

CURRENT AFFAIRS MAGAZINE

SEPTEMBER 2022

- Urban Flooding
- Live-Streaming of the Supreme Court's Proceedings
- Freeing the Central Bureau of Investigation(CBI) and ED
- Cheetah Reintroduction in India
- Civil Servants and Freedom of Speech



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GS I

1) Women in STEM

More than a quarter - 28% - of participants in extramural R&D projects in 2018-19 were women, up from 13% in 2000-01 due to various initiatives taken by successive governments, as per data compiled by the Department of Science and Technology

FINDINGS:

- The number of women principal investigators in R&D had risen more than four times from 232 in 2000-01 to 941 in 2016-17.
- According to available UNESCO data on some selected countries, India is at the lowest position, having only 14% female researchers working in STEM areas.
- But India is not very far behind many advanced countries in this aspect.
- For example, Japan has only 16% female researchers, the Netherlands 26%, the United States 27% and the United Kingdom 39%.

WOMEN GRADUATES IN STEM:

- In India, about 43% of women constitute the graduate population in STEM, which is one of the highest in the world, but only 14% of women join academic institutions and universities.
- Women in research & faculty: The participation of women in research has dropped significantly (27% female as compared to 73% male).
- Thus, the visibility of female faculty in universities and research institutes is significantly lower.

REASONS

- The increase in women's participation, especially in research, is due to a combination of government programmes and natural progression.
- In numerous CSIR labs, women's participation has increased because there are creche facilities now in the residential colonies where the women scientists live.
- Parental attitudes towards girls pursuing science has also seen a shift, and girls are now encouraged more.

MEASURES TAKEN BY THE GOVERNMENT

- SERB-POWER (Promoting Opportunities for Women in Exploratory Research) - It provides structured support in research to ensure equal access and weighted opportunities for Indian women scientists engaged in Research and Development (R&D) activities.
- GATI (Gender Advancement through Transforming Institutions) - Under it the Department of Science and Technology (DST) is incorporating a system of grading institutes depending on the enrolment of women and the advancement of the careers of women faculty and scientists.
- Knowledge Involvement in Research Advancement through Nurturing (KIRAN) Scheme of DST - Instituted to encourage women scientists through various programs in the field of Science and Technology
- Consolidation of University Research through Innovation and Excellence in Women Universities (CURIE) Programme - Under this, only women Universities are being supported for the development of research infrastructure and the creation of state-of-the-art research laboratories to enhance women's participation in the S&T domain.
- Indo-US Fellowship for Women in STEMM (Science, Technology, Engineering, Mathematics & Medicine) - It encourages Indian women scientists and technologists to undertake international collaborative research in premier institutions in the USA
- Vigyan Jyoti Scheme: It encourages girl students of Class 9 to 12 to pursue education and career in S&T, particularly in the areas where women are underrepresented.

- National Award for woman scientist: To recognize the contribution of women scientists in the field of Earth System Sciences, Ministry of Earth Sciences has initiated a special award called “National Award for woman scientist” which is conferred to one-woman scientist each year on the Foundation Day.

NEED :



WAY FORWARD:

- Mentoring - The mentoring of women is required in order to boost their confidence and promote participation in careers related to Science and Technology
- Work-Life Balance – When work and personal life are out of balance one's stress is likely to soar. Thus work-life balance shall be maintained and promoted by the government via the suitable legislature.
- Flexi-Timing - In 2013 Parliamentary Committee on Women had recommended flexible timing of work for women in both public and private sector.
- Leadership Programs - Leadership position in science and technology has been a male domain since ages. Thus Leadership Programs for women need to be implemented to increase the share of leadership positions of women.

2) Urban Flooding

Urban flooding is significantly different from rural flooding as urbanization leads to developed catchments, which increases the flood peaks from 1.8 to 8 times and flood volumes by up to 6 times.

- It is not only the event of flooding but the secondary effect of exposure to infection also has its toll in terms of human suffering, loss of livelihood and, in extreme cases, loss of life.
- In most of the cities, damage to vital infrastructure has a bearing not only for the state and the country but it could even have global implications.
- Major cities in India have witnessed loss of life and property, disruption in transport and power and incidence of epidemics.

ISSUES:

Old drainage system: There are cities like Chennai, Hyderabad, Mumbai that rely on a century-old drainage system, which lacks the capability to address the needs of the growing cities.

These are several provisions like rain water harvesting, urban drainage systems, and conducting proper environmental impact assessments. However, these are not implemented effectively.

Green cover, wetlands, grasslands, forest areas, etc have all reduced in number significantly due to developmental activities that have reduced the sponginess of the cities to absorb excess water.

Reduced Infiltration: Cities are becoming more and more concretized with lesser soil areas. This has reduced the permeability of the surface which, in turn, acts as a catalyst for urban flash floods.

Topography modification: The natural landscape and topography of the cities has been disrupted due to developmental activities like construction. Hence they have disturbed the natural flow of the river system causing urban flooding.

WAY FORWARD:

- **Sponge Cities concept:** Chinese sponge cities concept can be remodelled and applied as per the Indian needs. Sponge cities means creating more green spaces in order to increase the permeability of the ground. This helps in better absorption of excess flood water.
- **Framing of Wetland Policy:** Wetlands are an excellent source of holding and soaking up of water. They are also known to filter pollutants. Hence, there is a need to understand its importance at all levels.
- The management of floods cannot be done alone at the municipal level. There is a need for participation from governments at all levels along with focussed investments and support from the private sector for building infrastructure.
- **New Materials and Technology:** In order to increase the city's capacity to soak and absorb water, there is a need to encourage new types of materials that are porous in nature. Such technologies include bioswales and retention systems, etc.
- **Bioswales** are constructed along the sides of the roads which act as the soaking ground for the water draining off from the road.
- **Vertical and horizontal convergence:** There is a need to make a converged effort using the existing initiatives like the Atal Mission for Rejuvenation and Urban Transformation (AMRUT), National Heritage City Development and Augmentation Yojana (HRIDAY) and Smart Cities Mission with the help of inter ministerial cooperation.

3) Social protection net in india:

- The report titled 'World Social Protection Report 2020-22 Regional companion report for Asia and the Pacific' is recently released by ILO.
- As of 2020, only 46.9 per cent of the global population was effectively covered by at least one social protection benefit.
- Large majority of the working-age population in the world 69.4 per cent, or 4 billion people are only partially protected or not protected at all.
- It notes that Mongolia, New Zealand, Singapore and Australia have 100 per cent social protection net.
- For countries like Myanmar and Cambodia, the number stands below 10 per cent.

INDIA:

- Only 24.4 per cent of Indians, even fewer than Bangladesh (28.4 per cent), are under any sort of social protection benefit.
- India's social security benefits are lower than the five per cent of GDP per capita (\$2,277).
- Contributory schemes are typically limited to those working in the formal sector while most of India's workforce is in informal sector.

TYPES OF SOCIAL SECURITY NET:

• Employment Related

- Mahatma Gandhi National Rural Employment Guarantee Programme (MGNREGA): it offers a degree of protection for informal sector workers for up to 100 days.
- PM Garib Kalyan Rojgar Abhiyaan: It is a massive rural public works scheme of Government of India to empower and provide livelihood opportunities to the returnee migrant workers and rural citizens, launched in 2020

• Pension related

- Pradhan Mantri Shram Yogi Maan-Dhan Yojana (PM-SYM): The unorganised workers (home based workers, street vendors, mid-day meal workers, head loaders, landless labourers and similar other occupations) whose monthly income is Rs 15,000/ per month or less are eligible. Each subscriber shall receive Minimum Assured Pension of Rs 3000/- per month after attaining the age of 60 years.
- National Pension Scheme for Traders and The Self-employed Persons (NPS): It is a pension scheme for shopkeeper's/ retail traders and self-employed persons for providing monthly minimum assured pension of Rs 3000/- for the entry age group of 18-40 years.
- Atal Pension Yojana: It provides a minimum guaranteed pension ranging from Rs 1000 to Rs 5000 on attaining 60 years of age.

• Food Grains Related

- PM Garib Kalyan Ann Yojana (PMGKAY): It is a scheme as part of Atmanirbhar Bharat to supply free food grains to migrants and poor launched in 2020
- One Nation One Ration Card: It allows all NFSA beneficiaries, particularly migrant beneficiaries, to claim either full or part foodgrains from any Fair Price Shop (FPS) in the country through existing ration card with biometric/Aadhaar authentication in a seamless manner.

• Insurance Related

- Pradhan Mantri Jeevan Jyoti Yojana (PMJJBY): It is a one-year life insurance scheme renewable from year to year offering coverage for death due to any reason.
- Pradhan Mantri Suraksha Bima Yojana (PMSBY): It is a one-year accidental insurance scheme renewable from year to year offering coverage for death or disability due to accident.

• Weaker Section Related

- National Safai Karamcharis Finance and Development Corporation (NSKFDC) It was setup as a non profit company under Ministry of Social Justice and Empowerment, Government of India to empower the Manual Scavengers, Safai Karamcharis and their dependents to break away their traditional occupation and move up the social order.
- Self-Employment Scheme for Rehabilitation of Manual Scavengers It aims to provide assistance to the identified manual scavengers and their dependants for their rehabilitation in alternative occupations.

- **Health Related**

- Ayushman Bharat-Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) Launched in February 2018, it offers a sum insured of Rs.5 lakh per family for secondary care as well as tertiary care. It is part of Ayushman Bharat Scheme which has two components - Health and Wellness Centres (HWCs) and

- **Unorganised Workers Related**

- Unorganised Workers' Social Security Act, 2008 Under it National and State Social Security Board are to be set up. National Social Security Board was set up in 2009. It recommends the formulation of social security schemes to centre. It is chaired by the Union Minister for Labour and Employment. Workers have to register under the act and she gets an ID.
- E-Shram portal It seeks to register an estimated 398-400 million unorganised workers and to issue an E-Shram card containing a 12 digit unique number.
- Employees' Provident Fund Organisation (EPFO) It has 3 schemes under it The Employees' Provident Fund Scheme, 1952; The Employee's Pension Scheme, 1995; and The Employees' Deposit Linked Insurance Scheme, 1976.

4) Addition of Tribes to ST List

The Union Cabinet approved a proposal to add several tribes to the list of Scheduled Tribes (ST) in States so that they can avail of benefits meant for STs, including reservation.

PROCESS:

- The process begins at the level of a State or Union Territory with the concerned government or administration seeking the addition or exclusion of a particular community from the SC or ST list.
- They are sent to Tribal affairs ministry, which sends them to Registrar General for approval.
- This is followed by approval of National commission for ST and then sent to Cabinet.
- The final decision rests with the President's office issuing a notification specifying the changes under powers vested in it from Articles 341 and 342.
- The inclusion or exclusion of any community in the Scheduled Tribes or Scheduled Castes list comes into effect only after the President assents to a Bill that amends the Constitution (Scheduled Castes) Order, 1950 and the Constitution (Scheduled Tribes) Order, 1950 as is appropriate after it is passed by both the Lok Sabha and Rajya Sabha.

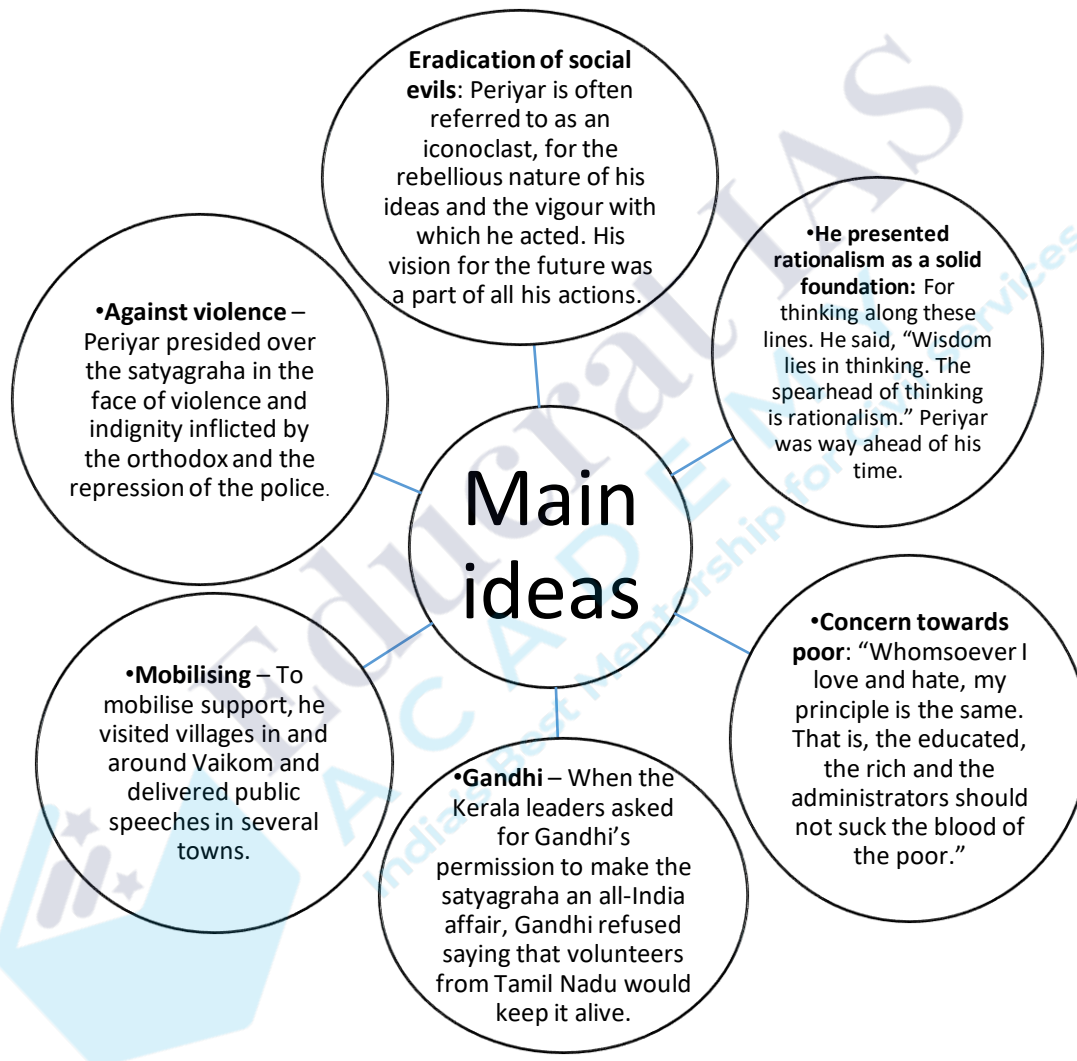
ABOUT:

- As per Census-1931, Schedule tribes are termed as "backward tribes" living in the "Excluded" and "Partially Excluded" areas. The Government of India Act of 1935 called for the first time for representatives of "backward tribes" in provincial assemblies.
- The Constitution does not define the criteria for recognition of Scheduled Tribes and hence the definition contained in 1931 Census was used in the initial years after independence.
- However, Article 366(25) of the Constitution only provides process to define Scheduled Tribes: "Scheduled Tribes means such tribes or tribal communities or parts of or groups within such tribes or tribal communities as are deemed under Article 342 to be Scheduled Tribes for the purposes of this Constitution."

5) 100 years of Periyar because of whom Tamil Nadu became modern and progressive

Erode Venkatappa Ramasamy, revered as Periyar or Thanthai Periyar, was an Indian social activist and politician who started the Self-Respect Movement and Dravidar Kazhagam. He is known as the 'Father of the Dravidian movement'.

- The self-respect movement was founded by V.Ramaswamy Naicker, commonly known as Periyar. It was a dynamic social movement aimed at destroying the contemporary Hindu social order in its totality and creating a new, rational society without caste, religion and god.
- V. Ramasamy Periyar led the famous Vaikom Sathya Graha in 1924, where the people of down trodden community were prohibited to enter into the temple. Finally the Travancore government relaxed such segregation and allowed the people to enter into the temple. Hence periyar was given the title of 'Vaikom Hero'.
- Periyar's role:



6) Highlights of India Discrimination Report, 2022

Oxfam India's latest 'India Discrimination Report 2022' finds women in India despite their same educational qualifications and work experience as men will be discriminated in the labour market due to societal and employers' prejudices.

KEY HIGHLIGHTS

- **Decline of women in workforce:** As per the Union Ministry of Statistics & Programme Implementation (MoSPI), LFPR for women in India was only 25.1 percent in 2020-21 for urban and rural women. This is considerably lower than Brazil, Russia, China and South Africa as per the latest World Bank estimates.

- Earning Gap: The men’s average earning is nearly 2.5 times that of the earnings of women
- Communal aspects of discrimination: Oppressed communities such as Dalits and Adivasis along with religious minorities such as Muslims also continue to face discrimination in accessing jobs, livelihoods, and agricultural credit. The data shows that the unequal income among urban SC and ST casual wage work is because of 79 percent discrimination in 2019-20.
- Muslims continue to face multidimensional challenges in accessing salaried jobs and income through self-employment as compared to non-Muslims.
- In rural areas, the sharpest increase of 17 percent in unemployment was for Muslims as compared to non-Muslims during the first quarter of the COVID-19 pandemic.

RECOMMENDATIONS FROM THE REPORT

- Actively enforce effective measures for the implementation of the right to equal wages and work for all women.
- Work to actively incentivise the participation of women in workforce including enhancements in pay, upskilling, job reservations and easy return-to-work options after maternity.
- Work to actively challenge and change societal and caste/religion-based norms, around women’s’ participation in labour markets.
- Strengthen civil society’s engagement in ensuring a more equitable distribution of household work and childcare duties between women and men and facilitating higher participation of women in labour market
- Implement “living wages” as opposed to minimum wages, particularly for all informal workers and formalise contractual, temporary and casual labour as much as possible.
- Extend priority lending and credit access to all farmers, regardless of social groups and penalize biased lending.

7) Triple-dip La Nina

La Niña is a natural and cyclical cooling of parts of the equatorial Pacific that changes weather patterns worldwide, as opposed to warming caused by the better-known El Niño, an opposite phenomenon.

- La Niña and trade winds:
 - Due to the cooler temperature, the trade winds above the sea surface change in character because of a difference in the wind pressures.
 - This change in the character of the trade winds is then carried all around the world affecting different regions in different ways.
 - Together El Niño, La Niña and the neutral condition are called ENSO, which stands for El Niño Southern Oscillation. These oscillations have one of the largest natural effects on climate.

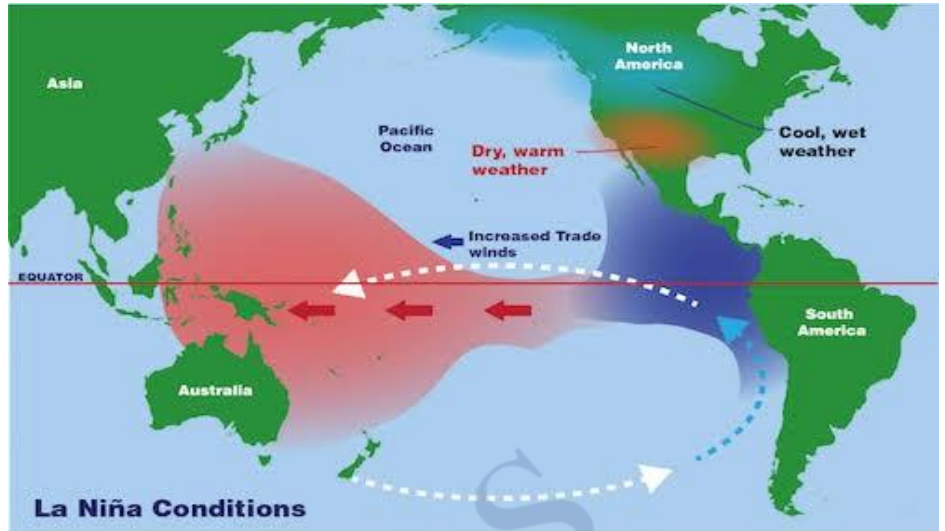
Recently various weather agencies like WMO and UN predicted a rare 'triple-dip' La Nina in 2022.

