provision the parliament has enacted two laws - **the River Boards Act (1956) and the Inter-State Water Disputes Act (1956)**.

Supreme Court expands Article 19 ambit

News: By ruling that a citizen can seek enforcement of the fundamental rights to freedom of speech not just against the state, the Supreme Court has, effectively, extended the ground for seeking these rights against other citizens.

- "A fundamental right under Article 19/21 can be enforced even against persons **other than the State or its instrumentalities**," said the 4-1 majority ruling by the Constitution Bench.

What can be the possible impact of recent judgement?

- This interpretation could bring an obligation on the state to ensure **private entities also abide by Constitutional norms**. These questions could hypothetically range from seeking enforcement of privacy rights against a private doctor to seeking the right to free speech against a private social media entity.
- While delivering this judgment, the Court relied on the 2017 verdict in **Puttaswamy** where a 9 judge bench **unanimously upheld privacy as a fundamental right**. One of the key arguments by the government was that privacy is right enforceable against other citizens and therefore, cannot be elevated to the status of a fundamental right against the state.
- The court also referred to several foreign jurisdictions such as the US where there is a shift from a purely vertical approach to a horizontal approach.

What is the vertical and horizontal approach of rights?

- No jurisdiction in the world appears to be adopting, at least as on date, a purely vertical approach or a wholly horizontal approach.
- A vertical approach provides **weightage to individual autonomy, choice and privacy**.
- While the horizontal approach seeks to imbibe Constitutional values **in all individuals**.
- A vertical application of rights would mean it can be enforced only against the state while a horizontal approach would mean it is enforceable against other citizens.
- For example, a horizontal application of the right to life would enable a citizen to bring a case against a private entity for causing pollution, which would be a violation of the right to a clean environment.

Aspirational Block Programme

News: Prime Minister Modi on Saturday launched the government's Aspirational Block Programme (ABP), which is aimed at improving performance of blocks lagging on various development parameters.

- The ABP was launched during the 2nd National Conference of Chief Secretaries, which was held on January 5-7.

About:

- The Aspirational Blocks Programme is on the lines of the Aspirational District Programme that was launched in 2018 and covers 112 districts across the country.
- Announced in the Union Budget 2022-23, the ABP will initially cover 500 districts across 31 states and Union Territories, with over half of these blocks located in six states – Uttar Pradesh, Bihar, Madhya Pradesh, Jharkhand, Odisha and West Bengal.

What is the Aspirational District Programme?

- It was launched in 2018 which aims to transform districts that have shown relatively lesser progress in key social areas.
- Aspirational Districts are those districts in India, that are affected by poor socio-economic indicators.
- At Government of India level, programme is anchored by NITI Aayog. In addition, individual Ministries have assumed responsibility to drive progress of districts.
- The components of Aspirational District Programme include - **Convergence** (of Central & State Schemes), **Collaboration** (of Central, State level 'Prabhari' Officers & District Collectors) and **Competition** among districts through monthly delta ranking.
- The delta ranking of the Aspirational Districts combines the innovative use of data with pragmatic administration, keeping the district at the locus of inclusive development.
- It focuses on the strength of each district, identifying low-hanging fruits for immediate improvement and measuring progress by ranking districts on a monthly basis.
- Districts are prodded and encouraged to first catch up with the best district within their state, and subsequently aspire to become one of the best in the country, by competing with, and learning from others in the spirit of competitive & cooperative federalism.

What are the parameters for ranking Aspirational Districts?

- The ranking is based on the incremental progress made across 49 Key Performance Indicators (KPIs) under 5 broad socio-economic themes -

- Health & Nutrition (30%), Education (30%), Agriculture & Water Resources (20%), Financial Inclusion & Skill Development (10%) and Infrastructure (10%).

Census exercise delayed yet again

News: The Census enumeration scheduled to take place in 2021 has been further pushed to 2024-25 until further orders.

- In a letter sent to all states and Union Territories last month, the office of the **Registrar General of India (RGI)** has extended the deadline of freezing of administrative boundaries to **June 30, 2023**.

What is the Census?

- Population Census is the total process of collecting, compiling, analyzing and disseminating demographic, economic and social data pertaining, at a specific time, of all persons in a country or a well-defined part of a country.
- Census is the basis for reviewing the country's progress in the past decade, monitoring the ongoing schemes of the government and plan for the future
- The exercise is undertaken **every 10 years** in India.
- The decennial Census is conducted by the Office of the Registrar General and Census Commissioner, Ministry of Home Affairs.
- Census is conducted under the provisions of the Census Act, 1948. The population census is a **Union subject** under Article 246 of India Constitution
- The Census Act, 1948 also guarantees confidentiality of the information collected during population census.

What are the possible implications of delay?

- Delimitation of parliamentary and Assembly constituencies would continue to be based on 2001 Census till data from a Census after 2026 are published.
- Census are used to determine the number of seats to be reserved for SCs and STs in Parliament, State legislatures, local bodies, and government services. Therefore, delay in the Census means that the data from the 2011 Census would continue to be used. Villages and towns have seen rapid changes in the composition of their population over the last decade, this would mean that either too many or too few seats are being reserved.
- The delay will impact government schemes and programmes, and would result in unreliable estimates from other surveys on consumption, health and employment, which depend on census data to determine policy and welfare measures.

How will 2021 census be different from previous ones?

- For the first time the data is collected digitally via mobile applications (installed on enumerator's phone) with a provision of working in offline mode.
- The Census Monitoring & Management Portal will act as a single source for all officers/officials involved in Census activities to provide multi-language support.
- First time that information of a person from the Transgender Community and members living in the family will be collected. Earlier there was a column for male and female only.

Delegated Legislation

News: In upholding the Centre's 2016 decision on demonetisation, one of the key questions to decide for the Supreme Court was whether Parliament gave excessive powers to the Centre under the law to demonetise currency.

- While the majority ruling upheld the validity of the delegated legislation, the dissenting verdict noted that excessive delegation of power is arbitrary.

What is Delegated Legislation?

- Parliament routinely delegates certain functions to authorities established by law since every aspect cannot be dealt with directly by the law makers themselves. This delegation of powers is noted in statutes, which are commonly referred to as delegated legislations.

- The delegated legislation would specify operational details, giving power to those executing the details. **Regulations** and **by-laws** under legislations are classic examples of delegated legislation.

What was delegation of power in the Demonetisation case?

- Section 26(2) of the Reserve Bank of India Act, 1934 essentially gives powers to the Centre to notify that a particular denomination of currency ceases to be legal tender.
- Here, Parliament, which enacted the RBI Act, is essentially delegating the power to alter the nature of legal tender to the central government. The Centre exercised that power by issuing a gazette notification, which is essentially the legislative basis for the demonetisation exercise.

Why was it challenged?

- The petitioner's challenge was this: "In the event that Section 26(2) is held to permit demonetization, does it suffer from excessive delegation of legislative power thereby rendering it ultra vires the Constitution?"
- The Constitution gives law-making powers to the Parliament. While operational aspects can be delegated to statutory bodies, essential powers cannot be delegated. Also, the delegation must be with sufficient guidelines on how the power can be used.
- The petitioners in the demonetisation case argued that since Section 26(2) contains no policy guidelines on how the Centre can exercise its powers, it is arbitrary and therefore, unconstitutional.

Why is excessive delegation power an issue?

- A 1959 landmark ruling in **Hamdard Dawakhana v Union of India**, the Supreme Court had struck down delegation of powers on the grounds that it was vague.
- The Court applies the "**policy and guideline**" test to decide the constitutionality of the delegated legislation.
- The Attorney General for India argued that the RBI Act itself has guidance for exercise of delegated powers. He cited the Preamble and Section 3 of the Act as guidance on the purpose of the law and the Centre's role in "regulating" monetary policy. Section 3 deals with establishment and incorporation of Reserve Bank.

What did the court decide?

- The majority verdict held that since the delegation of power is to the Centre which is anyway answerable to the Parliament, the delegation power cannot be struck down.
- The dissenting opinion, however, disagreed with this view. First, Justice BV Nagarathna held that Centre could not have exercised its delegated powers because Section 26(2) of the RBI only gives powers to the Centre when the recommendation is "initiated" by the RBI Central Board.
- The dissenting view also held that, even if the Centre has the power under Section 26(2) allowing for demonetisation of "any" notes is a vast power that is arbitrary and therefore unconstitutional.

Conclusion:

- Justice Nagarathna emphasised that demonetisation of all series of notes, at the instance of the central government, is far more serious than the demonetisation of particular series by the bank, **mandating the need for a legislation as opposed to an executive action.**

SC dismisses PIL challenging UCC

News: The Supreme Court refused to entertain a PIL challenging the decisions of the Uttarakhand and Gujarat governments to constitute committees for implementing Uniform Civil Code (UCC) in their respective states.

Background:

- The promulgation of the UCC emerges as a positive obligation and not duty of the State under Article 44 of the Constitution in the Directive Principles of State Policy (DPSP).
- Goa's Portuguese Civil Code of 1867 is an example of a common family law prevalent in a State.
- Both the Uttarakhand and Gujarat governments have constituted committees to look into the issue of implementation of UCC. This to govern matters of divorce, adoption, inheritance, guardianship, succession of all citizens equally regardless of their religion, gender and sexual orientation.
- Several other petitions are also pending before the top court seeking uniform ground and procedures of divorce, adoption and guardianship for all communities across the country.
- The Centre has been clear that UCC falls within the domain of legislature.

What did the Supreme Court say?

- The constitution of such committees by the states **cannot be challenged** for being ultra vires to the Constitution of India, as **Article 162** empowers the State to constitute such committees.
- Article 162 of the Constitution states that the executive power of a state shall extend to the matters with respect to which the legislature of the State has power to make laws.
- Also, Entry 5 (Concurrent List) of the 7th schedule of the Constitution gives such power to the states to form a committee. It deals with marriage and divorce; infants and minors; adoption; etc.

What is PIL?

- Public interest Litigation (PIL) means litigation filed in a court of law, for the protection of “Public Interest”, such as Pollution, Terrorism, Road safety, Constructional hazards etc. Any matter where the interest of public at large is affected can be redressed by filing a Public Interest Litigation in a court of law.
- Public interest litigation is not defined in any statute or in any act. It has been interpreted by judges to consider the intent of public at large.

Evolution of PIL in India:

- The seeds of the concept of public interest litigation were initially sown in India by **Justice Krishna Iyer**, in 1976 in **Mumbai Kamagar Sabha vs. Abdul Thai**.
- The **first reported** case of PIL was **Hussainara Khatoon vs. State of Bihar** (1979) that focused on the inhuman conditions of prisons and under trial prisoners that led to the release of more than 40,000 under trial prisoners. Right to speedy justice emerged as a basic fundamental right which had been denied to these prisoners. The same set pattern was adopted in subsequent cases.
- A new era of the PIL movement was heralded by **Justice P.N. Bhagwati** in the case of **S.P. Gupta vs. Union of India**.
 - In this case it was held that “any member of the public or social action group acting bonafide” can invoke the Writ Jurisdiction of the High Courts (under article 226) or the Supreme Court (under Article 32) seeking redressal against violation of legal or constitutional rights of persons who due to social or economic or any other disability cannot approach the Court.
 - By this judgment PIL became a potent weapon for the enforcement of “public duties” where executive action or misdeed resulted in public injury. And as a result any citizen of India or any consumer groups or social action groups can now approach the apex court of the country seeking legal remedies in all cases where the interests of general public or a section of the public are at stake.

Who can file PIL and against whom?

- **Any citizen** can file a public case by filing a petition:
 - Under Art 32 of the Indian Constitution, in the Supreme Court.
 - Under Art 226 of the Indian Constitution, in the High Court.
 - Under sec. 133 of the Criminal Procedure Code, in the Court of Magistrate.
- A Public Interest Litigation can be filed against a State/ Central Govt., Municipal Authorities, and **not any private party**.

6th Schedule of Indian Constitution

News: Recently, the Ministry of Home Affairs (MHA) constituted a high-powered committee for the Union Territory of Ladakh to “ensure protection of land and employment” for the people of Ladakh.

Background:

- Few members suggested that the MHA's order is vague and does not address their demand for **inclusion in the Sixth Schedule**.
- In September 2019, the **National Commission for Scheduled Tribes** recommended the inclusion of Ladakh under the Sixth Schedule, noting that the new UT was predominantly tribal (more than 97%) and its distinct cultural heritage needed preservation.

What is the 6th Schedule of Indian Constitution?

- The Constitution, under Sixth Schedule, contains special provisions for the administration of tribal areas in the four north-eastern states of Assam, Meghalaya, Tripura and Mizoram.
- The Sixth Schedule under **Article 244** provides for the formation of autonomous administrative divisions — Autonomous District Councils (ADCs) — that have some legislative, judicial, and administrative autonomy within a state.
- The tribal areas in these four states have been constituted as **autonomous districts**. The **governor** is empowered to **organise** and **re-organise** the autonomous districts. The acts of Parliament or the state legislature do not apply to autonomous districts or apply with specified modifications and exceptions. The power of direction, in this regard, lies either with the President or Governor.
- Each autonomous district has a **district council** consisting of **30 members**, of whom **four are nominated by the Governor** and the **remaining 26 are elected on the basis of adult franchise**. The elected members hold office for a term of **five years** (unless the council is dissolved earlier) and nominated members hold office during the pleasure of the governor.
- Each autonomous region also has a separate **regional council**.

Why was committee formed?

- After the abrogation of Article 370 in 2019, the civil society groups have demanded for protection of land, resources and employment. There is constant fear of big businesses and conglomerates taking away land, jobs from the local people.
- Their main purpose is to discuss measures to protect the region's unique culture and language taking into consideration its geographical location and strategic importance.

What is Government's stand?

- As per MHA, Ladakh's inclusion in the Sixth Schedule would be difficult. The Constitution is very clear; **Sixth Schedule is for the Northeast**. For tribal areas in the rest of the country, there is the Fifth Schedule.
- The government believes that UT administration of Ladakh is already taking care of socio-economic conditions and welfare of the people there. Sufficient funds are also being allocated.
- According to a recent report tabled in Rajya Sabha, Ladakh administration recently increased the reservation for the Scheduled Tribes in direct recruitment from 10% to 45% which will significantly help the tribal population in their development.

Basic Structure Doctrine

News: Vice President Jagdeep Dhankar criticized the Supreme Court for using the Basic Structure Doctrine to strike down constitutional amendments by Parliament, such as the NJAC Act.

What is the Basic Structure Doctrine?

- The Doctrine of Basic Structure is a form of judicial review that is used to test the legality of any legislation by the courts.
- The doctrine was evolved by the Supreme Court in the 1973 landmark ruling in **Kesavananda Bharati v State of Kerala**. In a 7-6 verdict, a 13-judge Constitution Bench ruled that the 'basic structure' of the Constitution is inviolable, and could not be amended by Parliament.
- The origins of the basic structure doctrine are found in the post-war German Constitution law which, after the Nazi regime, was amended to protect some basic laws.

What is the Basic Structure Doctrine test?

- If a law is found to "damage or destroy" the "basic features of the Constitution", the Court declares it unconstitutional.
- The test is applied to constitutional amendments to ensure the amendment does not dilute the fundamentals of the Constitution itself.
- The test is widely regarded as a check on majoritarian impulses of the Parliament since it places substantive limits on the power to amend the Constitution.

What are the important cases to understand Basic Structure Doctrine?

- Shankari Prasad (1951), Golak Nath (1967), Keshavnanda Bharati (1973) and Minerva Mills (1980)

What is the significance of Basic Structure of Constitution?

- Proponents of the basic structure doctrine consider it to be a safety valve against majoritarian authoritarianism.
- It saved the Indian democracy as it acts as a limitation of constituent power or else unlimited power of parliament might have turned India into a totalitarian regime.
- It strengthens our democracy by delineating a true separation of power where the Judiciary is independent of the other two organs.
- Being dynamic in nature, it is more progressive and open to changes in time, unlike the rigid nature of earlier judgements.

Why is the Doctrine criticized?

- Some critics of the doctrine, like senior advocate Raju Ramachandran have argued that the power of “unelected judges” to strike down amendments to the Constitution on the basis of this doctrine is “**anti-democratic and counter-majoritarian.**”
- It is **not found in the text of the original Constitution** itself and therefore by inventing this test the judiciary is encroaching on the Parliament’s powers.

Conclusion

- Legal scholarship over the years has defended the legitimacy of the test. They have argued that the doctrine rests on a sound structural interpretation of Constitution.
- For example, Justice YV Chandrachud, former Chief Justice of India found himself in the minority in the Kesavananda Bharati ruling. However, in subsequent rulings where the Court applied the test, Justice Chandrachud applied the doctrine to limit Parliament’s powers.

Law Minister’s suggestion to CJI on MOP

News: Union Minister for Law and Justice Kiren Rijiju has written to the Chief Justice of India (CJI) “suggesting” that a nominee of the government should be included in the collegium that makes recommendations for the appointment of judges. The letter offered the suggestion since the Memorandum of Procedure (MoP) is “pending finalisation”.

What is MOP?

- The MoP is the official playbook agreed upon by the government and the judiciary on the appointment of judges. It is a crucial document that governs the collegium system of appointing judges.
- Since the collegium system evolved through a series of Supreme Court rulings (First (1981), Second (1993) and Third (1998) Judges Cases), the MoP is the bedrock of the process of appointments.
- The MoP was sought to be re-negotiated after the Supreme Court struck down (4:1) 2015 the National Judicial Appointments Commission (NJAC). Draft MoPs, which include eligibility criteria, a new secretariat and a mechanism to deal with complaints against proposed candidates, were exchanged during 2015-17.

Why is Law Minister’s suggestion a problematic proposal?

- The proposed inclusion of a government nominee in a new “**search and evaluation committee**” which will shortlist names and make recommendations to the High Court or Supreme Court Collegium, **seeks to change the present system** in which names are vetted by the Collegium, which comprises senior judges.
- The government is trying, through the new Committee, to turn the clock back and re-insert itself into a process over which **judicial primacy** was formalised in 1993 with the **Second Judges Case**, and **reiterated in 2015** with the Supreme Court **striking down** the constitutional amendment to bring in the National Judicial Appointments Commission.
- The proposal will be **destructive of the principle of separation of powers** on which the Constitution is premised and which forms part of the basic features of the Constitution.
- Earlier, Vice President Jagdeep Dhankar had targeted the court by painting its decision on the NJAC as violative of “parliamentary sovereignty” and questioning the “basic structure” doctrine. These

interventions have sharpened apprehensions that the government is trying to use its **popular mandate to subdue non-elected institutions**, especially the judiciary which is the centrepiece of an intricate system of checks and balances.

- **Any move that results in weakening the independence** of the judiciary, or one that rearranges the separation of powers in a way that gives the executive the right of way, therefore, is rife with unhappy consequences in a constitutional democracy.

What are the limitations with Collegium system?

- As the judiciary appoints its own, it needs to cast its net wider, and make the criteria and process of decision-making more open and inclusive.
- There is **opacity in the working** of the Collegium, and a glaring **lack of diversity** on the bench.
- The representation of Dalits and women, for instance, needs to go beyond tokenism.

Way Forward

- The Collegium black box needs to open itself to **ensure accountability** and **transparency** in a manner that doesn't undermine its institutional processes. However, it must be allowed to do it without an overweening executive breathing down its neck.
- Additionally, we can allow for **expression of interest** and **self-nomination** which can overcome the present shortcoming of the system of appointment of judges. This will ensure diversity of class, caste, creed, sexual orientation, leading to an understanding of the plurality and diversity that we need to see on the bench.

National Commission for Women

News: The National Commission for Women (NCW) has asked all States to ensure strict implementation of the sexual harassment at workplace law.

About NCW:

- Under the National Commission for Women Act, 1990, the NCW was set up as a **statutory body** in January 1992. The First Commission was constituted on 31st January 1992 with Mrs. Jayanti Patnaik as the Chairperson.
- The commission consists of a **chairperson**, a **member secretary** and **five** other members. The chairperson of the NCW is nominated by the Central Government.
- Its mission is to strive towards enabling women to achieve equality and equal participation in all spheres of life by securing her due rights and entitlements through suitable policy formulation, legislative measures, etc.

What are concerns raised by NCW?

- The NCW has expressing concern over incidents of sexual harassment at **coaching centres** and **educational institutes** and asked to ensure strict implementation of the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 and guidelines established thereunder.
- In recent years, sexual harassment at workplace is becoming one of the most pressing issues affecting women across the globe.
- Nearly 31,000 complaints of crimes committed against women were received by the NCW in 2022, the highest since 2014. About 54.5 % of the complaints were received from Uttar Pradesh. Delhi recorded 3,004 complaints, followed by Maharashtra (1,381), Bihar (1,368) and Haryana (1,362).
- Crimes that women were subjected to - Domestic violence, Harassment of married women or dowry harassment, Sexual harassment at workplace, Rape and attempt to rape, Cybercrimes.

What is Protection of Women against Sexual Harassment Act, 2013?

- The Supreme Court in a landmark judgement in the Vishakha and others v State of Rajasthan 1997 case gave **Vishakha guidelines**. These guidelines formed the basis for the Sexual Harassment of Women at Workplace (Prevention, Prohibition and Redressal) Act, 2013 ("Sexual Harassment Act").
- The Act defines sexual harassment at the workplace and creates a mechanism for redressal of complaints.
 - Every employer is required to constitute an **Internal Complaints Committee** at each office or branch with **10 or more employees**.

- The Complaints Committees have the powers of **civil courts** for gathering evidence.
- The Complaints Committees are required to provide for conciliation before initiating an inquiry if requested by the complainant.
- **Penalties** have been prescribed for employers. Non-compliance with the provisions of the Act shall be punishable with a fine. **Repeated violations** may lead to **higher penalties and cancellation of license or registration** to conduct business.
- The **State Government** will notify the District Officer in every district, who will constitute a Local Complaints Committee (LCC) so as to enable women in the unorganised sector or small establishments to work in an environment free of sexual harassment.

What is the need of the hour?

- To implement **JS Verma Committee** recommendations on Sexual Harassment at Workplace Act.
- Setting up of an **employment tribunal** instead of an internal complaint committee (ICC) in the Sexual Harassment at the Workplace Act.
- To ensure speedy disposal of complaints, the committee proposed that the tribunal should not function as a civil court but may choose its own procedure to deal with each complaint.
- **Domestic workers** should be included within the purview of the Act. The Committee said any “unwelcome behavior” should be seen from the subjective perception of the complainant, thus broadening the scope of the definition of sexual harassment.

India’s Football ‘Vision 2047’

News: The **All India Football Federation** unveiled its strategic roadmap with ‘Vision 2047’, hoping that in the country’s centenary year of independence, India will emerge as a new powerhouse of Asian football.

Background:

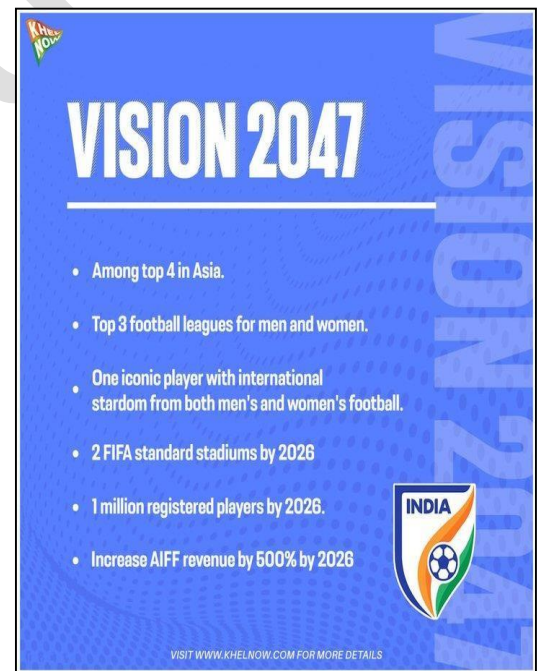
- Developed in conjunction with all stakeholders within Indian Football, the roadmap has also sought and incorporated inputs from the Asian Football Confederation and FIFA (Fédération internationale de Football Association).
- AIFF has broken down ‘Vision 2047’ into six four-year strategic plans. The first of these will look to cover the period till 2026.

About AIFF:

- The AIFF is the organization that manages the game of association football in India.
- The AIFF was founded in 1937, and gained FIFA affiliation in the year 1948.
- Current President – Kalyan Chaubey HQ – New Delhi.

Key Details:

- **Vibrant Footballing Ecosystem**
 - The roadmap envisions India to be among the top four footballing nations in Asia, host one of the top leagues in Asia, and create a vibrant footballing ecosystem.
- **National Football Philosophy**
 - The national football philosophy of India would be based on collecting data from scouting, creating a technical curriculum, focusing on coach and player development and hoping it would translate into a talent pool for the national team.
 - AIFF seeks to develop Coach education program to improve quality of football at all levels of the ecosystem.
- **Village Grassroots Programme**
 - AIFF aims to implement village grassroots programmes to reach 35 million children across 100 villages throughout India.
- **Focus on Women participation**



- A four-level league table pyramid will be created for women's football by 2026.

Chargesheet

News: Recently, the Supreme Court (SC) ruled that chargesheets are not 'public documents' and enabling their free public access violates the provisions of the Criminal Code of Procedure (CrPC) as it compromises the rights of the accused, victim, and the investigation agencies.

About:

- A chargesheet, as defined under Section 173 CrPC, is the final report prepared by a police officer or investigative agency after completing their investigation of a case.
- In the *K Veeraswami vs Union of India & Others* (1991) case, the SC ruled that the chargesheet is a final report of the police officer under section 173(2) of the CrPC.
- A chargesheet must be filed against the accused within a prescribed period of 60-90 days, otherwise, the arrest is illegal, and the accused is entitled to bail.
- It shows the names of each person brought into custody the nature of the accusations, and the identity of the accusers.

How is it different from FIR?

Distinction between FIR Charge sheet	
FIR	Charge sheet
It is preliminary report	It is final report
It is prepared by victim of crime	It is prepared by investigation officer
It is file in police station	It is file in court
It is having purpose of investigation	It is having purpose of trail
It can be with draw in petty offences	It cannot be with draw

Freedom of Speech of Ministers

News: Recently, a Constitution Bench of the Supreme Court unanimously and rightly ruled out any additional curbs on free speech by ministers.

Background:

- The case (*Kaushal Kishor v the State of UP*), relates to the Bulandshahar rape incident of 2016, in which the then Minister of the State termed the incident a 'political conspiracy and nothing else'.
- A writ petition was filed by the survivors before the SC and the court raised an important question: "Can restrictions be imposed on a public functionary's freedom of speech and expression?"

What was the Majority Judgement?

- Like other citizens, ministers are guaranteed the right to freedom of expression under Article 19(1) (a), governed by the reasonable restrictions laid out in Article 19(2) — and those are enough. Because "The role of the court is to protect fundamental rights limited by lawful restrictions and not to protect restrictions and make the rights residual privileges."
- The majority ruling also made a valid distinction on the government's vicarious responsibility for ill-judged or hateful remarks made by its individual ministers. The flow of stream in collective responsibility is from the Council of Ministers to the individual ministers. The flow is not on the reverse, namely from the

individual ministers to the Council of Ministers. It is not possible to extend the concept of collective responsibility to “any and every statement orally made by a Minister outside the House of the People/Legislative Assembly”.

- The court also addressed the question of whether the statement of a minister, that is inconsistent with the fundamental rights of citizens, can result in a constitutional tort. A mere statement by a minister that goes against an individual’s fundamental rights may not be actionable, but becomes actionable if it results in actual harm or loss.

What was the dissenting judgement?

- The minority judgment expresses concern over a hateful public discourse - “hate speech, whatever its content, denies people dignity”.
- It is possible to attribute vicarious responsibility to the government if a minister’s view represents that of the government and is related to the affairs of the state. If such a statement is not consistent with the view of the Government, then it is attributable to the Minister personally.
- It holds the view that there should be a proper legal framework to define acts and omissions that amount to ‘constitutional tort’.

Way Forward

- There are enough provisions in the statute book to deal with speech that promotes enmity and violence or results in cramping the freedoms of others.

Social Justice

Internationalization of Higher Education

News: The University Grants Commission (UGC) released the draft UGC (Setting up and Operation of Campuses of Foreign Higher Educational Institutions in India) Regulations 2023.

Key Proposals of Draft:

- **It will allow Foreign universities to** – Set up their campus in India, decide their admission process, fee structure (to be reasonable), and shall also allow to repatriate funds (to be governed by the Foreign Exchange Management Act, 1999) to their parent campuses.
- **Top 500** global rankings or “**reputed**” universities are eligible to apply and will be granted approval to operate for **10 years**.
- The regulations provide foreign institutions **complete autonomy** to hire faculty and other staff members either from abroad or in India.
- The regulations underline that foreign faculty appointed to teach at the Indian campus shall **stay for a reasonable period**. This was aimed at ensuring that institutes do not make them serve like visiting faculty.
- The UGC will have the right to inspect the campuses at any time and such campuses will not be outside the purview of anti-ragging and other criminal laws.
- The operation of Foreign Higher Educational Institutions shall not be contrary to the sovereignty and integrity of India, the security of the State, friendly relations with foreign States, public order, decency, or morality.

How will it help improve Higher education in India?