A “triple-dip” La Nina is a multiyear cooling of the surface temperature of the equatorial Pacific Ocean, which can cause droughts, fierce winds and heavy rainfall.

- According to WMO, the current La Nina is projected to span three consecutive northern hemisphere winters. It began in September 2020.
- It is exceptional to have three consecutive years with a La Nina event.
- Its cooling influence is temporarily slowing the rise in global temperatures – but it will not halt or reverse the long-term warming trend.
- La Nina’s are usually preceded by El Nino, a weather pattern that warms the surface of the eastern tropical Pacific Ocean.
- However, an El Nino event did not occur before the current La Nina
- This would be the first “triple-dip” La Nina this century.

CONCERNS

- No spring season for India: La Nina usually brings wet and cold winter and spring seasons for India, but this time large parts of India do not experience a spring season at all. This happens as a north-south pressure pattern, which usually forms over India during the winter season and dissipates by spring, continuing into March and April during La Niña years.
- Prolonged monsoons and floods in India: India can experience a prolonged monsoon season for the third year in a row.
- It may lead to subsequent floods as seen in many states in the last two years.



IN THE OTHER PARTS OF THE WORLD

- Drought conditions: The ongoing drought conditions in 40 percent of the United States, the years-long drought conditions in the Horn of Africa and southern South America would also likely continue and become more intense due to the continuation of the La Nina.
- It also leads to agricultural losses in this part of the world.
- Hurricanes: It could also form an above-average hurricane season for the Atlantic Ocean, with a 65 percent probability.
- Heat waves & wildfires: This condition could lead to devastating and unpredictable consequences for India and many other regions around the world in particular through more intense heat waves and drought and the associated risk of wildfires.

WAY AHEAD

- Mitigation: The current atmospheric carbon dioxide (CO₂) concentrations are higher than at any time in the last two million years.
- To align with a 1.5°C target of limiting warming, global CO₂ emissions must reach net zero around 2050, with global GHG emissions reaching net-zero 15-20 years later.
- A delay of 15-20 years in either net-zero CO₂ or net-zero GHGs implies limiting warming to 2°C rather than 1.5°C.
- Need to shift from the sensational to the strategic:
- In order to stabilise the rise in temperatures, two things have to happen:
- Anthropogenic emissions must become net-zero and,
- In the interim, cumulative emissions cannot exceed a global carbon budget.

8) Why our urban centres need to be better planned

- Urban planning encompasses the preparation of plans for and the regulation and management of towns, cities, and metropolitan regions. It attempts to organize socio-spatial relations across different scales of government and governance.
- What are 'Happy Cities': A term that follows the Green City, Sustainable City, Liveable City, in the lingo of urban planning
- A smart city is one that uses information and communication technologies to enhance citizen engagement. It is a neo-vision which seeks to improve the delivery of services in urban areas. The following story maps out the steps being taken by India to explore this concept in practice.

GLOBAL BEST PRACTICES IN URBAN PLANNING

- The Garden City movement: In the West, the Garden City movement (initiated by Ebenezer Howard in 1898) sought to decentralise the working environment in the city centre with a push for providing healthier living spaces for factory workers. The ideal garden city was planned on a concentric pattern with open spaces, public parks and boulevards, housing 32,000 people on 6,000 acres, linked to a central city with over 50,000 people. Once a garden city reached maximum capacity, another city would be developed nearby.
- Neighbourhood concept: In the US, the garden city movement evolved into the neighbourhood concept, where residential houses and streets were organised around a local school or community centre, with a push for lowering traffic and providing safe roads. London has a metropolitan green belt around the city, covering 5,13,860 hectares of land, to offset pollution and congestion and maintain biodiversity. Why can't Indian cities have something similar, instead of ring roads and urban sprawls?
- La ville du quart d'heure: Paris has taken this forward with the "15-minute city" ('la ville du quart d'heure'). The idea is rather simple, every Parisian should be able to do their shopping, work, and recreational activities and fulfil their cultural needs within a 15-minute walk or bike ride this means that the number of vehicular trips gets reduced significantly.
- Investment in pedestrian infrastructure and non-motorised transport zones: A city would then be planned for pedestrians, instead of cars and motors. This requires an extensive usage of mixed-use developments, along with investment in pedestrian infrastructure and non-motorised transport zones. Instead of widening highways, this approach would push for widening pedestrian walkways.

WHAT SHOULD BE ADOPTED FOR INDIA?

- Every Indian city should ideally have a Master Plan: A strategic urban planning document which would be updated every decade or two. The document would entail how a city is supposed to grow, vertically and horizontally, across zones, while offering a high quality of life in a sustainable manner.
- Urban land use needs to be better: India's hidden urbanisation, driven partly by our stringent definition of the word, along with weak enforcement of building codes, has meant that the local government is often playing catch-up, unable to provide urban services and infrastructure to keep up with growth.
- Public land availability: Consider the case of Mumbai, where almost 1/4th of the land is open public space while over half of it is the underutilised space around buildings, which is enclosed by walls and hived off from public access. Such open spaces, if available, would help cities like Mumbai achieve similar ratios as globally benchmarked cities (Amsterdam, Barcelona) in public land availability (typically above 40 per cent).
- India's urban density will also need to be thought through: Dense construction on the peripheries of our major cities (for instance, dense construction in Delhi's suburbs, like Noida and Gurugram) will inevitably mean that public services are stretched and emissions (due to transportation to the main city) remain high. Such urbanisation will unavoidably lock India into a high emissions future while making our cities prone to extreme heat and flooding.
- Then there is climate change: Many urban experts cite technological solutions that may save our cities a chain of sea walls, river embankments and reclamations, for instance from such potential calamities. However, structural engineering simply may not be an economically and environmentally feasible option everywhere instead, our focus must be on conservation.
- Climate resilience perspective Bengaluru, with its network of interconnected lakes, could have considered Bangkok-style ferries instead of draining out its lakes.
- Establishing a sense of cityhood: By making a push for a city as a co-created space will also require building up institutional capacity.
- Addressing lack of town planning education: India would ideally require 3,00,000 town and country planners by 2031 (there are just 5,000 town planners currently).. More schools are needed, with a push for local IITs and NITs to have a standalone planning department. With over 8,000 towns and cities, there is a clear unmet need.

GS II

9) Why India should support African participation under its G20 presidency:

The G20 comprises the world's major developed and developing economies.

- It Accounts for nearly: 85% of global GDP, Two-thirds of world population
- Naturally then, leaving out Africa, which represents the voice of 1.37 billion people and is the world's 8th largest economy

NEED TO INCLUDE AFRICAN UNION:

- The inclusion of the AU will echo the type of representation that the European Union (EU) reflects as member of the G20
- On the other hand, South Africa, being the sole African member of the G20. Often finds it difficult to balance its own domestic interests with that of other African countries which have vastly different demography and national priorities
- The African continent still continues to remain severely underrepresented.

WHY INDIA SHOULD SUPPORT AFRICA?

- It is a prerequisite if the world is to truly become multipolar.
- India has always been a vocal proponent of supporting African representation in multilateral organisations.
- According to External affairs "India believes that Africa's growth and progress is intrinsic to global rebalancing."
- This sentiment is even more important at a time when the world is witnessing sharpening polarisation between: Democratic nations led by the United States and Authoritarian regimes coalescing around China

INDIA-AFRICA RELATIONS:

- Trade Relation: India sources nearly 18% of its crude oil from Africa, especially countries like: Nigeria, Angola, South Sudan
- 20% of India's Coal also come from the continent.
- Moreover, almost 90% of Indian import of cashew nuts are from Africa, in addition to 90% of phosphates.
- India's entire fertiliser industry is based on what it procures from countries like: Morocco, Tunisia, Senegal
- India the 5th largest investor in Africa.
- The capacity building and skill development aspect of the relationship is equally strong. As more than 32,000 of proposed 50,000 scholarships back in 2015 have been availed by African nationals
- The 17th Edition of the Conclave on India-Africa Project Partnership was jointly held by CII and EXIM Bank recently in New Delhi. The ensuing discussions pointed towards a serious push by the Indian private sector and business to export Indian innovations to Africa
- India needs to Leverage on this 'Africa Opportunity' by facilitating the induction of the AU as a permanent member of the G20 under its presidency.
- As reflected in our strong support towards the Common African Position, which is stated in the Ezulwini Consensus and Sirte Declaration.

AFRICA'S AND G20:

- The G20's focus on Africa is not new.
- The initial reference was made back in July 2010 at the Toronto Summit. During which financial support through concessional lending to the African Development Bank (AfDB) was promised, despite the financial crisis of 2008.



- Following this, the twin objective of Infrastructure Building and Regional Economic Integration through trade facilitation was emphasised during the Seoul Summit in November 2010.
- Since then, African countries have consistently been invited to G20 summits.
- The engagement coalesced into a G20 Compact with Africa (CWA) under the German G20 presidency in 2017. Currently, 12 African countries are members of the compact.
- More importantly, the compact seeks to diversify the focus beyond established continental players like South Africa and Nigeria to smaller African countries.
- The fact that each African country is unique and has varied infrastructure requirements informed the rationale behind the G20 Compact with Africa.

The Ezulwini Consensus is a position on international relations and reform of the United Nations agreed by the African Union.

- It calls for a more representative and democratic Security Council, in which Africa, like all other world regions, is represented

The consensus is named after Ezulwini, a valley in central Eswatini (then known as Swaziland), where the agreement was made in 2005.

10) A lot is at stake for India-Bangladesh ties

Recently Bangladesh Foreign Minister requested India to ensure that Prime Minister Sheikh Hasina stays in power in next year's polls. He claimed that both India and Bangladesh would gain political stability by ensuring this.

WHAT IS THE PRESENT STATUS OF INDIA-BANGLADESH RELATIONS?

- Trade: Bangladesh is India's sixth largest trade partner with bilateral trade rising from \$2.4 billion in 2009 to \$10.8 billion in 2020-21.
- According to a World Bank working paper, Bangladesh's exports could rise 182% under a free trade agreement. This could become 300% if combined with trade facilitation measures and reduced transaction costs.
- Connectivity: India and Bangladesh have implemented several projects to boost eastern India-Bangladesh connectivity. India's connectivity projects with ASEAN and Bangladesh will open up the region to economic growth.
- Bangladesh has expressed its interest in joining the India-Myanmar-Thailand highway project. India-Bangladesh bilateral waterway trade will get boosted as India can now use the Mongla and Chittagong ports.
- Currently, three express trains and international bus services operate between Indian and Bangladesh.
- India-Bangladesh Joint Consultative Commission: The commission expanded the India-Bangladesh partnership to include Artificial Intelligence, Fintech, cybersecurity, startups, and connectivity.
- Land Swap Agreement: In 2015, India and Bangladesh resolved the decades-long border dispute through the Land boundary Agreement.
- Curb of illicit activities: Bangladesh's government has uprooted all anti-India insurgency activities within Bangladesh by leading from the front.



WHAT ARE THE CHALLENGES IN INDIA-BANGLADESH RELATIONS?

- Teesta river water sharing: For West Bengal, Teesta is important to sustain its impoverished farming districts which comprise 12.77% of its population. For Bangladesh, the Teesta's flood plains cover about 14% of the total cropped area of the country and provide direct livelihood opportunities to approximately 7.3% of the population.

- NRC: In 2019, India enacted the National Register of Citizens and the Citizenship (Amendment) Act. This created an uproar within and beyond the borders. Bangladesh government termed the move as “unnecessary”.
- Role of China: China had successfully approached China for a mega project to enhance Teesta river water flow. Bangladesh also requires China’s support in resolving the Rohingya refugee crisis. Bangladesh is the second biggest arms market for China after Pakistan.
- Ties with Pakistan: Although memories of 1971 remain, Bangladesh has expressed its interest in establishing peaceful relations with Pakistan.

WAY FORWARD:

Long-term stable relations with its most trusted friend(Bangladesh) in the neighbourhood is the need of the hour for India. But the challenge for India is to earn the trust and confidence of Bangladeshis across the spectrum and strata. This can be done by resolving long-standing issues such as Teesta water-sharing and killings at the border.

11)Time for a joint space exercise

India and the U.S. will undertake joint military drills in October in Auli. The location is at an altitude of 10,000 feet and some 95 km from the Line of Actual Control (LAC).

India and the US should also join hands in the space war exercises.

WHY IS IT IMPORTANT?

India and US, in the Defense Technology and Trade Initiative (DTTI) meeting, identified space as a critical area of cooperation.

It will have other positive outcome which is required for the wider Quad.

It will also send a strong message to the common opponents like China. hina has advanced to the Cis-Lunar space (region beyond the geosynchronous orbit). It is done with an ambition to establish a permanent presence on the Moon by 2024.

This drill will push India’s defense partnership into a new sphere.

Space has assets that form the bedrock of the modern economy; GPS (PNT — position navigation timing), telecom networks, early warning systems for missiles.

HOW HAS INDIA PERFORMED IN SPACE FORCE?

- Space in India has mostly remained under the sole jurisdiction of the Indian Space Research Organization (ISRO).
- However, the successful demonstration of anti-satellite (ASAT) missile test and first ever simulated space warfare exercise (IndSpaceX) in 2019 has changed the image of space being limited to ISRO.
- The government has also set up the Defence Space Research Agency (DSRA) to help develop space-based weapons for the DSA.
- Space is now equally recognised as a military domain as land, water, air and cyber.

HOW CAN INDIA AND THE US JOIN HANDS IN SPACE WARFARE PROGRAMS?

- Space has been an important critical area of cooperation in the Defence Technology and Trade Initiative (DTTI) meeting between India and the U.S.
- India and the US can cooperate in a joint anti-satellite (ASAT) missile test because both the countries have shown capabilities in this.
- ASAT is a missile launched from the Earth's surface to destroy a satellite passing overhead.
- Issues: There is a possibility of China-Pakistan collusion against India, It will derail the ongoing Core Commanders dialogue in Ladakh. It may lead to militarization of space.

12) Role of CSR in funding NGOs

Corporate Social Responsibility (CSR): The CSR concept in India is governed by Section 135 of the Companies Act, 2013, Schedule VII of the Act and Companies (CSR Policy) Rules, 2014.

The Companies Act encourages companies to spend 2% of their average net profit in the previous three years on CSR activities.

Companies having a net worth of at least 500 crore rupees or a minimum turnover of Rs 1,000 crore or a net profit of Rs 5 crore or more during the immediately preceding financial year have to spend on CSR activities.

WHAT ARE THE FUNDING ARCHETYPES?

- There are three distinct funder archetypes such as program proponents, adaptive funders and organisation builders.
- Programme proponents value programme outcomes above all.
- Adaptive funders are not rigid and support indirect costs and organisational development, if the NGO makes a case.
- Organisation builders see value in investing in stronger organisations in addition to programmes.
- CSR funders, who now represent a fifth of all private giving in India, principally fall under programme proponents.

ISSUES:

- CSR mostly contribute little or no money to organisational development and limit what they pay for indirect costs to a fixed rate often below 5%.
- NGOs' indirect costs range from 5% to 55%, depending on their mission and operating model, much as a corporate's sales and administration costs vary significantly by industry and product.
- These practices are partly a consequence of CSR funders' focus on regulatory compliance, amendments to the CSR law in 2021 include substantial financial penalties for non-compliance.
- Roughly 90% of the CSR funders are relatively small, unlisted companies, and companies that spend less than ₹50 lakh annually on CSR are not required by law to have a CSR committee.
- They generally leave decision-making and action plans to company boards, who may have little to no experience working with NGOs or on social impact.
- Hence, their priorities tend to sway towards risk avoidance, compliance, and cost minimisation.
- Not every company is aware of all the facets of the CSR rules they are complying with.
- For instance, the 5% cap on administrative overhead costs is applicable only to a business' internal CSR operation cost, not to the grantee's administrative costs, as is widely perceived.

OTHER CHALLENGES FACED BY NGOS

- Underfunding : NGO working on education outcomes might receive funding for books, other online resources, teacher training, curriculum design, etc. But NGOs have other expenses too. In order to achieve long-term and sustained impact, they need to pay for administrative and support expenses not specifically tied to programmes— for instance, rent, electricity, technology and human resource costs. These organisational development and indirect costs, combined with programme expenses, make up an NGOs' true costs.

- Lacking skill: Most NGOs lack the technical know-how for efficient working and are also not interested in investing in training etc.
- NGOs don't have clear financial reporting standards and many lack the internal capabilities to undertake a true-cost analysis.
- Pandemic : The pandemic also exposed how vulnerable NGOs are to financial stress.
- NGOs also suffer largely from a lack of volunteers and frequent turnover of staff.

SUGGESTIONS

- Companies can pool their resources with other mission-aligned CSR or social sector stakeholders, increasing their collective impact potential, and also hire or tap into professionals with experience working with NGOs.
- The CSR programmes cannot currently contribute to NGO reserves/corpus by law. However, by covering indirect costs and organisational development, they still help to relieve financial pressure and make organisations more resilient.
- Corporations can offer NGOs additional funds .
- A corporate that has developed a relationship of mutual trust with an NGO could offer volunteer financial analysis services to help the NGO calculate true costs and communicate with other funders, and build financial resilience.

13) New Non-Aligned Posture

ABOUT NON-ALIGNED MOVEMENT (NAM)

- It was created and founded during the collapse of the colonial system and the independence struggles of the peoples of Africa, Asia, Latin America and other regions of the world and at the height of the Cold War.
- It came about in 1961 because of a conference in Bandung in 1955 – saw five global leaders at the height of the Cold War:
- PM Nehru, President Tito of Yugoslavia, Naser of Egypt, Nkrumah of Ghana and President Sukarno of Indonesia. Today it has 120 members or 2/3rds of the UN.
- It aimed to retain an autonomy of policy (not equidistance) between two politico-military blocs.
- Throughout its history, the Movement of Non-Aligned Countries has played a fundamental role in the preservation of world peace and security.
- It provided a platform for newly independent developing nations to join together to protect this autonomy.
- Problems with Non alignment in today's scenario
- The government has rejected NAM as a Nehruvian era idea, and uses the terms strategic autonomy to describe its policies now and he has not attended a NAM summit even once, becoming the first full term PM of India to skip NAM summits
- In the past few years, India has joined multiple groupings that are built around global powers: the Quad around the United States, and the SCO around Russia and China
- India's problems with Pakistan, as well as countries like Malaysia and other countries that have been critical of India on Human rights violations, Jammu Kashmir, and the treatment of minorities
- NAM today competes with G-7, ASEAN and the Commonwealth, which are similar groups of nations. The other groups are more effective, as they deal with economic and trade issues
- NAM has no position even on issues like human rights, child exploitation and gender issues. As a result, its members have to follow the Western dictates in this regard.
- Other NAM members like Iran, Cuba, Venezuela are under heavy sanctions from the West, and India's ties with them are no longer as robust either.
- Terrorism is the most flagrant threat to NAM principles.

NAM RELEVANCE IN PRESENT DAY WORLD

- Earlier the NAM was a political movement, but now the movement is shifting its political concept to the economic. It's also true that the bipolarity of the world is ended after the cold war but still the world has an economic gap

between the first world and third world nations. So, as long as the economic gap among the nations exists the NAM continues as relevant in this present world order too

- NAM continues to hold relevance to maintain world peace. It has played an active role to stand by its founding principles, idea and purpose, which mainly aims to establish a peaceful and prosperous world
- NAM as an international organization is relevant due to its principles. The idea of preserving the independence of every nation to save the territorial integrity and sovereignty holds its relevance.
- Around two-third nations belong to the United Nations and represent almost 55% of world population, hence NAM has a significant role to strengthen and support to the UN. So, as one of the largest international organizations, it continues to hold relevance as a platform
- NAM has become an Integral part of foreign policy. NAM as foreign policy is very much relevant today. Many developing countries like India still follow NAM policy. The policy to avoid colonization and imperialism continues to remain valid for all small and developing countries
- NAM acts as catalyst to foster the co-operation between South-South nations. It raises issues that are of major concern for the south countries. It initiates economic, political and social development corner to achieve desired results of moving from developing to developed nations

NEED OF THE HOUR: NAM'S REVITALISATION AND NOT ABANDONMENT

- At a time, where the World is transitioning from Diminishing Confrontation Towards Increasing Cooperation, the NAM's new focus must be on eradicating poverty, hunger, malnutrition and illiteracy
- Also, for a replacement of the unipolar world by the multipolar world, NAM is perhaps even more relevant now to international relations and development that at any time in the history.

14) The Outline of an Essential Global Pandemic Treaty

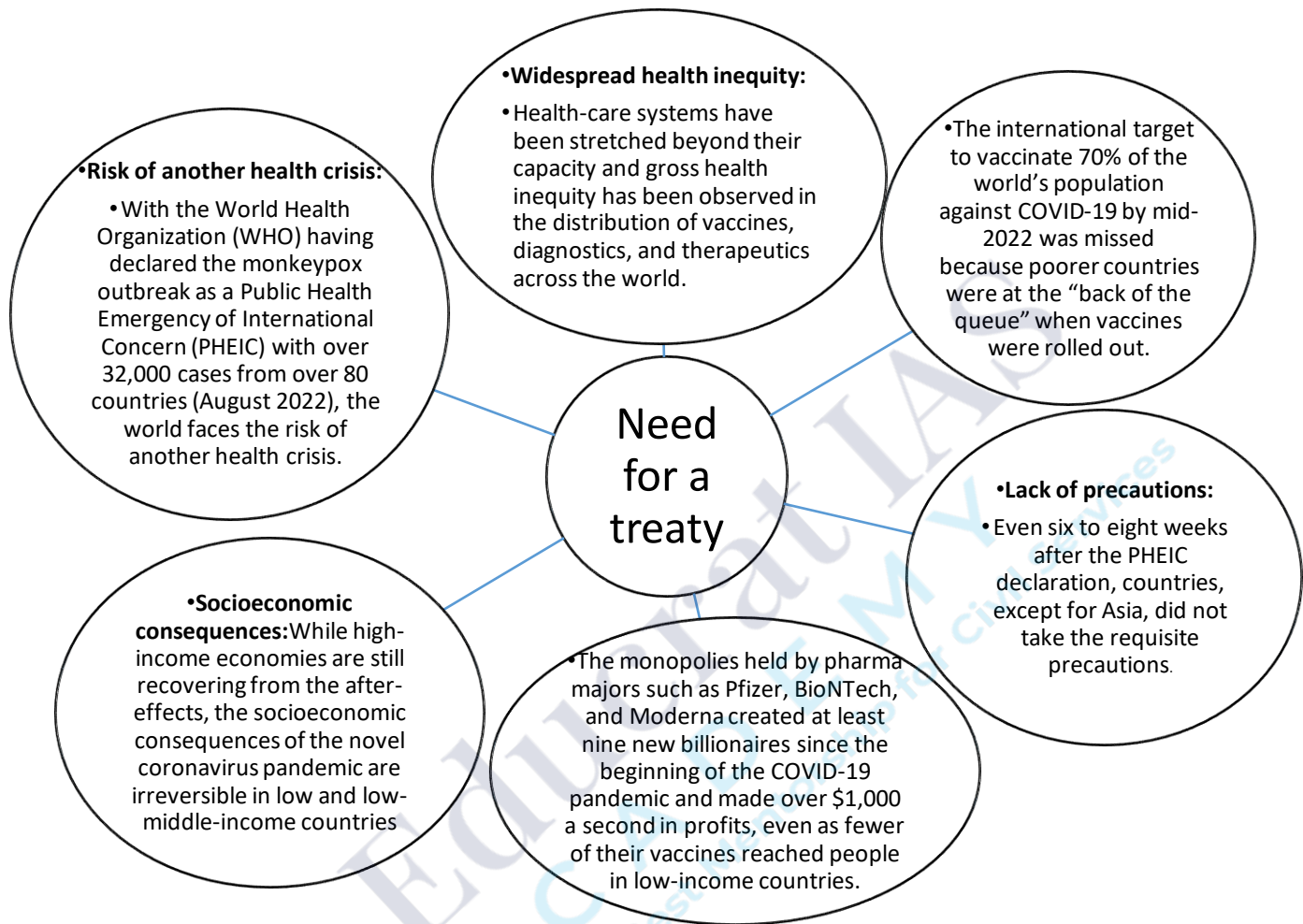
WHAT IS THE PANDEMIC TREATY?

- In December 2021, the World Health Assembly agreed to start a global process to draft the pandemic treaty.
- The need for an updated set of rules was felt after the COVID-19 pandemic exposed the shortcomings of global health systems.
- The Health Assembly adopted a decision titled "The World Together" at its second special session since it was founded in 1948.
- Under the decision, the health organization established an Intergovernmental Negotiating Body (INB) to draft and negotiate the contents of the pandemic treaty in compliance with Article 19 of the WHO Constitution.
- The pandemic treaty is expected to cover aspects like data sharing and genome sequencing of emerging viruses and equitable distribution of vaccines and drugs and related research throughout the world.
- The underlying logic is that as global governance had failed during the pandemic, the world needed political commitment to mitigate future challenges.

INDIA'S LEAD ROLE:

- India produces nearly 60% of the world's vaccines and is said to account for 60%-80% of the United Nations' annual vaccine procurement - "vaccine diplomacy" or "Vaccine Maitri" with a commitment against health inequity.
- India was unfettered in its resolve to continue the shipment of vaccines and other diagnostics even when it was experiencing a vaccine shortage for domestic use.
- As of 2021, India shipped 594.35 lakh doses of 'Made-in-India' COVID-19 vaccines to 72 countries — a classic example of global cooperation.
- Among these, 81.25 lakh doses were gifts, 339.67 lakh doses were commercially distributed, and 173.43 lakh doses were delivered via the Covax program under the aegis of Gavi, the Vaccine Alliance.
- The long tussle with the pharma majors over vaccine patents, especially in the African countries, held back the global vaccination drive.

- India stood as a global leader, moving a proposal with South Africa in October 2020 to ask the World Trade Organization (WTO) ‘to allow all countries to choose to neither grant nor enforce patents and other intellectual property related to COVID-19 drugs, vaccines, diagnostics and other technologies for the duration of the pandemic until global herd immunity is achieved.’



WAY FORWARD:

- In the COVID-19 pandemic, the world has seen a multitude of initiatives to address the pandemic and to do better in the future such as the Vaccine Alliance.
- These are all valuable, but a treaty under the umbrella of WHO would build coherence and avoid fragmentation.
- Such a treaty should cover crucial aspects such as data sharing and genome sequencing of emerging viruses. It should formally commit governments and parliaments to implement an early warning system and a properly funded rapid response mechanism.

15) Road safety in India

In spite of several years of policymaking to improve road safety, India remains among the worst-performing countries in this area.

Total 1,47,913 lives lost to road traffic accidents in 2017 as per Ministry of Road Transport and Highways statistics.

Causes of Road Accidents in India

Sub-standard roads: The life of roads is not good due to the substandard raw materials and potholes accidents caused.

Traffic: The increasing traffic on roads and conditions of roads are not proportionate to each other.

Use of mobile phone: Most of the people are on call while driving thus they drive recklessly and accidents happen as most of the Indians now have mobile phones.

Drunk Driving: Drinking makes people lose the ability to focus and function properly. This makes it dangerous for the driver to operate the vehicle.

Dis-obedience for traffic rules: Indian drivers are quick to learn to drive but they don't learn traffic rules and the purpose of such rules.

Malpractices: Malpractices such as over-speeding, triple riding, underage driving, etc are reducing the safety of road users.

Implementation drawbacks: Police are supposed to execute the rules but, it may be a lack of workforce or lack of intention, they also fail to execute.

Corrupt practices: Mostly police use the rules to mint money either officially by Chalan or in person.

Various Policy Initiatives by government

Road Safety: In the area of road safety, the Act proposes to increase penalties to act as deterrent against traffic violations.

Vehicle Fitness: Automated fitness testing for vehicles has been made mandatory. This would reduce corruption in the transport department while improving the road worthiness of the vehicle.

Recall of Vehicles: The Act allows the central government to order for recall of motor vehicles if a defect in the vehicle may cause damage to the environment, or the driver, or other road users.

Road Safety Board: A National Road Safety Board, to be created by the central government on all aspects of road safety and traffic management. This would include standards of motor vehicles, registration and licensing of vehicles, standards for road safety, and promotion of new vehicle technology.

Protection of Good Samaritan: The Act lays down the guidelines and provides rules to prevent harassment of Good Samaritan to encourage people to help road accident victims.

Cashless Treatment during Golden Hour: The Act provides for a scheme for cashless treatment of road accident victims during golden hour.

THE 4 'E' APPROACH

- The Government of India put forth Engineering, Economy, Enforcement and Education as the fundamental areas to focus on in order to ensure road safety

WAY FORWARD:

- **Better first aid and paramedic care:** In most cases, the public and police are the first ones to reach the site of an accident. But sadly, neither has any first aid training and the police don't even have even simple things like a first aid box or stretcher. This initial trauma care has to improve.
- **Heavy crackdown against non-compliance:** This is one of the leading causes of road accidents in India and while we do have strict laws, the enforcement, particularly on our highways is quite lax. Consumption of drugs by truck drivers while driving is rampant, and this needs to stop completely.
- **Stricter enforcement of traffic rules:** The Amended Motor Vehicles Act has higher penalties and punishment to deter people from committing traffic offenses and driving rashly. It's high time we enforced our traffic rules and imposed discipline while driving and using the road.

16) Supreme Court to take up CAA Challenge

WHAT IS CITIZENSHIP AMENDMENT ACT (CAA), 2019?

- The act is sought to amend the Citizenship Act, 1955 to make Hindu, Sikh, Buddhist, Jain, Parsi, and Christian illegal migrants from Afghanistan, Bangladesh, and Pakistan, eligible for citizenship of India.

- In other words, it intends to make it easier for non-Muslim immigrants from India's three Muslim-majority neighbours to become citizens of India.
- Under The Citizenship Act, 1955, one of the requirements for citizenship by naturalization is that the applicant must have resided in India during the last 12 months, as well as for 11 of the previous 14 years.
- The amendment relaxes the second requirement from 11 years to 6 years as a specific condition for applicants belonging to these six religions, and the aforementioned three countries.
- It exempts the members of the six communities from any criminal case under the Foreigners Act, 1946 and the Passport Act, 1920 if they entered India before December 31, 2014.

EXCEPTIONS

- The Bill provides that illegal migrants who fulfil four conditions will not be treated as illegal migrants under the Act. The conditions are:
 - they are Hindus, Sikhs, Buddhists, Jains, Parsis or Christians;
 - they are from Afghanistan, Bangladesh or Pakistan;
 - they entered India on or before December 31, 2014;
 - they are not in certain tribal areas of Assam, Meghalaya, Mizoram, or Tripura included in the Sixth Schedule to the Constitution, or areas under the "Inner Line" permit, i.e., Arunachal Pradesh, Mizoram, and Nagaland.

CONTROVERSY WITH THE ACT

- **Country of Origin:** The Act classifies migrants based on their country of origin to include only Afghanistan, Pakistan and Bangladesh.
- **Other religious minorities ignored:** It is unclear why illegal migrants from only six specified religious minorities have been included in the Act.
- **Defiance of purpose:** India shares a border with Myanmar, which has had a history of persecution of a religious minority, the Rohingya Muslims.
- **Date of Entry:** It is also unclear why there is a differential treatment of migrants based on their date of entry into India, i.e., whether they entered India before or after December 31, 2014.
- **Against the spirit of Secularism:** Further, granting citizenship on the grounds of religion is seen to be against the secular nature of the Constitution which has been recognised as part of the basic structure that cannot be altered by Parliament.

THE SUPREME COURT HAS DEVELOPED A TWO-PRONGED TEST TO EXAMINE A LAW ON THE GROUNDS OF ARTICLE 14.

- First, any differentiation between groups of persons must be founded on "intelligible differentia"
- Second, that differentia must have a rational nexus to the object sought to be achieved by the Act
- Simply put, for a law to satisfy the conditions under Article 14, it has to first create a "reasonable class" of subjects that it seeks to govern under the law.
- Even if the classification is reasonable, any person who falls in that category has to be treated alike.

17) India stays out of 'Trade Pillar' of IPEF

India stayed out of the joint declaration on the trade pillar of the US-led Indo-Pacific Economic Framework (IPEF) ministerial meet

WHY DID INDIA OPT OUT OF THE TRADE PILLAR?

- One of the reasons for staying out of the trade pillar was that the contours of the framework had not emerged yet.
- This is particularly about the kind of commitment each country would have to make on "environment, labour, digital trade and public procurement".
- India's decision also mirrors the decision to walk out after seven years of negotiations from the Regional Comprehensive Economic Partnership (RCEP).

REASONS FOR THE CREATION OF IPEF

- US regaining lost credibility: IPEF is also seen as a means by which the US is trying to regain credibility in the region after Trump pulled out of the Trans Pacific Partnership TPP).
- Rising Chinese influence: Since then, there has been concern over the absence of a credible US economic and trade strategy to counter China's economic influence in the region.
- Competing RCEP: It is also in the 14-member Regional Comprehensive Economic Partnership, of which the US is not a member (India withdrew from RCEP).
- "Pivot to Asia" strategy: US has intensified its engagement with the wider Asia-Pacific region to advance its economic and geopolitical interests.
- It includes seven out of 10 members of the Association of South East Asian Nations (ASEAN), all four Quad countries, and New Zealand.
- Countries are free to join (or not join) initiatives under any of the stipulated pillars but are expected to adhere to all commitments once they enrol.
- Negotiations are meant to determine and list the provisions under each pillar and open the floor for countries to choose their 'commitments'.

Indo-Pacific Economic Framework for Prosperity launched



Key Areas To Focus:

- Trade: To build high-standard, inclusive, free, and fair trade commitments
- Supply Chains: To improve transparency, diversity, security, and sustainability to make resilient & well-integrated
- Clean Energy, Decarbonization & Infrastructure: To accelerate development and deployment of clean energy technologies
- Tax and Anti-Corruption: To promoting fair competition by enforcing robust tax, anti-money laundering, and anti-bribery regimes

ISSUES WITH IPEF FRAMEWORK

- IPEF would neither constitute a 'free trade agreement,' nor a forum to discuss tariff reductions or increasing market access.
- Unlike a traditional trade agreement, the US administration will not need congressional approval to act under the IPEF. Hence its legal status is questionable.
- This also raises doubts among potential participants about their reluctance to offer significant concessions under the agreement.
- The volatility of US domestic politics has raised concerns about IPEF's durability.
- Unlike traditional FTAs, the IPEF does not subscribe to the single undertaking principle, where all items on the agenda are negotiated simultaneously.
- Given the divisive nature of American politics, it is unclear whether the IPEF will survive past the Biden administration.



WHAT DOES IT HAVE TO DO WITH CHINA?

- The US strategists believe the US lacks an economic and trade strategy to counter China's increasing economic influence in the region since 2017.
- US companies are looking to move away from manufacturing in China.
- IPEF would therefore offer an advantage to participating countries, allowing them to bring those businesses into their territory.
- However, it officially excluded Taiwan despite its willingness and economic merit to join.
- This exhibits Washington's geopolitical caution.

Going forward, the US and the founding partners need to develop the process and criteria by which other countries from the region will be invited to join the negotiations on the IPEF.

18) For India, the buzzword now is 'all-alignment'

Next year, India will host the SCO summit, and is expected to invite all members — this includes the Chinese President and Pakistan's Prime Minister. India's engagement with the upcoming Shanghai Cooperation Organisation (SCO) summit in Samarkand, Uzbekistan highlights India balances various blocs. For instance,

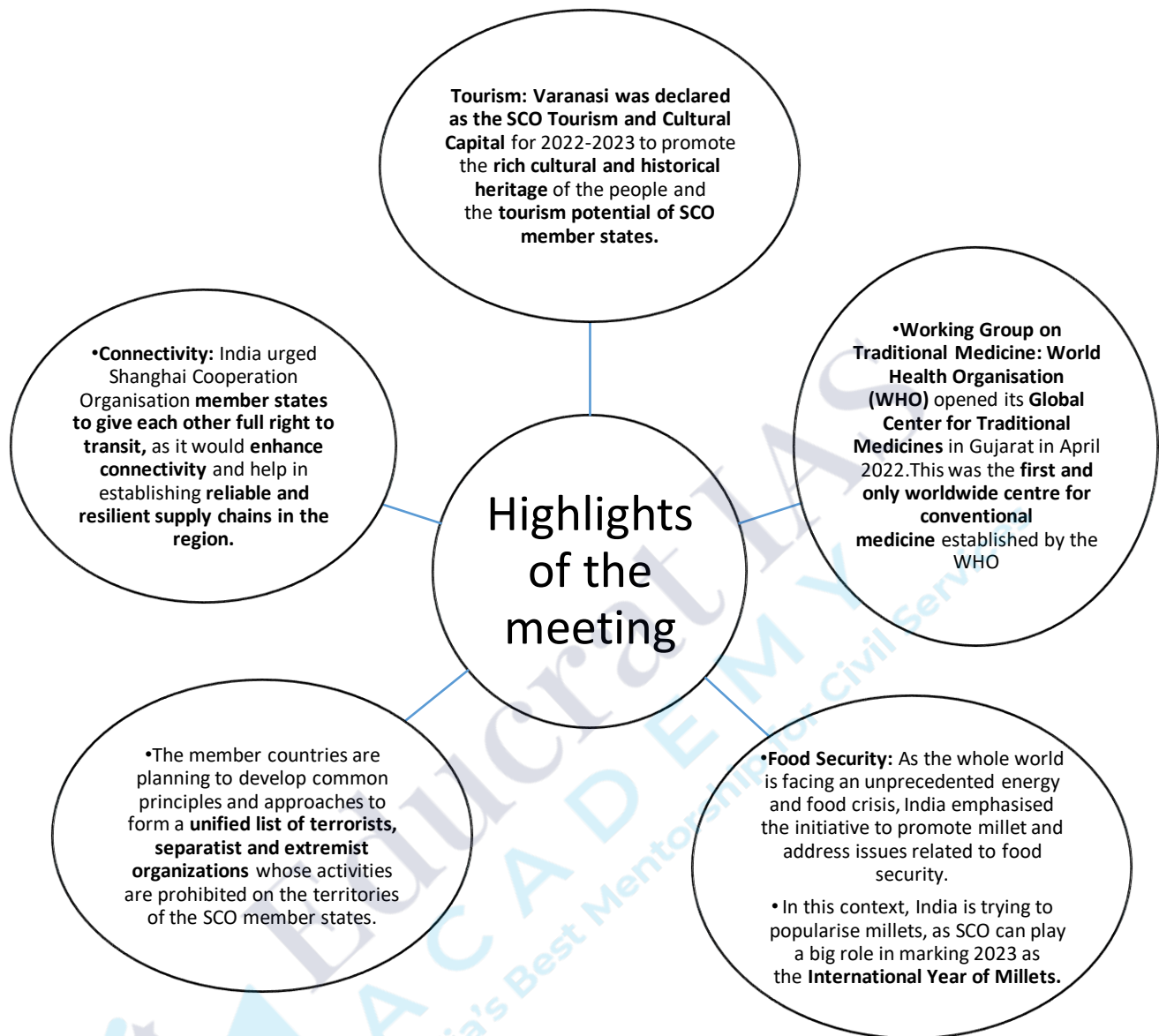
- a) India is a member of SCO and BRICS and also a member of Quad, groups such as the I2U2 (India-Israel-U.S.-UAE), and the Indo-Pacific Economic Framework (IPEF).
- b) India joining the Russian-led 'Vostok' Army Exercises along with China, and plans to host SCO-RATS counterterror exercises. On the other hand, the Indian Air Force took part in the Australian 'Pitch Black' exercises, and the Indian Army is planning exercises with the U.S. (Yudh Abhyas).
- This shows India is the only country that would form the intersection, a part of all of those groupings.