- By fixing a benchmark of allowing only the top 500 foreign universities in India, the draft UGC regulations have an in-built mechanism to ensure the entry of only the highest-quality institutions.
- Foreign Higher Education Institutions (FHEIs) are backed with **robust financial resources**, integrity and expertise. They will bring **diverse courses** with them such as in fields of urban design and fashion design.
- The draft regulations empower the positioning of India as an **affordable value player in the global education sector**. Campuses of foreign HEIs will attract students from the Global South.
- The draft regulations will give more viable options to the four lakh or so Indian students who head overseas each year for transnational education.
- FHEIs will provide opportunities for students who do not wish to immigrate to stay in India and study at a foreign university. This can be a win-win situation because Indian students will be able to access high-quality education living in India while foreign universities can cater to huge numbers.
- The **National Institute of Educational Planning and Administration** recently conducted a study. In the report, several universities ranking in the top 200 **have expressed their interest** in considering India as a destination.
- Additionally, such campuses will foster **healthy competition** among Indian institutions to better their standards and establish world-class institutions.
- The Institutions of Eminence (IoE) have made progress in multidisciplinary teaching and research and promoting internationalization of higher education. IoEs and other institutions in India can make joint efforts with FHEI’s for research collaborations in cutting edge-areas.

However, there is a different school of thought which advocates against the recent UGC draft proposal. What do they have to say?

- They say that tuition fees of such institutes alone would be about 15 times more expensive than Indian private universities and over a hundred times costlier than most Indian public universities. Prohibitive costs will prevent education in any foreign university campus for most aspirants. The new proposal vitiates the NEP’s vision of equity and inclusion as it envisages higher education only for the super-rich.
- The quality and excellence in teaching and research on overseas campuses cannot match those in their primary location.

- They argue that instead of enabling the creation of international campuses of universities from developed countries, we need to focus on becoming a global higher education destination in our own right.

What should we do to become a Global leader in International education?

- Firstly, we must provide **greater autonomy** to Indian universities, including the Institutions of Eminence (IoE). Indian universities, both public and private, are generally highly regulated and poorly governed.
- We must provide **more resources** to Indian universities and **not focus only on select centrally established institutions**. Indian universities face acute resource scarcity.
- Government must encourage CSR and philanthropic initiatives with more tax incentives to enable private sector contributions to public and private universities.
- We must do away with institutionalized hierarchy approach that is evident in Indian higher education system. For example, IIT's/IIM's are highest in pecking order followed by central resources then leading to state public universities. It is only after exhausting every other type of publicly-funded institution that private universities come into the reckoning. These deep-rooted biases and prejudice have fostered discrimination against private universities.
- Lastly, there must be a significant improvement in the quality of infrastructure and hostels on university campuses. The safety, security and well-being of the students, especially women, must be ensured.

Way Forward:

- Having said that, The UGC's reforms should not be read in silos. Rather, the cumulative effects of the enabling provisions must be seen as a catalyst for transforming higher education in India.

ASER 2022

News: The findings of the first nationwide ASER survey in four years offer significant takeaways.

Background:

- Pratham, a non-governmental organisation (NGO), has been surveying children aged 6 to 14 and publishing ASER since 2005 to track trends in school enrolment, attendance, and reading and arithmetic abilities.
- The current survey covered nearly 7 lakh children across 616 districts. It frames the impact of pandemic on learning outcomes.

Key Findings:

- School enrolment touched a record high (98.4% in 2022, 97.2% in 2018).
- The **proportion of girls** (aged 11-14) **not enrolled has reduced** (10.3% in 2006, 4.1% in 2018, 2% in 2022).
- An increase of 7.3 percentage points in **government school enrollment** in the period 2018 to 2022.
- The report also shows a **surge in students attending tuition classes**. Between 2018 and 2022, in all states, there is an increase in the proportion of children who attend tuition classes. The exceptions are Gujarat, Karnataka, Tamil Nadu, Kerala and Tripura.
- The **percentage of children not going to school has dropped to 2%** or below for the first time in 2022.
- As per ASER 2021, 1 in 3 students belonging to classes 1 and 2 did not attend school in person due to reasons such as lack of digital access. But, in according to 2022 report, the **availability of smartphones** in homes of enrolled students has nearly doubled from 2018 to 2021, from 36.5 per cent to 67.6 per cent.
- However, there has been a **drop in learning levels of foundational literacy and numeracy** (FLN). For example, in 2022, the basic reading ability of children in Class 3 dipped by 6.8% points from 27.2% in 2018 and the proportion of children in Class 3 who could do at least subtraction fell to 25.9% (from 28.2%).

What can be inferred from ASER 2022?

- The reason why Private tuition went up is probably that it is more flexible. There if flexibility in payment of fees and parents are also seen to be wanting more for their children.
- The enrolment in government schools increased due to factors such as Improvements in infrastructure; distribution of textbooks, midday meals during lockdown; job losses, and the closure of budget private schools in rural areas.
- The government schemes such as **NIPUN Bharat** and **FLN mission** have yielded positive results. For example, almost **80 per cent of the schools** reported that they had received guidelines and teachers have

been trained. This means that the seriousness with which governments are also sort of pushing on NIPUN Bharat is quite high.

Way Forward:

- There is need for integration between the anganwadi system and the school system because the work starts there. There are anganwadis everywhere and their enrollment has gone up.
- The education component of the Anganwadi system must be adequately funded.

National Exit Test

News: Recently, the **National Medical Commission (NMC)** issued the proposed draft regulations related to the National Exit Test (NExT).

About:

- The NExT is a medical licensing exam that is designed to **assess the competency** of medical graduates.
- **Students** who received their **medical degrees** from **NMC approved** medical institutions and **overseas students** also will have to qualify the National Exit Test.
- To register for medical practice in India, they must pass the NExT test.
- This centralized common exam will be conducted by a body formed by the commission for this purpose.
- National Medical Commission (Amendment) Bill, 2022, proposes an autonomous board, '**Board of Examinations in Medical Sciences**', which, when comes to effect, will be responsible for holding the NExT exam.
- Currently, the National Board of Examinations in Medical Sciences (NBEMS) is responsible for holding exams like NEET PG (National Eligibility cum Entrance Test Postgraduate), Foreign Medical Graduate Examination (FMGE).
- NExT will take the place of tests like FMGE and NEET PG.
- The NExT will comprise **two separate** exams called '**Steps**'.

Who can appear for the test?

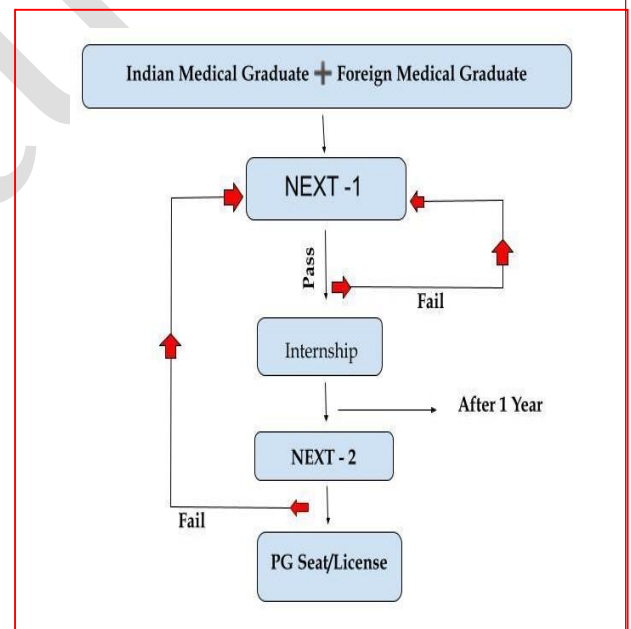
- All the students who have **completed the final MBBS course** from a Commission-recognized medical college would be eligible to appear in the exam.
- There is **no restriction** in the number of attempts provided that the candidate passes both the steps within 10 years of joining MBBS.
- Just by clearing the NExT exam the **foreign medical graduates** will get licentiate to become practicing doctors.

What is NMC?

- The National Medical Commission (NMC) is a **statutory body** in India that was established in 2019 by the Indian government to replace the Medical Council of India (MCI).
- The NMC has been constituted by an act of Parliament known as National Medical Commission Act, 2019
- The NMC is a regulatory body for the medical education sector in India.
- Headquarters – New Delhi.

NCPCR draft guidelines for assessing minors

News: The National Commission for Protection of Child Rights (NCPCR) has come up with draft guidelines on the preliminary assessment of whether certain minors are to be tried under law as adults in particular cases, under the Juvenile Justice (Care and Protection of Children) Act.



Background:

- Previously, all children under the age of 18 were deemed minors by the law, but a provision was added to the JJ Act in 2015 that allows a child in conflict with the law to be tried as an adult.
- In cases of heinous offences, a child between the ages of 16 and 18 may be tried as an adult, and the Juvenile Justice Board (JJB) must perform a preliminary assessment to determine whether to try such a child as an adult or a minor.
- If tried as an adult, the child may be sentenced to jail, with the exception of death or life imprisonment

What is the need for Draft guidelines?

- Recently, the SC held that the task of preliminary assessment under the JJ Act is a “delicate task” and the assessment requires expertise and direction to put in place specific guidelines.
- The NCPCR has framed guidelines which describe the key procedures to conduct the preliminary assessment.
- While the course of assessment may differ from child to child, the guidelines are meant to frame essential components and the basic mechanisms to address any ambiguity.

What do the draft guidelines say?

- The preliminary assessment has to determine 4 aspects:
 - Physical capacity of the child
 - Mental capacity – To determine child’s ability to make social decisions and judgments.
 - Circumstances in which the offence was allegedly committed – Psychological vulnerabilities of child – Trauma, abuse, or mental health problems.
 - Ability to understand the consequences of the alleged offence
- It also states that the experts (from the field of child psychology and psychiatry) must be given an optimal opportunity to interact with the child to build a rapport.
- A copy of the assessment (conducted within 3 months of the child being produced before the JJB) must be given to the child and a legal aid counsel must be present during the assessment.
- The JJB must rely on the Social Investigation Report, statements of witnesses and interaction with parents, guardians, school staff, peer groups and neighbors.

About NCPCR:

- National Commission for Protection of Child Rights (NCPCR was established in March 2007 under an **Act of Parliament** (December 2005) under the Commission for Protection of Child Rights Act, 2005.
- The commission's mandate is to ensure that all laws, policies, programs and administrative systems conform to the vision of the rights of the child as enunciated in the Constitution of India as well as the United Nations Convention on the Rights of the Child.
- A child is defined as a person falling in the age group of 0 to 18 years.

About Juvenile Justice Act, 2015

- Parliament introduced and passed the Juvenile Justice (Care and Protection of Children) Act in 2015 to replace the Juvenile Delinquency Law and the Juvenile Justice (Care and Protection of Children Act) 2000.
- The Act offered provisions to allow trials of juveniles in the age group of 16-18 years as an adult who were found to be in conflict with the law, especially heinous crimes.

Global Report on Child Mortality and Stillbirths

News: Recently, two global reports on child mortality (Levels and Trends in Child Mortality) and stillbirths (Never Forgotten) were released by **United Nations Inter-Agency Group for Child Mortality Estimation** (UN IGME).

Key Findings:

Levels and Trends in Child Mortality

- Data related to Mortality
 - Globally, 5 million children died before their fifth birthday (under-five mortality) in 2021.
 - India’s share in these child mortalities was estimated around 7 lakhs under-five deaths; 5.8 lakhs infant deaths (death before first birthday); and 4.4 lakhs neonatal deaths.
- Decline in mortality rate

- The global under-5 mortality rate fell by 50% since the start of the century, while mortality rates in older children and youth dropped by 36%, and the stillbirth rate decreased by 35%. This can be attributed to more investments in strengthening primary health systems to benefit women, children and young people.
- However, gains have reduced significantly since 2010, and 54 countries will fall short of meeting the Sustainable Development Goals target for under-5 mortality.
- Access to quality health
 - Access to and availability of quality health care continues to be a matter of life or death for children globally. Most child deaths occur in the first five years, of which half are within the first month of life. For these youngest babies, premature birth and complications during labour are the leading causes of death.
- Sub-Saharan Africa and southern Asia continue to have the highest rates of child mortality, with children born in sub-Saharan Africa having the lowest chances of surviving.
- For children that survive past their first 28 days, infectious diseases like pneumonia, diarrhoea and malaria pose the biggest threat, the global health agency found.

Report on Still Birth

- Globally, an estimated 1.9 million stillbirths happened in 2021.
- In 2021, the absolute estimated number of stillbirths in India (2,86,482) was greater than the death amongst children in 1-59 months of age (2,67,565).

What is the root cause of many child deaths?

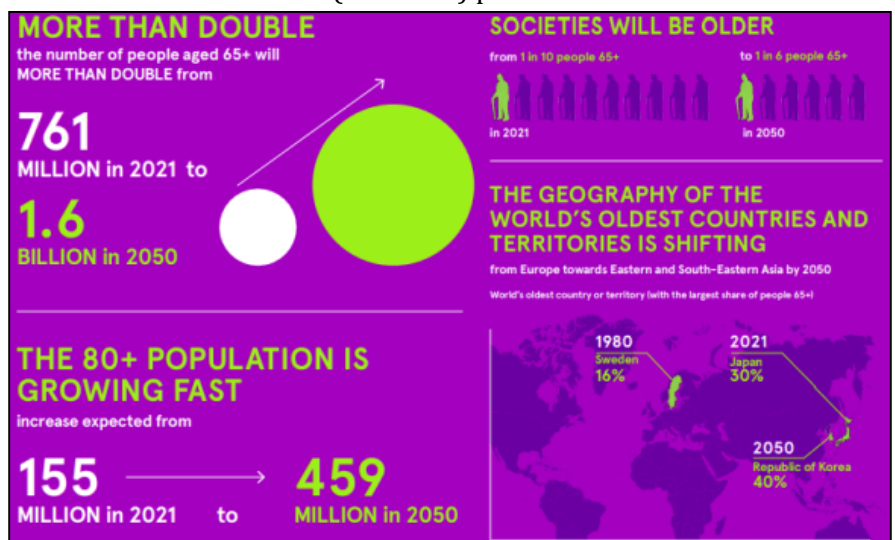
- Preterm Births (Children born before 37 weeks of pregnancy are completed):
 - This is a challenge because these 'preterm babies' are two to four times at higher risk of death after birth in comparison to those born after 37 weeks of gestation.
 - Globally, one in every 10 births is preterm; in India, one in every six to seven births is preterm.
 - India has a high burden of preterm births, which means newborns in the country are at greater risk of complications and mortality.
- Stillbirths
 - The rates and number of both preterm births and stillbirths are unacceptably high and drive the neonatal, infant and child mortalities upwards in India. Thus, they demand urgent interventions.
 - A baby who dies any time after 22 weeks of pregnancy, but before or during the birth, is classified as a stillborn.
 - One of the reasons preterm births and stillbirths do not get due attention is lack of granular and reliable data.

UN World Social Report 2023

News: The United Nations Department of Economic and Social Affairs (UN DESA) published the World Social Report 2023, with the theme **“Leaving No One Behind in an Aging World”**.

Key Findings:

- The elderly population will reach 1.6 billion in 2050, accounting for more than 16% of the global population.
- North Africa, West Asia and sub-Saharan Africa are expected to experience the fastest growth in the number of older people over the next three decades. Also, Europe and North America combined now have the highest share of older persons.
- This demographic shift brings into



question current arrangements of old-age support in young and old countries.

- Gender inequality also persists into old age. Economically, women's lower levels of formal labor market participation, shorter working lives and lower wages during working years lead to more economic insecurity in later life.

What is Ageing of Population?

- It refers to the process by which the proportion of older individuals in a society increases over time. This is typically measured by the proportion of the population that is over a certain age, such as 65 years or older.
- According to the **National Commission on Population**, the **share of the elderly in India's population**, close to 9% in 2011, is growing fast and may reach **18% by 2036**.
- Life expectancy in India has more than doubled since Independence from around 32 years in the late 1940s to 70 years or so today.

What are issues associated with ageing population?

- With age, people are more likely to face chronic physical health conditions and require more healthcare service. This can subsequently lead to increased cost for governments, insurers and family.
- According to a recent survey, 30% to 50% of elderly people had symptoms that make them depressed due to feelings of powerlessness, loneliness. A large majority of elderly persons living alone are women, especially widows.
- Children these days also show negligence towards their old parents who are left to fend off themselves. They suffer from depression, loneliness and isolation.
- Lack of Financial literacy and financial planning especially retirement planning also makes life difficult for parents in their old age.
- Lastly, ageing populations can put a strain on social security systems, as a smaller proportion of the population is working and contributing to the system, while a larger proportion is retired and drawing benefits.

What are policy actions suggested by the Report?

- To promote labour market participation and increased productivity, uphold good health and prevent poverty.
- To reduce inequality and promote economic security at older ages in a fiscally sustainable manner, taking into account both pensions and health care.

What are the schemes and programme for welfare of elderly in India?

- **Maintenance and Welfare of Parents and Senior Citizen's Act, 2007** - The Act provides for: maintenance of parents/ senior citizens by children/ relatives made obligatory and justiciable through Tribunals; revocation of transfer of property by senior citizens in case of neglect by relatives; penal provision for abandonment of senior citizens etc.
- **National Action Plan for the Welfare of Senior Citizens (NAPSrC)** - This Plan takes care of the top four needs of the senior citizens viz., **financial security, food, health care and human interaction /life of dignity**.
- **National Awards for Senior Citizens-Vayoshreshtha Samman** - To recognize the efforts made by eminent senior citizens and Institutions involved in rendering distinguished services for the cause of elderly persons.
- **Rashtriya Vayoshri Yojana (RVY)** - Scheme for providing Physical Aids and Assisted-Living Devices for Senior Citizens.
- **Pradhan Mantri Vaya Vandana Yojana (PMVVY)**: It is a Pension Scheme launched in 2017 and extended up to 2023.
- **SACRED Portal** for Elderly – It was launched by the Ministry of Social Justice and Empowerment. The portal was launched to cater senior citizens seeking job opportunities.
- Additionally, The **World Health Organization** and the **UN** have designated **2021-2030** as the **Decade of Healthy Aging**, building on the **Madrid International Plan of Action on Ageing** is a good step for elderly empowerment.

Way Forward:

- **Financial Security for Elderly** - Increase pension coverage and improve pension schemes to ensure older citizens are financially secure.

- **Increased Pvt Sector participation** - Encourage private sector participation in the provision of elderly care services through Corporate Social Responsibility. Private sector can also help in the development of age-friendly infrastructure and environments to support older citizens.
- There is a need to **Increase funding for healthcare** and **social security programs** to support older citizens. Also, promoting healthy ageing and preventive healthcare can reduce the burden of chronic disease.
- **Sensitizing children** about the issues that elderly population face. Value education, field trip to old age homes can be promoted.
- **Old Age Self Help Groups** can be formed at the local level linked with handloom and handicraft activities to keep elderly socially and physically active and busy.
- **Government** can do its part by **motivating elderly population** to participate in sports activities, cultural activities so that their time can be utilized wisely.

Acute Malnutrition risking 30 million children's lives:WHO

News: United Nations agencies have called for urgent action to protect the most vulnerable children in 15 countries hit the hardest by an unprecedented food and nutrition crisis.

Background:

- According to the World Health Organization (WHO), conflict, climate shocks, the ongoing impacts of COVID-19 and rising living costs are rendering increasing numbers of children acutely malnourished.

What is Malnutrition?

- Malnutrition refers to deficiencies, excesses or imbalances in a person's intake of energy and/or nutrients.
- It covers 2 broad groups of conditions –
 - Undernutrition - It includes stunting (low height for age), wasting (low weight for height), underweight (low weight for age) and micronutrient deficiencies or insufficiencies (a lack of important vitamins and minerals).
 - Overweight - It includes obesity and diet-related non-communicable diseases (heart diseases, stroke, cancer and diabetes).

Key Findings:

- According to Director-General WHO – “The global food crisis is also a health crisis, and a vicious cycle: malnutrition leads to disease, and disease leads to malnutrition,”
- Wasting/acute malnutrition, which is the deadliest form of undernutrition, is a major threat to children's lives and their long-term health and development.
- Currently, more than 30 million children in the 15 worst-affected countries suffer from this and 8 million of these children are severely wasted.
- Meanwhile, critical health, nutrition and other life-saving services are becoming less accessible.

What is being done to tackle this?

- Five UN agencies subsuming WHO are calling for accelerated progress on the **Global Action Plan on Child Wasting**. These agencies are Food and Agriculture Organization (FAO), UN Refugee Agency (UNHCR), United Nations Children's Fund (UNICEF), World Food Programme (WFP) and WHO.
- The action plan aims to prevent, detect and treat acute malnutrition among children in the worst-affected countries - Afghanistan, Burkina Faso, Chad, the Democratic Republic of the Congo, Ethiopia, Haiti, Kenya, Madagascar, Mali, the Niger, Nigeria, Somalia, South Sudan, Sudan and Yemen.

Way Forward:

- Decisive and timely action is needed to prevent this crisis from becoming a tragedy for the world's most vulnerable children. All agencies urged greater investment in support of a coordinated UN response that will meet the unprecedented needs of this growing crisis before it is too late.

Social Progress Index

News: Recently, the Social Progress Index (SPI) for States and Districts of India was released by the **Economic Advisory Council to the Prime Minister (EAC-PM)**.

Background:

- The SPI was compiled by the Institute for Competitiveness and Social Progress Imperative.
- The report also dwells on India's performance (ranked 110 out of 169 nations) based on the global SPI 2022 that is brought out by Social Progress Imperative since 2013.

About:

- SPI is a comprehensive tool that can serve as a holistic measure of a country's social progress at the national and sub-national levels.
- The report aims to provide a systematic account of the social progress made at all levels in the country.
- The index uses an extensive framework comprising 89 indicators at the state level and 49 at the district level.

What are the assessment components?

- The index assesses states and districts based on 12 components across three critical dimensions of social progress.
- **Foundations of Wellbeing** - It evaluates the progress made by the country across the components of Access to Basic Knowledge, Access to Information and Communication, Health and Wellness, and Environmental Quality
- **Basic Human Needs** - Nutrition and Basic Medical Care, Water and Sanitation, Personal Safety and Shelter.
- **Opportunity** - It focuses on Personal Rights, Personal Freedom and Choice, Inclusiveness, and Access to Advanced Education.

Key Findings:

- Best performing state in SPI Score - Puducherry
- Worst performing state SPI Score - Jharkhand and Bihar
- Basic Human Needs - Goa, Puducherry, Lakshadweep, and Chandigarh are the top four states with the best performance in water, sanitation and shelter.
- Opportunity - Tamil Nadu has achieved the highest component score under opportunity dimension.
- Foundations of Wellbeing - Mizoram, Himachal Pradesh, Ladakh, and Goa have emerged as the best-performing states for the Foundations of Wellbeing.
- For Environmental Quality, Mizoram, Nagaland, and Meghalaya are the top three states.
- Top Best Performing Districts - Aizawl (Mizoram), Solan (Himachal Pradesh) and Shimla (Himachal Pradesh) have emerged as the top three best-performing districts.

Women in Command Roles

News: As many as 108 women officers in the Army are set to be cleared for the rank of Colonel (selection grade) by a special selection board, which will make them eligible to command units and troops in their respective arms and services for the first time.

Why is this significant?

- Most importantly, it grants women officers **parity** with their male counterparts.
- It is not that women officers did not reach the rank of Colonel or beyond in the past, but they were only in two branches — the Judge Advocate General (JAG) branch and the Army Education Corps — where they were



granted permanent commission in 2008. However, these were merely administrative in nature and not purely command appointments in which an officer commands troops on ground.

- The **Supreme Court's** order to grant **permanent commission to women Army officers** in February 2020 opened the doors for promotion to women officers across all streams of the Army, except pure combat arms.

Why did their Colonel promotions come so late?

- An officer in the Army is promoted to the rank of Colonel only after serving between 16 and 18 years, based on certain criteria such as annual confidential reports and various courses.
- Women officers who were inducted into the Army were inducted as SSC officers in 1992 and in the years after did not have the choice to opt for permanent commission.
- JAG and Army Education Corps were exceptions, where a permanent commission was opened for them in 2008.
- For other arms and services, women could not become permanent cadres, and had to retire much before they completed the service period that is mandatory to become a Colonel.

What exactly does commanding a unit of the army mean?

- The position of Colonel is considered a coveted appointment because it is a high-ranking position within the military, but it also allows the officer to interact directly with troops on the ground.
- This interaction allows the Colonel to have a more hands-on approach to leadership and decision making, which is a unique opportunity not found in higher-ranking positions like Brigadier or Major General.

In which arms and services will women officers command units?

- Women officers in many streams of the Army, including the Army Air Defence, Signals, Engineers, Army Aviation, Electronics and Mechanical Engineers, Army Service Corps, Army Ordnance Corps, and Intelligence Corps will be commanding units.
- They are still not eligible in core combat arms such as Infantry, Mechanised Infantry and Armoured Corps, as the Army is not open to women fighting wars at the borders as foot soldiers. Much of this resistance stems from past instances of male soldiers being taken as prisoners of war and tortured by the enemy.

International Relations

Zelenskiy's 10-point peace plan

News: Ukraine's President Volodymyr Zelenskiy has been vigorously promoting his 10-point peace plan, discussing it with U.S. President Joe Biden among others, and urging world leaders to hold a Global Peace Summit based on it

What does the plan call for?

- Radiation and nuclear safety, focusing on restoring safety around Europe's largest nuclear power plant, Zaporizhzhia in Ukraine, which is now-Russian occupied.
- Food security, including protecting and ensuring Ukraine's grain exports to the world's poorest nations.
- Energy security, with focus on price restrictions on Russian energy resources, as well as aiding Ukraine with restoring its power infrastructure, half of which has been damaged by Russian attacks.
- Release of all prisoners and deportees, including war prisoners and children deported to Russia.
- Restoring Ukraine's territorial integrity and Russia reaffirming it according the U.N. Charter, which Zelenskiy said is "not up to negotiations".
- Withdrawal of Russian troops and cessation of hostilities, restoration of Ukraine's state borders with Russia.
- Justice, including the establishment of a special tribunal to prosecute Russian war crimes.
- Prevention of ecocide, need for protection of environment, with focus on demining and restoring water treatment facilities.
- Prevention of escalation of conflict, and building security architecture in the Euro-Atlantic space, including guarantees for Ukraine.
- Confirmation of the war's end, including a document signed by the involved parties.

How has the world responded?

- Russia rejected Zelenskiy's peace proposal and Moscow reiterated that it would not give up any territory it has taken by force, around a fifth of Ukraine, which it says it has annexed.
- The Western world's support for Ukraine's military has run into billions of dollars, led by Washington, and nations have rushed to help Kyiv with demining and fixing power infrastructure. But response to Ukraine's peace plan and its proposed peace summit has been more cautious.
- The G7 leaders said they were committed to bringing peace to Ukraine "in line with its rights enshrined in the U.N. Charter."
- While the U.N. Secretary-General Antonio Guterres said that chances for any peace talks are small any time soon.

Cyprus-India ink 3 agreements

News: At a joint news conference held in Nicosia, Cyprus, Foreign Minister of Cyprus Ioannis Kasoulides and External Affairs Minister S. Jaishankar signed three important agreements.

Background:

- The two ministers had fruitful conversations during Dr. Jaishankar's first official visit to Cyprus about bilateral relations, multilateral cooperation, geopolitical and regional problems, the Indo-Pacific issue, the Middle East, Europe, and India's relationship with the European Union.
- Diplomatic ties between India and Cyprus were established in 1962.
- Cyprus got the support of India during its struggle for independence from British colonial rule.

What agreements were signed?

- India and Cyprus today signed a number of agreements in various areas including on Defense and Military Cooperation between the two countries.
- A Letter of Intent on Migration and Mobility Partnership was also signed to provide a common framework of arrangement and cooperation to facilitate the mobility of students, academics, business people and professionals. It will also help in combating irregular migration.
- The External Affairs Minister reiterated India's position on the Cyprus issue and expressed commitment for a bi-communal bi-zonal Federation based on UN Resolutions as a solution to the issue.
- Dr. Jaishankar also welcomed signing the framework agreement on the signing of the International solar alliance by Cyprus.
- The External Affairs Minister also released the commemorative stamps today on 75 years of India's Independence and 60 years of establishing diplomatic ties with Cyprus.



Voice of Global South Summit

News: Prime Minister Modi recently inaugurated a virtual event, "Voice of the Global South Summit".

About:

- India hosted the summit in a bid to articulate the views of the developing countries regarding the effects of the pandemic and the war in Ukraine. The event has planned eight ministerial sessions including finance, energy, education, foreign affairs, and commerce.
- It was held under the theme - '**Unity of Voice, Unity of Purpose**' - essentially envisages bringing together countries of the global south and sharing their perspectives and priorities on a common platform across a whole range of issues.

Key Highlights:

- Prime Minister through this event has set the stage on behalf of developing countries, many of which are **united by a history of colonisation**.
- Offering to become the voice of the Global South, India during the event gave a new agenda to the world on behalf of the countries of the South: 'respond, recognise, respect, and reform'.
- The 'Global South' broadly refers to countries in **Asia, Africa, and South America**.
- The PM stressed that The Global South **does not have adequate voice** in the "eight decades old model of global governance" and that it should shape the "**emerging order**".
- The goal of India in 2023 is to represent the Global South

Why set categorization of Global North and Global South?

- What sets the terms Global North and South apart are that first, they are arguably more accurate in grouping countries together, measuring similarly in terms of wealth, indicators of education and healthcare, etc.
- Another commonality between the South countries is that most have a history of colonisation, largely at the hands of European powers.
- Why the concept is being reiterated now is partly because of the economic emergence of some of these South countries, such as India and China, in the last few decades.

- Many consider the world to now be multipolar rather than one where the US alone dominates international affairs.
- The progress achieved by many Asian countries is also seen as challenging the idea that the North is the ideal.

What are the possible limitations?

- The problem of proper naming is still not resolved. North countries paying for funding green energy, having historically contributed to higher carbon emissions, many in the Global North have objected to China and India's exclusion from this, given their increasing industrialisation.
- In the rise of Asia, the continued neglect of Africa has been questioned as well.
- There is also the question of whether the South simply aims to replace the North and the positions it occupies, again continuing a cycle in which a few countries accumulate crucial resources.

Way Forward:

- In this multipolar world, the whole North and South needs to come together to fight the issues of developed and developing countries and promote the East like the West.
- Unhindered flow of International trade, capital flows across countries could lead to contraction in North-South divide.

India-Maldives Relations

News: In a bid to strengthen ties, India and Maldives on Wednesday signed pacts on development projects as External Affairs Minister S Jaishankar visited the island country and held talks with the top leadership in the country.

Key Details:

- The pact included grant assistance of 100 million Rufiyaa [currency of Maldives] for the High Impact Community Development Project (HICDP) scheme.
- It also included the development of a sports complex in Gahdhoo, and academic collaboration between Maldives National University and Cochin University of Science and Technology.
- Dr. Jai Shankar participated in the groundbreaking ceremony of an international airport being developed by India at **Hanimadhoo in Haa Dhaalu atoll**.
- The two ministers also witnessed the handover of two sea ambulances from India to the Ministry of Defence of Maldives.

Background of India-Maldives relations:

- Defence cooperation extends to the areas of Joint Exercises - "Ekuverin", "Dosti", "Ekatha" and "Operation Shield" (begun in 2021). India provides the largest number of training opportunities for Maldivian National Defence Force (MNDF), meeting around 70% of their defence training requirements.
- In August 2021, Afcons, an Indian company, signed a contract for the largest-ever infrastructure project in Maldives which is the Greater Male Connectivity Project (GMCP).
- India is Maldives 2nd largest trading partner.
- In 2022, the National College for Policing and Law Enforcement (NCPL) was inaugurated by India's External Affairs Minister. NCPL is the largest grant project executed by India in Maldives.
- In the past five years, Delhi's Neighbourhood First and SAGAR policies have found expression in the improvement of ties. Maldives is part of the India-driven Colombo Security Conclave.

Challenges:

- Radicalisation of youth in Maldives is on the rise with many joining ISIS and Pak based Jihadi groups.
- Political instability in the nation has always been a concern.
- China's strategic footprint in India's neighborhood has increased. The Maldives has emerged as an important 'pearl' in China's "String of Pearls" construct in South Asia.

India-Sri Lanka relations

News: Recently, India sent written financing assurances to the International Monetary Fund (IMF), becoming the first bilateral creditor of the island nation to officially support its crucial debt restructure programme after last year's economic meltdown.

How will written assurance help the island nation?

- The International Monetary Fund's provisional USD 2.9 billion package to Sri Lanka will be cleared only after Sri Lanka's official creditors - China, Japan and India have provided adequate financing assurances.
- The decision of financing assurance was also a reassertion of India's belief in the principle of "neighborhood first", and not leaving a partner to fend for themselves.

Key Takeaways:

- Dr. Jaishankar said in Colombo that in going to the IMF first, India "did not wait on others and decided to do what we believe is right", acting on its **Neighbourhood First principle**.
- Dr. Jaishankar announced that the two countries had agreed in principle on a **renewable energy framework**.
- It was further reiterated to the Lankan government to implement the **13th amendment** in its constitution. The amendment, which provides for elected provincial councils, was introduced at India's intervention in 1987. It is the only concession in the constitution on the **Tamil demand for devolution**.

About IMF:

- The IMF was set up along with the World Bank after the Second World War to assist in the reconstruction of war-ravaged countries.
- The IMF's primary purpose is to ensure the stability of the international monetary system the system of exchange rates and international payments that enables countries (and their citizens) to transact with each other.
- The Fund's mandate was updated in 2012 to include all macroeconomic and financial sector issues that bear on global stability.
- HQ - Washington DC, United States
- Flagship Publication - World Economic Outlook, Global Financial Stability Report and Fiscal Monitor.

India's Egypt Opportunity

News: PM Modi and President Abdel Fattah El-Sisi agreed to elevate the India-Egypt bilateral relationship to a "strategic partnership".

- The strategic partnership will have broadly four elements: political, defence, and security; economic engagement; scientific and academic collaboration; cultural and people-to-people contacts.

How have India-Egypt relations evolved over the years?

- The history of contacts between India and Egypt, two of the world's oldest civilisations, can be traced back to at least the time of Emperor Asoka. In modern times, Mahatma Gandhi and the Egyptian revolutionary Saad Zaghloul shared common goals on independence from British colonial rule.
- India-Egypt along with Yugoslavia, Indonesia and Ghana, established the Non-Alignment Movement (NAM).



- In September 2016, when President Sisi paid a state visit to India, it led to a joint statement that identified political-security cooperation, economic engagement and scientific collaboration, and cultural and people-people ties as the basis of a new partnership for a new era.

Egypt as Friend of India in Muslim World:

- It is home to the great university of **Al Azhar**, widely seen as the most respected seat of learning for Sunni Islam.
- New Delhi views Sisi's Egypt as a **moderate Islamic voice** among Muslim-majority countries, as well as a "**friend**" within the Organisation of Islamic Cooperation (OIC).

Potential to fight Terrorism and improved Defence ties:

- From the beginning, Sisi has been tough on **Islamic religious extremism**.
- Both leaders were "unanimous" that terrorism is the "most serious security threat" to humanity. The two countries agreed that "concerted action is necessary to end cross-border terrorism".
- The two countries are looking at deepening **defence** and **security cooperation**. New Delhi wants to supply India-made defence equipment such as the LCA Tejas, missiles like Akash, DRDO's Smart Anti-Airfield Weapon, and radars to Egypt.

Role India can play to help Egypt in current crisis:

- Egypt's economy has been in shambles over the past few years.
- Egypt's 80% grains come from Russia-Ukraine. Despite restrictions on the export of **wheat**, India had last year allowed shipments of **61,500 metric tonnes** to Egypt. But the country needs more.
- From India, Egypt has sought investments in infrastructure Metro projects in Cairo and Alexandria, a Suez Canal economic zone, a second channel of the Suez Canal, and a new administrative capital in a Cairo suburb.

Geo-strategic significance of Egypt:

- **12%** of global trade passes through the **Suez Canal** — and is a key player in the region. It is a **major market** for India and can act as a **gateway** to both **Europe** and **Africa**. It also has bilateral trade pacts with important West Asian and African nations.

Way Forward:

- More than six decades ago, the two countries founded the NAM. They now have an opportunity to forge a new path ahead, not just for their strategic and economic interests, but as the voice of the Global South.



36th India-France Strategic Dialogue

News: Recently, India-France Strategic Dialogue between National Security Adviser Ajit Doval and Diplomatic Adviser to the President of France, Emmanuel Bonne was held in New Delhi.

Key outcomes:

- India and France reiterated their commitment to take forward their strategic partnership to ensure peace, stability and security in the Indo-Pacific based on common beliefs in the rules-based international order and strategic autonomy.
- Both sides reiterated that in view of the emerging uncertainties and volatile global security environment, there was a need for closer cooperation between India and France, including in the UNSC and other multilateral forums.

Key Details about India-France Relations:

Economic Relations:

- France is the 7th largest foreign investor in India with a cumulative FDI stock of USD 9 billion from 2000 to 2020, which represents 2 % of the total FDI inflows into India.
- In FY 2020-21, bilateral trade stood at \$ 9.12 Bn and has increased to \$ 9.87 Bn during the period April 2021 – January 2022.
- Launch of Unified Payment Interface (UPI) in France
- “Co-localisation of production” with India as a priority indicates urgency to take steps for ensuring a more diversified and stable Indo-Pacific and global periphery.

Security Relations:

- Bilateral defence ties are in fine fettle and France has largely stuck to the promised delivery of Rafale aircrafts to India.
- The challenge here is to move from a buyer-seller relationship to an investor-investee one by making defence equipment in India accompanied by a transfer of technology.
- India and France have conducted joint patrols from the Reunion Island for the first time.
- Bilateral Military exercises – Exercise Shakti (Army), Exercise Varuna (Navy) and Exercise Garuda (Airforce).

Environment and Ecology:

- India will be the first “country of honour” at the Sea Tech . Week in Brest, France, a major international event bringing together Blue Economy stakeholders.
- France announced its support for Prime Minister Modi’s Lifestyle for the Environment (LIFE) initiative.
- Regarding solar alliance, India has started having annual summits with France and Germany from 2000.

Technology:

- A Joint Vision for space cooperation was concluded in 2018. The vision document talks of bringing societal benefits of space technology, situational awareness in space domain and cooperation in satellite navigation and related technologies.
- Co-operation and acceleration of Jaitapur Nuclear power plant project (could be nation’s largest nuclear power site once completed) must be key to further deepen ties as far as technology and clean energy is concerned.
- France also has a special tech visa for Indian engineers, enabling robust exchanges.
- Digital cooperation is being stepped up in cyber security and on building standards for public digital infrastructure.

Way Forward:

- France holds the rotating presidency of the EU. In this context, discussion on FTA and the Investment Agreement that India is negotiating with the EU and persuade France to weigh in favorably with the Brussels bureaucracy and other stakeholders.
- More can be done in the area of digital sovereignty where India is a potential model for France with its use of open platforms and open-source public goods like India Stack and MOSIP; regulation, especially personal data empowerment and protection; health data and health tech.
- France and India must now invest in preventing digital platforms from being weaponised and avert threats to critical infrastructure.
- Accelerate investment between two countries in low carbon alternatives like wind, solar PV, biomethane, heat pumps, nuclear and clean hydrogen.
- India has the market, France has the technology and capital, and the EU has the political will and incentives to drive the transition to green hydrogen.

General Studies – 3

Economic Development

1. Indian Economy and issues relating to planning, mobilization, of resources, growth, development and employment.
2. Inclusive growth and issues arising from it.
3. Government Budgeting.
4. Major crops-cropping patterns in various parts of the country, - different types of irrigation and irrigation systems storage, transport and marketing of agricultural produce and issues and related constraints; e-technology in the aid of farmers.
5. Issues related to direct and indirect farm subsidies and minimum support prices; Public Distribution System- objectives, functioning, limitations, revamping; issues of buffer stocks and food security; Technology missions; economics of animal-rearing.
6. Food processing and related industries in India- scope' and significance, location, upstream and downstream requirements, supply chain management.
7. Land reforms in India.
8. Effects of liberalization on the economy, changes in industrial policy and their effects on industrial growth.
9. Infrastructure: Energy, Ports, Roads, Airports, Railways etc.
10. Investment models.

Technology

11. Science and Technology- developments and their applications and effects in everyday life.
12. Achievements of Indians in science & technology; indigenization of technology and developing new technology.
13. Awareness in the fields of IT, Space, Computers, robotics, nano-technology, bio-technology and issues relating to intellectual property rights.

Environment & Bio-diversity

14. Conservation, environmental pollution and degradation, environmental impact assessment.

Disaster Management & Security

15. Disaster and disaster management.
16. Linkages between development and spread of extremism.
17. Role of external state and non-state actors in creating challenges to internal security.
18. Challenges to internal security through communication networks, role of media and social networking sites in internal security challenges, basics of cyber security; money-laundering and its prevention.
19. Security challenges and their management in border areas - linkages of organized crime with terrorism.
20. Various Security forces and agencies and their mandate.

Economic Development

Why the Indian Rupee fell 10% against US Dollar in 2022?

News: The Indian rupee depreciated by around 10 per cent against the US dollar in 2022 on account of sharp appreciation of the greenback (a dollar), as the US Federal Reserve tightened its interest rate to check inflation amid the uncertainties surrounding the Russia-Ukraine conflict.

How did Rupee perform in 2022?

- The rupee was the worst-performing Asian currency in 2022, witnessing a fall of around 10 per cent against the greenback.
- This decline was mainly on account of appreciation in the US currency on safe haven appeal amid fears of recession and inflation across many parts of the world and Russia-Ukraine war.
- During the year, Chinese Yuan, Philippine Peso and Indonesian Rupiah fell around 9 per cent. South Korean Won and Malaysian Ringgit declined by nearly 7 per cent and 6 per cent, respectively.

What was the reason for capital outflows?

- The US Fed aggressively raised interest rates by 425 basis point (bps) in 2022 in its fight against inflation. This led to a **higher interest rate differential** between the US and India, and **investors pulled out money from the domestic market** and started investing in the US market to **take advantage of higher rates**.
- In 2022, foreign portfolio investors (FPIs) pulled out Rs 1.34 lakh crore from the Indian markets – the highest-ever yearly net outflow.
- Russian invasion of Ukraine accentuated the FPI withdrawals with the global economic slowdown making inflows tougher.

What is the outlook on rupee for 2023?

- It is expected that the depreciation in local currency may not continue for a longer period as India remains the fastest-growing economy.
- When the (US Fed) tightening is over, the tide will surely turn, RBI Governor Shaktikanata Das said during the December monetary policy announcement.

Crypto Awareness Campaign

News: The Investor Education and Protection Fund (IEPF) will launch an outreach programme to create awareness of Cryptocurrencies and Online Gaming.

About IEPF:

- It is managed by the IEPF Authority, which was set up in 2016 under the provisions of Section 125 of the Companies Act, 2013.
- The Authority is entrusted with the responsibility of administration of the IEPF, which, besides promoting awareness among investors, makes refunds of shares, unclaimed dividends, matured deposits and debentures and so on to rightful claimants.
- As for investment education, the idea is to reach out to household investors, housewives and professionals alike in rural and urban areas and teach them the basics. Focus areas include primary and secondary capital markets, various saving instruments, the instruments for investment (such as mutual funds, equity, among others), increasing awareness of Ponzi and chit fund schemes.

What is the need for outreach programme?

- Both crypto-assets and online gaming (that extends to gambling and betting) continue to be promoted in a risky manner despite the recent turmoil in the sector. Thus, the programme will help consumers to make informed choices.

What is the concern surrounding cryptocurrency?

- The crypto dilemma stems from concerns about the unregulated currency having a destabilizing effect on the monetary and fiscal stability of a country.

- Further, crypto exchanges in India are being investigated for their alleged involvement in unlawful practices such as drug trafficking, money laundering, violating foreign exchange legislation and evasion of GST (Goods and Services Tax).
- As on December 2022, Rs 907.48 crore have been attached/seized, three persons have been arrested and four prosecution complaints have been filed before the Special Court, Prevention of Money Laundering Act (PMLA).
- The immutable, public nature of the block chain makes crypto a poor choice for money laundering because it allows law enforcement to uncover and trace money laundering far easier than cash transactions.
- The Reserve Bank of India (RBI) has recommended framing legislation on the sector. It is of the view that cryptocurrencies should be prohibited.

About Online gaming:

- The Ministry of Electronics and Information Technology (MeitY) has been appointed the nodal industry for online gaming in India; for e-sports, the nodal agency is the Department of Sports, under the Ministry of Youth Affairs and Sports.
- A proposed framework for Central regulation by MeitY is expected to address issues faced by the sector.
- For instance, there is confusion about the definitions of a '**game of chance**' like fantasy games, and a '**game of skill**', a term which has been used in the Public Gaming Act (1867) but has not been spelt out. There are risks from cybercrimes as well.
- In a 'game of skill', while the element of chance cannot be entirely ruled out, it is the 'element of skill' (mental or physical skill of the user) that plays a dominant role in determining the outcome of the game rather than pure chance.
- As per several rulings of the Supreme Court and several High Courts clearly establish 'Games of Skill' as legitimate business activities protected under Article 19(1)(g) of the Indian Constitution.
- These rulings have also emphasized a clear distinction between 'Games of Skill' and 'Games of Chance'. Despite these court rulings, online skill games have faced restrictions in a few States due to addiction, financial losses and the thin line between skill and chance.

Way Forward:

- Apart from the outreach programme, there has to be a regulatory mechanism for the crypto sector.
- If the government takes a heavy-handed approach and starts saying things like virtual currency is not legal in India, that will not be entirely true. People may presume incorrectly that it is illegal, and One may be indulging in unlawful transactions like money laundering using crypto assets. But unlawful transactions can also be executed using legal banking channels as well.

Sweet Revolution in India

News: Under the **Honey Mission**, 1,75,000 bee boxes have been distributed so far by the **Khadi and Village Industries Commission (KVIC)**.

Background:

- As per the **National Horticulture Board (NHB)**, Uttar Pradesh, West Bengal, Punjab, Bihar, Rajasthan, Himachal Pradesh, Haryana, Uttarakhand, Madhya Pradesh and Karnataka were the top ten honey-producing states in 2021-22.
- The National Horticulture Board (NHB) was set up by the Government of India in 1984 as an **Autonomous organization** under the administrative control of **Ministry of Agriculture and Farmers Welfare** and registered as a society under Societies Registration Act with its headquarters at **Gurugram**.

What is Sweet Revolution?

- It is an ambitious initiative of the Government of India for promoting apiculture, popularly known as 'beekeeping'.
- To provide a booster shot to Sweet Revolution, the government launched the National Beekeeping and Honey Mission in 2020 (a central sector scheme under the Ministry of Agriculture and Farmers Welfare) as part of the Atmanirbhar Bharat scheme.

- It aims to accelerate the production of quality honey and other related products. Other apiculture products such as **royal jelly, beeswax, pollens**, etc., are also used extensively in different sectors like pharmaceuticals, food, beverage, beauty, and others.

About KVIC:

- KVIC is a **statutory body** established under the Khadi and Village Industries Commission Act, 1956.
- It functions under the **Ministry of Micro, Small and Medium Enterprises**.
- The KVIC is charged with the planning, promotion, organisation and implementation of programmes for the development of Khadi and other village industries in the rural areas in coordination with other agencies engaged in rural development wherever necessary.
- Headquarters – Mumbai.

Sovereign Green Bonds

News: On Friday (January 6), the Reserve Bank of India (RBI) announced that it will, for the first-time, issue Sovereign Green Bonds (SgrBs) worth Rs 16,000 crore, in two tranches of Rs 8,000 crore each in the current financial year.

What are Green Bonds?

- Green bonds are bonds issued by any sovereign entity, inter-governmental groups or alliances and corporates with the aim that the proceeds of the bonds are utilised for projects classified as environmentally sustainable.
- Green Bonds have emerged as an important financial instrument to deal with the threats of climate change and related challenges. It's critical to connect environmental projects with capital markets and investors and channel capital towards sustainable development – and Green Bonds are a way to make that connection.

How will they help investors?

- Green Bonds offer investors a platform to engage in good practices, influencing the business strategy of bond issuers. They provide a means to hedge against climate change risks while achieving at least similar, if not better, returns on their investment.
- In this way, the growth in Green Bonds and green finance also indirectly works to disincentivise high carbon-emitting projects.

When did the government plan to issue such bonds?

- The Union Budget 2022-23 made an announcement to issue Sovereign Green Bonds.
- The country's climate actions have so far been largely financed from domestic resources and it is now targeting generation of additional global financial resources.

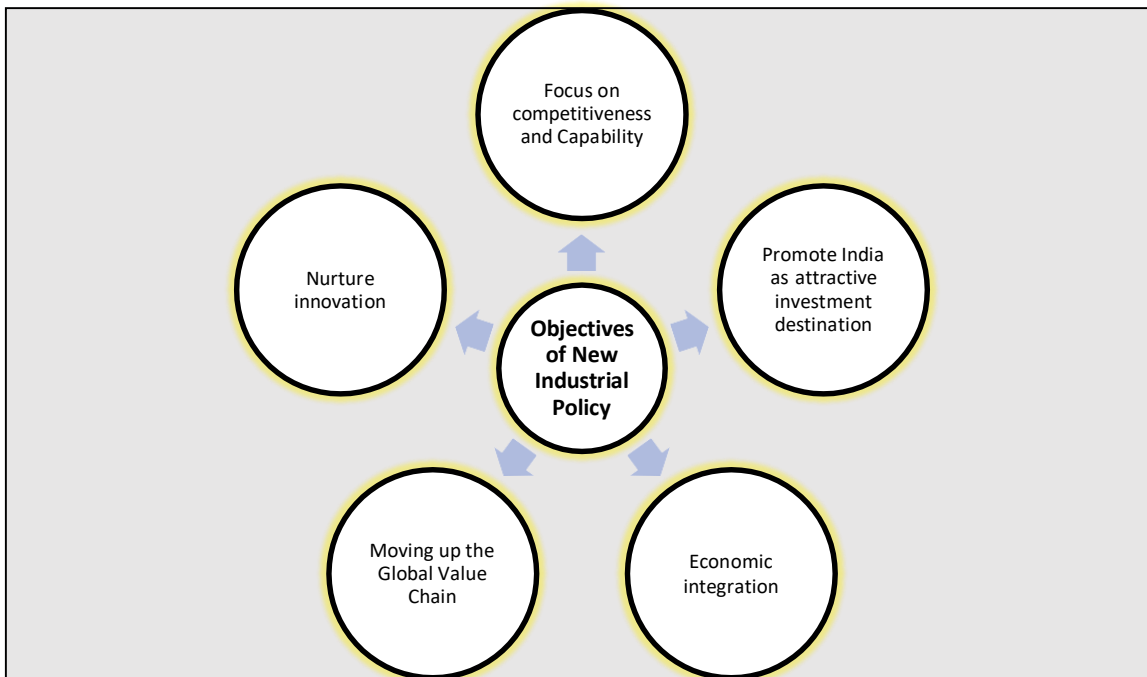
Where will the funds be utilized?

- The government will use the proceeds raised from SGrBs to finance or refinance expenditure (in parts or whole) for various green projects, including in renewable energy, clean transportation, energy efficiency, climate change adaptation, sustainable water and waste management, pollution and prevention control and green buildings.
- In renewable energy, investments will be made in solar, wind, biomass and hydropower energy projects.

New Industrial Policy

News: The Department for Promotion of Industry and Internal Trade (DPIIT), Ministry of Commerce & Industry, is working on a new industrial policy.

- This will be the third industrial policy (after 1956 and 1991), which is likely to replace the 1991 policy, which was prepared against the backdrop of the balance of payment crisis.
- The **draft policy**, made by the DPIIT, also proposes to create a **Universal Enterprise ID** for micro, small and medium enterprises (MSMEs) to strengthen their credit rating mechanism and MSME cluster financing models, as it aims to showcase India as an attractive investment destination.



Key Proposals:

- It seeks to achieve - One Nation-One Standard, Promote startups in every district, Create startup innovation zones at the level of urban local bodies, Formulation of a national capacity development program, and Incentivize Indian specialty products by creating premium international brands.
- To increase financing sources, promote the Made in India brand, enhance local value addition and the country's credibility as a source of quality products.
- It has suggested various ways for wider access to finance for the industry such as setting up - A development finance institution to provide finance at competitive rates and Considering using some part of forex reserves for such funding.
- An integrated investment promotion strategy involving district, state, national and international market synergies.
- Creating a national digital grid, developing a robust data protection regime, setting up a technology fund, and creating a task force to continuously identify skill gaps.
- Strengthening of the export finance systems for enhancing export competitiveness.
- Additionally, it intends on providing performance based loans and incentives for innovation and green growth, leverage fintech and encourage MSME's to opt for corporate bond market.
- Accepting intellectual property rights as collaterals for loans, enabling supply chain financing, Encouraging microfinance institutions to form cooperative groups and finance micro-enterprises at affordable rates.
- Rolling out social security schemes for women workers and Inclusion of labor-intensive industries under the production-linked incentive scheme.

State Finances: A study of Budgets of 2022-23

News: Recently, the Reserve Bank of India (RBI) has released a report stating that the Gross Fiscal Deficit (GFD) of states is expected to decrease to 3.4% of Gross Domestic Product (GDP) in 2022-23, from 4.1% in 2020-21.

What is Gross Fiscal Deficit?

- GFD measures the overall financial health of the state government and is calculated by subtracting total revenue from total expenditure.
- A decrease in GFD is generally considered a positive sign as it indicates that the state government is able to balance its revenue and expenditure more effectively.

Key Findings:

- The report titled "State Finances: A Study of Budgets of 2022-23" is a comprehensive analysis of the financial position of the Indian states, including the trends and challenges in their revenue and expenditure.
- According to the RBI report, states' debt is expected to decrease to 29.5% of GDP in 2022-23, compared to 31.1% in 2020-21.
- However, the report also highlights that this is still higher than the 20% recommended by the Fiscal Responsibility and Budget Management (FRBM) Review Committee in 2018.
- States are anticipating an increase in non-tax revenue, which is generated from sources such as fees, fines, and royalties. This increase is likely to be driven by revenue from industries and general services.
- The report notes that states are expecting to see an increase in revenue from various sources such as State GST, excise taxes, and sales taxes in the 2022-2023 fiscal year.

Key measures suggested by RBI:

- **Debt consolidation** should be a priority for state governments.
- Allocating more resources to key sectors such as healthcare, education, infrastructure, and green energy, the states can promote economic growth and development.
- Create favorable environment for private sector to invest in the states.
- States also need to encourage and facilitate higher inter-state trade and commerce to realize the full benefit of spillover effects of state capex across the country.
- The report is proposing that it would be beneficial to establish a fund that would be used to buffer capital expenditure during periods of strong revenue growth. The purpose of this fund would be to maintain a consistent level of spending on capital projects, and to ensure that spending on these projects is not drastically reduced during economic downturns.

Demonetisation

News: Recently, the Supreme Court has passed a verdict on the Demonetisation of currency notes of Rs 500 and Rs 1,000 in a majority 4-1 by a five-judge Constitution Bench.

What was the majority view of the verdict?

- The majority held that Centre's notification dated November 8, 2016 is valid and satisfies the **Test of proportionality**.
- The RBI and the Centre had been in consultation with each other for six months prior to the November 8 notification issued under Section 26(2) of the RBI (Reserve Bank of India) Act, 1934.
- The statutory procedure under Section 26(2) of the RBI Act was not violated merely because the Centre had taken the initiative to "advise" the Central Board to consider recommending demonetisation.
- The government was empowered under the provision to demonetise "all series" of banknotes.
- On hasty decision, the court said such measures undisputedly are required to be taken with utmost confidentiality and speed. If the news of such a measure is leaked out, it is difficult to imagine how disastrous the consequences would be.
- Demonetisation was done for the "proper purposes" of eliminating fake currency, black money and terror financing.

What was the minority view?

- The government could have issued a notification under Section 26(2) of the RBI Act only if the RBI had initiated the proposal to demonetise by way of a recommendation. Therefore, the government's notification issued under Section 26(2) of the RBI Act was unlawful.
- In cases in which the government initiates demonetisation, it should take the opinion of the RBI. The opinion of the Board should be "independent and frank". If the Board's opinion was in the negative, the Centre could still go forward with the demonetisation exercise, but only by promulgating an ordinance or by enacting a parliamentary legislation.
- Describing the Parliament as the "nation in miniature", "without the Parliament, democracy will not thrive".

What is the Test of Proportionality?

- The test of proportionality is a commonly employed legal method used by courts around the world, typically constitutional courts, to decide cases where two or more legitimate rights clash. When such cases are decided, **one right typically prevails at the expense of the other** and the court thus has to **balance the satisfaction** of some rights and the damage to other rights resulting from a judgment.
- The **principle of proportionality** ordains that the administrative measure must not be more drastic than is necessary for attaining the desired result.

Key Takeaways from WEF's Davos Event 2023

News: The World Economic Forum's Annual Meeting 2023, was recently held in the Swiss town of Davos.

Background:

- **Theme - 'Cooperation in a Fragmented World'.**

Key Takeaways:

- **On Economic Front**
 - Most business leaders were upbeat about the economy, with US and the European Union (EU) seemingly beyond the risk of a recession now.
 - China ending its Zero covid strategy and opening up again gave a significant boost.
 - However, central banks of the major economies cautioned that concerns still remained, and said they would keep interest rates high to ensure inflation is under check.
- **On Ukraine**
 - Ukraine kept up its demand for more military aid to fight its war against Russia, and more financial aid to rebuild after the war, saying the reconstruction fund commitments should start coming in now and not after the war ends.
- **On Climate**
 - The World Economic Forum, supported by more than 45 partners launched the **Giving to Amplify Earth Action** (GAEA), a global initiative to fund and grow new and existing public, private and philanthropic partnerships (PPPPs) to help unlock the \$3 trillion of financing needed each year to reach net zero, reverse nature loss and restore biodiversity by 2050."
 - While Pakistan brought up the issue of a loss and damage fund for the developing countries.
- **Indian perspective**
 - The Press Trust of India (PTI) reported that more than 50 "high-impact initiatives" was launched at the event.
 - **Maharashtra Institution for Transformation** (MITRA) signed a partnership with the forum on **urban transformation** to give the state government "strategic and technical direction".
 - While a thematic centre on healthcare and life sciences is to be set up in **Telangana**. The **Coalition for Epidemic Preparedness and Innovations** (CEPI) aims to develop new vaccines for future pandemics.
 - As G20 Chair, India has identified women-led development as one of the high-priority subjects and created an engagement group Women20 focused on gender equity.

Additional Tier-I Bonds

News: The Bombay HC quashed the write-off of Additional Tier-1 (AT1) bonds worth Rs 8,400 crore issued by Yes Bank Ltd, bringing relief to investors.

What is the issue?

- Yes Bank, which was on the verge of collapse, was placed under a moratorium by the RBI in 2020 and a new management and board were appointed as part of a rescue plan worked out by the RBI.
- The central bank allowed a write-off of Rs 8,400 crore on AT1 bonds issued by Yes Bank after it was rescued by the SBI.

- A SEBI probe found that the bank facilitated the selling of AT1 bonds (as a 'Super FD' and 'as safe as FD') from institutional investors to individual investors, who were not informed about all the risks involved in the subscription of these bonds.

What are AT-I Bonds?