HOW DOES INDIA'S ALL ALIGNMENT POLICY FUNCTION WITHIN THE SCO GROUPING AND WHAT INDIA CAN DO IN THE UPCOMING SCO SUMMIT?

- India's ties with Russia: India has refused to heed pleas from the U.S. and Europe to endorse resolutions critical of Russia at the United Nations. India often abstained from voting on the Ukraine crisis.
- In the recent Eastern Economic Forum meeting, India outlines it wants to further strengthen energy ties, building on the \$16 billion investment Indian public sector units already have in Russian oil and gas fields.
- India's ties with China: The two leaders of India and China met 18 times between 2014-2019. But have not spoken directly once since the standoff that began in April 2020 between the Indian Army and the People's Liberation Army (PLA).
- During the Doklam conflict, it was a "brush by" meeting between two leaders at the G-20 summit that led to the "breakthrough" in talks. So a similar can happen in the upcoming SCO summit or the G20 Summit.
- India's engagement with Iran: The SCO meeting is expected to pitch the Chabahar port terminal India is developing as an important route for trade to Central Asia and Russia.
- Further, Iran has asked for India's support with "above ground" equipment and parts for its plans to extend the rail line from the Afghan border outpost to Turkmenistan, the shortest possible route for India. This is in line with India's plan to build a connectivity framework that counters the China-Pakistan-Economic Corridor from Gwadar.
- **India's engagement with Pakistan:** The decision by the Pakistan government in 2019 that no trade with India is possible without a reversal of India's Article 370 moves in Jammu and Kashmir has ended formal communication between both the countries.

- With Pakistan reeling from massive floods, an economic crisis, and growing worries of an unstable Afghanistan



Pakistan might look for a way to hold a conversation with India.

SHANGHAI COOPERATION ORGANISATION (SCO) SUMMIT 2022

- The Shanghai Cooperation Organisation (SCO) summit 2022 was held recently in Samarkand, Uzbekistan.
- Samarkand declaration was signed by the member states.

SIGNIFICANCE OF IRAN'S MEMBERSHIP:

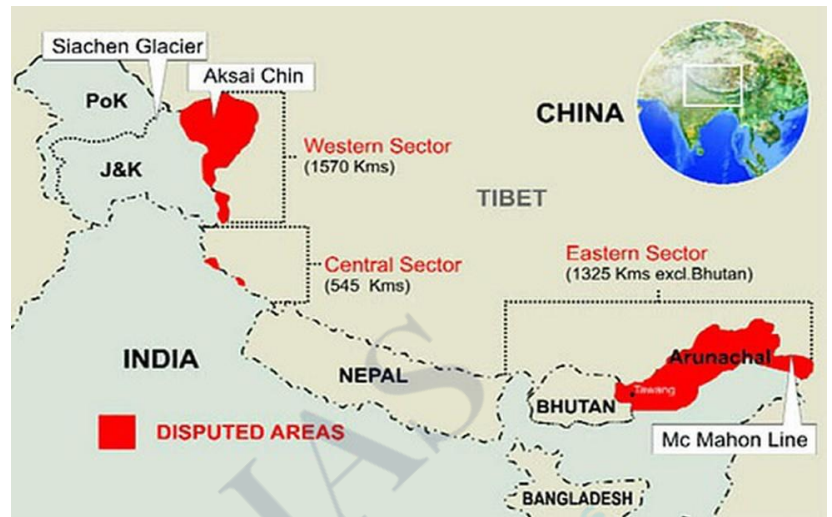
- As a country that has been long sanctioned and isolated by the US-led West, Iran, by joining the SCO that accounts for 40 percent of the world's population and 28 percent of global GDP, could expect a breakthrough in its geopolitical and economic status quo.
- Iran's proposal for a single currency: Iran has also approached the SCO with a proposal to create a new single currency for carrying out trade among SCO members, in a push to counter the increasing weaponization of the US dollar-dominated global financial system.
- For India: Iran's entry into the SCO will boost India's Eurasian outreach ensuring seamless coordination between India and Iran.
- India also maintains that entry of Iranian oil in the market will address global energy security to some extent.

19) Disengagement at PP15:

Indian and Chinese troops have completed the disengagement process at Patrolling Point-15 in the Gogra-Hot Springs region of eastern Ladakh, sources in the military establishment.

5 COMPONENTS OF THE DISENGAGEMENT

1. Stopping of “forward deployments” i.e. return of troops of both sides to their respective areas.
2. Dismantling of “all temporary structures and other allied infrastructure”
3. Restoring “landforms in the area” to pre-standoff positions by both sides.
4. Stopping of forward deployment in a “phased, coordinated and verified manner”
5. Ensuring structures are “dismantled and mutually verified”.



SIGNIFICANCE OF DISENGAGEMENT

- With the disengagement at PP-15 completed, forces of the two countries, Locked in a face-off ever since May 2020, have disengaged at all friction points in the region, Which included the North and South banks of the Pangong Tso, PP-14, PP-15 and PP-17A.
- However, Chinese forces continue to block Indian access to traditional patrolling areas along the LAC in the Depsang Plains and Charding Nala region.
- Buffer zones have now been established by the two sides in five locations, Including in Galwan Valley, north and south of Pangong Lake, and at PP17A in Gogra.

ISSUES:

- In the view of some military observers, might have been China’s game-plan all along
- China has neither agreed to resolve standoffs in Demchok and Depsang.
- Instead continuing to build forward infrastructure aimed at permanently housing a large number of troops closer to the LAC.

EVOLUTION OF LAC

- India and China share a 3,488 km long boundary. Unfortunately, the entire boundary is disputed. The line, which delineates the boundary between the two countries, is popularly called the McMahon line, after its author Sir Henry McMahon.
- In 1957, China occupied Aksai Chin and built a road through it. This episode was followed by intermittent clashes along the border, which finally culminated in the border war of 1962.
- The boundary, which came into existence after the war, came to be known as Line of Actual Control (LAC). It is a military held line.
- India considers the LAC to be 3,488 km long, while the Chinese consider it to be only around 2,000 km.



- It is divided into three sectors: the eastern sector which spans Arunachal Pradesh and Sikkim (1346 km), the middle sector in Uttarakhand and Himachal Pradesh (545 km), and the western sector in Ladakh (1597 km).
- The alignment of the LAC in the eastern sector is along the 1914 McMahon Line.
- The middle sector is the least disputed sector, while the western sector witnesses the highest transgressions between the two sides.

DEPSANG PLAINS

- The Depsang Plains, located in the northern part of eastern Ladakh, are close to the strategically important Daulat Beg Oldie (near the Karakoram Pass).
- India's highest airstrip is located at DBO.
- The plains come under India's sub sector north (SSN), and lie between the Siachen Glacier on one side and Chinese-controlled Aksai Chin.



WHAT ARE PATROLLING POINTS?

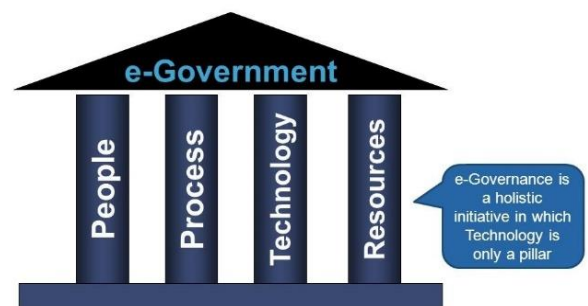
- PPs are patrolling points identified and marked on the LAC, which are patrolled with a stipulated frequency by the security forces.
- They serve as a guide to the location of the LAC for the soldiers.
- They Act as indicators of the extent of 'actual control' exercised on the territory by India.
- By regularly patrolling up to these PPs, the Indian side is able to establish and assert its physical claim about the LAC- All Patrolling Points Except for the Depsang plains in northern Ladakh.
- Unlike on the Line of Control (LoC) with Pakistan.
- The border with China is not physically held by the Army all along.
- They are just physical markers on the ground, chosen for their location.
- They have no defensive potential or tactical importance for the Army

20) Need to build a framework for best global digital governance affirmation

Electronic governance or e-governance can be defined as the usage of Information and Communication Technology (ICT) by the government to provide and facilitate government services, exchange of information, communication transactions and integration of various standalone systems and services.

- Global digital governance encompasses the norms, institutions, and standards that shape the regulation around the development and use of these technologies. Digital governance has long-term commercial and political implications.

The four pillars of e-Governance



WHAT ARE THE THREE DOMAINS OF E-GOVERNANCE?

1. E-administration: improving government processes
2. E-services: connecting individual citizens with their government
3. E-society: building interactions with and within civil society.

WHY GLOBAL DIGITAL GOVERNANCE IS IMPORTANT?

- Minimum rights and protections for platform workers: Under the G20, the International Labour Organisation has already placed a proposal in the employment working group for digital labour platforms to develop an international governance system determining minimum rights and protections for platform workers.
- Implementation of central bank digital currency projects: Similarly, on digital money, a reincarnated Bretton Woods is being advocated to address the distrust in private currencies and to coordinate the implementation of central bank digital currency projects.
- Digital taxation: Finally, in the deeply contested area of digital taxation, the OECD facilitated Base Erosion and Profit Shifting (BEPS) negotiations and helped arrive at a global solution.
- Digital sovereignty: The internet is splintering and digital sovereignty is now commonplace; yet, there is no better time for countries to come together and build a framework for global digital governance.

21) Death Penalty: SC moots fair hearing

The Supreme Court has referred to a Constitution Bench the question of how to provide accused in death penalty cases a “meaningful, real and effective” hearing of their mitigating circumstances before a trial judge.

- The term “Capital Punishment” stands for most severe form of punishment.
- It is the punishment which is to be awarded for the most heinous, grievous and detestable crimes against humanity.

SPECIAL FACTORS ON THE DEATH PENALTY JURISPRUDENCE IN INDIA

- (a) Increase in Sexual Offences: The report on death penalty published by NLU Delhi shows that the rate of awarding capital punishment to the offences of rape with murder is much higher than other offences.
- (b) Sedition and waging War against India

SUPREME COURT’S VERDICT IN BACHAN SINGH VS STATE OF PUNJAB (1980):

- This verdict established the doctrine of “rarest of rare” crime in handing down capital punishment while mandating a comparative analysis of aggravating and mitigating circumstances in connection to the accused.
- The judgment laid down that a court must scrutinise both the crime as well as the criminal, and then decide whether death penalty is the only suitable punishment in the facts of the case.

MACHI SINGH VS STATE OF PUNJAB (1983):

- In this case, the Supreme Court elucidated the doctrine of “rarest of rare” and set down some guiding principles in the death sentences cases.
- The aggravating circumstances included the manner in which the crime was committed, motive for committing the crime, severity of the crime, and the victim of the crime.
- The mitigating circumstances consisted of the possibility of reformation and rehabilitation of an accused, his mental health and his antecedents.

Arguments in favor:	Arguments against:
<p>Forfeiture of life: Supporters of the death penalty believe that those who commit murder, because they have taken the life of another, have forfeited their own right to life.</p> <p>Moral indignation of the victim: It is a just form of retribution, expressing and reinforcing the moral indignation not only of the victim’s relatives but of law-abiding citizens in general.</p>	<p>Eye for an eye: Reformative justice is more productive.</p> <p>Deterrence is a myth: Death penalty is not a deterrent to capital crimes state that there is no evidence to support the claim that the penalty is a deterrent.</p> <p>Political tool of suppression: The authorities in some countries, for example Iran and Sudan, use the death penalty to punish political opponents.</p>

Highest form of Justice: For heinous crimes such as the Nirbhaya Gangrape Case, no other punishment could have deterred the will of the convicts.

Deterrent against crime: Capital punishment is often justified with the argument that by executing convicted murderers, we will deter would-be murderers from killing people.

Proportional punishment: The guilty people deserve to be punished in proportion to the severity of their crime.

Prevailing lawlessness: The crimes we are now witnessing cannot be addressed by simple punishments. We are seeing horrific attacks on women, young girls, minority communities and Dalits etc.

Prevention of crime is non-existent: Despite of stringent regulations, it is certainly visible that some crimes can never be prevented in our society.

Reverence for life' principle: Death penalty is an immoral punishment since humans should not kill other humans, no matter the reasons, because killing is killing.

Stigma against killing: With the introduction of lethal injection as execution method, medical professionals participate in executions. Many professionals have now refused to administer such deaths.

Skewed justice systems: In many cases recorded by Amnesty International, people were executed after being convicted in grossly unfair trials, on the basis of torture-tainted evidence and with inadequate legal representation.

Discriminatory nature: The weight of the death penalty is disproportionately carried by those with less advantaged socio-economic backgrounds or belonging to a racial, ethnic or religious minority.

WAY FORWARD:

- The Law Commission of India in its 262nd Report (August 2015) recommended that:
- Death penalty be abolished for all crimes other than terrorism related offences and waging war.
- Measures such as police reforms, witness protection scheme and victim compensation scheme should be taken up expeditiously by the government.

22) The NPT is beginning to look shaky

The Tenth Review Conference of the Parties to the Treaty on the Non-Proliferation of Nuclear Weapons (NPT) concluded in New York.

WHAT ARE THE CONCERNS ARISING OUT OF RUSSIA'S DISAGREEMENT?

- The occupation of the Zaporizhzhia nuclear plant in southeastern Ukraine as well as the takeover of the Chernobyl nuclear plant, scene of the world's worst nuclear disaster in 1986, renewed global fears of another nuclear emergency.

- The NPT is a multilateral treaty aimed at limiting the spread of nuclear weapons including three elements:
- Non-proliferation, Disarmament, Peaceful use of nuclear energy.
- The treaty was signed in 1968 and entered into force in 1970.
- The Treaty does not affect the right of state parties to develop, produce, and use nuclear energy for peaceful purposes.
- India is one of the only five countries that either did not sign the NPT or signed but withdrew.
- It represents the only binding commitment in a multilateral treaty to the goal of disarmament by the nuclear-weapon States.
- Nuclear-weapon states parties under the NPT are defined as those that manufactured and exploded a nuclear weapon or other nuclear explosive devices before 1st January, 1967.

- The threat of nuclear weapons use today is higher than at any time since the heights of the Cold War and the deteriorated international security environment.
- This NPT conference represents a missed opportunity to strengthen the treaty and global security by agreeing to a specific action plan with benchmarks and timeframes to effectively address the growing dangers of nuclear arms racing and nuclear weapons use.

WEAKNESS:

- Consensus document: Since 1970, when the NPT entered into force, only four of the 10 review conferences have concluded with a consensus document.

- Differences among members: the United States, the United Kingdom and Russia were earlier always on the same page, but now Russia has adopted a different point of view.
The difference in 2022 was that it pitched Russia against the West.
- No discussions: No meaningful discussions or negotiations on nuclear disarmament have ever taken place in the NPT framework.
- Withdrawal from ABM treaty: S withdrew from the 1972 Anti-Ballistic Missile (ABM) Treaty in 2002 on the grounds that it unduly constrained its missile defence activities.
- US withdrawal from INF: In 2019, the U.S. decided to quit the Intermediate-Range Nuclear Forces (INF) Treaty.
- It had obliged both the US and Russia to get rid of all ground-launched missiles with a range of 500-5,500 km.

SUCCESS:

- Talks between the US and Russia: Arms control talks between the U.S. and Russia did take place and succeeded in bringing collective arsenals from about 65,000 in the early 1980s to less than 12,000
- Four countries have tested and developed nuclear arsenals: In the last 50 years, only four more countries have gone on to test and develop nuclear arsenals — India, Israel, North Korea and Pakistan, despite apprehensions that by the 1980s, there would be close to 25 nuclear powers.
- Reagan-Gorbachev declaration: All that the five nuclear-weapon-states parties to the NPT reiterated at the conference., the 1985 Reagan-Gorbachev declaration that ‘a nuclear war cannot be won and must never be fought’.

WHAT ARE THE OTHER TREATIES AND AGREEMENTS RELATED TO NUCLEAR WEAPON?

- The Treaty Banning Nuclear Weapon Tests in the Atmosphere, In Outer Space and Under Water, also known as the Partial Test Ban Treaty (PTBT).
- Comprehensive Nuclear-Test-Ban Treaty (CTBT): India has not signed the CTBT as India is a strong advocate for a time-bound disarmament commitment from nuclear weapon states (NWS) and may use the lack of a commitment as a reason to refrain from signing the CTBT.
- The Treaty on the Prohibition of nuclear weapons (TPNW): It entered into force on 22 January 2021 and India is not a member of this treaty.
- Nuclear Suppliers Group(NSG): India is not a member of the NSG.
- The Missile Technology Control Regime.

23) Weighing Quad Against SCO

When the Ukraine crisis began, Indian observers and officials pointed out that New Delhi would prefer not to take sides partly because its priority was elsewhere — China. Today, in the context of the SCO meeting, this decoupling appears difficult to sustain.

QUAD AS A RESULT OF CHINESE ASSERTIVENESS:

- The launch of the Quad was a reaction to China’s assertiveness in the region.
- The Chinese threat has been largely responsible for shaping New Delhi’s Indo-Pacific policy.
- India’s growing apprehensions had become palpable after the launch of the Belt and Road Initiative and the growing presence of China in India’s neighbourhood — as evident from China’s investments not only in Pakistan and Myanmar but also in Nepal and Sri Lanka. In this context, India felt encircled.
- India agreed to upgrade the Quad meetings at the ministerial level only after the Galwan attack in which 20 Indian soldiers were killed in 2020.

MULTILATERALISM BY INDIA:

- India was not comfortable with the anti-Chinese stand of the Americans — the ambivalence was a result of the desire not to alienate the country’s big neighbour.
- While the India-US rapprochement in the Indo-Pacific seemed to be more necessary than ever vis-à-vis China, India continued to believe in plurilateralism.
- A longstanding trilateral with Russia and China now coexists with one involving the US and Japan.

- The idea, here, is to “engage competing powers like the US, China, the EU or Russia at the same time”.
- India stands in favour of a multipolar world where the plurality of power centres would allow her to play one pole against the other.

COUNTERING WESTERN HEGEMONY:

- The stand on a multipolar world goes together with India’s reservations against the West’s past hegemony and the international order that got established after 1945.
- The West has imposed on the world norms that need to be dismantled: The key to Western durability till now is the set of institutions and practices that it progressively but firmly established in the period of its dominance.
- These are supported by narratives that serve the West well while diminishing its competitors.
- To get rid of the multilateral institutions shaped by the West in 1945 — or to control them — is also the objective of India’s regional partnerships like BRICS and SCO.

WHY RUSSIA MATTERS TO INDIA?

- Defence:
- India cannot free itself from Russian dependence in terms of military equipment — when more than two-thirds of its weapons come from Russia (or have been conceived in Russia), including sophisticated ones like the S-400.
- But overcoming this dependence may be on India’s agenda if, true to its plurilateral doctrine, it aims mostly at diversifying its supply.
- Balance China:
- New Delhi is keen to remain a partner of Russia to balance China — isolated, Moscow may be tempted to get even closer to China.

DOES THE WEST NEED INDIA MORE THAN INDIA NEEDS THE WEST?

WEAKENING RUSSIA:

- Western sanctions weaken Russian sanctions to such an extent that Moscow not only turns to Beijing but also fails to deliver some of the weapons India needs.
- And if Russia fails to win the Ukraine war, this pole will be so low that China will be the only non-western power that will matter.