- AT-I Bonds are **unsecured bonds** (issued by banks) that have **perpetual tenor** (no maturity date). These bonds are typically used by banks to bolster their core or tier-1 capital.
- Tier I capital is a bank's highest quality capital because it is fully available to cover losses and is made up primarily of share capital and disclosed reserves.
- They have a call option, which can be used by the banks to buy these bonds back from investors.
- These bonds are subordinate to all other debt and only senior to common equity. Mutual funds (MFs) were among the largest investors in perpetual debt instruments.



Nuts and Bolts of Union Budget

News: On February 1, Finance Minister Nirmala Sitharaman will present the Union Budget for the next financial year (2023-24). Given that the next general elections will be in early 2024, this Budget is likely to be the last full-fledged Budget for the current government.

What is Annual Financial Statement?

- The Union Budget is more technically called the Annual Financial Statement. To be precise Article 112 of the Indian Constitution refers to it as Annual Financial Statement.

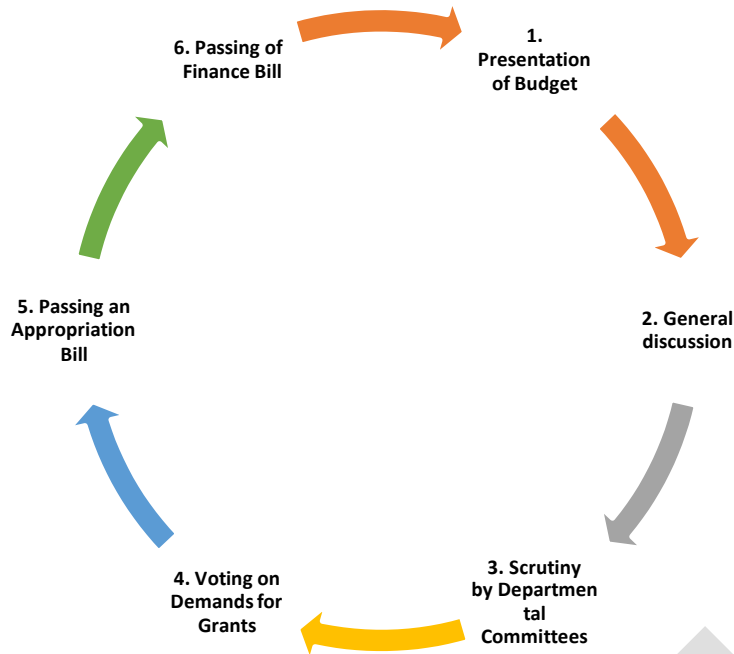
What are the components of the Budget?

- Any budget essentially provides three big details.
- One, the total amount of money that the government will raise in the coming year; this is called the **total receipts**.
- Two, the total amount of money it will spend; this is called the **total expenditure**.
- Three, the total amount of money it will borrow from the market to plug the gap between what it spends and what it earns; this is referred to as the **fiscal deficit**.

What are the forces that shape Budget?

- Demand for a lower rate of taxation and/or a higher rate of exemptions. In other words, people and firms lobby to get their tax burden reduced.
- Demands from people/firms wanting higher or newer subsidies. For example, a firm that produces green energy or produces products that run on cleaner fuels. Such a firm/entrepreneur may argue that subsidising (or increasing existing subsidies) will help India transition to a cleaner environment in the coming years.
- A third group (small but influential) demands something called "fiscal rectitude or prudence". They demand that the government cuts down on its fiscal deficit (essentially the total amount of money the government borrows from the market in order to bridge the gap between its total expenditure and its total receipts).

What are different stages that Budget goes through in Parliament?



Interesting Trivia that you should know regarding Budget:

- RK Shanmukham Chetty presented the 1st Union Budget of independent India on Nov 26, 1947.
- 10 – is the number of Budgets presented by Morarji Desai, the Highest by one person.
- Jawaharlal Nehru, Indira Gandhi and Rajiv Gandhi are the only prime ministers to have presented a Budget.
- In 2017, the Rail Budget was merged with Union Budget.
- Former PM, Dr. Manmohan Singh, during his stint as FM, delivered the longest budget in terms of word count (18,650 words) in 1991.
- The date of the Union Budget presentation was changed in 2017 by then finance minister Arun Jaitley from 'last working day of February' to 'February 1'.
- FM Nirmala Sitharaman delivered the longest budget speech. She spoke for 2.42 hours while presenting Union Budget 2020.
- On 1st Feb 2021, FM Nirmala Sitharaman presented the first paperless budget. This was done due to the ongoing COVID- 19 pandemic in India.

OXFAM inequality report

News: The article is based on the article “Oxfam inequality report - Taxing the ‘obscenely’ wealthy may not be the right solution”. It explains the Oxfam “Survival of Richest report” and analyses its claims regarding the tax structure in India.

Key Findings of OXFAM “Survival of Richest Report”

- According to the report, there are now 166 billionaires in India. It is up from 106 in 2020. Wealth is concentrated among the top deciles. Top 30% accounts for 90% of the wealth.
- Globally, 1% are estimated to have captured almost two-thirds of new wealth.
- It argues for a wealth tax and higher taxes on corporates.
- It also argues that indirect taxes are regressive. The paper says that the bottom 50% pays six times more indirect tax as a percentage of income as compared to the top 10%.

Implications of these findings:

- It can stir the debate for an equalizing wealth tax (a progressive wealth tax where the tax rate increases as the wealth of an individual increase. The goal is to redistribute wealth and reduce inequality among citizens.)
- Oxfam argues that indirect taxes are regressive and suggests –

- A wealth tax – a tax on unrealized capital gains and higher taxes on corporates.
- Tax on incomes, capital gains and wealth are interrelated and the changes cannot be recommended in isolation.
- Tax collection depends upon The mix of taxes that a country raises as a function of its institutional capacity, the structure of the tax base and the desire for simplification.

What does the report say in context of India?

- The lower corporate tax rate in lieu of incentives and the introduction of GST – a costly experiment of tax policy in India.
- The corporate tax cuts brought the statutory tax rate down from 30 to 25.17%, leading to a revenue loss of Rs 1.03 lakh crore.
- Oxfam uses NSS 2011-12 to establish that the bottom 50% pays six times more indirect tax as compared to the top 10%.
- The current income tax system exempts incomes up to Rs 5 lakh from tax and the GST rate structure places a higher burden on luxuries.

What are issues with OXFAM report?

- The report is spot on as far as mentioning about rising inequalities is concerned and need for tax reform. However, its assumptions are inaccurate as seen in India's previous experience.
- For example, it says India will gain 10% more in taxes than it currently collects indirect taxes from the introduction of the wealth tax.
- A wealth tax has historically been utilized by nations, including India, but the revenues were dismal, making it an expensive tax to operate. Hence, a compartmentalized approach to tax policy that links several taxes that are levied against the same base is meaningless.

Way forward

- Everything is not fixed by taxes. The role of other macroeconomic policies, like low interest rates and regulatory interventions, should not be ignored.

Science & Technology

5 space missions in 2023

News: These are some of the biggest spaceflight landmarks that are scheduled to happen in 2023.

Background:

- 2022 was an incredible year for humanity's spaceflight aspirations. From NASA's Artemis 1 mission that charted humanity's path back to the Moon to the DART mission that successfully redirected an asteroid, the year marked many firsts for human spaceflight.
- 2023 will also prove to be an important year for human spaceflight with the beginning and conclusion of many path breaking missions.

Gaganyaan Mission:

- ISRO will begin a series of test flights for India's maiden human space flight from February 2023. The space agency said it also plans to use the heavy-light Chinook helicopter and the C-17 Globemaster transport aircraft for testing the mission's crew module.
- The crew module will have to provide oxygen, remove carbon dioxide, remove humidity and maintain a living temperature as it transports the three astronauts on board. The Indian space agency has shortlisted four candidates to go on the mission and they have already undergone initial training in Russia.

Chandrayaan - 3:

- Chandrayaan-3 will carry a lunar lander and a lunar rover to Earth's lone natural satellite. The mission is scheduled to launch aboard a Launch Vehicle 3 (LVM3) rocket, earlier known as the GSLV 3, in June this year.
- The mission's propulsion module will carry the lander and rover configuration to an orbit that is about 100 kilometres above the Moon's surface. The module will also carry a **Spectro-polarimetry of Habitable Planet Earth** (SHAPE) payload to study the spectral and polarimetric measurements of Earth from the lunar orbit.
- The mission's lunar lander will carry instruments like **Chandra's Surface Thermophysical Experiment** (ChaSTE) to measure the thermal conductivity and temperature; **Instrument for Lunar Seismic Activity** (ILSA) for measuring the seismicity around the landing site; **Langmuir Probe** (LP) to estimate the plasma density and its variations. A passive **Laser Retroreflector Array** from NASA will also hitch a ride aboard the lander.

JUICE Mission:

- The **European Space Agency** (ESA) plans to launch the Jupiter Icy Moons Explorer mission in April 2023. The Juice mission will complete 35 fly-bys near Jupiter and will make detailed observations about the gas giant and its three large ocean-bearing moons—**Europa, Ganymede and Callisto**.
- Among the three moons, **Ganymede** will be the **primary scientific target** of the Juice mission. Why? As it is the **largest moon** in the Solar System and is larger than both Pluto and Mercury. It is also the only moon to have its **own intrinsic magnetic field**. Mercury and Earth are the only other solid bodies that generate a dipole field like Ganymede.

OSIRIS-Rex Mission:

- The OSIRIS-REx mission was launched in September 2016. In 2021, it took off from the asteroid Bennu. The spacecraft is carrying samples of the asteroid and is on track to return them to Earth in September 2023.
- According to **NASA**, asteroids like Bennu can act as time capsules for the earliest history of our solar system. NASA refers to Bennu as an "ancient relic of the solar system's early days." The asteroid has more than 4.5 billion years of history and its present-day composition was already established within 10 million years of the solar system's formation. Since it is so old, it may contain molecules similar to those that were involved in the beginning of life on Earth.

Visiting Asteroid Psyche:

- Following OSIRIS-REx's return, **NASA** plans to launch the Psyche mission to study the metallic asteroid 16 Psyche. The asteroid orbits the Sun in an orbit between Mars and Jupiter and is unique because it appears to be the **exposed nickel-iron core** of an early planet, one of the building blocks of the solar system.

- Since we can't see or measure our planet's core directly, the Psyche mission will offer a window into the collisions and accretion that create terrestrial planets.
- Instruments aboard the Psyche spacecraft will include a Multispectral Imager, a Gamma Ray and Neutron Spectrometer, a Magnetometer and an X-band Gravity Science Investigation.

Note – We recommend you to keep a close look at launch of such space missions as and when they occur and update your notes accordingly.

Deep-Fake Technology

What are Deep-Fakes?

- Deep-fakes are a type of fake media in which a person's likeness is digitally altered in an already-existing photograph or video. Deep-fakes use sophisticated machine learning and artificial intelligence algorithms to edit or generate visual and audio content with the intent of fooling.
- AI-Generated Synthetic media or deep-fakes have clear benefits in certain areas, such as accessibility, education, film production, criminal forensics, and artistic expression.
- However, it can be exploited (hyper-realistic digital falsification) to damage the reputation, fabricate evidence, defraud the public, and undermine trust in democratic institutions with fewer resources (cloud computing, AI algorithms and abundant data).



What threats does it possess?

- 96% of Deep-Fakes are pornographic videos, reducing women to sexual objects and causing emotional distress.
- Deep-Fake can depict a person as indulging in antisocial behaviors and can create social discord, increase polarization, and can even influence the election outcome
- Deep-Fakes can accelerate the trust deficit in traditional media and could be used by nation-state actors to create chaos in the target country, undermining trust in institutions and
- Misuse by non-state actors (terrorist organisations), to stir anti-state sentiments among people.
- The threat of the liar's dividend – an undesirable truth is dismissed as deep-fake or fake news, giving more credibility to denials.
- Weaponisation of deep-fakes, use of fake news and alternative-facts narrative to dismiss an actual piece of media and truth.

What are nations doing to combat Deep-Fakes?

- The European Union updated Code of Practice, that requires tech companies including Google, Meta, and Twitter to take measures in countering deep-fakes on their platforms. If found non-compliant, these companies can face fines of as much as 6% of their annual global turnover.
- In India, there are no legal rules against using deep-fake technology. However, specific laws can be addressed for misusing the tech, which includes Copyright Violation, Defamation and cybercrimes.

What preventive measures can individuals apply?

- Media literacy for consumers is the most effective tool to combat disinformation and deep fakes.
- Easy-to-use and accessible technology solutions to detect deep-fakes, authenticate media, and amplify authoritative sources.
- Meaningful regulations with a collaborative discussion with the technology industry, civil society and policymakers to disincentivise the creation and distribution of malicious deep-fakes.

National Geospatial Policy 2022

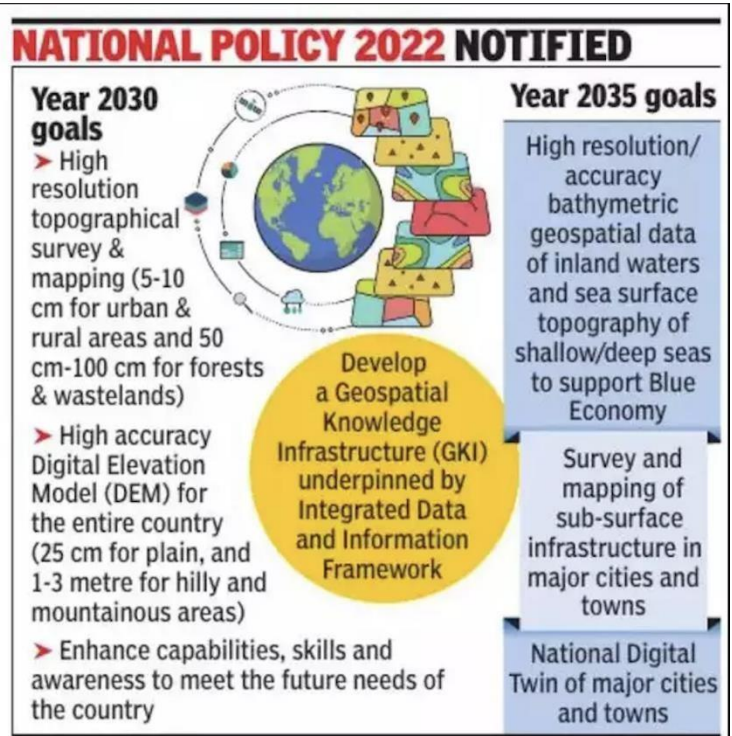
News: After liberalizing the use of geospatial data under the draft geospatial data policy in February 2021, the **Ministry of Science and Technology** has notified the National Geospatial Policy, 2022.

What are the details about the policy?

- The National Geospatial Policy, 2022 is a citizen-centric policy that seeks to strengthen the geospatial sector to support national development, economic prosperity and a thriving information economy
- The 13-year guideline promote the country's geospatial data industry and develops a national framework to use such data for improving citizen services, and more.
- The policy has divided 14 Geospatial Data Themes to support the development of commercial geospatial applications in various sectors such as disaster management, mining, forestry etc.

What kind of infrastructure the government intends to build?

- Geospatial Knowledge Infrastructure (GKI):
 - The government will establish an Integrated Data and Information Framework by 2030 (to develop GKI)
 - The government will also establish National Digital Twin (for high-resolution topographical survey and mapping by 2035)
- Institutional Infrastructure:
 - Geospatial Data Promotion and Development Committee('GDPDC') will be constituted for formulating and implementing guidelines, strategies, and programs for the promotion of activities related to the Geospatial sector.
 - Will put in place a legal framework (by 2025) that supports the liberalization of the geospatial sector, and democratization of data for enhanced commercialization with value-added services.



Importance of the Policy:

- Government has opened its geospatial data and services offered by government agencies, academic and research institutions, private organizations, NGOs, and individuals.
- Government has removed the requirement for prior approval, security clearance, or other restrictions on the management of geospatial data. Self-Certification will be sufficient for adherence to the guidance
- Anyone can process the acquired geospatial data, build new applications and solutions using it and use it for profit (except for defence or security-related data)
- The Policy recognizes the importance of locally available and locally relevant Maps and Geospatial Data
- By 2035, the policy will include mapping of sub-surface infrastructure in major cities and towns across India, and the development of accurate bathymetric geospatial data (resources and economy of inland waters, and sea surface topography of shallow and deep seas)
- The Policy enables and supports innovation, creation and incubation of ideas and start-up initiatives in the Geospatial sector.

How will the Geospatial policy potentially help?

- It will enhance private participation in agri-tech industry. For example, it will widen the scope and adoption of precision farming.

- While the global positioning system (GPS) locates precise crop locations, the global information system (GIS) stores this data. This data later helps in Crop scouting, Soil sampling, weed location, accurate planting, and harvesting.
- Along with the SWAMITVA scheme, the geospatial data will help in the pooling of lands by farmers. This will drive wider adoption of Commercial and Precision Farming in India.
- Better implementation of Government schemes such as PM Fasal Bima Yojana, Soil health card schemes and 'Per Drop more Crop'. Geospatial data will assist the BFSI segment to understand the risk better and underwrite loans and insurance products.
- Better geospatial data will drive more targeted and deeper fishing opportunities, thus helping in the economic upliftment of fishermen. It will help bridge the infrastructure gap as envisaged under PM Matsya Sampada Yojana.
- The flagship schemes of the Government like the Gati Shakti program can be smoothly implemented using geospatial technology. The scheme involves huge investments in construction of about 25,000 Kms of highways, multimodal transport, and modernization of land records.
- Focusing on the sector will allow Indian companies to develop indigenous apps like an Indian version of google maps.
- Using this technology, the data related large number of landholdings can be appropriately tagged and digitized. It will not only help in better targeting but would also reduce the quantum of land disputes in courts.

Way Forward:

- Geospatial will be a crucial technology that will drive growth ambitions of the country – providing employment and also aiding the new-age ecosystem by providing location intelligence at your fingertips. More and more sectors such as agriculture, environment protection, power, water, transportation, health etc. desire the technology in order to realize their potential.

India Science Congress

News: Recently, the 108th session of the India Science Congress (ISC) was inaugurated by the Prime Minister.

- The event's theme is 'Science and Technology for Sustainable Development with Women's Empowerment'.

What is India Science Congress?

- With a history dating back to 1914, the Science Congress is a one-of-its-kind event in the country. It brings together scientists and researchers not just from the premier institutions and laboratories but also science teachers and professors from colleges and universities.
- It offers a platform for their interaction with students and the general public on matters related to science. It is a celebration of Indian science that has had an illustrious past, with the who's who of Indian science participating and organizing.
- The first session of the Indian Science Congress was held in 1914.

Who organizes the event?

- Indian Science Congress Association (ISCA) - It is an independent body functioning with the support of the Department of Science and Technology (DST) in the central government.

What did the PM speak at the event?

- **Emphasized on women's participation**
 - Increasing participation of women is a reflection of the progress of society and science. Today, the country's thinking is not only that women should be empowered through science, but science should also be empowered with the participation of women. Women's participation in extramural research has doubled over the last eight years.
 - India has been given the opportunity to preside over G20. Women-led development is one of the high-priority subjects taken up by the chair.
- **He highlighted about India's recent achievements**

- India is now one of the top three countries in the world when it comes to the number of PhD research works and startup ecosystems.
- The country is now ranked 40th on the Global Innovation Index 2022, up from the 81st rank in 2015.
- Scientific developments should ultimately make the country Atmanirbhar.
- **Energy innovation**
 - Endorsed the need for the scientific community to focus on working on a National Hydrogen Mission and stressed the need to manufacture critical equipment like electrolyzers in India to make it a success.
- On highlighting importance of science in modern world he said that efforts of science can bear fruit only when they go from labs to land.
- Stressed on the increasing importance of data gathering and analysis as well as the importance of traditional knowledge alongside modern knowledge.
- Acknowledged the role of low-cost satellite launch vehicles in the booming space sector in India and pointed to the importance of quantum computing.
- Stressed the need to focus on futuristic ideas and areas where no work is happening anywhere as well as the importance of keeping Artificial intelligence (AI), Augmented Reality (AR) and Virtual Reality (VR) as priorities.

National Green Hydrogen Mission

News: Union Cabinet has approved the National Green Hydrogen Mission, which is aimed at making India the global hub for the production of green hydrogen.

About:

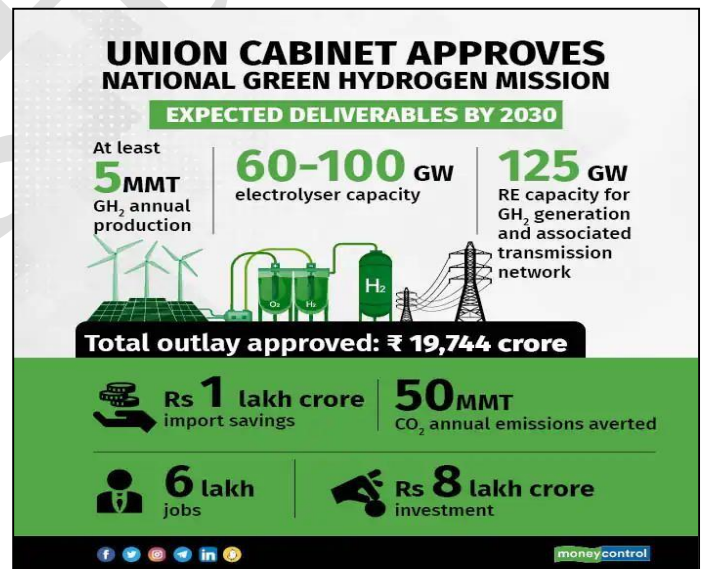
- A mission outlay of **Rs 19,744 crore** was cleared by the Union Cabinet, aimed at the creation of **export opportunities** for green hydrogen and its derivatives; **decarbonisation** of the energy sector and use in **mobility applications** in a bid to lower the dependence on imported fossil fuels; and the development of indigenous manufacturing capacities.
- The ultimate aim is to fuel key sectors of the economy using hydrogen that is made by splitting water through an electrical process called **electrolysis**, using a device called **electrolyser that is powered entirely by renewable energy**.

Hydrogen as a fuel:

- Hydrogen, the most common element in nature, exists only in combination with other elements, and has to be extracted from naturally occurring compounds like water. Hydrogen is a clean molecule, but the process of extracting it is **energy intensive**.
- The sources and processes by which hydrogen is derived are **categorised by colour tabs**.
- Hydrogen produced from **fossil fuels** is called **grey hydrogen**, which constitutes the bulk of the hydrogen generated today.
- Hydrogen generated from fossil fuels with carbon capture and storage options is called **blue hydrogen**.
- While hydrogen generated using **electrolysers** powered by renewable power sources is called **green hydrogen**.

What are the objectives of the mission?

- Developing green hydrogen production capacity of at least **5 MMT** (Million Metric Tonne) **per annum**, alongside adding renewable energy capacity of about 125 GW (gigawatt) in India by 2030.
- It aims to entail over Rs 8 lakh crore of total investments and is expected to generate six lakh jobs.



- It will also lead to a cumulative reduction in fossil fuel imports by over Rs 1 lakh crore and an abatement of nearly 50 MT of annual greenhouse gas emissions.
- Ministry of New and Renewable Energy will be the nodal ministry.

What are the components of the Mission?

- **Strategic Interventions for Green Hydrogen Transition Programme (SIGHT)** - under this, two financial incentive mechanisms have been created - **Targeting domestic manufacturing** of electrolysers and Production of green hydrogen.
- **Strategic Hydrogen Innovation Partnership (SHIP)** - Under this Public-private partnership framework for R&D will be facilitated under the mission.
- Regions capable of supporting large-scale production and/or utilization of hydrogen will be identified and developed as **Green Hydrogen Hubs**.
- To provide a major push for hydrogen in the auto sector — R&D for fuel cell development and pilot projects for fuel cell vehicles.

What is the potential of Green Hydrogen?

- It is a clean burning molecule that can **decarbonise a range of sectors** including iron and steel, chemicals, and transportation.
- Renewable energy that cannot be stored or used by the grid can be channeled to produce hydrogen.
- India has a favorable geographic location and abundance of sunlight and wind for the production of green hydrogen.
- It will reduce our dependence on imported fossil fuels and feedstock.
- It will help create employment opportunities, promote use of cutting-edge technologies and will lead to development of indigenous manufacturing capabilities.
- It will help create an export market for high-value green products.

What are the challenges?

- Green hydrogen is **not commercially viable** at present. The current cost in India is around Rs 350-400 per kg; it is likely to become viable only at a production cost of under Rs 100/ kg.
- The industry itself is at a nascent stage. India has the opportunity to take the lead but we don't have required infrastructure yet.
- One of the biggest challenges faced by the industry for using hydrogen commercially is the **economic sustainability of extracting green hydrogen**.

Liquefied Natural Gas

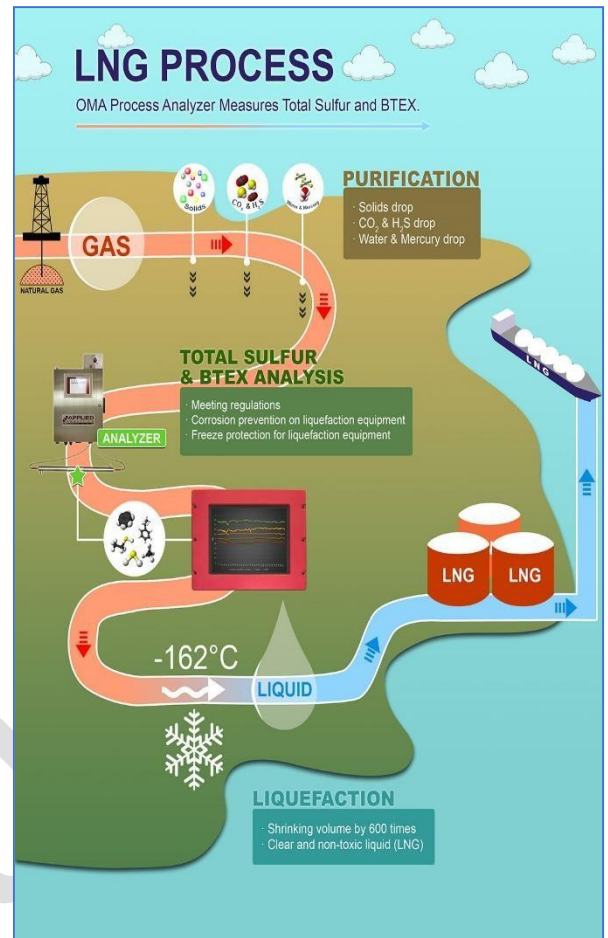
News: The European Union is investing billions in infrastructure in its effort to replace Russian fuels with liquefied natural gas. This could prove to be a dead end — both for taxpayers and for the climate.

What is LNG?

- Liquefied natural gas (LNG) is natural gas that has been cooled to a liquid state, at about -260° Fahrenheit, for shipping and storage. The volume of natural gas in its liquid state is about 600 times smaller than its volume in its gaseous state. This process makes it possible to transport natural gas to places pipelines do not reach.
- Liquefying natural gas is a way to move natural gas long distances when pipeline transport is not feasible. Markets that are too far away from producing regions to be connected directly to pipelines have access to natural gas because of LNG.
- In its compact liquid form, natural gas can be shipped in special tankers to terminals around the world. At these terminals, the LNG is returned to its gaseous state and transported by pipeline to distribution companies, industrial consumers, and power plants.

Pipeline vs LNG? Which has better prospects?

- **Affordability**
 - LNG energy projects are among the **most expensive** and **technically complicated**, so the EU is likely to face high energy prices if it makes greater use of LNG shipments.
- **Energy Efficiency and GHG emissions**
 - The **LNG supply chain** tends to be **more energy** and **greenhouse gas intensive** than the supply chain for pipeline gas, because of the extra processing steps.
 - LNG may be more favourable with respect to greenhouse gases compared to pipeline supplies under certain conditions, e.g. when the alternative is very remote pipeline deliveries of gas or when LNG is brought to the end-users in liquid form and then re-gasified on-site.
- **Quality**
 - **LNG is of superior quality** to pipeline gas, because it is **purier**, has **higher methane** and **energy content**, and has a more stable composition.
- **Shipping Cost**
 - LNG shipping costs tend to be the most volatile cost component in the overall LNG supply chain and have a major impact on the competitiveness of LNG supplies.



What are the concerns raised?

- The European Union has announced its intent to become climate-neutral by 2050. Germany is aiming for 2045. If the EU burns more LNG, however, emissions will rise.
- Shifting toward LNG would not only be in conflict with the national climate targets but would constitute a breach of national legislation and international commitments under the Paris Agreement.

What should be the way forward?

- Cheaper sustainable energy sources could instead make up the current gas deficit.
- Comprehensive energy efficiency upgrades. Germany, for example, can save more gas than new LNG terminals offer, by investing solely in building efficiency.
- Any LNG terminals that are built need to be easily retrofitted for green hydrogen to fast-track the clean energy transition.

Cancer in India

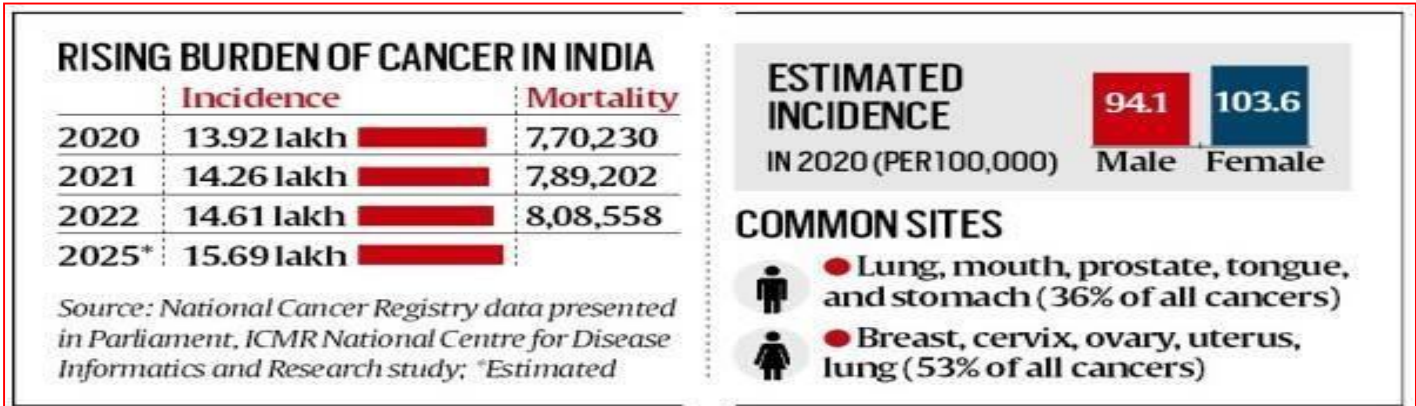
News: A new report says Cancer deaths in the US have declined by a third over the past three decades. What is the situation in India, and what will it take to replicate the success in the US? We discuss here.

Background:

- Even with improvements in treatment, both the incidence of cancer and mortality continue to rise in India.
- Cancer is a disease in which some of the body's cells grow uncontrollably and spread to other parts of the body.
- According to a report by the American Cancer Society, deaths due to cancer have declined by 33% (translating into 3.8 million fewer deaths) in the United States since 1991. This success is mainly due to early detection, lower rates of smoking, and improvements in cancer treatment.

What is the incidence of Cancer and mortality in India?

- According to an ICMR study, one in nine Indians will develop cancer during their lifetime. One in 68 men will develop lung cancer and one in 29 women will develop breast cancer.



Why are some Cancers declining?

- The incidence of cervical cancer has dropped in India over the last 50 years from 45 to 10 per 100,000 populations. The decline is because of late marriages, fewer children, better hygiene, and vaccination (human papillomavirus vaccine (HPV)).
- At the same time, there is an increase in rates of breast cancer, especially in urban centres (45 per 100,000 in Hyderabad). This is because of the same reasons (which resulted in cervical cancer decline) – late marriages, having the first child at a later age, not breastfeeding, and a high protein diet.
- Unlike cervical cancer, there is no specific intervention for breast cancer other than screening because what causes it is unknown.
- The rates of tobacco-related cancers (oral, oesophageal) are also coming down, largely due to tobacco laws that have brought down smoking in public places.
- Lung cancers, however, remain a cause for concern. It is caused not only by smoking but also by pollution. For example, lung cancer rates are high in Arunachal Pradesh because they light fires indoors in winter. The survival rate for lung cancer is not very high and it is mostly diagnosed in the late stages.

Have there been improvements?

- Yes, as the cure rate for various cancers is rising. For example, The cure rate for pancreatic cancer has doubled from 3% to 6% in the last 50 years. Prostate cancer has gone up from 60% to 100% and Breast cancer has improved from 50% to 90% with newer treatments.

What must be done to bring down overall mortality like in The US?

- The first intervention has to be screening. Screening for the three most common types of cancer — breast, cervical, and oral.
- Next, Screening must lead to treatment. However, the treatment has to be accessible and affordable.
- Coordination of different government programmes is utmost important. Presently, they are working in silos and independently.
- There must be many more cancer care facilities.
- We have one comprehensive cancer care centre for every 5 crore population. There are seven pillars of cancer care — prevention, surgery, chemotherapy, radiotherapy, imaging, laboratory diagnostics, and palliation.
- “The WHO says there should be 1 radiotherapy machine per million population in developing countries, so for our 1.4 billion people we need 1,400 machines, and we have only 700.

Solitary Waves in Mars

News: Recently, **Indian Institute of Geomagnetism (IIG)**, an **autonomous institute** of the Department of Science and Technology (DST) has found evidence of "solitary waves" in the weak magnetic field around Mars for the first time.

- Scientists used high-resolution electric field data from **NASA's MAVEN** spacecraft to make the discovery of solitary waves.

What are Solitary Waves?

- Solitary waves are the distinct electric field fluctuations (bipolar or monopolar) that follow constant amplitude-phase relations. Their shape and size are less affected during their propagation.
- Solitary waves have been found to play a significant role in the dynamics of various physical systems, such as in the Earth's magnetosphere and in the Martian magnetosphere.
- In the Earth's magnetosphere, they are known to be responsible for the energization and transport of plasma particles, which can affect the behavior of satellites and other space-borne equipment.
- In the Martian magnetosphere, their significance is not fully understood yet, but it has been suggested that they may play a role in the loss of atmospheric ions on Mars.

Key Findings:

- Unlike Earth, the planet Mars does not have any intrinsic magnetic field. This allows the high-speed solar wind to interact directly with the Mars atmosphere, like an obstacle in flow. It has been suggested that even in a weak and thin magnetosphere as that of Mars, frequent occurrences of solitary waves can be observed.
- Despite several missions to Mars, the presence of solitary waves in the Martian magnetosphere has never been reported earlier. The exact cause is yet to be known.

Exoplanet – LHS 475b

News: NASA recently announced that the **James Webb Space Telescope** has discovered its first new exoplanet.

Background:

- Located just 41 light-years away, the planet orbits very close to a red dwarf star and completes a full orbit in just two days.
- Researchers hope that in the coming years, owing to the Webb telescope's advanced capabilities, they will be able to detect more Earth-sized planets.

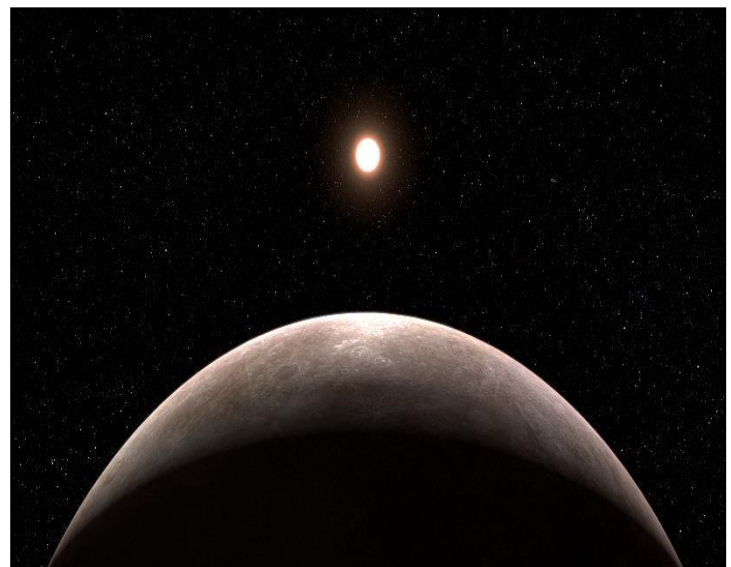
What are Exoplanets?

- Exoplanets are planets that orbit other stars and are beyond our solar system. According to NASA, to date, more than 5,000 exoplanets have been discovered. Scientists believe that there are more planets than stars as each star has at least one planet orbiting it.
- Exoplanets come in a host of different sizes. They can be gas giants bigger than Jupiter or as small and rocky as Earth. They are also known to have different kinds of temperatures — boiling hot to freezing cold.

Why do we study them?

- Studying exoplanets not only broadens our understanding of other solar systems but also helps us piece together information about our own planetary system and origin.
- Another important element of the study is finding out the distance between an exoplanet and its host star. This helps scientists determine if a discovered world is habitable or not.
- If an exoplanet is too close to the star, it might be too hot to sustain liquid water. If it's too far, it might only have frozen water. When a planet is at a distance that enables it to have liquid water, it is said to be in the "Goldilocks zone".

How are they discovered?



- Scientists rely on indirect methods, such as the **transit method**, which is “measuring the dimming of a star that happens to have a planet pass in front of it.”

What are Red dwarf stars?

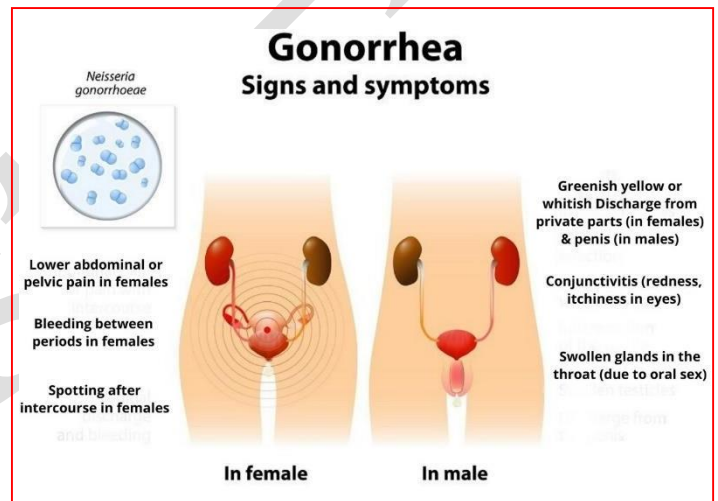
- The newly discovered exoplanet orbits around a **red dwarf star**.
- Such types of stars are the most common and smallest in the universe. As they don’t radiate much light, it’s very tough to detect them with the naked eye from Earth. However, as red dwarfs are dimmer than other stars, it is easier to find exoplanets that surround them. Therefore, red dwarfs are a popular target for planet hunting.

Gonorrhea

News: Recently, a strand of antimicrobial-resistant gonorrhea outbreak has hit Kenya. Researchers have raised alarm, warning this infection is asymptomatic in some cases and can cause significant health challenges, including permanent damage to their reproductive systems.

About:

- Gonorrhea is a sexually transmitted infection (STI) caused by the bacterium **Neisseria gonorrhoeae**. It can infect both men and women and can occur in the **genitals, rectum, and throat**.
- If left untreated, gonorrhea can cause serious health problems, including infertility and an increased risk of Human Immunodeficiency Virus (HIV) infection.
- According to the World Health Organization (WHO), it is the second-most common disease to be sexually transmitted across the world after **chlamydia**.
- Gonorrhea is typically treated with antibiotics, but the bacteria have become increasingly resistant to many of the drugs that were once effective.



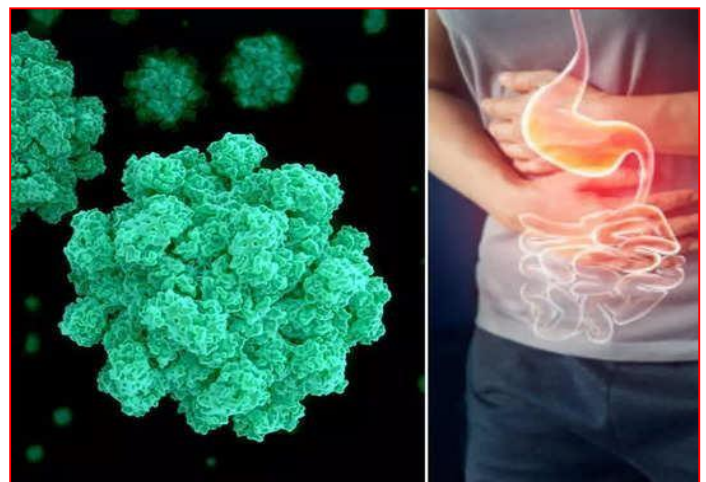
Norovirus

News: The Kerala Health Department recently confirmed two cases of the gastrointestinal infection norovirus in class 1 students in Ernakulam district.

What is Norovirus?

- Norovirus is not new; it has been circulating among humans for over 50 years and is thought to be one of the primary causes of **gastroenteritis**.
- The virus is capable of surviving low temperatures, and outbreaks tend to be more common during the winter and in colder countries — that is why it is sometimes referred to as “**winter vomiting disease**”.

Can norovirus infection cause a large-scale outbreak?



- No. Even though more cases of norovirus are being detected, experts say that this is unlikely to lead to a large-scale outbreak.

What are its symptoms and how to prevent its spread?

- Norovirus leads to diarrhoea, vomiting, nausea, and abdominal pain. Being a diarrhoeal disease, it can lead to dehydration, so drinking plenty of fluids is recommended.
- The infection can be transmitted through foods contaminated with the virus, touching surfaces that are contaminated with the virus and then touching the mouth, and being in direct contact with someone with the infection like taking care of them and sharing foods and utensils with them.
- Good hand hygiene is the best way to prevent infection.

Measles and Rubella (MR)

News: India set a goal (in 2019) to eradicate measles and rubella (MR) by 2023 after missing the previous deadline of 2020 for a number of reasons, worsened by the pandemic's disruptions.

What is Measles and Rubella?

- Measles and Rubella (German measles) are **contagious viral disease** that is spread by contact with an infected person through **coughing and sneezing**.
- Measles is caused by a **single-stranded, enveloped RNA virus** with 1 serotype. It is classified as a member of the **genus Morbillivirus** in the **Paramyxoviridae** family. **Humans** are the only natural hosts of measles virus.
- Measles and Rubella have similar symptoms. However, rubella is a milder viral infection than measles. Rubella infection in pregnant women may cause foetal death or congenital defects known as congenital rubella syndrome
- Both of them can be entirely prevent with a two-dose of MMR (Measles, Mumps, and Rubella) vaccine.

What complications it can lead to?

- Common complications from measles include otitis media, bronchopneumonia, laryngotracheobronchitis, and diarrhea.
- Even in previously healthy children, measles can cause serious illness requiring hospitalization.
- One out of every 1,000 measles cases will develop acute encephalitis, which often results in permanent brain damage.
- One to three out of every 1,000 children who become infected with measles will die from respiratory and neurologic complications.

Why eliminating MR is important?

- According to the WHO, the measles virus is one of the world's most contagious human viruses that kills more than 1,00,000 children every year globally and rubella is a leading cause of birth defects.
- An outbreak of measles in Maharashtra in 2022, particularly in Mumbai, killed 15 children among several hundred who contracted the infection.

What has India done to achieve the targets?

- During 2010-2013, India conducted a phased measles catch-up immunization for children aged 9 months-10 years in 14 States, vaccinating approximately 119 million children.
- **Mission Indradhanush** was launched in 2014 to ramp up vaccinating the unvaccinated population.
- During 2017-2021, India adopted a **national strategic plan for MR elimination**, and introduced rubella-containing vaccine (RCV) into the routine immunization programme, besides launching a nationwide MR supplementary immunization activity (SIA) catch-up campaign.
- Additionally, it changed the focus of acute fever and rash surveillance from outbreak-based to case-based.
- The number of laboratories in the MR network has more than doubled.

What is the need of the hour?

- If the immunization rate is maintained at 95% for under-one-year population we can reach our objectives. However, it must follow a district-by-district approach.

- Monitoring the progress and providing additional inputs to the districts that are lagging in implementing the immunization.
- In the process, it is important to provide full support (improve their service conditions, and salaries) to the ground-level staff (village health nurses, ASHA, Anganwadi and ICDS workers) who implement the programme.

Trans-Fatty Acids (TFA)

News: Five billion people globally are exposed to harmful trans-fat, increasing their heart disease and death risk, according to a new report “**Countdown to 2023**” by the **World Health Organization (WHO)**.

What are TFA?

- TFAs are unsaturated fatty acids that are of two types – **Naturally occurring** trans-fat occurs in some dairy and meat products and **Industrially produced** trans-fat adds hydrogen to liquid vegetable oils to make them more solid. It is found in packaged foods, baked goods, cooking oils and spreads.

Key Findings:

- Trans fat intake is accountable for up to 500,000 early deaths from coronary heart disease annually.
- Nine countries — Australia, Azerbaijan, Bhutan, Ecuador, Egypt, Iran, Nepal, Pakistan and the Republic of Korea — of the 16 nations with the highest estimated percentage of coronary heart disease fatalities attributed to trans-fat consumption do not currently have best-practices strategy.
- Two best-practices policy options that can be opted are as follow:
- Mandatory national limit of **two grams of industrially produced trans-fat per 100 grams of total fat in all foods**;
- Mandatory national ban on the production or use of **partially hydrogenated oils** (a major source of trans fat) as an ingredient in all foods.
- TFAs pose a higher risk of heart disease than saturated fats – they raise total cholesterol levels, and reduce the good cholesterol (HDL), which helps to protect one against heart disease.
- It is also associated with a higher risk of developing obesity, type 2 diabetes, metabolic syndrome, insulin resistance, infertility, and certain types of cancers and can also lead to compromised fetal development causing harm to the yet-to-be-born baby.

What are steps taken by India to regulate TFA?

- FSSAI launched a “**Trans Fat-Free**” (as seen in the picture) logo for voluntary labelling to promote TFA-free products in shops for preparations containing TFA not exceeding 0.2 per 100 g/ml.
- Campaign “**Heart Attack Rewind**” to eliminate industrially-produced trans-fat in the food supply by the year 2022.
- FSSAI limits the content to **not more than 2%** by mass of total oils and fats from January 2022.
- **Swasth Bharat Yatra**, an initiative started under the “Eat Right” campaign is a Pan-India cyclothon to engage citizens on issues of food safety, combating food adulteration and healthy diets.
- **Eat Right India** campaign initiated by FSSAI.
- Globally, the TFA **REPLACE** strategy was initiated by WHO.



Indian Railways AI-based Project

News: The Indian Railways has concluded the trial of an Artificial Intelligence (AI) program it built to fix a perennial issue — long waiting lists for tickets.

Background:

- The AI-driven program has, for the first time, allocated vacant berths in over 200 trains in such a way that fewer people need to turn away without a confirmed ticket. The waiting lists on these trains, as a result, have seen a curtailment.
- This project has been in the works for the past two years, wherein the AI has been “taught” ticket booking data and trends of the past few years to come up with the best possible combination of how many berths to keep for which sectors and at what time.

Who developed this program and what is it called?

- Made by Railways’ in-house software arm **Centre for Railway Information Systems (CRIS)**, this AI module, called **Ideal Train Profile**, was fed with information like how millions of passengers booked tickets on these trains, which origin-destination pairs were a hit and which were flops at what time of the year, which seats remained vacant for what portion of a journey, etc.
- The combination of “training data” the AI has been fed goes back three years.

Why was its need felt?

- The railways lagged how it is not practically possible to keep physically increasing the number of trains in every sector based on demand. They had seen that on not getting confirmed tickets passengers would switch to other mode of transport. Thus, the solution is to take a re-look at its own inventory of berths and apportion them intelligently.
- The Ideal Train Profile’s AI tells the Passenger Reservation System how best to give out confirmed tickets and for which sectors.

What lies ahead?

- The AI does data-driven remote location selection, completely automates the process of quota distribution, and suggests optimal quota for different ticket combinations based on historical demand.
- The project has got the Railway Board excited about the possibility of how it can manage busy season rush, when the demands of confirmed tickets are at a peak. So the coming summer vacation season will be the first big test for the new system.

Neuromorphic Computing

News: Recently, a team of scientists from Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR) has developed Artificial Synapse for Brain-Like Computing or Neuromorphic Computing.

- They have used **scandium nitride (ScN)**, a semiconducting material with supreme stability and Complementary Metal-Oxide-Semiconductor (CMOS) compatibility, to develop brain-like computing.

What is Neuromorphic Computing?

- Neuromorphic Computing refers to the designing of computers that are based on the systems found in the human brain and the nervous system.
- Neuromorphic computing devices can work as efficiently as the human brain without acquiring large room for the placement of software.
- One of the technological advancements that has rekindled the interest of scientists in neuromorphic computing is the development of the Artificial Neural Network model (ANN).

How does it work?

- The working mechanism of neuromorphic computing involves the use of Artificial Neural Networks (ANN) made up of millions of artificial neurons, similar to those in the human brain. These neurons pass signals to each other in layers, converting input into output through electric spikes or signals, based on the architecture of Spiking Neural Networks (SNN).
- This allows the machine to mimic the neuro-biological networks in the human brain and perform tasks efficiently and effectively, such as visual recognition and data interpretation.

What is the significance of study?

- Neuromorphic hardware aims at mimicking a biological synapse that monitors and remembers the signal generated by the stimuli. ScN is used to develop a device mimicking a synapse that controls the signal transmission as well as remembers the signal.
- This invention can provide a new material for stable, CMOS-compatible optoelectronic synaptic functionalities at a relatively lower energy cost and hence has the potential to be translated into an industrial product.
- The traditional computers have physically separated memory storage and processing units. As a result, it takes enormous energy and time to transfer data between these units during an operation.
- On the contrary, the human brain is a supreme biological computer that is smaller and more efficient due to the presence of a synapse (the connection between two neurons) that plays the role of both processor and memory storage unit.
- In the current era of artificial intelligence, the brain-like computing approach can help meet the escalating computational demands.
- With the help of one of the techniques of AI, (machine learning), neuromorphic computing has advanced the process of information processing and enabled computers to work with better and bigger technology.

Environment & Bio-diversity

Rhinos in Assam

News: Assam Chief Minister Himanta Biswa Sarma announced on January 1 that no rhinos were poached in the state in 2022.

About:

- The Indian rhinoceros (*Rhinoceros unicornis*) is found only in the Brahmaputra valley, parts of North Bengal, and parts of southern Nepal.
- It has a single black horn that can grow up to 60 cm, and a tough, grey-brown hide with skin folds, which gives the animal its characteristic armour-plated look.
- The Indian rhino is listed as **vulnerable** in the IUCN Red List. The WWF says the “recovery of the greater one-horned rhino is among the greatest conservation success stories in Asia”.
- According to the WWF, there are around 3,700 Indian rhinos in the wild today. Assam’s Kaziranga National Park (KNP) alone has 2,613 animals, according to a census carried out in March 2022. There are more than 250 other rhinos in the Orang, Pobitora, and Manas parks.

Why were Rhinos poached?

- Rhinos have been poached for their horn, which is prized in some cultures.
- Additionally, ground rhino horn is used in traditional Chinese medicine to cure a range of ailments, from cancer to hangovers, and also as an aphrodisiac.
- While in Vietnam, a rhino horn is considered a status symbol.

What efforts were made by Assam government to break the myth surrounding Rhino horns?

- In 2019, the Assam government constituted a Special Rhino Protection Force to keep a check on rhino poaching and related activities at Kaziranga National Park (KNP).
- On September 22, **World Rhino Day**, in 2021, **almost 2,500 rhino horns were burnt publicly** in Bokakhat in KNP to “bust myths about rhino horns”.

Forest (conservation) Rules, 2022

News: The conflict between the government and the National Commission for Scheduled Tribes (NCST) over the Forest (Conservation) Rules, 2022, seems to be escalating as the latter held its ground on impact of new Forest (conservation) Rules on the Forest right act.

What is the issue?

- **Consent clause over Diversion of Forest Land**
 - In September 2022, **flagging concerns** over the provision in the new rules that proposes to do away with the **consent clause for diversion of forest land for other purposes**, the Commission had recommended that these rules should be put on hold immediately.
 - In response, the ministry has insisted that the rules were framed under the Forest (Conservation) Act, 1980 and that the NCST’s apprehension of these rules being in violation of the Forest Rights Act (FRA), 2006 was “not legally tenable”. The Minister added that the two statutory processes were parallel and not dependent on each other.
- **Consent of Gram Sabhas**
 - The NCST had pointed out that the FCR 2022 **has done away with** the provisions to **mandatorily seek consent of Gram Sabhas** before the Stage 1 clearance, leaving this process to be done later and even after Stage 2 clearance.
 - According to the government, FCR 2022 already provides for diversion of forest land “only after fulfilment and compliance of all provisions, including settlement of rights under the Forest Rights Act” and also does not bar or infringe upon the operation of other laws mandating consent of Gram Sabhas.

What are the provisions of Forest (Conservation) Rules, 2022?

- It constituted an Advisory Committee, a regional empowered committee at each of the integrated regional offices and a screening committee at State/Union Territory (UT) government-level.
- 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%.
- The rules make a provision for private parties to cultivate plantations and sell them as land to companies who need to meet compensatory afforestation targets. Prior to the updated rules, state bodies would forward documents to the Forest Advisory Committee (FAC) that would also include information on the status of whether the forest rights of locals in the area were settled.
- The new rules state 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. However, earlier consent of gram sabha, or the governing body in villages in the area, was required to give written consent to the diversion of the forest.
- It provides for right to construct structures for bonafide purposes including forest protection measures and residential units (up to an area of 250 sq meters as one-time relaxation).

What are concerns about new rules?

- The Gram Sabha's approval had significant persuasive power and could influence decisions to proceed with the diversion process. However, the new Rules eroded Gram Sabha's role.

Global Risk Report 2023

News: Global Risk Report was released recently by the World Economic Forum.

Background:

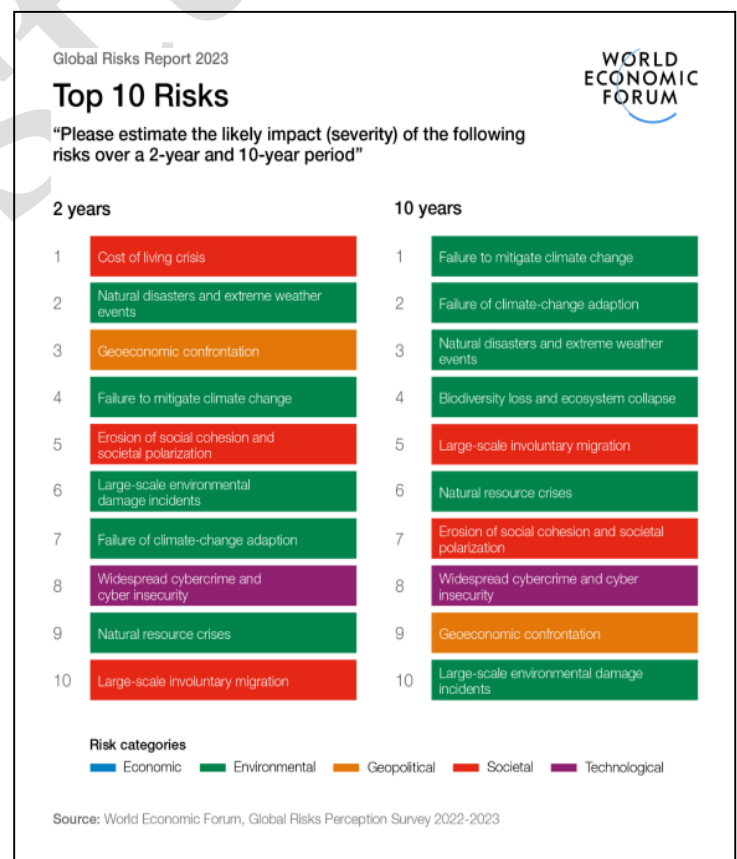
- The Global Risks Report 2023 explores some of the most severe risks we may face over the next decade. As we stand on the edge of a low-growth and low-cooperation era, tougher trade-offs risk eroding climate action, human development and future resilience.

About Global Risk Report:

- The Global Risks Report is an annual study published by the World Economic Forum ahead of the Forum's Annual Meeting in Davos, Switzerland. Based on the work of the Global Risk Network, the report describes changes occurring in the global risks landscape from year to year.

Key Findings:

- The report identifies Top 10 risks and divides it into period of 2 years and 10 years.
- The immediate risks (in 2 years) include Cost of living crisis, Natural disasters and extreme weather events, Geoeconomic confrontation and others (See the image)
- The long term risks (in 10 years) include Failure to mitigate climate change, Natural disasters and extreme weather events, Large scale involuntary migration etc (See the image)
- Major risks to India include Digital inequality; geopolitical confrontation for resources, the rising cost of living, debt crisis, natural disasters and extreme weather events



- Technologies such as AI, Quantum and Biotechnology are going to exacerbate the inequalities and digital divide (provided that no action is taken to mitigate it)
- Covid-19 and Ukraine war has resulted in rising inflation, rapid normalization of monetary policies, low-growth and low-investment era
- A miscalibration between monetary and fiscal policies will raise the likelihood of liquidity shocks, signaling a more prolonged economic downturn and debt distress on a global scale.
- Geopolitical fragmentation will drive geo-economic warfare and heighten the risk of multi-domain conflicts.
- Concurrent shocks, deeply interconnected risks and eroding resilience are giving rise to the risk of polycrises (one crisis leading to another and the overall impact far exceeds the sum of each part)
- Food, fuel and cost crises exacerbate societal vulnerability while declining investments in human development erode future resilience.

What are the other reports released by WEF?

- Global Competitiveness Report
- Global IT Report
- Global Gender Gap Report
- Global Risk Report
- Global Travel and Tourism Report
- Energy Transition Index

Eco-Sensitive Zones

News: Recently, Eco-sensitive Zones have been met with resistance from protests claiming that compliance with the Environmental Protection Act 1986 and the Wildlife Protection Act 1972 has led authorities to disregard the rights of forest communities and negatively affect their way of life and livelihood.

What are ESZ?

- Eco-Sensitive Zones (ESZs) or Ecologically Fragile Areas (EFAs) are areas notified by the MoEFCC around Protected Areas, National Parks and Wildlife Sanctuaries.
- An ESZ could go up to 10 kilometres around a protected area as provided in the Wildlife Conservation Strategy, 2002.
- Moreover, in the case where sensitive corridors, connectivity and ecologically important patches, crucial for landscape linkage, are beyond 10 km width, these should be included in the ESZs.

What are the activities that can be carried out in ESZ?

- Prohibited Activities - Commercial mining, saw mills, industries causing pollution (air, water, soil, noise etc), establishment of major hydroelectric projects (HEP), commercial use of wood.
- Regulated Activities - Felling of trees, establishment of hotels and resorts, commercial use of natural water, erection of electrical cables, drastic change of agriculture system, e.g., adoption of heavy technology, pesticides etc, widening of roads.
- Permitted Activities - Ongoing agricultural or horticultural practices, rainwater harvesting, organic farming, use of renewable energy sources, adoption of green technology for all activities.