CHINA’S POLICY VIS-À-VIS INDIA:

- While New Delhi had immediately come to the rescue of Colombo by offering some financial help after Sri Lanka got almost bankrupt, its pressure could not prevent its neighbour from welcoming a Chinese surveillance ship at the Hambantota port.
- If China continues to put this kind of pressure on India, New Delhi may need the Quad more than some of the SCO countries.

24) Live-Streaming of the Supreme Court’s Proceedings

Recently, the Supreme Court (SC) decided to live stream its proceedings in crucial Constitution Bench cases that will be heard from 27th September, 2022.

- Background: The Supreme Court in *Swapnil Tripathi vs Supreme Court of India (2018)* had ruled in favour of opening up the apex court through live-streaming.
- It held that the live streaming proceedings are part of the right to access justice under Article 21 (Protection of Life and Personal Liberty) of the Constitution
- Gujarat High Court was the first high court to livestream court proceedings followed by Karnataka high court.

SET OF GUIDELINES APPROVED BY SUPREME COURT

- The Supreme Court approved a set of guidelines suggested by the A-G, which included allowing transcripts and archiving the proceedings.

- The A-G suggested that the court must retain the power to withhold broadcasting, and also not permit it in cases involving:
- Matrimonial matters,
- Matters involving interests of juveniles or the protection and safety of the private life of the young offenders,
- Matters of National security,
- To ensure that victims, witnesses or defendants can depose truthfully and without any fear. Special protection must be given to vulnerable or intimidated witnesses. It may provide for face distortion of the witness if she/he consents to the broadcast anonymously,
- To protect confidential or sensitive information, including all matters relating to sexual assault and rape,
- Matters where publicity would be antithetical to the administration of justice,
- Cases which may provoke sentiments and arouse passion and provoke enmity among communities.

LIVE STREAMING OF PROCEEDING IN OTHER COUNTRIES:

- United States of America: While the US Supreme Court has rejected pleas for broadcast of its proceedings, it has since 1955 allowed audio recording and transcripts of oral arguments.
- Australia: Live or delayed broadcasting is allowed but the practices and norms differ across courts.
- Brazil: Since 2002, live video and audio broadcast of court proceedings, including the deliberations and voting process undertaken by the judges in court, is allowed. A public television channel, TV Justiça, and a radio channel, Radio Justiça, were set up to broadcast video and audio. Separately, dedicated YouTube channels hold discussions and commentaries on the judicial system, apart from broadcasting proceedings live.
- Canada: Proceedings are broadcast live on Cable Parliamentary Affairs Channel, accompanied by explanations of each case and the overall processes and powers of the court.
- South Africa: Since 2017, the Supreme Court of South Africa has allowed the media to broadcast court proceedings in criminal matters, as an extension of the right to freedom of expression.
- United Kingdom: In 2005, the law was amended to remove contempt of court charges for recording proceedings of the Supreme Court. Proceedings are broadcast live with a one-minute delay on the court’s website, but coverage can be withdrawn in sensitive appeals.

<p>Advantages:</p> <p>Broadcasting court proceedings is a step in the direction of transparency and greater access to the justice system.</p> <p>Litigants can view their lawyer’s presentation and access the same.</p> <p>Without coming to court from far-flung areas, litigants can view live proceedings in the comfort of their place.</p> <p>Fewer Interruptions, raised voices, adjournments etc., by the lawyers can be avoided.</p> <p>Live streaming of court proceedings will be of academic help.</p> <p>Live streaming of court proceedings will also help in legal research.</p> <p>Impugned orders and judgements can be avoided.</p>	<p>Issues:</p> <p>There are concerns around the impact of live streaming both on judges and the people watching the proceedings.</p> <p>Video clips of proceedings from Indian courts are already on YouTube and other social media platforms with sensational titles and little context, such as “HIGH COURT super angry on army officer”.</p> <p>There are fears that irresponsible or motivated use of content could spread disinformation among the public.</p> <p>Control of unauthorised reproduction of the proceedings by the cyber-criminals will be challenging on the part of the Government.</p> <p>Indications already exist that snippets of the judicial process, once available in the public domain, are already open to both sensationalism and disinformation.</p> <p>Videos shared through WhatsApp which take a clip of a few seconds clip from a question/observation by a judge or</p>
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Cost-effective.

lawyer and make propaganda videos, often demonising the professional.

WAY FORWARD:

- Court proceedings' live streaming is a part of the right to access justice. Transparency reimburses the faith of the public in the judiciary.
- But, Careful selection of cases for live streaming, and not uploading archived streams on the SC website until it is legally/technologically possible to ensure that such videos cannot be spliced is important.
- These precautionary steps will ensure that live streaming enriches constitutionalism across the country.
- A hasty and wholesale introduction on the other hand is likely to land the SC right in the middle of the majoritarian and toxic information swamp that prevails in the country.

25) Freeing the Central Bureau of Investigation(CBI) and ED

CBI

- It is the premier investigating police agency in India.
- It was set up by a resolution of the Ministry of Home Affairs in 1963 after Santhanam committee recommendation.
- It functions under the Department of Personnel, Ministry of Personnel, Pension & Public Grievances, Government of India.
- Functioning: The CBI's functioning is governed by the Delhi Special Police Establishment (DSPE) Act, 1946, and therefore it must mandatorily obtain the consent of the State government concerned before beginning investigations into a crime in any other State.
- The consent of the State government can be either case-specific or general.

ISSUES IN FUNCTIONING OF CBI

- In May 2013, as multiple corruption scandals dogged the UPA government, the Supreme Court made an observation about the Central Bureau of Investigation (CBI) that has stuck to the agency ever since.
- A Bench headed by Justice R M Lodha described the CBI as "a caged parrot speaking in its master's voice"
- The observation was made in the context of government interference in the functioning of the CBI in its investigation of the coal blocks allocation cases.
- Political Interference: The Supreme Court of India has criticised the CBI by calling it a "caged parrot speaking in its master's voice", due to excessive political interference in its functioning.
- It has often been used by the government of the day to cover up wrongdoing, keep coalition allies in line and political opponents at bay.
- Overlapping Agencies: A single incident these days gets investigated by multiple agencies, often leading to dilution of evidence, contradiction in depositions, prolonged incarceration of innocents.
- Acute shortage of personnel: A major cause of the shortfall is the government's sheer mismanagement of CBI's workforce, through a system of inefficient, and inexplicably biased, recruitment policies - used to bring in favoured officers, possibly to the detriment of the organisation.
- Limited Powers: The powers and jurisdiction of members of the CBI for investigation are subject to the consent of the State Government, thus limiting the extent of investigation by CBI.
- Restricted Access: Prior approval of Central Government to conduct inquiry or investigation on the employees of the Central Government, of the level of Joint Secretary and above is a big obstacle in combating corruption at higher levels of bureaucracy.

ABOUT ENFORCEMENT DIRECTORATE (ED)

- Whenever any offence is registered by a local police station, which has generated proceeds of crime over and above ₹1 crore, the investigating police officer forwards the details to the ED.

- Alternately, if the offence comes under the knowledge of the Central agency, they can then call for the First Information Report (FIR) or the chargesheet if it has been filed directly by police officials. This will be done to find out if any laundering has taken place.

WHAT ARE THE OTHER ROLES AND FUNCTIONS OF THE ED?

- The ED carries out search (property) and seizure (money/documents) after it has decided that the money has been laundered, under Section 16 (power of survey) and Section 17 (search and seizure) of the PMLA.
- On the basis of that, the authorities will decide if arrest is needed as per Section 19 (power of arrest).
- Under Section 50, the ED can also directly carry out search and seizure without calling the person for questioning.
- It is not necessary to summon the person first and then start with the search and seizure.
- If the person is arrested, the ED gets 60 days to file the prosecution complaint (chargesheet) as the punishment under PMLA doesn't go beyond seven years.
- If no one is arrested and only the property is attached, then the prosecution complaint along with attachment order is to be submitted before the adjudicating authority within 60 days.
- If an ill-gotten property is acquired before the year 2005 (when the law was brought in) and disposed off, then there is no case under PMLA.
- But if proceeds of the crime were possessed before 2005, kept in storage, and used after 2005 by buying properties, the colour of the money is still black and the person is liable to be prosecuted under PMLA.

ALLEGATIONS AGAINST ED

- Huge discretions: The ED is the only Central agency in the country that does not require permission from the government to summon or prosecute politicians or government functionaries for committing economic offences like money laundering.
- Used for petty crimes: PMLA is pulled into the investigation of even "ordinary" crimes and assets of genuine victims have been attached.
- Actual purpose denigrated: PMLA was a comprehensive penal statute to counter the threat of money laundering, specifically stemming from the trade in narcotics.
- Violations of Rights: PMLA was enacted in response to India's global commitment to combat the menace of money laundering. Instead, rights have been "cribbed, cabined and confined".
- Functional opacity: There is also a lack of clarity about ED's selection of cases to investigate. We often see ED raiding houses of opposition parties suddenly.
- Poor rate of conviction: We have hardly read the conclusion of cases by ED. Meantime media-trial tears off the accused person's credibility which is the most desired intent.
- Under-trials and slower prosecution: ED has been focusing on keeping the accused in custody rather than actually proving the charges against them.

HOW LAW ENFORCEMENT CAN BE IMPROVED?

- Creation of Independent Umbrella Institution: CJI proposed to bring various central agencies like the CBI, Enforcement Directorate and the Serious Fraud Investigation Office under one roof.
- This organisation should be headed by an independent and impartial authority, appointed by a committee akin to the one which appointed the CBI Director.
- The CJI said one additional in-built safeguard is to have separate and autonomous wings for prosecution and investigation, to ensure total independence.
- A reasonable check and balance would be a provision in the proposed law for annual audit of the institution's performance by the appointing committee.
- Harmonious Relationship between the States and Centre: With the police and public order under the State list, and the burden of investigation is primarily on the State police.
- The State agencies must be equipped to deal with increasing challenges in the field of investigation.
- The proposed Central law for the umbrella investigative body, can be suitably replicated by the States.

- Bringing Gender Parity: There was a need for adequate representation of women in the criminal justice system.
- Bringing Social Legitimacy: The need of the hour is to reclaim social legitimacy and public trust and the first step to gain the same is to break the nexus with the political executive.
- Criminal Justice System Reforms: There is need to implement long overdue Police Reforms and dealing with huge pendency of cases.

26) Scandinavian social democracy

Within socialism, social democracy is a left-wing political, social, and economic theory that promotes political and economic democracy. It is defined as a policy regime that supports economic and social interventions to advance social justice inside the framework of a liberal-democratic polity and a mixed economy that is capitalist-oriented.

- A dedication to representative and participatory democracy
- mechanisms for income redistribution
- management of the economy in the public interest
- social welfare policies

THE 'EXCEPTIONAL' SCANDINAVIAN MODEL

- In the Scandinavian countries, on the other hand, the systems are more akin to typical “social democracies” —
- reliance on representative and participatory democratic institutions where separation of powers is ensured;
- a comprehensive social welfare schema with emphasis on publicly provided social services and investment in child care, education, and research among others, that are funded by progressive taxation;
- presence of strong labour market institutions with active labour unions and employer associations which allow for significant collective bargaining, wage negotiations and coordination besides an active role in governance and policy.
- All these countries also follow a capitalist model of development, allowing for entrepreneurship and funding of welfare policies through a large degree of wage taxation in relation to corporate taxes.

SUCCESS OF THE NORDIC COUNTRIES:

- The commonalities in the Scandinavian countries — Norway, Sweden, Denmark, Finland, and Iceland — on many of these counts are measurable.
- For example, among countries in the Organisation for Economic Cooperation and Development (OECD) (featuring most high-income countries in the world), Iceland, Denmark, Sweden, Finland, and Norway have the highest proportion of the workforce belonging to trade unions.
- Education is free in all the Nordic States; health care is free in Denmark and Finland and partially free in Norway, Sweden, and Iceland ;
- workers get several benefits — from unemployment insurance to old age pensions, besides effective child care. Therefore, labour participation rates in these countries are among the highest in the world (even among women).
- The five Nordic nations rank in the top 10 among OECD countries in government expenditure on health and education if calculated as percentage of GDP.
- India can take a cue from the Nordic model since the State needs to find employment for its youth as well as provide welfare support to its vast section of vulnerable population.



WAY FORWARD:

- One key reason for the thriving social democratic model in the Nordic countries has been their relatively smaller and more homogenous populations enabling focused governance.
- The “corporatist” model of involving interests of both capital and labour, mediated by the government at many levels, has allowed these countries to transition from agrarian to industrial to post-industrial (in some cases) and knowledge/service economies relatively smoothly.
- Thus, the Nordic model of social democracy offers lessons to the developing world, including countries like India despite the myriad complexities of diversities, differential internal development, and histories.

27) G4 countries call for UNSC reforms

- The G4 nations, comprising Brazil, Germany, India, and Japan are four countries which support each other’s bids for permanent seats on the United Nations Security Council.
- Their primary aim is the permanent member seats on the Security Council.
- Each of these four countries have figured among the elected non-permanent members of the council since the UN’s establishment.
- Their economic and political influence has grown significantly in the last decades, reaching a scope comparable to the permanent members (P5).

Little Satisfaction

On January 1, India began its tenure as non-permanent member of the powerful 15-nation UN organ for 2021-22 term

- India, Norway, Kenya, Ireland and Mexico join non-permanent members Estonia, Niger, Saint Vincent and the Grenadines, Tunisia and Vietnam and the five permanent members in the Council for **2021**

- India will be UNSC President in **August 2021** and will preside over the Council again for a month in **2022**. The presidency of the Council is held by each member in turn for one month, following the English alphabetical order of the member states’ names

- On **June 17**, India was elected to the UN Security Council with **184** of the total **192** votes. A member country needs two-thirds majority of votes in the General Assembly to become a non-permanent member. This is the eighth time India has been elected as a non-permanent member

- The UNSC has 15 members and five of them (P5) — US, UK, Russia, China and France — are permanent members with veto rights

- The ten elected or non-permanent members have a tenure of two years and no veto rights. This makes them a toothless grouping

THE G4 CASE

- By **1992**, India, Brazil, Germany, and Japan staked their claims demanding inclusion as permanent members

- India has been part of UN since inception, has the world’s second-largest population, is the world’s largest democracy and has contributed maximum peacekeepers to UN

- Brazil is the largest country in Latin America (unrepresented continent) and fifth largest in the world

- Japan and Germany are one of the largest financial donors to the UN

- Besides G4 countries, South Africa (largest economy in African continent) is also a claimant, as the continent remains unrepresented on high table of permanent members

- The roadblock is that Articles **108** and **109** of the United Nations Charter grant **P5** veto over any amendments to the Charter, requiring them to approve of any modifications to the UNSC veto power, that they themselves hold

- So even if one member of **P5** doesn’t agree to any reform, the UNSC cannot be reformed

DETERRENT IN THEIR CAUSE

- The UK and France have backed the G4’s bid for permanent seats.
- All the permanent members of P5 have supported India’s bids for permanent seat.
- However, China has previously implied that it is only ready to support India if it does not associate its bid with Japan.
- The US has sent strong indications to Brazil that it is willing to support its membership; albeit, without a veto.

WHAT HOLDS THEM BACK?

- There has been discontent among the present permanent members regarding the inclusion of controversial nations or countries not supported by them.
- For instance, Japan’s bid is heavily opposed by China, North Korea, Russia and South Korea who think that Japan needs to make sincere reparations for war crimes committed during World War II.

- Under the leadership of Italy, countries that strongly oppose the G4 countries' bids have formed the Uniting for Consensus movement, also called as Coffee Club.
- In Asia, Pakistan opposes India's bid.

WHY INDIA DESERVES A PERMANENT SEAT?

- India has been part of UN since inception.
- It has the world's second-largest population and is the world's largest democracy suited to represent South Asia.
- It has contributed maximum peacekeepers to UN so far.

WHY REFORM UNSC?

- Non-representative nature: UNSC in current form is not representative of developing world and global needs, with primacy of policy being political tool in hands of P5, is well recognised globally.
- Contention over Veto and Technical Holds: Veto power with P5 enables any one of them to prevent the adoption of any "substantive" draft Council resolution, regardless of its level of international support.
- Divided institution: UNSC has become an organisation, which can pass strong resolutions against weak countries, weak resolutions against strong countries and no resolution against P5 countries.

There is a possibility that if UN doesn't reform itself, it may lose relevance and alternate global and regional groupings may assume greater importance.

More global pressure from middle powers like G4 may force an expansion of UNSC as a possibility, but abolition of veto power in current set up is unlikely.



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28) Cybercrime on the rise

According to the National Crime Records Bureau (NCRB), from 12,317 cases of cybercrime in 2016, there were 50,035 cases registered in 2020.

REASONS FOR INCREASING CYBER ATTACKS IN INDIA

- Increasing dependency on technology: In India, cybercrime is increasing with the increased use of information and communication technology (ICT). Growing digital reliance in the post-COVID era has exposed digital disparities .
- Limited capacity enforcement agencies: the capacity of the enforcement agencies to investigate cybercrime remains limited. India's approach to cyber security has so far been ad hoc and unsystematic.
- With 'police' and 'public order' being in the State List, the primary obligation to check crime and create the necessary cyber infrastructure lies with States. At the same time, with the IT Act and major laws being central legislations, the central government is no less responsible to evolve uniform statutory procedures for the enforcement agencies.
- Lack of International Coordination: International cooperation and consensus is missing in this field.
- No procedural code : There is no separate procedural code for the investigation of cyber or computer-related offences.
- Shortage of technical staff :there have been half-hearted efforts by the States to recruit technical staff for the investigation of cybercrime.
- A regular police officer, with an academic background in the arts, commerce, literature, or management may be unable to understand the nuances of the working of a computer or the Internet.
- Low digital literacy among the general public and digital gaps amongst nations create an unsustainable environment in the cyber domain.

GOVERNMENT INITIATIVES TO TACKLE CYBER CRIME IN INDIA

- Banning of unsafe apps: India had banned apps that posed a threat to security.
- The Indian Computer Emergency Response Team (CERT-In): It operates as the national agency for tackling the country's cybersecurity, and has helped in lowering the rate of cyber attacks on government networks.
- Indian Cyber Crime Coordination Centre (I4C): To act as a nodal point in the fight against cybercrime, To prevent misuse of cyber space for furthering the cause of extremist and terrorist groups
- National Critical Information Infrastructure Protection Centre (NCIIPC): It is a central government establishment, formed to protect critical information of India, which has an enormous impact on national security, economic growth, or public healthcare.
- Cyber Swachhta Kendra: Cyber Swachhta Kendra helps users to analyse and keep their systems free of various viruses, bots/ malware, Trojans, etc.Launched in early 2017.
- Cyber Surakshit Bharat: It was launched by the Ministry of Electronics and Information Technology (MEITY) in 2018 with an aim to spread awareness about cybercrime and building capacity for safety measures for Chief Information Security Officers (CISOs) and frontline IT staff across all government departments.

WAY FORWARD

- Upgrade cyber labs: the cyber forensic laboratories of States must be upgraded with the advent of new technologies.
- The central government has proposed launching a digital rupee using blockchain technology soon.
- State enforcement agencies need to be ready for these technologies.
- Need for localisation: Most cyber crimes are trans-national in nature with extra-territorial jurisdiction. The collection of evidence from foreign territories is not only a difficult but also a tardy process. Therefore, 'data localisation' must

feature in the proposed Personal Data Protection law so that enforcement agencies are able to get timely access to the data of suspected Indian citizens.

29) What is the idea of Climate Reparation?

Facing the worst flooding disaster in its history, Pakistan has begun demanding reparations, or compensation, from the rich countries that are mainly responsible for causing climate change.