Rationale behind declaring ESZ:

- The facilitate **in-situ conservation** of species. For example, One-horned Rhinos in Kaziranga.
- It intends to minimize the **impact of urbanization**.
- The purpose of declaring ESZs is to create some kind of '**shock absorbers**' to the protected areas by regulating and managing the activities around such areas.
- They also act as a **transition zone** from areas of high protection to areas involving lesser protection.
- Eco-Sensitive Zones **minimize forest depletion** and **man-animal conflict**.

Challenges faced by ESZ:

- They are not in synchronization with Forest rights act and PESA Act. The Forest Rights Act (FRA) 2006, recognises the customary and traditional rights (both individual and collective) of forest-dwellers on forest land, including inside protected areas.

- Similarly, the Provisions of the Panchayat (Extension to Scheduled Areas) Act (PESA) 1996, empower Gram Sabhas to safeguard and preserve community resources on forest and revenue lands in Scheduled Areas.
- However, the MoEFCC has shown no inclination to amend the Indian Forest Act 1927, the Wildlife (Protection) Act and the EPA 1986 to comply with PESA and FRA.

What is the case of Kerala?

- The Western Ghats (WG) cover 48% of Kerala and nearly 30% of the state is covered by forests. There is also a network of lakes, canals and wetlands, as well as a 590-kilometre-long coastline, all of which are governed by a set of environmental conservation laws.
- This leaves **little space for its 3.5 crore population**, which has a population density of 900 people per square km (much higher than the national average).
- According to an SC directive, at least one km from the boundary of every protected area in Kerala should be marked as ESZ
- The Kerala State Assembly recently unanimously passed a resolution urging the Central Government to exempt the state's human settlements, farmlands, and public institutions from the ESZ's scope.

Way Forward:

- There is need to involve local communities in the decision-making process for the management of ESZs.
- It is important to provide alternative livelihood options for local communities who depend on the resources found in ESZs for their livelihoods.

Global Glacier Change in 21st century

News: Recently, a report titled “Global glacier change in the 21st century: Every increase in temperature matters”, which states **half the Earth's glaciers may disappear by 2100**.

Background:

- The researchers used two decades of satellite data to map the planet's glaciers with greater precision than ever before.
- The United Nation's (UN) Intergovernmental Panel on Climate Change's sixth assessment report released in 2022 also warned that we are running out of time to attain the 1.5°C target.

Key Findings:

- **Glaciers melting at alarming rate**
 - Glaciers are receding at unprecedented rates due to climate change and rising temperatures. The amount of ice lost by glaciers between 1994 and 2017 was around 30 trillion tonnes and they are now melting at a pace of 1.2 trillion tonnes each year. The glaciers in the Alps, Iceland and Alaska are some of those that are melting at the quickest rates.
 - Half the Earth's glaciers are destined to vanish by 2100, even if we adhere to the Paris Climate Agreement goal of limiting global temperature rise to 1.5 degrees Celsius above pre-industrial levels.
- **Increase disaster risk**
 - Melting glaciers raise sea levels dramatically, jeopardizing up to two billion people's access to water and increasing the risk of natural disasters and extreme weather events like floods.
 - Global sea level rose by 21 % between 2000 and 2019. This was solely due to meltwater from melting glaciers and ice sheets.
- The rapidly increasing glacier mass losses as global temperature increases beyond 1.5C stresses the urgency of establishing more ambitious climate pledges to preserve the glaciers in these mountainous regions.

Indian Star tortoise

News: A new study on the Indian Star Tortoise (*Geochelone elegans*) has found that **illegal trade and unscientific translocations** are causing major losses to the species' genetic diversity and habitat.

About:

- Indian star tortoises are found across the Indian subcontinent, more specifically, in the Central and Southern parts of India, in West Pakistan and in Sri Lanka.
- It is typically found in dry, open habitats such as scrub forests, grasslands, and rocky outcroppings.
- The species is facing twin challenges of a threat to its habitat at one level and loss of its genetic diversity at the other.
- Also, according to the Wildlife Crime Control Bureau, 90% of the trade of Star Tortoise occurs as part of the international pet market.

Protection Status:

- **IUCN Red List - Vulnerable**
- Wild Life Protection Act 1972: Schedule IV (It is list for species that are not endangered. It includes protected species but the penalty for any violation is less compared to the Schedules I and II)
- CITES - Appendix I

Risk of moving from Fossils to Clean Energy

News: Recently, a study published in the **Global Environmental Change** journal, which states that India's financial sector is highly exposed to the risks of the economy transitioning from being largely dependent on fossil fuel to clean energy.

Key Findings:

- **Negative impact of Transition:**
 - India's financial sector is highly exposed to the activities related to fossil fuels and any transition from fossil fuel to clean energy will have a negative impact on this sector.
 - 60% of lending to the mining sector is for oil and gas extraction.
 - 20% of manufacturing sector debt is for petroleum refining and related industries.
 - Electricity production is the largest source of carbon emissions, accounting for 5.2% of outstanding credit.
- **Lack of Experts:**
 - There is a shortage of experts in India's financial institutions who have the expertise to appropriately advise the institutions on transition from fossil fuel to clean energy.
 - Only four of the ten major financial institutions surveyed collect information on environmental, social and governance (ESG) risks and these firms do not systematically incorporate that data into financial planning.
- **Not capable to respond to Shocks and Stresses:**
 - High-carbon industries - power generation, chemicals, iron and steel, and aviation-account for 10% of outstanding debt to Indian financial institutions.
 - However, these industries are also heavily indebted, and therefore have less financial capacity to respond to shocks and stresses. This will further expose India's financial sector to the risk associated with the transition.
- **More Polluting and More Expensive Energy Supply:**
 - The financial decisions of Indian banks and institutional investors are locking the country into a more polluting, more expensive energy supply. For example, only 17.5% of bank lending to the power sector has been to pure-play renewables. Consequently, India has much higher electricity from carbon-sources than the world average.

How will the transition help?

- The current lending and investment patterns reveal that India's financial sector is heavily exposed to potential transition risks. However, the other side of risks is the tremendous opportunity to move finance towards sustainable assets and activities.
- In 2021, India committed to reach net-zero emissions by 2070.
- India has also announced plans to source half of its electricity needs (50%) from non-fossil fuel sources by 2030. This will require financing to the order of at least a trillion dollars to meet these commitments.

Kelp Forests

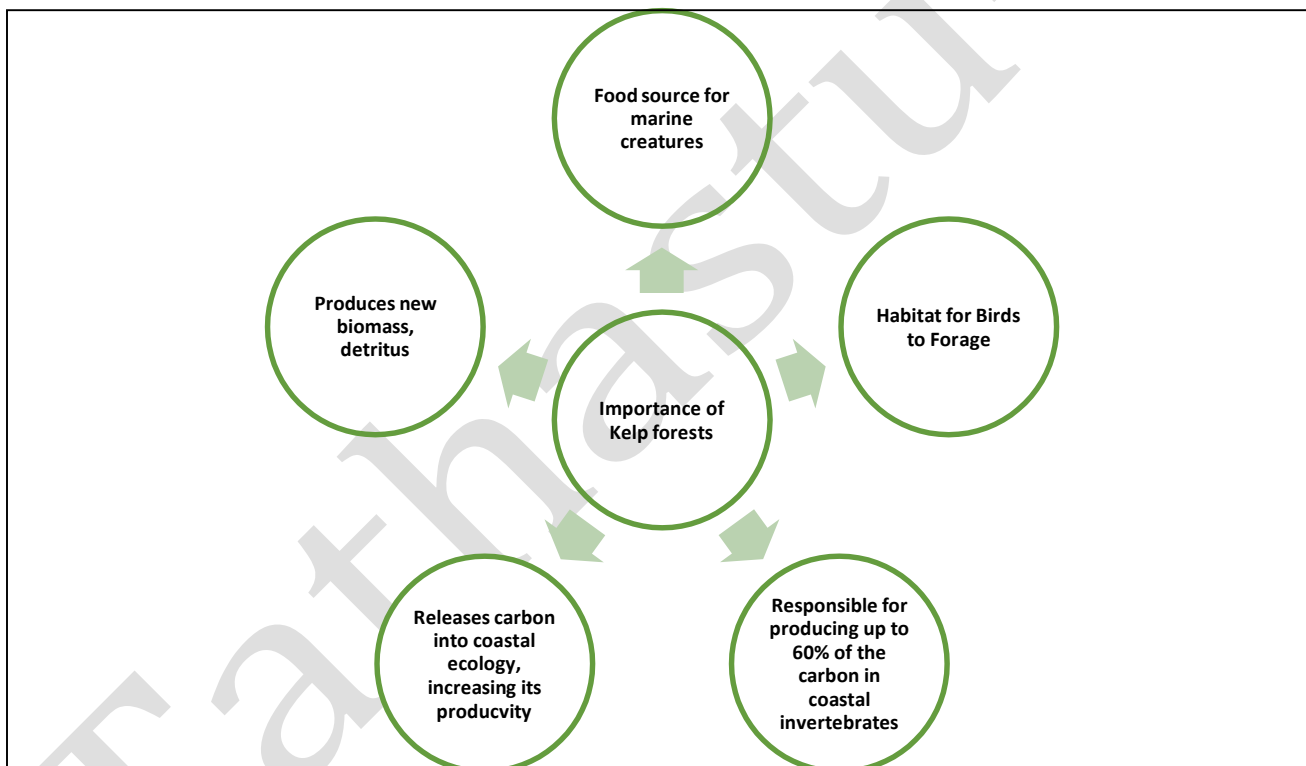
News: A recent study has revealed that Kelp forests are declining because of climate change.

Key Findings:

- **Ecklonia radiata**, a dominant kelp species in the southern hemisphere, is vulnerable to climate change, especially in regions near the equator.
- Rising temperatures are causing declines in the species along the eastern Australian coastline and it is expected to decline further in the future globally.
- In situ protection may not be possible but its unique genetic diversity can be preserved through ex situ preservation in culture banks for use in future restoration, hybridization, or adaptation strategies.

What are Kelp Forests?

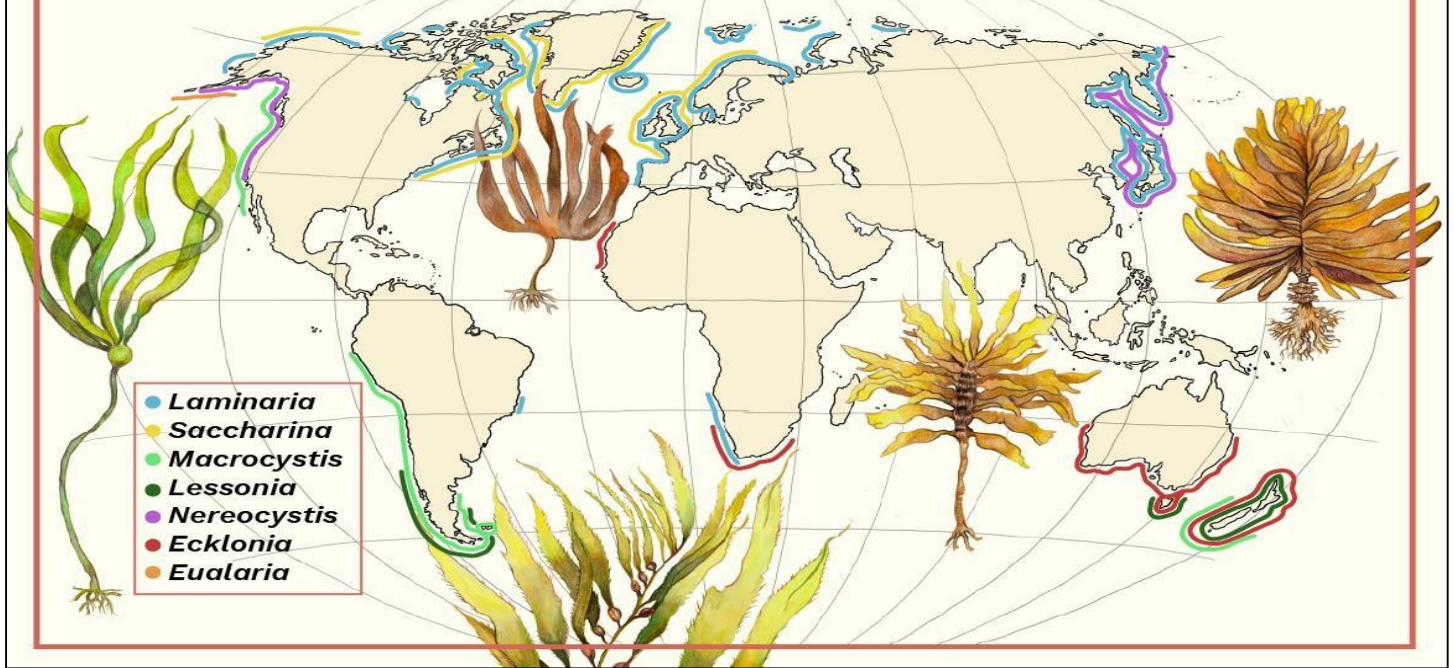
- Kelp forests are **underwater ecosystems** formed in **shallow water** by the dense growth of several different species.
- Kelp are **large brown algae** that live in cool, relatively shallow waters close to the shore.
- They attach to the seafloor and eventually grow to the water's surface and **rely on sunlight** to generate food and energy, kelp forests are always coastal and require shallow, relatively clear water.
- They provide underwater habitats to hundreds of species of invertebrates, fishes, and other algae and have great ecological and economic value.



World Distribution of Major Kelp Forests:

- Remember the key names associated with Kelp Forests.

The distribution of major kelp genera



Way Forward:

- Kelp forests are incredibly important ecosystems that are worth protecting and preserving for their ecological, economic, and social benefits. To ensure that genetic diversity is protected, it is essential to identify refuge areas, which are places that support a lone or extinct population of a once more common species.

M-Sand Project

News: Coal India Ltd (CIL) has envisaged processing the fragmented rock (known as Overburden Rocks (OB) for sand production in mines.

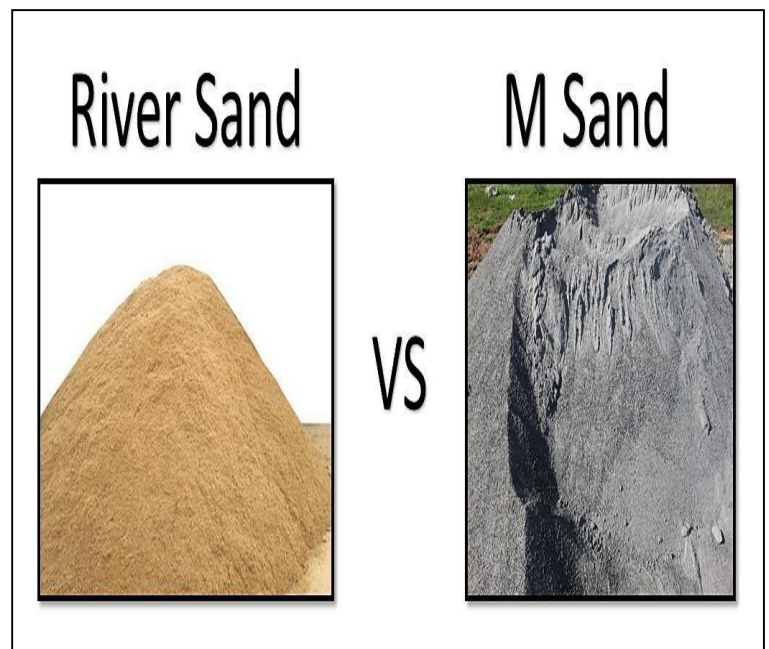
- OB material contains about 60% sandstone by volume which is harnessed through crushing and processing of Overburden.

What is M Sand?

- M sand is a form of artificial sand, manufactured by crushing large hard stones, mainly rocks or granite, into fine particles, which are then washed and finely graded.
- It is widely used as a substitute for river sand for construction purposes, mostly in the production of concrete and mortar mix.

What is need for M-Sand?

- Due to high demand, regulated supply and a complete ban on sand mining during monsoon to protect the river ecosystem, finding an alternative to river sand became necessary.
- The Supreme Court banned illegal mining on



riverbeds in 2017

- Sand Mining Framework (2018) prepared by the Ministry of Mines envisages alternative sources of sand in the form of Manufactured Sand (M-Sand) from crushed rock fines (crusher dust), and sand from Overburden (OB) of coal mines.

Advantages of M-Sand:

- Cost effective
- Consistency in grain size and shape
- Reduces dependence on mining natural sand thereby also taking care of environment.
- Lesser Sand extraction from the river will reduce erosion of channel beds & banks and protect the water habitat
- It will ensure balance in water table levels.
- Using manufactured sand can help to reduce the amount of water required for construction projects, as it does not require washing before use.

Inclusive Circular Economy

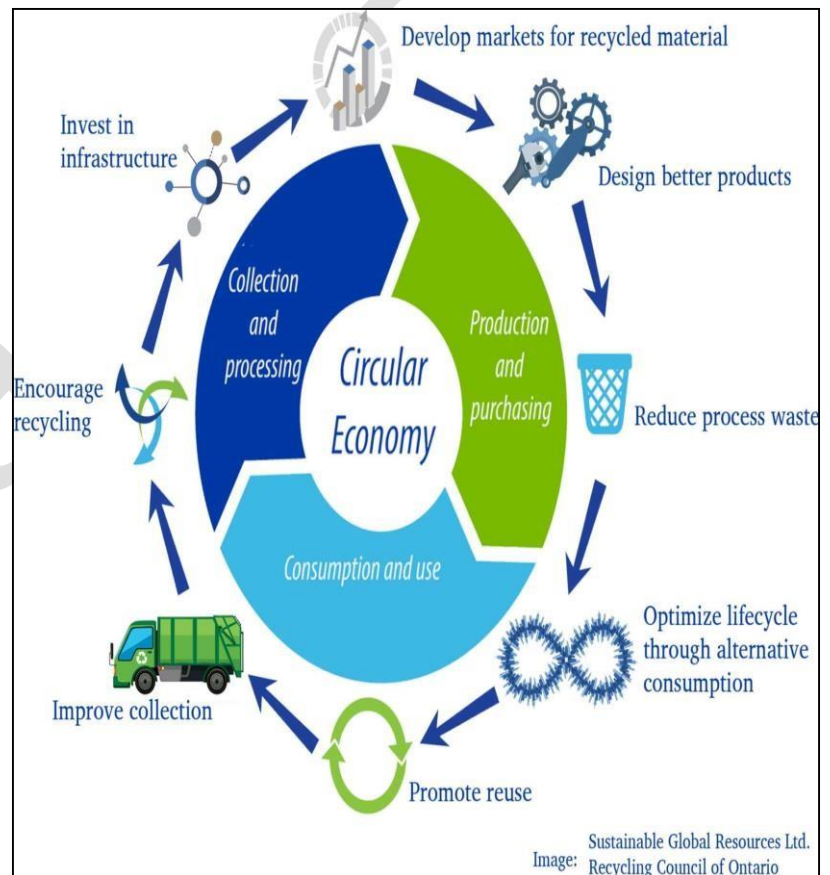
News: The United Nations Development Programme (UNDP) launched a campaign to drive an inclusive circular economy as part of its initiative to promote sustainability.

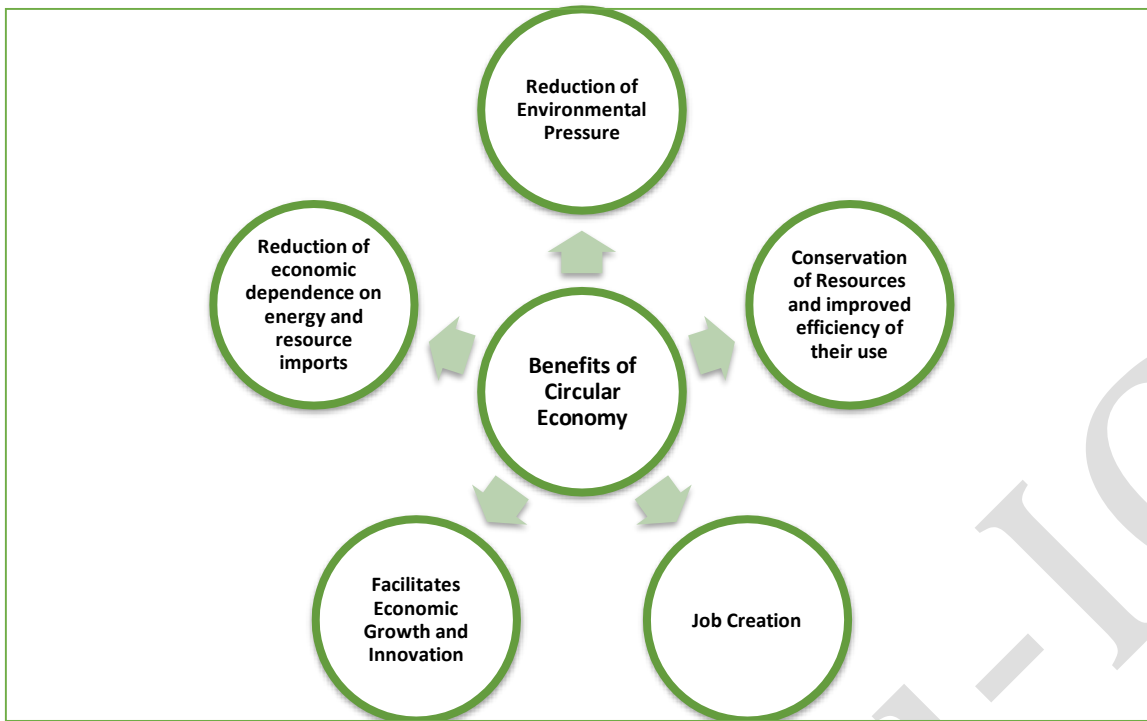
What is Circular economy?

- A circular economy is an industrial system that is **restorative** or **regenerative** by intention and design.
- It **replaces the end-of-life concept with restoration**, shifts towards the **use of renewable energy**, eliminates the use of **toxic chemicals** which impair reuse and return to the biosphere.
- It aims for the elimination of waste through the superior design of materials, products, systems and business models.

What are the key features of campaign?

- The project is a scale-up of existing partnership under UNDP's flagship Plastic Waste Management Programme to develop a sustainable model for plastic waste management in India
- End-to-end management of plastic waste by promoting - Segregation of waste at the source, Collection of the segregated waste and setting up Material Recovery Facilities (MRFs) for recycling all kinds of plastic waste.
- Partnership with the Private sector - Hindustan Unilever Limited (HUL) will also help build the capacities of Urban Local Bodies for adopting the MRFs or Swachhata Kendra
- The project is a collaboration between municipal corporations, corporates, Safai Saathis, and people to work together for cleaner and greener cities.
- The project will reach out to 100,000 households for segregation at the source





What are the challenges?

- Despite government initiatives, there is underwhelming response. Lack of a clear vision towards the end goal of India's circular economy mission.
- The **Industries are reluctant** in adopting the circular economy model due to **supply chain limitations, lack of incentives to invest, complex recycling processes** and lack of information to support participation in reusing/ recycling/re-manufacturing processes.
- **Lack of awareness** about the Concept of Circular economy itself amongst the people.
- **India's infrastructure** is not well-suited to support a circular economy. For example, there is a lack of recycling facilities, which makes it difficult to recycle and reuse materials.
- Significant **capital investment** is required.

What are the government initiatives?

- The **2022-23 Budget** recognized the importance of sustainable growth and in sync with a circular economy, the government formulated:
 - Battery Waste Management Rules 2022
 - Plastic Waste Management (Amendment) Rules 2022
 - e-Waste Management Rules 2022
- These rules set out target waste disposal standards for manufacturers, producers, importers, and bulk consumers, along with enabling transactions among stakeholders for Extended Producer Responsibility (EPR) certificates.
- Vehicle Scrappage Policy 2022 - Private vehicles older than 20 years will be deregistered from June 1, 2024, if they fail the fitness test or their registration certificate is not renewed.
- Niti Aayog along with the EU has prepared a strategy paper on 'Resource Efficiency'
- While globally, Germany and Japan have made the 'Circular Economy' part of their economic planning.

Security & Disaster Management

VSHORADS missile

News: The **Defence Acquisition Council (DAC)** Tuesday accorded **Acceptance of Necessity (AoN)** to procure the Very Short Range Air Defence System or VSHORAD (IR Homing) missile system, designed and developed by the DRDO.

Background:

- The development comes amid the ongoing military standoff with China at the LAC in eastern Ladakh and reports of air violations by China along the LAC last year.

What is the missile system?

- Meant to kill low altitude aerial threats at short ranges, VSHORADS is a man portable Air Defence System (MANPAD).
- As per the defence ministry, the missile—which is propelled by a **dual thrust solid motor**—incorporates many novel technologies including **miniaturised Reaction Control System (RCS)** and integrated avionics, which were successfully proven during the tests conducted last year. The DRDO has designed the missile and its launcher in a way to ensure easy portability.



How will it help India?

- As it is man portable and lightweight compared to the other missile systems in the Army's armoury, it can be **deployed in the mountains close to the LAC** at a short notice.
- When inducted, they will be a critical air defence missile for the forces, even for an all-equipped infantry unit, and will be the best option for mountain warfare.

When will they be inducted?

- The AoN is the first step in the long capital procurement process in defence. Not all AoNs accorded necessarily culminate into a final order.
- However, with flight tests having taken place, defence officials estimate the missile systems can be delivered to the forces in another three to four years with industry support if the orders are placed on time.

Defence Acquisition Council

- The Defence Acquisition Council is the **highest decision-making** body in the Defence Ministry for deciding on new policies and capital acquisitions for the three services (Army, Navy and Air Force) and the Indian Coast Guard.
- The **Minister of Defence** is the Chairman of the Council.
- It was formed, after the Group of Ministers recommendations on 'Reforming the National Security System', in 2001, post Kargil War (1999).

AK-203 Rifles

News: India and Russia have begun the joint production of AK 203 rifles at a factory in Amethi, Uttar Pradesh.

Background:

- India and Russia had inked an agreement in December 2021 for procurement of 6,01,427 AK 203 assault rifles through Korwa Ordnance Factory in Uttar Pradesh's Amethi district.

About AK-203 Rifles:

- AK-203 assault rifle is considered to be the latest and most advanced version of the AK-47 rifle.
- It is a 7.62×39mm variant from the AK-100 rifle family (one that offers the AK-74M system, in multiple cartridges and lengths).
- It is set to **replace the Indian Small Arms System (INSAS)** 5.56×45 mm assault rifle, which are presently being used by Army, Navy and the Air Force besides other security forces. INSAS rifles are not suitable for use at high altitude and other issues observed also include gun jamming, oil leakage etc.

Key agreements:

- More than six lakh rifles are to be manufactured in India as part of a joint venture — Indo-Russia Rifles Private Limited — established between the Indian Ordnance Factory Board (OFB), Kalashnikov Concern, and Rosoboronexport.
- It is the biggest defence deal between the two nations in recent years. The deal has a clause for complete technology transfer. The rifles will also be exported to friendly foreign nations.
- The idea is to have rifles made of 100 % indigenous components over a period of 128 months.

Background of India-Russia security relations

- Tri-services exercise INDRA
- Brahmos Cruise Missile Programme
- Sukhoi Su-30MKI programme
- T90 Bhishma
- S-400 defense missile system
- India's first submarine 'Foxtrot Class' came from Russia
- INS Vikramaditya aircraft carrier programme

General Studies – 4

Ethics, Integrity & Aptitude

1. Ethics and Human Interface: Essence, determinants and consequences of Ethics in-human actions; dimensions of ethics; ethics - in private and public relationships. Human Values - lessons from the lives and teachings of great leaders, reformers and administrators; role of family society and educational institutions in inculcating values.
2. Attitude: content, structure, function; its influence and relation with thought and behaviour; moral and political attitudes; social influence and persuasion.
3. Aptitude and foundational values for Civil Service, integrity, impartiality and non-partisanship, objectivity, dedication to public service, empathy, tolerance and compassion towards the weaker-sections.
4. Emotional intelligence-concepts, and their utilities and application in administration and governance.
5. Contributions of moral thinkers and philosophers from India and world.
6. Public/Civil service values and Ethics in Public administration: Status and problems; ethical concerns and dilemmas in government and private institutions; laws, rules, regulations and conscience as sources of ethical guidance; accountability and ethical governance; strengthening of ethical and moral values in governance; ethical issues in international relations and funding; corporate governance.
7. Probity in Governance: Concept of public service; Philosophical basis of governance and probity; Information sharing and transparency in government, Right to Information, Codes of Ethics, Codes of Conduct, Citizen's Charters, Work culture, Quality of service delivery, Utilization of public funds, challenges of corruption.
8. Case Studies on above issues

Generative AI

News: In the wake of newly released models such as Stable Diffusion and ChatGPT, generative AI has become a 'hot topic' for technologists, investors, policymakers and society at large.

What is Generative AI?

- Generative AI is a type of artificial intelligence that involves creating new, original content or data using machine learning algorithms.
- It can be used to generate text, images, music, or other types of media.

What is GPT?

- A Generative Pretrained Transformer (GPT) is a type of **large language model** (LLM) that uses deep learning to generate human-like text.
- It is called Generative because they can generate **new text** based on the input they receive.
- It is referred "pretrained" because they are **trained** on a large corpus of text data before being fine-tuned for specific tasks and "transformers" because they use a **transformer-based neural network** architecture to process input text and generate output text.

Neural Network - Neural networks, also known as artificial neural networks (ANNs) or simulated neural networks (SNNs), are a subset of machine learning and are at the heart of deep learning algorithms. Their name and structure are inspired by the human brain, mimicking the way that biological neurons signal to one another.

How does Generative AI help?

- **Language and Content** - Generative AI can be used to generate natural language text. For example, researchers are using ChatGPT to generate news articles, poetry, and even code. These models can be fine-tuned to use a specific writing style, or to generate text based on a specific topic or theme.
- **Computer Graphics** - Generative AI can be used to create realistic images and animations. For example, researchers have used generative models to create photorealistic images of faces and animals, and to animate virtual characters in real-time.
- **Music and Art** - It can be used to compose music and create art. For example, researchers have used generative models to create new pieces of music that are similar in style to a given artist.
- **Potential Drug Discovery** - AI-assisted drug discovery has the potential to accelerate the drug discovery process significantly. Generative AI models can be used to predict the properties of new compounds and predict their potential efficacy as drugs.
- **Robotics** - It can be used to design and control robotic systems.

What are issues associated with Generative AI?

- Generative AI has the potential to displace jobs and lead to job loss. For example, generative AI models can be used to automate tasks that were previously done by humans, such as writing news articles or composing music.
- Generative AI can reduce the need for human cognition, as the models can perform tasks that would otherwise require human intelligence. This could potentially lead to decrease in overall cognitive abilities of significant population especially the children who will rely on AI to do their homework.
- It can also lead to the replication of societal biases present in the mind of its trainer or programmer, this can also have a negative impact on marginalized groups and lead to further discrimination.
- Fear of Misinformation and Mistrust by manipulation of information, creating fake text, speech, images or video.
- Fear of Concentration of Power in the hand of a few companies.
- Risks for national security using automated troll bots, with advanced capabilities.

Way Forward:

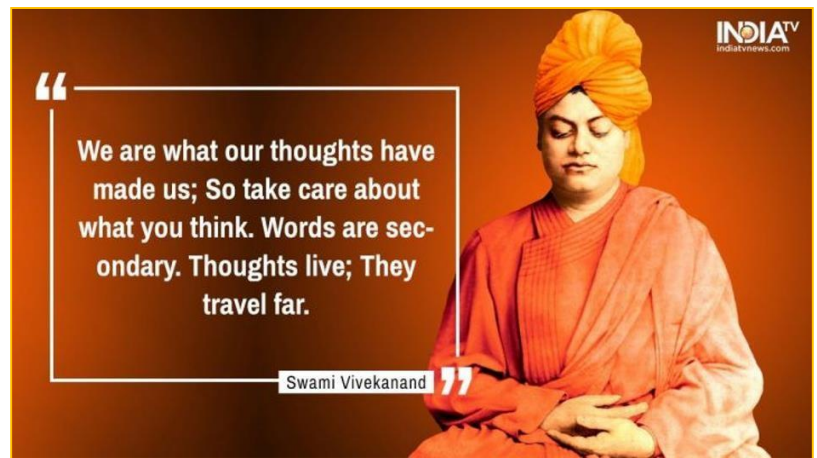
- Developing ways to make the inner workings of generative AI models more transparent, so that the public can understand how and why the model is making certain decisions.
- Accountable governance especially of Big-Tech companies using a designated "AI ethicist" or "AI ombudsman".
- Designing systems that involve human oversight and decision-making at key points in the generative AI process, in order to ensure that the model is behaving as intended and that any unintended consequences can be quickly identified and addressed.
- Encouraging collaboration between human and AI in the decision making process where AI can be used as a support system while humans make the final decision, which will keep humans in control over the outcome.
- Continually assessing the potential consequences of generative AI models, both intended and unintended, and making adjustments as needed to minimise any negative impact is necessary.

Swami Vivekananda

News: National Youth Day is celebrated every year on **12th January** to commemorate the birth anniversary of Swami Vivekananda.

Background:

- The message and teachings of Swami Vivekananda, who was one of the most well-known spiritual leaders of India, outlive him. He preached '**neo-Vedanta**', an interpretation of Hinduism through a Western lens, and believed in combining spirituality with material progress.
- Quotes such as "**Arise, awake, and stop not till the goal is reached**" have become a source of inspiration for many.
- In this article we will understand meaning and context of above quote which Swami Vivekananda took from **Katha Upanishad**.



What is the meaning of the quote?

- The quote reflects the basis of Swami Vivekananda's philosophy, which says human beings have infinite power and strength within themselves. Vivekananda, in his speeches and work, reiterated and exhorted the youth to "take one idea" and make that one idea their life.
- **Strength** and **fearlessness** were the two keywords he used to urge the youth to imbibe in their lives to achieve their true potential.
- Swami Vivekananda appealed to the youth to follow the **religion of fearlessness**, for that is the only way to achieve any goal. He decried inactivity and 'hypnotism' of weakness, which he believed are the biggest deterrent to achieving anything.
- To remain focused on any goal, Swami Vivekananda claimed that **patience, perseverance, and purity** are required. He categorically articulated that it is the calm, forgiving, equable and well-balanced mind that does the greatest amount of work.
- Swami Vivekananda also stressed the **importance of concentration** to achieve one's goals. "The world is ready to give up its secrets if we only know how to knock, how to give it the necessary blow and that can be done through concentration of the powers of the mind. The strength and the force of the blow come through concentration."
- To highlight the importance of work, he even said that through work even God can be attained. He called on the youth to wake up from their slumber and **be awake to the divinity within themselves**, which can lead to their success in every sphere of their lives.

What are other important quotes of Swami Vivekananda?

- "Freedom can never be reached by the weak. Throw away all weakness. Tell your body that it is strong, tell your mind that it is strong, and have unbounded faith and hope in yourself."
- "I stand for truth. Truth will never ally itself with falsehood. Even if all the world should be against me, Truth must prevail in the end."
- "Ours not to reason why, ours but to do and die. Be of good cheer and believe that we are selected by the Lord to do great things, and we will do them."

Passive Euthanasia norms eased

News: The Supreme Court in India has made changes to the rules for passive euthanasia with the primary objective to make the process less difficult and less time-consuming.

What has changed?

- The Supreme Court tweaked the previous judgement to do away with the necessity of a judicial magistrate to attest or countersign a living will. SC held that an attestation by a notary or a gazetted officer would be sufficient for a person to make a valid living will.
- Instead of the living being in the custody of the district court concerned, SC said that the document will be a part of the National Health Digital Record which can be accessed by hospitals and doctors from any part of the country.
- If the hospital's medical board denies permission to withdraw medical treatment, the family members of the patient can approach the relevant high court, which forms a fresh board of medical experts to enable the court to take a final call.

What is Passive Euthanasia?

- Passive euthanasia is the act of **withholding or withdrawing medical treatment**, such as withholding or withdrawing life support, with the intention of allowing a person to die.
- This is in contrast to active euthanasia, which involves an active intervention to end a person's life with substances or external force, such as administering a lethal injection.

Euthanasia in India:

- In a landmark judgement, the Supreme Court of India **legalized passive euthanasia** in 2018, stating that it was a matter of 'living will'.
- According to the judgement, an adult in his conscious mind is permitted to refuse medical treatment or voluntarily decide not to take medical treatment to embrace death in a natural way, under certain conditions.
- It also laid down guidelines for 'living will' made by terminally ill patients who beforehand know about their chances of slipping into a permanent vegetative state.
- The court specifically stated that "**Dignity in the process of dying is as much a part of the right to life under Article 21.** To deprive an individual of dignity towards the end of life is to deprive the individual of a meaningful existence."

THE CHANGES BROUGHT

	NOW	EARLIER
Living will	An attestation by a notary or a Gazetted officer to be sufficient for a living will	It was necessary that a judicial magistrate attest or countersign a living will
Access to the living will	Living will a part of national health record which can be accessed by Indian hospitals	Living will was kept in the custody of the district court concerned
Primary board to examine patient's condition	Three doctors, including treating physician and two other doctors with five years of experience in the specialty, will comprise the primary board of doctors	Primary board of doctors needs at least four experts from general medicine, cardiology, neurology, nephrology, psychiatry or oncology with overall standing of at least 20 years
Time taken to decide	Primary/secondary board to decide within 48 hours on withdrawal of further treatment	The 2018 judgment did not specify any outer limit on withdrawal of treatment
Secondary board	Hospital must immediately constitute a secondary board of medical experts	The district collector had to constitute the second board of medical experts

What are laws in different countries regarding Euthanasia?

- Netherland, Luxembourg, Belgium allows both euthanasia and assisted suicide for anyone who faces "unbearable suffering" that has no chance of improvement.
- Switzerland bans euthanasia but allows assisted dying in the presence of a doctor or physician.

Project Sweekruti

News: The Indian Express is conducting The Indian Express Excellence in Governance awards for 2020 and 2021.

Background:

- Chanchal Rana, DM & Collector, Balangir (Odisha) won one of such award under the category "Gender" for Project Sweekruti which seeks to provide life of Dignity to Transgender Persons by giving them jobs.
- You can quote such examples in your essay, ethics paper or any issue that talks about larger role of civil society, administration, gender justice etc.

Below are few details about the project, experience of a beneficiary and how it has helped the community in particular:

- We will discuss how life of Premanand Sahu has changed. Sahu is among 300 transgenders persons who have been engaged by the distinct administration under project Sweekruti (acceptance), an ambitious plan seeking to mainstream the transgender community through jobs.
- Sahu's job is to collect fees at parking lot near the District collectorate complex in Balangir.
- The project is a departure from a life of discrimination and social exclusion the transgender persons faced, where no one even gave them a job.
- As quoted by Sahu, "We were forced to beg on trains, dance in marriages and other social functions to earn a livelihood."
- Sahu, who earns Rs 7,000-10,000 a month now, said Sweekruti has also ensured an **end to transphobia** and the **mental stress** that came from dealing with it. "People coming to park their vehicles also show us respect. My parents are also very happy for me," he said.

The story of Jairaj Nag (another Transgender person):

- He works as a helper in a Swachha Safari, a battery-operated vehicle used in door-to-door waste collection, says Sweekruti has given the transgender persons their "**own identity**".
- He says, there was a time when people used to crack jokes for being a transgender but now Jairaj doesn't face any transphobia and lives life with Dignity.

How has the project helped SHG's?

- The project has helped form **self-help groups** among transgender persons to enable these groups to avail of **seed capital**. Around 400 to 500 people are likely to have benefitted from this.

Note – Making notes on social issues, stigma faced by Transgender community in India is important topic. You must have necessary data, facts and initiatives taken by Government, civil society for the Transgender community.

Short News for Prelims

Project Nilgiri Tahr

News: Tamil Nadu Government has announced the 'Nilgiri Tahr Project', India's first-of-its-kind initiative aimed at restoring the state animal's original habitat and stabilizing its population.



About:

- The project will have nine components, including bi-annual synchronised surveys across the division, diagnosis and treatment for affected individuals and a Shola grassland restoration pilot in Upper Bhavani.
- The Nilgiri tahr is the only mountain ungulate in southern India amongst the 12 species present in India. It is also the state animal of Tamil Nadu.
- The Nilgiri tahr, which used to be found along the entire stretch of Western Ghats, is presently found only in small fragmented pockets. The existing populations are under severe stress due to habitat loss and hunting.
- This endemic species of the Western Ghats is listed as **Endangered** in the IUCN Red List of Threatened Species and is protected under **Schedule I** of the Wildlife (Protection) Act of India, 1972.

- The population of Nilgiri Tahr has been estimated at 3,122 individuals in the wild as per a report released by WWF India in 2015.

Prahari App

News: Union Home and Cooperation Minister Shri Amit Shah launched the Border Security Force (BSF) mobile app 'Prahari'.

Significance of App:

- Prahari' in Hindi means 'a guard'.
- Jawans can get personal and service-related information, housing, Ayushman-CAPF and leave related information on their mobile phones.
- BSF Jawans can also get GPF, Bio Data or grievance redressal on the "Centralized Public Grievance Redress and Monitoring System" (CP-GRAMS) or information on various welfare schemes through the app.
- This app will also connect them with the portal of the Ministry of Home Affairs.

Strait of Hormuz

News: Recently, the United Arab Emirates and Iran's military have started their annual Drill in the coastal area of the Gulf of Oman and near the strategic Strait of Hormuz.



About:

- The strait is located at the mouth of the Persian Gulf and is crucial to global energy supplies, with about a fifth of all oil traded at sea passing through it.
- The waterway separates Iran and Oman, linking the Persian Gulf to the Gulf of Oman and the Arabian Sea.
- The Strait is 33 km wide at its narrowest point, but the shipping lane is just three km wide in either direction.
- Most crude exported from Saudi Arabia, Iran, the UAE, Kuwait and Iraq is shipped through this waterway.

Is it the only way out of the gulf?

- Traveling by sea, the strait is the only means of transporting goods or people to the rest of the world. For this reason, the UAE and Saudi Arabia have proposed building more oil pipelines to avoid the problematic waterway.

Schengen Area

News: Recently, **Croatia** adopted the euro currency and entered Europe's passport-free Schengen zone nearly a decade after joining the European Union.



What is Schengen Area?

- The **border-free** Schengen Area guarantees **free movement** to more than 400 million EU citizens, along with non-EU nationals living in the EU or visiting the EU as tourists, exchange students, or for business purposes (anyone legally present in the EU).
- Free movement of persons enables every EU citizen to travel, work and live in an EU country without special formalities.

- Schengen underpins this freedom by enabling citizens to move around the Schengen Area without being subject to border checks.

HEFA

News: Higher Education Financing Agency (HEFA) has fallen short of the government's target of mobilizing Rs 1 Lakh crore by 2022.

About:

- HEFA was set up by the Centre in 2017 to upgrade the education infrastructure in the higher education institutions under the Government of India.
- It has sanctioned 144 loans worth Rs 35,000 crore so far, falling short of the government's target of mobilising Rs 1 lakh crore by 2022
- HEFA, which was set up as a non-profit Non-Banking Financing Company (NBFC), is a joint venture between the **Union Ministry of Education** and the **Canara Bank** to finance infrastructure development in educational institutions through long-term loans.
- While the premium is paid by the institute, interest is paid by the government.
- The government expanded the scope of HEFA in 2018 under the Revitalizing Infrastructure and Systems in Education or RISE by 2022 initiative, bringing schools and medical colleges under its ambit, and making it the nodal body in infrastructure financing in the education sector.

The Kotia Dispute

News: The Odisha government has mooted a proposal allowing officers above joint secretaries to reach Kotia, a territory claimed by both **Odisha** and



Andhra Pradesh, using flight service to review the progress on developmental activities.

Background:

- Both, Odisha and Andhra Pradesh have claimed jurisdictional authority over the villages under the Kotia Gram Panchayat in Koraput district or Kotia Group of villages in SC.

About:

- Kotia gram panchayat has been in Odisha since 1936.
- In 1953, Andhra Pradesh claimed Kotia to be part of the state.
- Ongoing tussle is for over 21 out of 28 villages in Kotia. In 2006, the Supreme court orders a status quo on the issue.

Stay Safe Online and G20 Digital Innovation Alliance

News: As part of India's G20 presidency, the **Ministry for Electronics & Information Technology** (MeitY) has launched the "Stay Safe Online" campaign and the "G20 Digital Innovation Alliance" (G20-DIA).

What is Stay safe online campaign?

- The objective of the 'Stay Safe Online Campaign' is to raise awareness among citizens to stay safe in the online world due to the widespread use of social media platforms and the rapid adoption of digital payments.
- The campaign will make citizens of all age groups, especially children, students, women, senior citizens, specially-abled, teachers, faculty, officials of Central/State Governments, etc. aware of the cyber risk and ways to deal with it. The campaign will be carried out in English, Hindi and local languages to reach a wider audience.

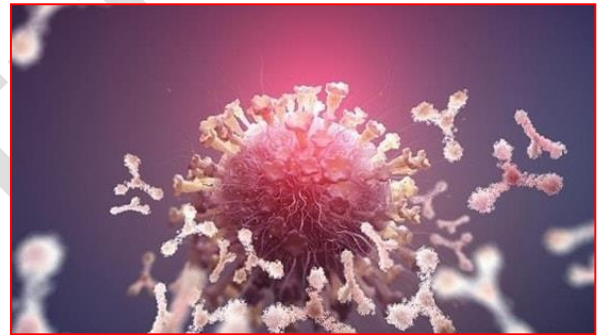
What is G20 Digital Innovation Alliance?

- It aims to identify, recognize, and enable the adoption of innovative and impactful digital technologies developed by start-ups, from G20 nations as well as the invited non-member nations.
- It envisages to address the needs of humanity in the six critically important sectors- Agri-tech, Health-tech, Ed-tech, Fin-tech, Secured Digital Infrastructure, and Circular Economy.

- Startup products in these six sectors enabled through Digital Public Goods Infrastructure can create a global population-scale impact and reduce the digital divide and enable sustainable, and inclusive techno-socio-economic development.
- The engagement of innovators, entrepreneurs, startups, corporations, investors, mentors, and other ecosystem stakeholders will lead to the speedy acceptance of the platform that India plans to offer through the G20 Digital Innovation Alliance (G20-DIA).

Virovore

News: Researchers have found the first known "Virovore" or organism that eats viruses. The new findings may change our understanding of the role viruses play in the food chain at a microscopic level.

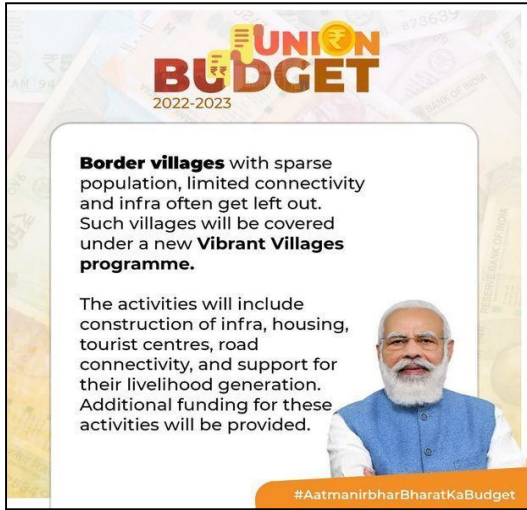


What is Virovore?

- It has been identified as an actual species of protist that feasts on viruses.
- These virus-eating species of protists which are their own kingdom on the tree of life and are not an animal, plant, or fungi are now classified as Virovores.
- It is a species of **Halteria** - microscopic ciliates that populate freshwater worldwide. The microbe Halteria is a common genus of protist known to flit about as its hair-like cilia propel it through the water.
- They're made up of **nucleic acids, nitrogen, and phosphorus**. It can eat huge numbers of infectious chloroviruses that share their aquatic habitat. Chloroviruses are known to infect microscopic green algae.
- These organisms can sustain themselves with viruses, consuming many and growing in size.
- A virus-only diet, termed "virovory" is enough to fuel the physiological growth and even population growth of an organism.

Vibrant Village Programme

News: Union Home Minister asked border-guarding forces to strengthen Vibrant Village Programme and ensure welfare programmes are implemented.



What is the VVP?

- It was announced in the 2022-23 budget with an aim to enhance the infrastructure in border villages **along India's border with China** in states like Himachal, Arunachal and Uttarakhand.
- Activities include Housing, Tourism promotion, Road Infrastructure, Renewable Energy, livelihood generation etc.
- It promotes community knowledge in the border management.
- Other similar initiatives include Border Area Development Programme (BADP); Border Infrastructure and Management Scheme etc.

What did the Home Minister say?

- While Soldiers on the ground and fencing are vital but borders can be truly secured only when **“we create villages with people who are concerned for the country”**

Abyei Area

News: India, among the largest troop-contributing countries to UN peacekeeping, is deploying a platoon of **women peacekeepers in Abyei**, the country's largest single unit of female Blue Helmets in a UN mission since 2007.

Background:

- Heightened intercommunal tensions are likely in the Abyei Area, a territory disputed by **Sudan and South Sudan**, over the short



term after armed herders killed 13 people and wounded five others in the region's Rumamer village on January 2.

About:

- This will be India's largest single unit of women Peacekeepers in a UN Mission since we deployed the first-ever all-women's



contingent in Liberia in 2007. It will also herald India's intent of increasing significantly the number of Indian women in Peacekeeping contingents.

- The Indian contingent, comprising two officers and 25 other ranks, will form part of an engagement platoon and specialise in community outreach and will be performing extensive security-related tasks as well.

SAIME initiative

News: In Sundarbans, a new shrimp farming initiative offers hope for mangrove restoration.

About:

- Under **Sustainable Aquaculture in Mangrove Ecosystem** (SAIME) initiative, farmers have taken up cultivation of shrimp at 30 hectares in West Bengal. They are also restoring mangroves.
- Started in 2019, the community-based initiative of sustainable shrimp cultivation is being conceived by NGOs- Nature Environment and Wildlife Society (NEWS) and Global Nature Fund (GNF), Naturland,

Bangladesh Environment and Development Society (BEDS).

- The mangrove ecosystem is integrated with shrimp cultivation, but when fisheries were expanded inwards, the mangrove ecosystem was excluded.
- Fishing, particularly shrimp cultivation, is one of the key occupations of the people of Sundarbans, which is a complex network of rivers and low-lying islands that face a tide surge twice a day.
- Shrimp cultivation is practiced in about 15,000 to 20,000 hectares of the unique ecosystem in India.

BIND Scheme

News: The Cabinet Committee on Economic Affairs has recently approved a large infrastructure development scheme for Prasar Bharati, the public broadcasting service in India that heads All India Radio and Doordarshan.

- The **Broadcasting Infrastructure and Network Development (BIND)** scheme, worth over ₹2,500 crore, will focus on expanding and upgrading the infrastructure of **Prasar Bharati**, as well as improving the digital content and distribution network.



Significance:

- The BIND scheme is designed to provide financial support to Prasar Bharati for expenses related to the expansion and upgradation of its broadcasting infrastructure, content development, and civil work related to the organization.
- As the public broadcaster of India, Prasar Bharati serves as a crucial source of information, education, entertainment, and engagement for the public, especially in remote areas of the country through DD and AIR.

- The BIND scheme will enable Prasar Bharati to expand its reach to include areas with left-wing extremism, strategic locations, and border regions.

Kala-Azar

News: There has been a 98.7 per cent decline in cases of Kala-azar from 44,533 in 2007 to 834 in 2022 in India according to data provided by Ministry of Health.

Background:

- India is committed to eliminating Kala-Azar from the country by **2023**
- Elimination of diseases means reducing the annual incidence of Kala-Azar to **less than 1 case per 10,000 people at the sub-district level.**

What is Kala-Azar?

- Visceral leishmaniasis (VL), also known as kala-azar, is the most severe form of leishmaniasis and, without proper diagnosis and treatment, is associated with high fatality.
- It is also a neglected tropical disease (NTD)
- It is caused by **protozoan parasites** of the Leishmania genus (transmitted through the bite of **Sand flies**), migrates to the internal organs such as the liver, spleen (hence “visceral”), and bone marrow.
- Signs and symptoms include fever, weight loss, fatigue, anemia, and substantial swelling of the liver and spleen.
- It is considered the second deadliest parasitic killer in the world after Malaria
- Kala-azar is endemic to the Indian subcontinent primarily in Bangladesh, Bhutan, India and Nepal.

Eat Right Station

News: The **Varanasi Cantt railway station** has been awarded a 5- star ‘Eat Right Station’ certification by the Food Safety and Standards Authority of India (FSSAI) for providing quality and nutritious food to passengers.

About:

- The “Eat Right Station” certification is awarded by Food Safety and Standards Authority of India (FSSAI) to the railway stations that set benchmarks (as per the Food

Safety and Standards Act, 2006) in providing safe and wholesome food to passengers.

- The certification is part of the 'Eat Right India' movement- a large-scale effort by FSSAI to transform the country's food system to ensure safe, healthy and sustainable food for all Indians.
- The other railway stations with star certification include Anand Vihar Terminal Railway Station (Delhi); Chhatrapati Shivaji Terminus (Mumbai); Mumbai Central Railway Station, (Mumbai); Vadodara Railway Station, Chandigarh Railway Station and Bhopal Railway Station.

Goa's Purple Fest

News: India's first-of-its-kind inclusivity, 'Purple Fest: Celebrating Diversity' was organized in Goa recently.

About:

- The festival aims to showcase how we can come together to create a welcoming and inclusive world for everyone.
- It is first of its kind inclusive festival in India that embraces, expresses and celebrates **persons with disabilities**.
- The Purple Fest will feature a variety of exciting live performances, sporting events, grand exhibitions, immersive experience zones, accessible movie screenings, & discussions on vital subjects like inclusive education, tourism, employment, & independent living.

Sagol Kangjei

News: Part of Home Minister Amit Shah's programme in Manipur on Friday was the inauguration of a 122-foot-tall statue of a polo player astride a Manipur Pony in Imphal, a project that has been in the works for several years now.

What is Sagol Kangjei?

- **Modern polo** is said to have originated from Sagol Kangjei, a sport indigenous to Manipur, in which players ride horses, specifically the **Manipur Ponies**, which are referenced in records dating back to the 14th century.
- **Marjing** is considered the God of polo and features a pony as his carrier.

- The Lai-Haraoba festival of the state depicts the life and times of **Khori-phaba**, the polo-playing god of sports.
- The Manipur Pony is one of five recognised equine breeds of India and has a powerful cultural significance for Manipuri society.
- The Marjing Polo Complex has been developed as a way to conserve the Manipur Pony.



Parshuram Kund Mela

News: Parshuram Kund Mela is an annual religious fair which is celebrated near Parshuram Kund, **Arunachal Pradesh**.



About:

- Also known as The **Kumbh of Northeast**.
- It is believed that a dip in the holy water of Parshuram Kund washes away all the sins.
- Parashuram Kund is situated within the Kamlang Reserve Forest area. This place on the **Lohit River** carries a strong mythological link with the legend of Parshurama, a Hindu sage.

- According to the legend, sage Parsurama washed away his sin of matricide in the waters of the Lohit river at Bramhakund.
- Each year thousands of pilgrims from all over the country congregate on Makar Sankranti day, to wash away their sins. A fair (mela) is held during this period.
- On Paush sankranti, a Parshuram Mela is held near this place on 4th January every year, which is attended by innumerable saints and devotees from across the nation, despite the severe cold.

Vishwa Hindi Diwas

News: World Hindi Day, also known as Vishwa Hindi Diwas, is celebrated on **January 10** every year by Hindi enthusiasts across the world to mark the importance and celebrate Hindi as a language.

About:

- Vishwa Hindi Diwas was started to mark the anniversary of the first time Hindi was spoken in the United Nations General Assembly (UNGA) in 1949. In the year 1975, the then Prime Minister Indira Gandhi inaugurated the first World Hindi Conference.
- However, it was on January 10, 2006 when the World Hindi Day was celebrated for the first time. This decision was announced by the then Prime Minister of India, Manmohan Singh.
- The purpose of this day is to create awareness about the Indian language and promote it as a global language around the world. It is also used to create awareness about the usage of the Indian language, and about the issues persisting around the usage and promotion of the Hindi language.

Ganga Vilas

News: Prime Minister Narendra Modi will launch the **world's longest river cruise**, Ganga Vilas, on 13 January 2023 in Varanasi.

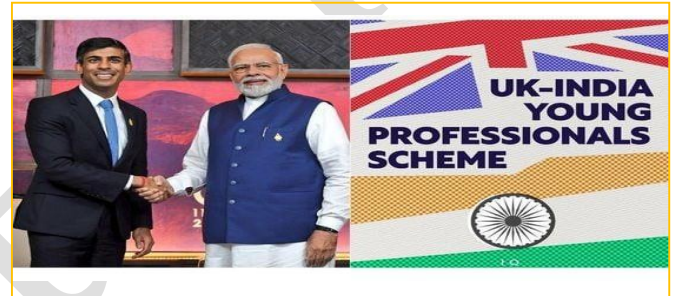
About:

- The luxury cruise will cover a distance of more than 3,200 kms across 27 river systems in 5 states in India and Bangladesh.
- The maiden voyage of MV Ganga Vilas will witness **32 tourists from Switzerland** relishing the Varanasi to Dibrugarh journey.

- The MV Ganga Vilas vessel is 62 meters in length, 12 meters in width and comfortably sails with a draft of 1.4 meters. It has three decks, 18 suites on board with a capacity of 36 tourists, with all the amenities to provide a memorable and luxurious experience for the tourists.
- It will cover places and tourist spots such as Ganga Arti, Sarnath, Mayong, Majuli Island, Bihar school of Yoga and Vikramshila university etc.

Young Professionals Scheme

News: On the 17th Pravasi Bharatiya Divas, **India and the UK** have decided to launch Young Professionals Scheme (YPS).



About:

- Under it, up to 3,000 of their degree-holding citizens (age 18-30) will be permitted to live and work in each other's countries for a period of 2 years.
- The YPS was conceived as part of an **India-U.K. Migration and Mobility MoU** (signed in 2021). The scheme will have an initial running period of 3 years and is expected to be launched by March 2023.

Cold Wave

News: Delhi and other parts of northwest India have been currently reeling under a cold wave spell.

What is a Cold wave?

- In the plains, the Indian Meteorological Department (IMD) marks a cold wave in terms of minimum temperatures – When the **minimum temperature is 4 degrees or less** or When the **minimum temperature is less than 10 degrees** and **4.5 to 6.4 degrees below the normal**.

What are reasons behind recent Cold wave?

- **Large-scale fog cover** is preventing Sunlight from reaching the surface.
- **Light winds and high moisture** near the land surface have been contributing to the fog.
- While **westerly and north-westerly winds** of around 5 to 10 kmph in the afternoon have also been contributing to the dip in temperature.
- **Absence of western disturbances** over the region. Western disturbances are storms from the Mediterranean region, which are associated with a change in wind direction, bringing easterly winds to northwest India.