- At its heart, the demand for compensation for loss and damage from climate disasters is an extension of the universally acknowledged “Polluter Pays” principle.
- This makes the polluter liable for paying not just for the cost of remedial action, but also for compensating the victims of environmental damage caused by their actions.
- Climate justice is based on the notion of not being punished for someone else’s bad behaviour, but it does not sanction additional bad behaviour.

WHY NEED CLIMATE REPARATIONS?

- While the impact of climate change is global, it is much more severe on the poorer nations because of their geographical locations and weaker capacity to cope.
- Countries that have had negligible contributions to historical emissions and have severe limitations of resources are the ones that face the most devastating impacts of climate change.
- A country like India, currently the third largest emitter, accounts for only 3% of historical emissions.
- China, which is the world’s biggest emitter for over 15 years now, has contributed about 11% to total emissions since 1850.
- The United States and the European Union, including the UK, account for over 50% of all emissions during this time.
- Historical responsibility is important because carbon dioxide remains in the atmosphere for hundreds of years, and it is the cumulative accumulation of carbon dioxide that causes global warming.

INSTITUTIONAL MECHANISM FOR CLIMATE REPARATIONS

The UN Framework Convention on Climate Change (UNFCCC), the 1994 international agreement that lays down the broad principles of the global effort to fight climate change.

It explicitly acknowledges this differentiated responsibility of nations.

It makes it very clear that rich countries must provide both the finance and the technology to the developing nations to help them tackle climate change.

It is this mandate that later evolved into the \$100 billion amount that the rich countries agreed to provide every year to the developing world.

While this promise is yet to be met, this \$100 billion per year amount is not meant for loss and damage.

Warsaw International Mechanism (WIM)

The WIM for Loss and Damages, set up in 2013, was the first formal acknowledgment of the need to compensate developing countries struck by climate disasters.

However, the progress on this front has been painfully slow.

No funding mechanism, or even a promise to provide funds, has come about

ISSUES WITH LOSS ASSESSMENT

- There are practical difficulties in estimating how much a country has actually suffered due to the actions of others.
- To begin with, it has to be established that the disaster was caused by climate change.
- Then there are non-economic losses as well, including loss of lives, displacement and migration, health impacts, and damage to cultural heritage.
- Then there is this other step about assessing how much of the losses are due to the event itself, and what could be attributed to misgovernance.

A lot of background work is going on to create the framework in which it would be possible to quantify the compensation due to an affected country.

What Pakistan has done, through its demands for reparations, is to call attention to this often neglected aspect.

30) India's growing water crisis

- UNESCO report : The UNESCO United Nations World Water Development Report of 2022 has encapsulated global concern over the sharp rise in freshwater withdrawal from streams, lakes, aquifers and human-made reservoirs, impending water stress and also water scarcity being experienced in different parts of the world.
- FAO: The new Water Report of the Food and Agriculture Organisation of the United Nations (FAO) sounded a note of caution about this silent crisis of a global dimension, with millions of people being deprived of water to live and to sustain their livelihood.

INDIAN SCENARIO

- India has only four per cent of the world's freshwater resources.
- The Global Drought Risk and Water Stress map (2019) shows that major parts of India, particularly west, central and parts of peninsular India are highly water stressed and experience water scarcity.
- A NITI Aayog report, 'Composite Water Management Index' (2018) has sounded a note of caution about the worst water crisis in the country, with more than 600 million people facing acute water shortages.

IMPACTS

- Sectoral and regional competition: The typical response of the areas where water shortage or scarcity is high includes transfer of water from the hinterlands/upper catchments or drawing it from stored surface water bodies or aquifers. This triggers sectoral and regional competition; rural-urban transfer of water is one such issue of global concern.
- Issue of water transfer: South Asia, including India, falls in the category of high biophysical and the highest socio-economic risks.
- Urban water use : According to Census 2011, the urban population in India accounted for 34% of total population. Water use in the urban sector has increased as more and more people shift to urban areas, and per capita use of water in these centres rises, which will continue to grow with improved standards of living.
- City water supply is now a subject of inter-basin and inter-State transfers of water.
- Dependence on groundwater: It continues particularly in the peri-urban areas in almost all large cities that have switched to surface water sources. While surface water transfer from rural to urban areas is visible and can be computed.
- Disputes : Whatever be the source, surface or groundwater, cities largely depend on rural areas for raw water supply, which has the potential to ignite the rural-urban dispute.
- At present, the rural-urban transfer of water is a lose-lose situation in India as water is transported at the expense of rural areas and the agricultural sector; in cities, most of this water is in the form of grey water with little recovery or reuse, eventually contributing to water pollution.
- Burden on women : Fetching water in India has been perceived as a women's job for centuries, especially in the rural areas. As groundwater resources come under increasing pressure due to over-reliance and unsustainable consumption, wells, ponds and tanks dry up. This has escalated the water crisis and placed an even greater burden of accessing water on women.

INITIATIVES:

•**National Water Policy: National Water Policy (2012):**It has been formulated by the Department of Water Resources, RD & GR, inter-alia advocates rainwater harvesting and conservation of water and highlights the need for augmenting the availability of water through direct use of rainfall.

•**Atal Bhujal Yojana (ABHY):** It is an Rs.6000 crore scheme with World Bank funding, for sustainable management of groundwater with community participation is being taken up in the identified over-exploited and water-stressed areas fall in the States of Gujarat, Haryana, Karnataka, Madhya Pradesh, Maharashtra, Rajasthan and Uttar Pradesh.

•**Master Plan for Artificial Recharge to Groundwater- 2020:** It has been prepared by CGWB in consultation with States/UTs which is a macro-level plan indicating various structures for the different terrain conditions of the country including estimated cost.

•**Central Ground Water Authority (CGWA):** It has been constituted under Section 3 (3) of the “Environment (Protection) Act, 1986” for the purpose of regulation and control of groundwater development and management in the Country.

•**Groundwater legislation:** The Ministry has circulated a Model Bill to all the States/UTs to enable them to enact suitable groundwater legislation for the regulation of its development, which also includes the provision of rainwater harvesting. So far, 19 States/UTs have adopted and implemented groundwater legislation.

In India’s 75th anniversary of Independence, it is time to examine the state of its water resources and ensure that the development process is not in jeopardy.

Water management must go hand-in-hand with vegetation planning to improve the ability of soils to hold water, even in times of intense and prolonged heat.

31) Hydrogen Fuel Cell

Hydrogen (H₂) is an alternative fuel that can be produced from diverse domestic resources.

- It is abundant in our environment and it's stored in water (H₂O), hydrocarbons (such as methane, CH₄), and other organic matter.
- Hydrogen is an energy carrier that can be used to store, move, and deliver energy produced from other sources.
- Hydrogen with its abundance, high energy density, better combustion characteristics, non polluting nature etc. has vast advantages over conventional fuels

APPLICATIONS OF HYDROGEN

- Fuel cell: Hydrogen fuel cell systems are used for generating electricity, in vehicular applications (Fuel cell cars, buses, etc.) and portable devices (Laptops, phones, etc.)
- Direct fuel in internal combustion (IC) engine vehicles: Hydrogen is used as an energy carrier directly in IC engines and turbines in place of fossil fuels or as a blended mixture with fossil fuels.

HYDROGEN PRODUCTION METHODS

GREEN	PURPLE	BLUE	GREY	BLACK
Generally considered as hydrogen produced from the electrolysis of water using renewables as the power source	Hydrogen produced from the electrolysis of water using nuclear as the power source	Produced by the reforming of natural gas into carbon dioxide (CO ₂) and hydrogen, in combination with carbon capture and storage (CCS)	Produced from fossil fuels, using thermal processes like steam-methane reformation and partial oxidation. Emissions of greenhouse gases occur	Extracted from a synthetic gas produced from coal

Note: Hydrogen produced using nuclear power has not been given an established color designation.

Source: Esperis

- Chemical industries, Fertilizer industries, and refineries: Hydrogen is used as a raw material in the fertilizer, chemical and petroleum refining industries as it is a fundamental building block for the manufacture of ammonia

Advantages:

Reduced imports: India is the world's third-largest consumer of oil, for which the country has to depend heavily on oil imports.

- Non-polluting & decarbonising: Hydrogen fuel cell leave only water vapour and heat as emissions and releases no greenhouse gasses.
- Abundance: Hydrogen can be produced locally from numerous sources like methane, gasoline, biomass, coal or water.
- High efficiency: Hydrogen is an efficient energy source, which means that an automobile that utilizes hydrogen energy travels more miles than one with an equal amount of gasoline.
- High energy density: Hydrogen has the highest energy per mass of any fuel, it is 120 MJ/kg, almost three times more than diesel or gasoline.
- Address energy requirement: Hydrogen can provide linkages between energy supply and demand, in both a centralized or decentralized manner, thereby enhancing the overall energy system flexibility.

Issues:

Energy intensive: For e.g. green hydrogen requires a massive expansion of renewable generation to power the electrolysis plants that split water into hydrogen and oxygen.

- Emissions: Natural gas reforming process (methane reforming) to produce grey hydrogen requires a fossil-fuel and emits carbon monoxide and carbon dioxide. Hence, not climate friendly.
- Storage: Hydrogen is also hard to store, for storage it requires compression to 700 times atmospheric pressure, refrigeration to -253 degree Celsius. As well it can embrittle metal and is more explosive.
- Additional costs: In case of centralized production, the cost of hydrogen generation is lower due economies of scale but Transmission & Distribution (T&D) costs are higher, while in decentralised production say at the refuelling station (using on site electrolyser or reformer), the T& D costs are minimized but cost of production is higher.
- Code of standard: The biggest challenge to the commercialization of the hydrogen-based technologies is the requirement of code and standards to get a sort of consistency and encourage deployment.

WAY FORWARD:

- The development of code of standards will help in dealing with Hydrogen vehicles in particular and help in progress of the Hydrogen economy in a smoother way.
- Advanced research and technology developments are necessary to improve the efficiency of fuel cells, tolerant to impurities, use of non-precious metals as catalysts etc.
- Need to develop safe and cost-effective solid-state storage methods using development of carbon nanostructures to achieve the desired storage goals.
- Major R&D programmes should be introduced linking with applications which may have market acceptance.
- The generation of hydrogen from renewable sources should be encouraged and Government should explore policies for subsidizing hydrogen prices generated from renewable sources

32) Mandatory requirements for Packaged Commodities

The Department of Consumer Affairs, Legal Metrology Division has notified a draft amendment to the Legal Metrology (Packaged Commodities) Rules 2011 making some compulsions.

WHAT ARE THE MANDATORY PROVISIONS UNDER THE LEGAL METROLOGY (PACKAGED COMMODITIES) RULES, 2011?

- It is mandatory under the Rules, to ensure a number of declarations, such as the:
- Name and address of the manufacturer/packer/importer,
- Country of origin,
- Common or generic name of the commodity,
- Net quantity, Month and year of manufacture, Maximum Retail Price (MRP) and Consumer care information.
- As a consumer-oriented policy, all pre-packaged commodities should also be inspected.
- Rule 9(1)(a) provides that the declaration on the package must be legible and prominent.
- The consumers' 'right to be informed' is violated when important declarations are not prominently displayed on the package.



WHAT ARE THE PROPOSED AMENDMENTS?

- As many blended food and cosmetic products are sold on the market, the key constituents need to be mentioned on the product packaging.
- Additionally, the front side of the package must contain the percentage of the composition of the unique selling proposition (USP).
- Also, packages displaying key constituents must display a percentage of the content used to make the product.
- The new amendments has suggested that at least two prime components should be declared on the package's front side along with the brand name.
- Currently, manufacturers list the ingredients and nutritional information only on the back of the packaging.
- This declaration must also include the percentage/quantity of the USPs of the product in the same font size as the declaration of the USPs. However, mechanical or electrical commodities are excluded from this sub-rule.

33) Mother Tongue as a medium of instruction

Over the years, there has been a raging debate over the need for children to have their mother tongue as the medium of instruction in schools.

While educationists have emphasised the importance of learning in the mother tongue to enhance a child's learning and overcome glaring inequities, there has been an equally steady demand for English-medium schools in several States.

WHY MOTHER TONGUE IS IMPORTANT?

- Suitability to child: There is an almost-complete consensus among educationists, linguistic experts and psychologists that the mother tongue, or the language of the region where the child lives, is the only appropriate language of learning for the child.
- Incomprehension: A child can be taught any number of languages, particularly later in life, but the medium of learning should be the mother tongue. As a number of classrooms today are stalked by the curse of incomprehension.
- Pressure of English language: There are a growing number of schools, mostly private, that teach in English. Government schools too in States like Tamil Nadu, unable to bear the pressure from parents and to stop students from migrating to private schools, are switching to English medium.
- Development in every way: The mother tongue, home language or the first language educationally means the language which the child is using to connect to the world, to people, to nature, to the environment, and to make sense of everything that's going on. This is the language which helps the child to build, grow and develop in every way.

- Inability to learn: English medium education is a profound tragedy in Indian education today. Millions are languishing because of their inability to learn in English not English as a language but as a medium through which they acquire any knowledge of any subject.

WHY ENGLISH SHOULD BE THE MEDIUM OF INSTRUCTION IN SCHOOLS, COLLEGES?

- Connectivity with The Rest of the World: To communicate and be on par with the world, the first language that stands common is English. With English, a student can remain on par with what is happening across the globe. Lack of English knowledge or alone mother tongue does not allow children to progress with the rest of the world.
- Technologies Can Be Used Only With English Instruction: Most of the modern technologies are invented, reinvented and modernized in foreign shores. The inventors keep the English language for the instruction manual of the technological gadget so that the gadget can be used worldwide.
- Higher Education Emphasizes on The English language: The main focus of teaching medium in higher secondary as well as in graduation and post-graduation colleges in India. There is no doubt that lecturers also teach in Hindi or other regional languages. However, question design comes in both English and regional language. But most of the classes are taught in English.

HOW MULTILINGUAL APPROACH HELPS

- Firstly, multilingualism gives equal status to all languages and there's enough work, history and research on this.
- Second, children come from different backgrounds, and in some cases, they are first-generation learners with not much support at home.
- The multilingual approach thus, is much more flexible, closer to the child, and inclusive. It is democratic, and it accepts that the teacher is not coming from a place of authority and is only correcting spellings and pronunciations.

34) GPS-based toll system to replace FASTag

The government plans to start a GPS-based toll system in place of FASTag to ensure seamless payment and vehicle movement on national highways.

HOW WILL A GPS-BASED TOLLING SYSTEM WORK?

- Vehicles will be fitted with an electronic device that can track their movement.
- Highways will be geo-fenced, creating virtual boundaries. The system will use GPS or radio frequency identification technologies.
- The software will recognize when a mobile device enters or leaves a particular area, and toll will be charged based on the distance travelled at the highway's exit point.
- As the system is based on sensors, there will be no need to stop at toll plazas.
- Vehicles and users must be registered with the GPS toll system, linked to bank accounts that will be used to transfer toll payments.

WHAT ARE FASTAGS?

- FASTags are stickers that are affixed to the windscreen of vehicles and use Radio Frequency Identification (RFID) technology to enable digital, contactless payment of tolls without having to stop at toll gates.
- RFID uses electromagnetic fields to automatically identify and track tags attached to objects.
- The tags are linked to bank accounts and other payment methods.
- As a car crosses a toll plaza, the amount is automatically deducted, and a notification is sent to the registered mobile phone number.

<p>Issues with FASTags</p> <p>Since the card is affixed to the windscreen, it can be easily misplaced, damaged or stolen.</p>	<p>How will GPS benefit highway users?</p> <p>GPS tolling uses satellite-based navigation and requires no halting.</p>
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The existing FASTag system, though faster than cash payments, still requires vehicles to stop at toll booths to enable reading of tags.

Also, the vehicle must wait till the gate is opened.

It has been observed that sometimes the toll fee is deducted twice from user account. Mostly, this happens due to a technical glitch.

Some card readers take longer time to read and register. Hence the purpose of saving time is itself defied.

Still, the wait time at toll booths is much more than the 30 seconds that was promised earlier. Also, it has not helped reduce the number of toll booths.

Also, vehicles can be charged only for their actual travel on a highway stretch.

Currently, toll is paid at toll booths which is fixed between two points of tolling and a user does not get any concession even if he/she exits before completing the full run between two toll plazas.

The new system should reduce the toll amount charged for travel on highways.

The system needs a proper legislative framework, and a full launch is still years away. The government intends to introduce it in phases.

The road ministry is expected to amend the Motor Vehicles Act and create rules to facilitate GPS tolling as well as to penalize offenders.

35) Cheetah Reintroduction in India

Eight animals sourced from Namibia and currently quarantined in South Africa for medical evaluation are expected to arrive in India.

- Reintroduction Action Plan
- 'Reintroduction' of a species means releasing it in an area where it is capable of surviving.
- Under the plan, 50 Cheetahs will be introduced in the different National Parks in the country in a span of 5 years.
- Initially, translocating around 8-12 cheetahs from South Africa, Namibia and Botswana will be done.
- This is the first time in the world that a large carnivore will be relocated from one continent to another.
- The Ministry is coordinating with the National Tiger Conservation Authority (NTCA) as well as the Wildlife Institute of India(WII), which has been spearheading the project on behalf of the Indian government.

How Cheetahs got extinct in India?

The Cheetah is believed to have disappeared from the Indian landscape when the Maharaja Ramanuj Pratap Singh Deo of Koriya is believed to have hunted and shot the last three recorded Asiatic cheetahs in India in 1947.

In 1952, the Indian Government declared the Cheetah extinct in the country.

The only large carnivore till date to have gone extinct in the country, due to a combination of hunting and loss of habitat.

<p>Significance:</p> <p>India as historical Cheetah habitat: The cheetah is the only large carnivore that has been extirpated, mainly by over-hunting in India in historical times.</p> <p>The Cheetah habitat in India historically is from Jammu to Tamil Nadu, very widespread and they were found in any habitat dry forests, grasslands, scrub forest, etc.</p> <p>Pray base: Experts believe that as long as there is enough food and there is protection they will regenerate on their own. A 'prey base' that can sustain the population and that has already been prepared at the Kuno-Palpur sanctuary.</p> <p>Conservation: To conserve threatened species and restore ecosystem functions. Reintroductions of large carnivores have increasingly been recognised as a strategy to conserve threatened species and restore ecosystem functions.</p>	<p>Challenges:</p> <p>Coexistence with tigers and leopards: There may be intra-guild competition between the big cats in Kuno.</p> <p>More aggressive predators such as tigers and leopards will compete with the cheetahs. They may be driven to the outskirts of the park, where they could come into conflict with humans.</p> <p>Locational Challenges of Kuno-Palpur National Park: Different vegetation type: The protected area of Kuno-Palpur National Park is largely dry, deciduous forest.</p> <p>The initial criticism was if the African cheetahs who are more used to the savannahs of that continent adapt well to Kuno.</p> <p>Specific prey base: Indian cheetahs were largely dependent on blackbucks and chinkaras, sometimes on chital and rarely on nilgai. Few of these species are believed to have disappeared from Kuno.</p> <p>Asiatic lion project: Some 24 villages have been relocated and rehabilitated from Kuno for this project. But now, Cheetah reintroduction may delay this project.</p>
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GOVERNMENT'S EFFORTS TO OVERCOME THESE CHALLENGES:

- **Increasing prey base:** To increase prey base inside the 500-hectare enclosure, the Kuno National Park has brought in 238 chitals or spotted deer (*Axis axis*) from Pench and Narsingharh Wildlife Sanctuaries of the state and are planning to bring in around 300 more deer.
- **Gradual coexistence:** Over time, says the action plan by the Centre, cheetah and leopard populations will be able to coexist.
- **Tracking:** The initial batch of cheetahs and their potential offspring will be radio-collared and tracked for at least 10 years.