Indian Skimmers

News: Around 250 Indian Skimmers, which has been included in the IUCN Red list of **Endangered species**, were sighted in Coringa Wildlife Sanctuary in a day during the Asian Waterbird Census-2023.

About:

- Also known as Indian Scissors Bill, they are primarily observed in Winter season and in coastal estuaries of western and eastern India.
- IUCN status – Endangered and Not listed under CITES.
- They can be sighted near the Chambal River in Central India and in few parts of Odisha and in Andhra Pradesh.

What is Asian Water bird Census?

- Every January, thousands of volunteers across Asia and Australasia visit wetlands in their country and count water birds. This citizen-science programme supports the conservation and management of wetlands and water birds worldwide.
- The AWC is an integral part of the global water bird monitoring programme, the International Water bird Census (IWC), coordinated by Wetlands International.

Golden Globes 2023

News: Composer **MM Keeravani**, along with singers Kaala Bhairava and Rahul Sipligunj, has won the Golden Globe for **Best Original Song**, for the track

“**Naatu Naatu**,” which became an anthem of sorts for fans of director SS Rajamouli’s RRR.



About:

- It was started in 1944 and is given by Hollywood Foreign Press Association (87 members) annually for American and International film and Television.
- Considered an important precursor for the Oscars, the Globes are emerging from a major controversy that resulted in the industry largely blacklisting them for over a year.

SPRINT scheme

News: Recently, **Indian Navy** has signed an agreement with **Sagar Defence Engineering Pvt. Ltd** for **armed autonomous boat swarms** under ‘SPRINT’ (Supporting Pole-vaulting In R&D), an initiative to promote the development of **niche defence** technologies by domestic companies.



What is Swarming?

- The main intent of the swarm would be to force the enemy to be confronted with multiple new threats from constantly changing directions. The swarm would aim at the psychological dislocation of the enemy more than his physical destruction.

Corrosion resistant Nickel Alloy Coating

News: A new method of deposition of Nickel alloy coatings on high-performance materials in engineering applications can replace environmentally toxic chrome coatings. The coatings obtained are also highly corrosion-resistant and useful for the plastic ware.

What is Chrome plating and issues associated with it?

- Chrome plating (less commonly chromium plating) is a technique of electroplating a thin layer of chromium onto a metal object.
- The chromed layer can be decorative, provide corrosion resistance, ease of cleaning, or increase surface hardness.
- However, Chromium contains Hexavalent chromium, which is a known carcinogen. The plating process uses lead, which can be absorbed through the skin and can cause liver, organ and brain damage. Cyanide is very toxic.

Star Labeling

News: Ceiling fans have come under the ambit of mandatory star labelling from January 1, as per the revised **Bureau of Energy Efficiency (BEE)** norms. As high energy-efficient five-star rated fans will require new imported motors and electronic components, they would get costlier by 8% to 20%.

What is Star Labeling?

- It denotes **energy savings** of a minimum of 30% for one-star rated fans to over 50% for five-star rated fans.
- Under the new mandate, manufacturers would have to display the star ratings on their fans. The star rating is dependent on service value (air delivery in cubic metres per minute divided by energy consumption in wattage in the case of fans).
- Star rating was introduced under the **Standards and Labelling Program** (in 2006) for the visual representation of an appliance's efficiency.

- It is mandatory for many appliances to have star ratings such as Frost Free and Direct Cool Refrigerators, LED lamps, Rooms AC, Color TV, Refrigerators, TFL etc.

Digital India Awards

News: President Droupadi Murmu, recently conferred the Digital India Award 2022 – **Gold to CBSE** in the **Data Sharing and Use for Socio-Economic Development** category.

- CBSE's pioneering IT initiative "**Digital Academic Repository – Parinam Manjusha**" was selected for the Gold category.

About:

- Digital India Awards encourage and honor innovative digital initiatives by government entities at all levels. These awards aim to inspire and motivate not only the government entities but also start-ups and grassroots level digital initiatives in fulfilling the Digital India vision.
- Nodal Agency - Ministry for Electronics and Information Technology
- Implementation Agency - National Portal of India

Note – You can read about various awards given by clicking on the following link <https://pib.gov.in/PressReleasePage.aspx?PRID=1889391>

Generalized System of Preferences Status

News: India has sought restoration of the preferential access to the US market that was revoked by Washington in 2019.

What is GSP?

- GSP is the largest and oldest U.S. trade preference program. Established by the Trade Act of 1974, GSP promotes economic development by eliminating duties on thousands of products when imported from one of 119 designated beneficiary countries and territories.
- It was 1st instituted by the UNCTAD conference in 1971.

When was GSP status of India terminated?

- President Donald Trump has terminated India's designation as a beneficiary developing nation under the key GSP trade programme due to India's failure to provide the United States with assurances that it will provide equitable and reasonable access to its markets in numerous sectors
- India was the largest beneficiary of the Generalized System of Preferences (GSP) status in 2017, with \$5.7 billion worth of imports into the US given duty-free status. About 2,000 products including auto parts and textile materials were allowed to enter the US duty-free.

Center of Excellence in Online Gaming

News: Digital India Startup Hub through the Software Technology Parks of India shall set up India's first Centre of Excellence in Online Gaming at Shillong.

About:

- The Centre of Excellence in Shillong is expected to catalyse startups and entrepreneurs from the entire North East Region to build the Next Gen Online Gaming Ecosystem
- The Minister announced another initiative of MeitY to set up a state-of-the-art facility under the National Institute of Electronics and IT (NIELIT) to provide training on cutting-edge Digital Skills at Shillong. A 10-acre campus shall soon be ready for this purpose which shall cater to the skilling requirement of youth in the North East Region.

75th Army Day

News: Every year India celebrates Army Day on **January 15** to commemorate Field Marshal Kodandera M. Cariappa who became the first commander-in-chief of the Indian Army in 1949 replacing his British predecessor (General Sir Francis Butcher).

Why is this day commemorated?

- Celebrated across India, Army Day is dedicated to remembering those who fight

relentlessly to protect our nation and its people. It also marks an important day which recognises army personnel and celebrates their achievements.

How is it celebrated?

- Every year, the celebrations are marked with several events on the day, including the main Army Day parade which is typically held at the Cariappa Parade Ground in the Delhi Cantonment.
- Sena medals and gallantry awards are also distributed on Army Day to recognise the achievements of army personnel.
- Army day Parade 2023 was held in Bengaluru, Karnataka this year. It is for the first time it was held outside New Delhi as the Defense ministry in a statement stated, "While the conduct of this historical event at Bengaluru is in recognition of the valour, sacrifices and services of the people of Southern India for the nation, it is also an apt tribute to Field Marshal KM Cariappa who hails from Karnataka."

Doppler Weather Radar Network

News: On the Occasion of 148th Foundation Day of India Meteorological Department (IMD), the Ministry of Earth Science has inaugurated the Doppler Weather Radar (DWR) Systems in Jammu & Kashmir, Uttarakhand, and Himachal Pradesh.

About:

- Based on Doppler principle, the radar is designed to **improve precision in long-range weather forecasting and surveillance** using a parabolic dish antenna and a foam sandwich spherical radome.
- DWR has the equipment to measure rainfall intensity, wind shear and velocity and locate a storm centre and the direction of a tornado or gust front.

Thiruvalluvar day

News: The Thiruvalluvar Day is celebrated annually on **January 15th** or **January 16th** in Tamil Nadu as a part of Pongal (or Sankranti) celebrations.

About:



- The day is dedicated to honoring the contribution of the Tamil poet Thiruvalluvar, who is best known for his literary work, the **Thirukkural**.
- Despite his literary legacy, little is known about Thiruvalluvar's life. There is no information available about his family, birthplace, or religious affiliation.
- The Thirukkural, written by Thiruvalluvar, is divided into three parts: Dharma, Artha, and Kama.
- The couplets in the Thirukkural define moral living, ideal characteristics of every relationship in the world, and moral responsibilities of every human being.

Village Defence Committees

News: Lieutenant Governor of the Jammu and Kashmir declared to revive Village Defence Committees (VDC) amid recent militant attacks.



What are VDC?

- The VDC were set up in the mid - 1990s as a force multiplier against militant attacks.
- Its aim was to provide residents of remote hilly villages with weapons and give them arms training to defend themselves.

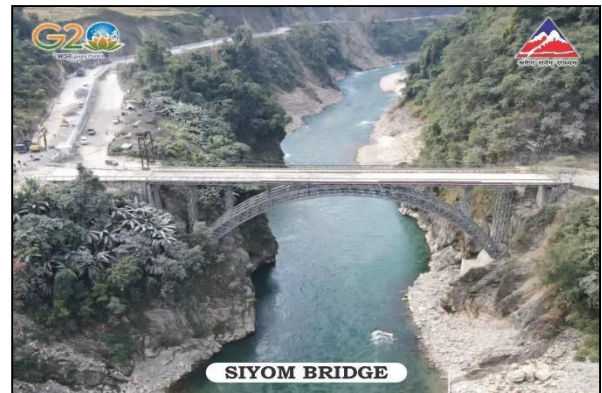
- During the peak of militancy in most parts of Jammu division, the VDCs played a significant role in combating militancy.
- They were the most-feared armed groups among militants in areas where poor road networks delayed the arrival of security forces. The villagers, well-versed with the local topography, averted many militant attacks and helped in their capture and killings.

Recent developments:

- The VDCs have now been renamed as Village Defence Guards (VDG). The new scheme to set up VDGs in vulnerable areas of J&K was approved by the Union Ministry of Home Affairs in March 2022.
- The VDGs will function under the direction of the Senior superintendent of police (SSP)/superintendent of police (SP) of the district concerned.

Siyom Bridge

News: Defence minister Rajnath Singh recently inaugurated the Siyom bridge in Arunachal Pradesh, along with 27 other infrastructure projects completed by the Border Roads Organisation (BRO).



About:

- Located on the Along-Yinkiong Road, the Siyom bridge will greatly enhance the speed of troop deployment, as well as the transportation of heavy equipment and mechanized vehicles to forward areas in the Upper Siang district, Tuting, and Yinkiong regions along the Line of Actual Control (LAC).
- The construction of the Siyom bridge and the other infrastructure projects completed by the BRO will greatly benefit the Indian military's ability to quickly and efficiently

deploy troops and equipment to the border regions.

Greater Scaup

News: A rare species of duck, Greater Scaup, locally known as Sadangman, was recently sighted in Loktak lake in Manipur's Bishnupur district after a gap of over 90 years.



About:

- The greater scaup (*Aythya marila*) is a medium-sized diving duck belonging to the family
- The greater scaup species is distributed in Asia, Europe, the United States, and Canada.
- It is a rare visitor to the Indian Subcontinent.
- IUCN Status – **Least Concern**

Bhopal Declaration

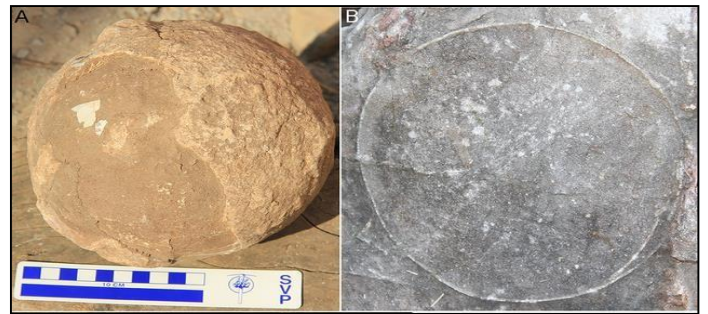
News: In Madhya Pradesh, more than 300 intellectuals from India and abroad released the Bhopal Declaration after discussing the G-20 agenda in the two-day meeting of Think-20 under G20 in Bhopal.

About:

- The Bhopal Declaration made an appeal to all the stakeholders to focus more on inclusive development and care for the welfare of every section of society in comparison to GDP, give special attention to children, encourage the model of development led by women, bridge the gap between North and South and work together to ensure the health for all.
- The **importance of localization** in achieving G-20 sustainable development goals has been acknowledged in the Bhopal Declaration.

Fossilised Dinosaur eggs

News: Recently, a group of Indian researchers found rare cases of fossilised dinosaur eggs - an egg within



an egg - among 256 newly discovered eggs from the Narmada Valley.

Key Findings:

- The discovery suggests that Titanosaurs displayed a notable reproductive trait unique to modern-day birds.
- Fossilised eggs provide clues on reproductive biology, nesting behaviour and parental care. The egg has two yolks; this feature can be seen in birds, suggesting they share similar reproductive traits.
- This region falls between the easternmost Lametta exposures at Jabalpur in the upper Narmada Valley (central India) and Balasinor in the west in the lower Narmada Valley (western central India), according to the document.
- **Lametta exposure** is a **sedimentary rock formation** known for its **dinosaur fossils**. These sedimentary rocks are mostly exposed along the Narmada Valley.
- The fossil records here are largely concealed by Deccan volcanic flows, which prevents their removal by erosion.

Painted Bat

News: Recently, a rare orange-coloured bat, also known as 'painted bat' was spotted at a banana plantation in Parali Bodal village of Chhattisgarh's **Kanger Valley National Park** in Bastar.

About:

- These are often found in unusual roosting sites such as suspended nests of weaver finches and sunbirds, and banana leaves, these bats have been known to roost in pairs.
- It is an aerial hawk, catching insects mid-flight.

- It is generally found in Bangladesh, Brunei, Burma, Cambodia, China, Indonesia.
- IUCN – Near Threatened



About Kanger Valley NP:

- Derived name from Kangar river, this park is a typically mixed humid deciduous type of forest, in which the Sal, Saugan, teak and bamboo trees are available in abundance.
- Bastar Maina is most popular species which emulates everyone with its human voice.
- Tirathgarh waterfall is located here.

Spot Bellied Eagle Owl

News: A ‘Spot Bellied Eagle Owl’ (*Bubo Nipalensis*) was spotted for the first time in the **Seshachalam forest**, and for the third time in Andhra Pradesh.



About:

- The bold predatory bird, measuring 20-25 inches in length and weighing between 1.5 kg and 2 kg, feeds on small rodents and lizards.

- The bird makes a strange scream similar to humans and it is hence called the ‘**Ghost of the Forest**’ in India and ‘**Devil Bird**’ in Sri Lanka.
- It is a forest-inhabiting species found in the Indian Subcontinent and Southeast Asia
- IUCN Status: **Least Concern**

Nature Risk Profile

News: The **UN Environment Programme (UNEP)** and **S&P Global** launched ‘Nature Risk Profile’, a new methodology for analyzing companies’ impacts and dependencies on nature.



About:

- It was released at Davos World Economic Forum Summit
- Its methodology is based on Kunming-Montreal Global Biodiversity Framework (GBF)
- The Nature Risk Profile is aimed at enabling the financial sector to measure and address nature-related risk by providing scientifically robust and actionable analytics on nature impacts and dependencies.

PARAKH

News: National Council for Education Research and Training (NCERT) has notified India’s first national assessment regulator, PARAKH.

About:

- PARAKH has been launched as part of the implementation of the National Education

Policy (NEP)-2020 that envisaged a standard-setting body.

- PARAKH stands for The Performance Assessment, Review, and Analysis of Knowledge for Holistic Development.

Key Role:

- To advise school boards regarding new assessment patterns and the latest research, and promote collaborations between them
- To facilitate students for self-assessment of learning outcomes
- To remove disparities in the score of students enrolled with different boards.

Education for Democracy

News: India-supported resolution 'Education for Democracy' gets adopted by the United Nations General Assembly (UNGA).

About:

- Education for democracy focuses primarily on democratic rights and responsibilities and education for active participation, in relation to the civic, political, social, economic, legal and cultural spheres of society.
- The resolution encouraged member states to integrate education for democracy into their education standards and curriculum. It also asked member states to close digital divides.
- Recently, the district of **Kollam** (Kerala) has become the **country's first constitution-literate district**.

SMART Program for Ayurveda

News: Recently, the National Commission for Indian System of Medicine (NCISM) and the Central Council for Research in Ayurvedic Sciences (CCRAS), the two prominent institutions under the Ministry of Ayush, have launched 'SMART' program.

About:

- The SMART (Scope for Mainstreaming Ayurveda Research in Teaching Professionals) program aims to boost scientific research through Ayurveda colleges and hospitals.
- It was observed that the research potential of the large community of Ayurveda teachers remains underutilized mostly. Therefore, the 'SMART' program will have a deep long term rejuvenating impact on research in the field

of Ayurveda and it will be a great service to the nation.

- It aims to identify, support and promote innovative research ideas in healthcare research areas including Osteoarthritis, Iron Deficiency Anaemia, Chronic Bronchitis, Dyslipidemia, Rheumatoid Arthritis, Obesity, Diabetes Mellitus, Psoriasis, Generalised Anxiety Disorder, Non-alcoholic fatty liver disease (NAFLD).

K9 Vajra

News: The Defence Ministry has started the process for the procurement of 100 more K9-Vajra tracked self-propelled howitzers.

About:

- The K9 Vajra is a 155 mm, 52-calibre tracked self-propelled howitzer (a short gun for firing shells on high trajectories at low velocities) built in India by **Larsen & Toubro** (L&T) with technology transferred from South Korean defence major Hanwha Defense based on its K9 Thunder.
- The K9 Thunder platform is made of all-welded steel armour protection material.
- The K9 gun has been developed under the 'Buy Global' programme of the Defence Procurement Procedure (DPP) where foreign companies are allowed to participate.
- The K9 Vajra was mainly bought for use in deserts, but the India-China standoff prompted them to be deployed in the mountains as well.

Prithvi II Missile

News: Recently, India carried out a successful test launch of tactical ballistic missile Prithvi-II from a test range off the Odisha coast.

About:

- Prithvi-II is an indigenously developed **Surface-to-Surface Missile Short-Range Ballistic Missile** (SRBM), which has a range of around **350km** and can carry a one tonne payload.
- Prithvi II class is a **single-stage liquid-fueled missile** that has warhead mounting capability of 500 kg-1000kg.

- The missile is a proven system and is capable of striking targets with a very high degree of precision.
- The state-of-the-art missile uses an **advanced inertial guidance system** with manoeuvring trajectory to hit its target.
- The missile was developed by DRDO under its Integrated Guided Missile Development Programme (IGMPD)

Exercise Cyclone-I

News: The first ever joint exercise between the special forces of the **Indian Army** and the **Egyptian Army** named "Exercise Cyclone-I" is in progress at Jaisalmer in Rajasthan since 14 January 2023.



About:

- Exercise "Cyclone - I" is the first exercise of its kind bringing the **special forces** of both the nations on a common platform.
- The exercise aims to bolster defence co-operation between the two nations and focus on sharing professional skills and interoperability of Special Forces in desert terrain while undertaking counter terrorism, reconnaissance, raids and other special operations.
- The joint exercise would provide an insight into the culture and ethos of both armies thereby fostering military cooperation and interoperability to further strengthen the diplomatic relations between India and Egypt.

Hakku Patra

News: The Prime Minister recently launched the 'Hakku Patra' (land title deed) distribution drive by distributing title deeds (hakku patra) to about fifty thousand in Kalaburagi, Karnataka.

About:

- The word 'Hakku' means "the right", and 'Patra' means a "paper" or "document".
- It is a legal document that states an individual's rightful inheritance of a property.
- In most cases, the land on which the Hakku Patra is issued is government-owned with a specific set of conditions attached.

Importance:

- It makes you legitimate owner of the land.
- It is a state guaranteed document and the title deeds enable owners to avail bank loans.
- The document helps in preventing any encroachment via trespassing on the boundaries.

BharOS

News: Recently, BharOS, an indigenous mobile operating system was developed by JandK Operations Private Limited, a non-profit organization incubated at **IIT Madras** and funded by the Department of Science and Technology.

About:

- BharOS is a mobile operating system similar to Android or iOS; it is based on an AOSP (Android Open Source Project) operating system and does not use any Google apps or services.
- It would support Native Over The Air (NOTA) updates as well as No Default Apps (NDA).
- It has a minimalistic home screen with the Indian flag, a list of app categories, and a selection of apps that have passed the OS's trust and security standards.
- It will employ the Private App Store Services (PASS) system to examine and curate apps that are safe for users. These systems enable smartphone users to interact with their devices and access their features while also ensuring their safety.
- The current version of BharOS includes third-party apps such as DuckDuckGo and Signal by default.

What is NOTA and NDA?

- Under NOTA, security updates and bug fixes will be automatically installed rather than users having to check for updates and implement them on their own
- Under NDA, users do not have to keep or use pre-installed apps in this mobile operating system.

Polycystic Ovarian Syndrome

News: The Indian Journal of Biochemistry and Biophysics (IJBB), the monthly journal from CSIR-National Institute of Science Communication and Policy Research (NIScPR), has brought out a special issue on the theme, "Polycystic Ovarian Syndrome (PCOS) and its Complications".

About:

- Polycystic ovarian syndrome (PCOS) is a multifactorial endocrine disorder, which is characterized by chronic anovulation.
- Irregular periods, hirsutism, and weight gain are the common symptoms of PCOS.
- It is the pre-eminent cause of infertility, with a worldwide range of 6-26%, and in India, it is 3.7-22.5%.
- Risk factors include genetics, neuroendocrine system, sedentary lifestyle, diet, and obesity.
- However, lifestyle changes such as weight loss, regular exercise, and a healthy diet can help regulate hormones and reduce symptoms and medications such as birth control pills, metformin, and clomiphene can be used to regulate the menstrual cycle, reduce androgen levels, and improve ovulation.

Immune Imprinting

News: Recent studies came out with the fact that Immune imprinting in the bodies, might be making new boosters dose of COVID-19 far less effective than expected.

About:

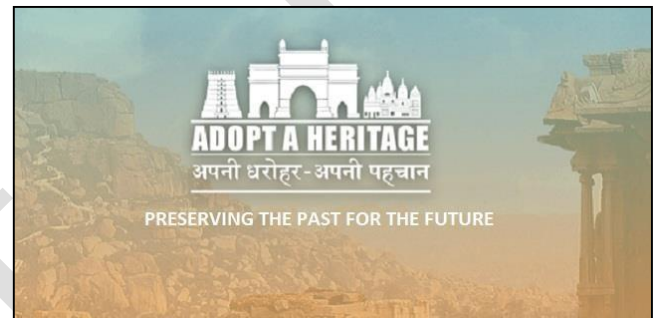
- Immune imprinting is a tendency of the body to repeat its immune response based on the first variant it encountered through infection or vaccination when it comes across a newer or slightly different variant of the same pathogen.
- Imprinting acts as a database for the immune system, helping it put up a better response to repeat infections.
- After the body is exposed to a virus for the first time, it produces memory B cells that circulate in the bloodstream and quickly produce antibodies whenever the same strain of the virus infects again.
- The problem occurs when a similar, not identical, variant of the virus is encountered by the body. In such cases, the immune

system, rather than generating new B cells, activates memory B cells, which produce cross-reactive antibodies that bind to features found in both the old and new strains.

- These cross-reactive antibodies offer some protection but are not as effective as the ones produced by B cells when the body first encountered the original virus.

Monument Mitra Scheme

News: The Secretary of the **Ministry of Culture** recently said that the government will hand over around 1,000 monuments under the control of the Archaeological Survey of India to the private sector for their upkeep under the Monument Mitra Scheme.



About:

- It applies to all **centrally protected** heritage properties.
- It aims at ensuring quality & inclusive provision of amenities and facilities across heritage, natural, & tourist sites through the active participation of private and public sector organizations and individuals.
- **Corporate entities** will take over these monuments as part of their Corporate Social Responsibility. These organizations would be known as "Monument Mitras" for their collaboration initiative.

Short Selling

News: Short seller Hindenburg Research on January 25 disclosed short positions in Adani Group, alleging stock manipulation and accounting fraud in its latest investigative report.

Background:

- "Buy low, sell high" is the traditional investment strategy in which one buys a stock or security at a particular price and

then sells it when the price is higher, thereby booking a profit.

- This is referred to as a “**long position**”, and is based on the view that the price of the stock or security will appreciate with time.

What is Short selling?

- Also called shorting, is a trading strategy based on the expectation that the **price of the security will fall**. While fundamentally it is based on the “buy low, sell high” approach, the sequence of transactions is reversed in short selling — **to sell high first and buy low later**.
- Also, in short selling, the trader **usually does not own** the securities he sells, but **merely borrows them**.

Yellow Band Disease

News: Scientists found that corals of eastern Thailand are getting affected by Yellow Band Disease which is killing corals over vast stretches of the sea floor.



About:

- Yellow-band disease is named for the color it turns corals before destroying them.
- It was first spotted decades ago and has caused widespread damage to reefs in the Caribbean.

Is there any cure?

- No, there is no cure for the disease. The disease’s impact cannot be reversed, unlike the effects of coral bleaching. This means that when the coral is infected with this disease, it just dies.
- Scientists believe overfishing, pollution and rising water temperatures because of climate change may be making the reefs more vulnerable to yellow-band disease.

Open Market Sale Scheme

News: The Food Corporation of India (FCI) will off load 30 LMT wheat from the Central pool stock to the market through various routes under the Open Market Sale Scheme (Domestic).

About:

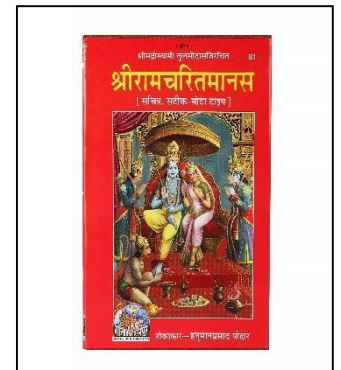
- FCI sells surplus stocks of wheat and rice at predetermined prices through e-auction in the open market from time to time to enhance the supply of food grains.
- The purpose of OMSS is to dispose of surplus stocks of wheat and rice held by FCI, and to regulate the prices of wheat in the open market.
- FCI conducts weekly auctions for the OMSS for wheat on the platform of the **National Commodity and Derivatives Exchange Limited (NCDEX)**.
- NCDEX is a commodity exchange platform in India that provides a platform for trading in various agricultural and other commodities.

Ramcharitmanas

News: Recently, the holy book was in news because of a statement made by politician on its context.

What is “Ramcharitmanas”?

- The poem was written in the 16th century in the **Awadhi dialect** that is mainly spoken in the areas that are today’s Lucknow, Prayagraj, and Ayodhya districts.
- It is divided into **seven chapters (Kand)** that tell the **story of Lord Ram** from birth to his becoming King of Ayodhya.
- It is based on the Ramayana, sage Valmiki’s great epic. It is the holiest book of the Indo-Gangetic region, and among the world’s most read holy books.



Who wrote it?

- **Goswami Tulsidas** composed the Ramcharitmanas on the bank of the Ganga in Varanasi — he is said to have begun writing

on Ram Navami day in 1574, and completed the poem over the next few years.

National Voters Day

News: The ECI on **25th January** celebrated the 13th National Voters Day.

Theme - Nothing Like Voting, I Vote for Sure.

About:

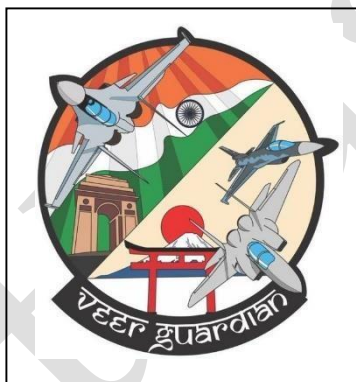
- It is celebrated to encourage, facilitate, and maximize enrolment, especially for new voters.
- The day has been celebrated every year since 2011 across the country to mark the foundation of the Election Commission of India (25th January 1950).
- It not only encourages the youth to participate in the electoral process but also focuses that the Right to vote as the basic right.
- NVD is a significant root of India as the future of the country lies in the leader that we choose.

Veer Guardian

News: The inaugural edition of the bilateral air exercise 'Veer Guardian 2023' between the Indian Air Force (IAF) and Japan Air Self Defence Force (JASDF) concluded recently in Japan.

About:

- This is Indo-Japan's maiden bilateral air exercise.
- The IAF contingent participated in the exercise with the Su-30 MKI aircraft complemented by one IL-78 Flight Refuelling Aircraft and two C-17 Globemaster strategic airlift transport aircrafts.
- Other military exercise - Dharma Guardian (Military), JIMEX (naval), SHINYUU Maitri (air force) and Malabar (along with Australia and the US).
- It was also the first time when an IAF woman fighter pilot was a part of the Indian contingent for aerial war games in a foreign land.



Bharat Parv

News: Government of India is organising the six-day mega event "Bharat Parv" event from January 26-31, 2023, as part of the Republic Day celebrations.

About:

- The Ministry of Tourism has been designated as the nodal ministry for the event. The event includes a food festival, a handicraft mela, folk and tribal dance performances, cultural troupe performances, a display of Republic Day tableaux, and the illumination of the Red Fort, among other things.
- Branding and promotion of Dekho Apna Desh, Ek Bharat Shreshtha Bharat, G20 and Mission LIFE would be undertaken during the event.
- The program is a way to celebrate India's unity in diversity and to make India a hub of civilization, culture, spirituality and inheritance in the next 25 years of Amrit Kaal.

World Economic Situation and Prospectus Report 2023

News: UNDESA (in partnership with UNCTAD and five regional UN commission) have produced this report.

Key Findings:

- The world economy was much affected by COVID-19 lockdowns and the war in Ukraine in 2022
- World output growth will decelerate to 1.9% in 2023 (from 3% in 2022)
- On South Asia - The economic outlook has "significantly deteriorated due to high food and energy prices, monetary tightening and fiscal vulnerabilities" with average GDP growth projected to moderate to 4.8% in 2023 from 5.6% in 2022
- Economic growth in India is projected to moderate in 2023, with higher interest rates weighing on investment and slower global growth weakening exports
- It recommends Reprioritization of public expenditures esp. in education, health and digital infrastructure and greater social protection.