African Cheetah	Asiatic Cheetah
IUCN status: They are vulnerable under the IUCN Red List.	IUCN status: The Asiatic cheetah is classified as a "critically endangered" species by the IUCN Red List.
Distribution: Around 6,500-7,000 African cheetahs present in the wild.	Status in India: The Asiatic Cheetah was declared extinct in India in 1952.
Characteristics: They are bigger in size as compared to Asiatic Cheetah.	Distribution: They are only 40-50 and found only in Iran.
	Characteristics: Smaller and paler than the African cheetah.

36) De-extinction:

ENGINEERING A NEW WAVE OF WILD

De-extinction, or resurrection biology, reverses plant and animal extinctions by creating new versions of previously lost species.



There are 3 main techniques for species restoration.



1. CLONING

A feasible de-extinction approach for living species close to extinction because the resulting organism is identical. For example, Dolly, the lamb clone, who was born as a result of cloning a female sheep.



The process is suitable for populations where some individuals remain, not those already extinct.

2. BACK-BREEDING

This method works well when the extinct species are closely related to a still-living species.



Quaggas that have been extinct since 1883 for example, are closely related to living zebras. Thus, scientists have bred a "quagga-like" animal that looks similar with the help of DNA and back-breeding.

3. GENOME-EDITING

This technique creates hybrids between living and extinct organisms by manipulating (deleting, replacing, or inserting a DNA sequence) a living organism's genetic material.



For example, Prof George Church at Harvard Medical School aims to create a mammoth by 'editing' mammoth genes into elephant cells.

WIPED OUT!

The limit of DNA survival, which is needed for de-extinction, has a half-life of 521 years, so after 65 million years, it's believed to be completely gone.



That's why dinosaurs have no chance of de-extinction. However, animals that went extinct in recent times like the dodo could be revived.

37) What is the draft Telecom Bill, and what changes it aims to bring?

INDIAN TELECOMMUNICATION BILL, 2022

- The proposed Bill aims to bring in sweeping changes to how the telecom sector is governed, primarily by giving the Centre more powers in several areas to do so.
- The draft Bill consolidates three separate acts that govern the telecommunications sector:
- Indian Telegraph Act 1885
- Indian Wireless Telegraphy Act 1933, and
- The Telegraph Wires, (Unlawful Protection) Act 1950

KEY AMENDMENTS INTRODUCED

- Inclusion of messengers: One of the key changes is inclusion of new-age over-the-top communication services like WhatsApp, Signal and Telegram in the definition of telecommunication services.
- Licensing of telecom services: As per the draft law, providers of telecom services will be covered under the licensing regime, and will be subjected to similar rules as other telecom operators.
- Covering OTT services: This issue has been under contention for several years now with telecom service providers seeking a level-playing field with OTT apps over communication services such as voice calls, messages, etc. Operators had to incur high costs of licences and spectrum, while OTT players rode on their infrastructure to offer free services.

OTHER FOCUS AREAS

- The Centre is also looking to amend the Telecom Regulatory Authority of India Act (TRAI Act) to dilute the sectoral watchdog's function of being a recommendatory body.
- The current TRAI Act mandates the telecom department to seek the regulator's views before issuing a new licence to a service provider.
- The proposed Bill does away with this provision.
- It has also removed the provision that empowered TRAI to request the government to furnish information or documents necessary to make this recommendation.
- Additionally, the new Bill also proposes to remove the provision where if the DoT cannot accept TRAI's recommendations or needs modification, it had to refer back the recommendation for reconsideration by TRAI.

ADDRESSING THE CONCERNS OF TELECOM INDUSTRY

- Insolvency of Telecoms: The DoT has also proposed that if a telecom entity in possession of spectrum goes through bankruptcy or insolvency, the assigned spectrum will revert to the control of the Centre.
- So far, in insolvency proceedings, there has been a lack of clarity on whether the spectrum owned by a defaulting operator belongs to the Centre, or whether banks can take control of it.
- Granting relief: The draft Bill also accords the Centre powers to defer, convert into equity, write off or grant relief to any licensee under extraordinary circumstances, including financial stress, consumer interest, and maintaining competition, among other things.
- Replacing USOF: It also proposes to replace the Universal Service Obligation Fund (USOF) with the Telecommunication Development Fund (TDF).
- USOF is the pool of funds generated by the 5 per cent Universal Service Levy that is charged upon all telecom fund operators on their Adjusted Gross Revenue.
- The USOF has largely been used to aid rural connectivity.
- However, with the TDF, the objective is also to boost connectivity in underserved urban areas, R&D, skill development, etc.

The Universal Service Obligation Fund (USOF) was formed by an Act of Parliament, was established in April 2002 under the Indian Telegraph (Amendment) Act 2003.

It aims to provide financial support for the provision of telecom services in commercially unviable rural and remote areas of the country.

It is an attached office of the Department of Telecom, and is headed by the administrator, who is appointed by the central government.



GS IV

38) Civil Servants and Freedom of Speech

A senior IAS officer from Telangana, tweeted from her personal account in support of Ms. Bano and questioned the Gujarat government's decision of releasing 11 men convicted on charges of gang-raping Bilkis Bano during the 2002 Gujarat riots.

CANNOT COMMENT ON SUCH MATTERS:

- Disciplinary rules. They prevent a government servant from becoming a member of a political organization, or any organization of such a nature, or expressing herself freely with regard to anything that has to do with the governance of the country.
- She is not a stakeholder in the decision-making process.
- Rule 9: No Government servant shall make any statement of fact or opinion, which has the effect of an adverse criticism of any current or recent policy or action of the Central Government or a State Government.

CAN MAKE SUCH COMMENTS:

- Laws by the legislature: A fundamental right cannot be curtailed except by a valid law made by a legislature.
- Lipika Paul v. The State Of Tripura: The court said, a Government servant (the petitioner) is not devoid of her right of free speech, a fundamental right which can be curtailed only by a valid law." Subject to not crossing the borders laid down in the Conduct Rules which were applicable in Tripura.
- Kerala High Court: One cannot be prevented from expressing his views merely because he is an employee.
- Constitutional principles and rule of law: The dharma of the civil servant is to uphold constitutional principles in letter and in spirit and the rule of law.
- In this case, both the spirit of the Constitution and the rule of law were being subverted.

IS IT TIME TO 'UN-GAG' CIVIL SERVANTS WHEN IT COMES TO COMMENTING ON GOVERNMENT DECISIONS?

- Government officers are given only one way of encouragement to say good things in the media. They do not have the liberty as of today to say what is bad.
- In a democracy, everybody has a right to express his or her opinion, a right to object, a right to dissent. The same thing stands true for an IAS officer that he or she may have a right to dissent.
- Creating more transparency about policies through social media is the duty of a government officer which has to be taken on a case-by-case basis.
- We need to make a differentiation between what is something that's going to hurt society, hurt the Constitution, and the rule of law.

39) New trends in work culture

WHAT IS WORK CULTURE?

- Attitudes, beliefs and behaviours that make up the regular atmosphere in a work environment are what we all know as work culture.
- Quiet quitting, Quiet firing, moonlighting, Hustle culture, Eighteen-hour work debate and work-life balance have appeared frequently in the past few months.

QUIET QUITTING:

- Quiet quitting refers to employees doing the bare minimum required of them.
Eg. leaving work exactly at the end of one's shift, demanding additional pay for extra work, and/or setting clear work-life boundaries.

REASONS FOR QUIET QUITTING:

- Changing work culture: The pandemic introduced many challenges that both increased what is demanded of employees, and allowed them to reimagine what alternative work systems could look like.
- Impact of Remote Work: increased the number of hours employees spend working, thus contributing to increased levels of burnout.
- Apathetic attitude of employers: Dissatisfaction among employees who believe their managers have little concern for employee welfare.

MOONLIGHTING:

- Moonlighting is the act of working at an extra job beyond regular working hours, usually without the knowledge of the employer. Since the side job was mostly at night time or on weekends, it was referred to as moonlighting.

WHY DO PEOPLE MOONLIGHT?

- Earn more money: The main reason for going above and beyond an existing job is earning more money.
- Learn new skills: working in a different role can allow a person to develop new skills, explore related domains and connect with more people.
- Why are employers not happy?
- Employers are suspicious of this practice often because it can mean that a worker may not give their organisation the time it needs, and not give any extra time to either organisation.
- Hustle culture is defined as one that encourages employees to work more than normal working hours.
- Work is on their minds even when they have free time or on holidays.
- The major requirement of this culture is to complete a job on target at a faster pace than usual.



WHY IS IT IMPORTANT TO HAVE A WORK-LIFE BALANCE?

- Siddhartha S, an author of 5 books — '60 Keys to Success with NLP', 'Thank God it's Monday', and many others suggest:
 - Work-life balance is critical
 - Put health before wealth
 - Devise an incentive system if you want employees to work extra hours
 - Success has different meanings for different people: Economic success is not the only yardstick to measure the success of human life.
 - Entrepreneur and employee mindsets are different: If an employee has to work 70+ hours for a basic salary, then it is not a great idea. The employee may as well take the entrepreneurship path where there is an opportunity to create a company and to keep the profits.

Prelims Booster

3.9.22

1) Anti-radiation pills: Potassium iodide (KI) tablets, or anti-radiation pills, are known to provide some protection in cases of radiation exposure. They contain non-radioactive iodine and can help block absorption, and subsequent concentration, of radioactive iodine in the thyroid gland.

- The thyroid gland, which uses iodine to produce hormones to regulate the body's metabolism, has no way of telling radioactive from non-radioactive iodine. Potassium iodide (KI) tablets rely on this to achieve 'thyroid blocking'.

2) Grievance Redressal Index: it has been published by the Department of Administrative Reforms and Public Grievances (DARPG).

- In this report, the Unique Identification Authority of India (UIDAI) has topped amongst all Ministries/ Departments for resolving Public Grievances.
- The UIDAI has been a top performer in resolution of cases received through the Centralized Public Grievance Redress and Monitoring System (CPGRAMS).

3) Jigyasa 2.0: Jigyasa, a student-scientist connect programme by CSIR in collaboration with Kendriya Vidyalaya and is aimed at connecting school students and scientists so as to extend students' classroom learning with that of a very well-planned research laboratory-based learning.

- Ministry of S&T recently organized Jigyasa 2.0 for the renewable fuel program

4) India becomes the world's 5th largest economy: Top Economies in the World 1. The United States 2. China 3. Japan 4. Germany 5. India 6. The United Kingdom 7. France 8. Italy.

- The calculation is based on US dollars (current prices), and India extended its lead in the first quarter, according to GDP figures from the International Monetary Fund.
- Indian economy is forecast to grow more than 7% this year

5) Scheme for promotion of Bulk Drug Parks: Centre has approved BDPs for Himachal Pradesh, Gujarat and Andhra Pradesh

- A bulk drug (or active pharmaceutical ingredient (API)) is the key ingredient of a drug or medicine, which lends it the desired therapeutic effect or produces the intended pharmacological activity.
- E.g. Paracetamol (acts against pain) – It is a bulk drug, as it is mixed with binding agents to produce a paracetamol tablet, capsule or syrup.
- BDP: Launched in 2020 by the Union Ministry of Chemicals and Fertilizers, with the aim to develop 3 mega BDPs and reduce India's dependence on China for APIs.
- The grant-in-aid will be 90% of the project cost in the case of North-East and hilly States and 70% in the case of other States (up to a maximum of Rs 1000 crore per BDP).

5.9.22

1) Hanle Dark Sky Reserve: The Department of Science & Technology (DST) has announced the setting up of India's first dark sky reserve at Hanle village in Ladakh, as a part of Changthang Wildlife Sanctuary. The dark sky reserve will also be known as the 'Night Sky Sanctuary'.

- It will be one of the world's highest-located sites for optical, gamma ray and infrared telescopes.
- Designation - The International Dark Sky Association (U.S.-based non-profit) designates places as International Dark Sky Places, parks, sanctuaries and reserves, depending on the criteria they meet.
- Hanle is regarded as one of the world's most optimal sites for astronomical observations.
- The cloudless skies and low atmospheric water vapour make it one of the world's best sites for optical, infrared, sub-millimetre, and millimetre wavelengths.

2) Inflatable Aerodynamic Decelerator: ISRO has successfully tested the Inflatable Aerodynamic Decelerator technology on a Rohini-300 (RH300 Mk II) sounding rocket from the Thumba Equatorial Rocket Launching Station.

- IAD is a technique used for an atmospheric entry payload. An inflatable envelope and an inflatant (anything that inflates the envelope, like air or helium) make up the IAD.

- The IAD serves to decelerate an object plunging down through the atmosphere. It systematically reduced the velocity of the payload through aerodynamic drag.
 - The IAD technology could aid cost-effective recovery of spent rocket stages and safely land payloads on other planets.
- 3) Kurki:** Kurki means attachment of a farmer's land, already pledged to the money lending institution or individual, in case of a loan default.
- Kurki orders are executed under Section 60 of Civil Procedure Code, 1908.
 - The land which is pledged by the farmer to the bank or money lender gets registered in their name.
- 4) Nano Urea:** Nano urea is a patented and indigenously made liquid (developed and patented by IFFCO) that contains nanoparticles of urea, the most crucial chemical fertiliser for farmers in India.
- A single half-litre bottle of the liquid can compensate for a 45kg sack of urea that farmers traditionally rely on.
 - Normally, three seasons of independent assessment by the Indian Council of Agricultural Research (ICAR) is required for approving a new fertiliser, but in the case of nano urea, this was reduced to two.
- 5) Cyber Surakshit Bharat Initiative:** aims to ensure awareness about cybercrime and adequate safety measures for Chief Information Security Officers (CISOs) and frontline IT staff across all government departments.
- The purpose of the Cyber Surakshit Bharat is to spread awareness, build capacity as well as enable government departments on steps that need to be taken to create a resilient IT set up.
 - Cyber Surakshit Bharat is first public-private partnership of its kind.
 - It will leverage the expertise of the IT industry in cybersecurity.

6.9.22

- 1) Gemini North Telescope:** The Gemini North telescope in Hawai'i captured this brilliant image of a pair of spiral galaxies interacting as they clash and merge into each other.
- The Gemini North Telescope is one of the twin telescopes at the International Gemini Observatory, Maunakea, Hawai'i.
 - This optical/infrared telescope is operated by the US National Science Foundation's (NSF)
 - This telescope was built to take advantage of the superb atmospheric conditions on this long-dormant volcano that rises about 4214 meters into the dry, stable air of the Pacific.
 - Since 2002 Gemini North has also been known as the Frederick C. Gillett Gemini North telescope.
- 2) Ramon Magsaysay Award:** Launched in 1958, the Ramon Magsaysay Award, widely considered to be Asia's equivalent to the Nobel Prize, recognises outstanding leadership and communitarian contributions in Asia.
- Recognises and honours individuals and organisations in Asia, regardless of race, creed, gender, or nationality, who have achieved distinction and have helped others generously without aiming for public recognition.
 - Former Kerala health minister K K Shailaja has declined her nomination for the 2022 Ramon Magsaysay Award
- 3) PM-SHRI Yojana:** It is a centrally sponsored scheme for upgradation and development of more than 14500 Schools across the country.
- It aims at strengthening the selected existing schools from amongst schools managed by Central Government/ State/ UT Government/ local bodies.
 - These schools will be equipped with modern infrastructure including labs, smart classrooms, libraries, sports equipment, art room etc. which is inclusive and accessible.
 - These schools shall also be developed as green schools, Focus will be on achieving proficiency in learning outcomes of every child in every grade.
- 4) Rule Curve:** Rule Curve is a tabulation that specifies quantum of storage of water or empty space to be maintained in a reservoir during different times of a year, based on the rainfall data for 35 years.
- The rule curve also decides on fluctuating storage levels of the reservoir.
 - It is also the deciding factor on the opening of the reservoir gates.
 - The rule curve is set by the Central Water Commission and during the monsoon, the number is fixed every 10 days once, based on the water level present.

5) Digital Rape: The term should not be taken to its face value rather it has a different literal meaning. Literally, it refers to the insertion of a digit (Finger, toe) into the private parts of the victim under physical or psychological force without the consent of the victim.

- Note: In the English dictionary, the finger, thumb and toe are addressed as 'digit' and hence the act has been named as 'digital rape'.
- Digital rape was classified as sexual offence after 2012 Nirbhaya gang-rape incident. It was differentiated as molestation till then and now it comes under the ambit of rape definition as per the Indian laws.

7.9.22

1) iNCOVACC: The iNCOVACC is India's first nasal COVID-19 vaccine. It has been developed by Bharat Biotech.

- It is a ChAd36-SARS-CoV-2 COVID-19 (Chimpanzee Adenovirus Vectors) recombinant vaccine.
- The iNCOVACC serves as an instrument for primary immunisation against Covid-19 in adults in the 18+ age group and it is meant for restricted use in emergencies only.
- For the time being, it can be administered only to the unimmunised.

2) WEST - An I-STEM Initiative: Recently, a new I-STEM (Indian Science Technology and Engineering facilities Map) initiative called Women in Engineering, Science, and Technology (WEST) was launched.

- Through the WEST initiative, I-STEM shall provide a separate platform to women researchers, scientists, and technologists for pursuing research in basic or applied sciences in areas of science and engineering.
- Women may join the WEST program and become stakeholders in various domains and pursue careers in R&D at various levels: technicians, technologists, scientists, and entrepreneurs.

3) India's External Debt: As per the External Debt management Unit (under Dept. of Economic Affairs), India's external debt rose to US\$ 620.7 bn (Six hundred twenty point seven) as on March 2022 (an increase of over 8% compared to the previous year)

- A country's gross external debt is the liabilities that are borrowed from outside the country and have to be paid back in the same currency.
- The debtors can be governments, corporations or citizens. External debt may be denominated in domestic or foreign currency. (Most of India's external debt is linked to the U.S. dollar).

4) Global Alliance for Industry Decarbonization (GAID): IRENA (Int'l Renewable Energy Agency) along with major companies (including Tata Steel) have launched GAID with the aim to accelerate net-zero ambitions and decarbonization of the industrial value chains.

- The term decarbonization literally means the reduction of carbon.
- The International Renewable Energy Agency is an intergovernmental organization mandated to facilitate cooperation, advance knowledge, and promote the adoption and sustainable use of renewable energy.
- India is the 77th Founding Member of IRENA.

5) Floppy Disks: Decades after the floppy disks became obsolete and were phased out globally, Japan has announced that it will finally do away with floppy disks and other outdated technology in a bid to modernise its bureaucracy.

- A floppy disk is a removable disk storage device used to store electronic data, like computer data and programmes.
- It is only able to store about 800 KB of data, which is about 0.0008 GB.
- Early computers did not have CD-ROM drives or USB; floppy disks were the only way to install a new program on a computer or back up your information from a computer.

8.9.22

1) Einstein Ring: An Einstein ring is a ring of light created when light from a galaxy, star or other light-emitting cosmic objects passes near a massive object before it reaches the Earth, or in this case, the Webb telescope. The Einstein ring is also known as the Chwolson ring.

- When this happens, gravitational lensing causes the light to get diverted and if the source, lens and the observing element are all in perfect alignment, this light appears as a ring.

- So, the ring itself not a real physical structure in space, but just a play of light and gravity, a result of the gravitational lensing effect.

2) Inouye Solar Telescope: The Daniel K Inouye Solar Telescope (DKIST) is located at the Haleakala Observatory on the Hawaiian island of Maui.

- The DKIST was set up by the US National Science Foundation (NSF).
- According to the NSF, the Inouye Solar Telescope is the most powerful solar telescope in the world. Its insights will transform how we predict and prepare for events like solar storms.

3) UNESCO Global Network of Learning Cities: The Indian cities, Nilambur and Thrissur in Kerala, have gained recognition from UNESCO after they became the nation's first entrants in the UNESCO Global Network of Learning Cities along with Telangana's second largest city, Warangal.

- In the year 2022, 77 cities from 44 countries of the world including India have been included in this list.
- Launched in 2013, the UNESCO Global Network of Learning Cities (GNLC) is an international policy based network. It aims to ensure the development of all learning cities by sharing ideas and arts with other cities
- The network supports the achievements of all 17 Sustainable Development Goals (SDGs), but primarily focused on SDG 4 ('Ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all) and SDG 11 (making human habitats sustainable, inclusive, safe).

4) Emergency Credit Line Guarantee Scheme (ECLG Scheme): It is a part of the Aatmanirbhar Bharat Abhiyan package (announced in May 2020)

- It provides fully guaranteed and collateral-free additional credit to MSMEs, business enterprises, MUDRA borrowers and individual loans for business purposes to the extent of 20% of their credit outstanding as of 29th February 2020.
- In an indication of the continuing distress in the MSME sector, one in every six loans disbursed under the ECLG Scheme launched as part of the Covid-19 relief package in May 2020 has turned bad.

5) Foundational Learning Study (FLS) survey: FLS survey by the Ministry of Education and NCERT has revealed that 11% of Class 3rd students lack basic maths skills and about 37% lack basic skills in maths

- Foundational learning forms the basis of all future learning and includes two main pillars – foundational literacy and foundational numeracy which a child is expected to acquire by Grade 3.
- It takes a one-to-one interview with each child and then assesses their learning skills. It is different from the National Achievement Survey (wherein learning outcomes are tested for students of classes 3, 5,8 and 10 using MCQ).

9.9.22

1) Human Development Index 2021: The HDI released by the UNDP in its Human Development Report.

- It measures average achievement in three basic dimensions of human development, A long and healthy life, Access to education and A decent standard of living.
- It is calculated using the following four indicators
Life expectancy at birth, Mean years of schooling, Expected years of schooling, and Per capita Gross National Income.
- Findings - Switzerland, Norway and Iceland topped the HDI 2021.
- India ranked 132nd among 191 countries and territories on the HDI 2021-2022. Last year, the country ranked 131.

2) Climate Tipping Elements: Climate tipping elements are certain large-scale systems on Earth that are essential for its sustenance.

- There are certain thresholds of these elements known as 'tipping points', beyond which even a slight change in them can become unstoppable, leading to catastrophic consequences.
- Of the 16, nine are 'core tipping elements' affecting the climate of the Earth in general.
- The remaining seven were categorized as 'regional tipping elements' that had an impact on the climate of various regions but could also interact with climate elements from other regions. The Amazon rainforest is an example of a core tipping element while the west African monsoon is considered to be a regional tipping element.

3) India's Sex Ratio Improves: An analysis of the 5th National Family Health Survey 2019-2021 (NFHS-5) showed that the sex ratio is 108 boys per 100 girls.

- This is an improvement from 111 boys in 2011, where it had been for two decades.

- However, the study prepared by the Pew Research Centre has revealed that there is still some room for improvement as the ratio was 105 boys per 100 girls in 1950.

4) Spent Nuclear Fuel: Spent nuclear fuel, also called used nuclear fuel, is the fuel that has undergone a reactor campaign and is no longer useful for sustaining the nuclear fission chain reaction in a thermal reactor.

- Spent fuel discharged from a power reactor contains residual ²³⁵U and converted plutonium, as well as fission-product and transuranic wastes.
- Spent nuclear fuel is highly radioactive and potentially very harmful. Spent fuel is dangerous because it contains a mixture of fission products, some of which can be long-lived radioactive waste, and also plutonium which is highly toxic. This necessitates remote handling and shielding.

5) Qimingxing-50: China's first fully solar-powered unmanned aerial vehicle, Qimingxing-50, or Morning Star-50, has successfully completed its maiden test flight with all onboard systems functioning optimally.

- The high-altitude, long-endurance (HALE) UAV can stay airborne for long durations.
- Flies above 20-km altitude where there is stable airflow with no clouds.
- Helps these drones to make the maximum use of solar equipment to stay functional for extended durations. In fact, the drone can operate without a break for months, even years.

10.9.22

1) The Gender Snapshot 2022: The Gender Snapshot 2022 report was launched by UN Women and the UN Department of Economic and Social Affairs (UN DESA).

- It displayed that Sustainable Development Goal 5 (SDG-5), or achieving gender equality, will not be met by 2030 at the current pace of progress.
- 286 years will be needed to achieve full gender equality at current rate of progress.

2) Shumang Leela: Shumang Leela (courtyard play) is a Manipuri theatrical art form developed in the 19th-20th century.

- It descended from Lai Haraoba, a ritual of the Meitei community.
- Shumang leela is performed to live music by either an all-male cast (who play women's roles too) or an all-women cast (who play men's roles too) called nupi shumang leela, and occasionally transgenders too.

3) BPAL Treatment: The BPAL is a 6-month, all-oral three-drug regimen that is used to treat people with highly drug-resistant forms of TB.

- This regimen consists of three antibiotics - Pretomanid (newest anti-TB drug), Bedaquiline and Linezolid.
- The BPAL regimen has been developed by TB Alliance, a non-profit organization
- BPAL will reduce the TB treatment time drastically from 18 months to 6 months.
- Facts - India has the world's highest TB burden: 2.6 million active cases.

4) EWS Quota: A Constitution Bench led by the Chief Justice of India finalized three cardinal issues for examining whether the 103rd Constitutional Amendment violates the Basic Structure of the Constitution.

- Economic criteria: Whether the amendment breaches the Basic Structure by permitting the state to make special provisions, including reservation, based on economic criteria.
- Admissions: Whether it violates the Basic Structure by allowing the state to make special provisions in relation to admissions to private unaided institutions
- Excluding SC/ST/OBC: Whether the Basic Structure is trampled upon by the constitutional amendment by excluding SEBC/OBC/SC/ST communities from the scope of the EWS quota.

5) Kirit Parikh Committee: The Ministry of Petroleum and Natural Gas has set up a committee under noted energy expert Kirit Parikh to review the current gas pricing formula.

- The panel has been asked to recommend a fair price to end consumers and also suggest a "market-oriented, transparent and reliable pricing regime for India's long-term vision for ensuring a gas-based economy".

12.9.22

1) The Indira Gandhi Urban Employment Guarantee Scheme: rolled out in Rajasthan

- Objective: Providing economic support to the poor and needy families living in the cities through work to be provided on demand for 100 days a year.
 - Eligibility: Age group of 18 to 60 years residing within the limits of urban local bodies are eligible. There is no income limit, though the poor and destitute people will be given preference.
- 2) Trees Outside Forests (TOF) in India Initiative:** It was launched by MoEFCC and USAID with the aim to expand tree coverage outside of traditional forests by 28 lakh hectares.
- In India, FSI has defined TOF as “All trees growing outside recorded forest areas irrespective of the size of the patch”.
 - Implementation: In seven states through a partnership between farmers, companies and private institutions.
 - Trees outside forests (TOF) in India, mainly growing on private land, are the main source of wood in the country for industry and domestic wood fuel. The total forest and tree cover of the country is 24.62 per cent of the geographical area of the country.
- 3) IPEF Ministerial:** It is the US-led economic grouping of 14 countries in the Indo-Pacific region, intended to counter Chinese aggressive and non-transparent trade and economic policies.
- Members: Four QUAD countries, South Korea, New Zealand, Fiji and seven out of the ASEAN members (see map)
 - The IPEF framework has four pillars: Supply-chain resilience, Clean energy, decarbonisation & infrastructure, Taxation & anti-corruption (anti-corruption, anti-money laundering and tax), and Fair & resilient trade (strong labour and environment standards etc.)
 - India has joined three out of four pillars related to supply chains, tax and anti-corruption and clean energy, but didn't join the “Fair and resilient trade” pillar
- 4) Taragiri:** This is the third in the line of four frigates under project 17A to be made by Mazagon Dock Shipbuilders Ltd. (MDL) in Mumbai.
- Project 17A: Started in 2015, it involves the building of seven stealth frigates
 - Of these seven, the contract for three frigates was awarded to GRSE (Kolkata) while four frigates was awarded to Government-owned Mazagon Docks Limited (MDL)
 - Frigates are usually used as escort vessels to protect sea lines of communication or as an auxiliary component of a strike group whereas destroyers are generally integrated into carrier battle groups as the air defence component or utilised to provide territorial air and missile defence.
- 5) Swachh Vayu Diwas:** In order to raise awareness of pollution, the 3rd International Day of Clean Air for Blue Skies (“Swachh Vayu Neel Gagan”) or “Swachh Vayu Diwas” was organized under NCAP (National Clean Air programme).
- NCAP (launched in 2019) aims to bring a 20-30% reduction in pollution levels from PM2.5 and PM10 particles by 2024 from 2017 levels as a base.
 - Implementation by CPCB in over 132 most polluted cities.

13.9.22

- 1) Index Funds:** An index fund is a type of mutual fund or exchange-traded fund (ETF) with a portfolio constructed to match or track the components of a financial market index, such as the S&P's 500 Index.
- An index fund is a portfolio of stocks or bonds designed to mimic the composition, returns, and performance of a financial market index. For example, a Nifty 50 Index Fund will replicate the Nifty50 index.
- 2) AT-1 Bonds:** Additional Tier-1 bonds (AT-1 bonds) are a type of unsecured perpetual debt instrument. They are used by the banks to augment their core equity base and thus comply with Basel III norms.
- AT-1 bonds are like any other bonds issued by banks and companies, but pay a slightly higher rate of interest compared to other bonds.
 - These bonds are also listed and traded on the exchanges. So, if an AT-1 bondholder needs money, he can sell it in the secondary market.
 - Investors cannot return these bonds to the issuing bank and get the money. i.e there is no put option available to its holders. However, the issuing banks have the option to recall AT-1 bonds issued by them (termed call options that allow banks to redeem them)
- 3) PM Matsy Sampada Yojana (PMMSY):** Ministry: Fisheries, Animal Husbandry and Dairying

- Timeline: FY 2020 to 2025, Approach: 'Cluster or Area based approaches' and many new interventions such as fishing vessel insurance, Aquaculture in saline/alkaline areas, Sagar Mitras, FFPOs, Nucleus Breeding Centres, etc.
- Key targets: Enhance fish production by an additional 70 lakh tonnes by 2024-25.
- Increase fisheries export earnings to Rs.1,00,000 crore by 2024-25.
- Reduce post-harvest losses from 20-25% to about 10%.
- Generate additional 55 lakhs of direct and indirect gainful employment opportunities in the fisheries sector and allied activities.

4) Mantle plume: Mantle plume is an upwelling of abnormally hot rock within the earth's mantle which carries heat upward in narrow, rising columns, driven by heat exchange across the core-mantle boundary.

- Eventually, the rising column of hot rock reaches the base of the lithosphere, where it spreads out, forming a mushroom-shaped cap to the plume.
- Heat transferred from the plume raises the temperature in the lower lithosphere to above melting point, and forms magma chambers that feed volcanoes at the surface. It is a secondary way through which earth loses heat.

5) Red-Eared Slider Turtles: The red-eared slider is primarily aquatic and will emerge from the water for basking on rocks and logs.

- When basking, red-eared sliders commonly pile on top of each other, and when startled by the sound or sight of a potential predator, they will slide off their basking spot back into the water, hence their name, "slider." The red-eared slider is native to South-Eastern USA and Mexico.
- Protection Status: IUCN Red List: Least Concern, CITES: N/A, Wildlife Protection Act 1972: N/A

15.9.22

1) CRISPR: Its mechanism is often compared to the 'cut-copy-paste', or 'find-replace' functionalities in common computer programmes. A bad stretch in the DNA sequence, which is the cause of disease or disorder, is located, cut, and removed — and then replaced with a 'correct' sequence.

- In 2021: India approved a five-year project to develop this technology to cure sickle cell anaemia which mainly afflicts the tribal populations of the country.

2) FINTECH incentive Scheme (FIS) 2022: International Financial Services centres Authority (IFSCA) has launched a scheme to provide financial support to FinTech activities.

- Aim: To promote the establishment of world-class fintech centres at GIFT city (Gujarat)
- Incentive: grants for start-ups, proof of concept, sandbox, green FinTech, Accelerator etc.
- FinTech, or financial technology, is a term used to describe any new technology that aims to improve and automate the use and delivery of financial services.
- An IFSC caters to customers outside the jurisdiction of the domestic economy. Such centres deal with flows of finance, financial products and services across borders.
- Currently, GIFT-IFSC is the maiden international financial services centre in India.

3) National List of Essential Medicines (NLEM): The National List of Essential Medicines (NLEM) is a list released by the Ministry of Health and Family Welfare.

- The medicines listed in the NLEM are sold below a price ceiling fixed by the National Pharmaceutical Pricing Authority (NPPA).
- In India, it was framed on the lines of the Essential Medicines List (EML) released by the WHO.
- A drug is deleted from the list if it gets banned in India. Also, it is removed if reports of concerns about drug safety emerge. If medicine with better efficacy or favourable safety profile and better cost-effectiveness is now available, then it is removed from NLEM.

4) NPPA: NPPA was constituted by the Government of India in 1997 as an attached office of the Department of Pharmaceuticals (DoP), Ministry of Chemicals & Fertilizers as an independent Regulator for pricing of drugs and to ensure availability and accessibility of medicines at affordable prices.

- It was made to fix/revise prices of controlled bulk drugs and formulations and to enforce price and availability of the medicines in the country, under the Drugs (Prices Control) Order, 1995-2013 (DPCO).

- As per the Drugs (Prices) Control Order 2013, scheduled drugs, about 15% of the pharma market, are allowed an increase by the government as per the WPI (Wholesale Price Index) while the rest 85% are allowed an automatic increase of 10% every year.
- The annual change in prices of scheduled drugs is controlled and rarely crosses 5%.
- Under the Drugs and Cosmetics Act 1940, the drugs are classified in schedules and regulations are laid down for their storage, display, sale, dispensing, leveling, prescribing etc.

5) Extended reality (XR) is an umbrella term referring to all real-and-virtual combined environments and human-machine interactions generated by computer technology and wearables.

16.9.22

1) Cabinet approves addition of four tribes: The Union Cabinet under the chairmanship of the Prime Minister has approved the addition of four tribes to the list of Scheduled Tribes.

- Tribes included:
- Hatti tribe(Trans-Giri area of Sirmour district in Himachal Pradesh)
- Narikoravar(hill tribe of Tamil Nadu)
- Kuruvikaran(hill tribe of Tamil Nadu)
- Binjhia(Chhattisgarh)

2) Damodaran to head the committee to boost PE/VC investments: The Finance Ministry constituted an expert committee headed by former SEBI chief M. Damodaran to examine and suggest appropriate measures to address regulatory issues to scale up investments by venture capital (VC) and private equity (PE).

- Private equity is an alternative investment class that invests in or acquires private companies that are not listed on a public stock exchange.
- Venture capital (VC) is a form of private equity and a type of financing that investors provide to startup companies and small businesses that are believed to have long-term growth potential.

3) India's first commercial satellite broadband service: Hughes Communications India (HCI) in collaboration with the Indian Space Research Organization (ISRO) officially launched its first high throughput satellite (HTS) broadband internet service in the country.

- From northeast to desolate parts of Leh and Ladakh, the company, using ISRO's Ku-band capacity of GSAT-11 and GSAT-29 satellites has promised to deliver high-speed satellite broadband services to remote locations across India.
- High-throughput Satellite differs from a conventional satellite in the sense that it increases capacity when using the same amount of orbital spectrum while simultaneously reducing the cost per bit.

4) Triple dip' La Niña: Triple dip' La Niña phenomenon means that the La Niña phenomenon has occurred for the third consecutive year in the Pacific Ocean.

- The World Meteorological Organisation (WMO) had stated that it is exceptional to have three consecutive years with a la Niña event.
- La Niña is caused by large-scale cooling of the ocean surface temperatures in the central and eastern equatorial Pacific Ocean.
- La Niña is also the opposite of the widely-known El Niño, which only occurs when the Pacific Ocean water is higher than normal.

5) Arattupuzha Velayudha: He challenged the domination of upper castes or 'Savarnas' and brought about changes in the lives of both men and women.

- He was known as the Morning Star of the Kerala Renaissance.
- He also established the first Kathakali Yogam (area-based schools for the classical dance form Kathakali) for the Ezhava community in 1861. He was a master of Kalaripayattu, Kerala's traditional martial arts, which is also considered the oldest of its kind in India.
- Panicker was murdered by a group of upper-caste men in 1874 at the age of 49. This makes him the 'first martyr' of the Kerala renaissance.

17.9.22

1) The Eastern Economic Forum: Russia hosted the seventh Eastern Economic Forum (EEF) Vladivostok. The forum is a platform for entrepreneurs to expand their businesses into Russia's Far East (RFE).

- It was established in 2015 to encourage foreign investments in the RFE.
- The EEF displays: Economic potential, Suitable business conditions, Investment opportunities.
- China is the biggest investor in the region as it sees potential in promoting the Belt and Road Initiative and the Polar Sea Route in the RFE.

2) Indo-Pacific Trilateral Development Cooperation Fund: India and France have agreed to work on the establishment of this fund to support India-based innovators and start-ups in taking their innovation to third countries

- Also, India and France have decided to resume cooperation under the India-France-Australia trilateral mechanism and India-France-UAE Trilateral Framework.

3) SCO tourist and cultural capital: The city of Varanasi has been nominated as the first-ever SCO Tourism and Cultural Capital during the period 2022-2023 at the 22nd Meeting of the Shanghai Cooperation Organization (SCO) Council of Heads of State in Samarkand, Uzbekistan.

- Varanasi is a city on the Ganges river in northern India that has a central place in pilgrimage, death, and mourning in the Hindu world. It is one of the world's oldest continually inhabited cities.
- It was the place where the Benares Gharana form of Hindustani classical music was developed. In the 20th century the Hindi-Urdu writer Premchand and the shehnai player Bismillah Khan were associated with the city.
- India's oldest Sanskrit college, the Benares Sanskrit College, was founded during East India Company rule.

4) E-Baal Nidan Portal: The portal for complaint management for violation of child rights, E-Baal Nidan has been revamped by NCPCR (National Commission for protection of Child Rights)

- NCPCR: Set up in March 2007 under the Commission for Protection of Child Rights Act, 2005.
- It works under the administrative control of the Ministry of Women & Child Development.
- Definition: The Child is defined as a person in the 0 to 18 years age group.

5) International Ozone Day: September 16 is celebrated as national ozone day.

- Theme: Montreal Protocol@35 (as 2022 marks the 35th year of implementation of the Montreal Protocol)
- Under the Vienna Convention (1985), Montreal Protocol (1987) was set up with the aim to cut down 99% of all ozone-depleting substances (ODS) by active collaboration between Governments, Scientists and Industry.
- It remains the only treaty to be ratified by all 198 UN Member States. It achieved universal ratification on September 16, 2009. Hence, September 16 is now commonly known as World Ozone Day. After Montreal Protocol, ODS Chloroflourocarbon (CFCs) was replaced with Hydroflourcarbons (HFCs).
- Even though HFCs don't harm ozone but are extremely potent to cause global warming and therefore under the Kigali amendment (2016), HFCs were replaced as well. India ratified the Kigali amendment in 2021.

19.9.22

1) Colour Revolutions: At the annual Shanghai Cooperation Organisation (SCO) summit, China appealed to the SCO members to cooperate with each other to prevent foreign powers from destabilising their countries by inciting "colour revolutions".

- It refers to a series of uprisings that first began in former communist nations in Eastern Europe since around 2004. But they are also used in reference to popular movements in the Middle East and Asia.
- Most have involved large-scale mobilisation on the streets, with demands for free elections or regime change, and calls for removal of authoritarian leaders.
- Some of the better known "colour revolutions" are: Ukraine's Orange Revolution, Kyrgyzstan's Tulip Revolution, and Tunisia's Jasmine Revolution.

2) PM PRANAM (Promotion of Alternate Nutrients for Agriculture Management Yojana):

- Objectives: To encourage the balanced use of fertilisers in conjunction with biofertilisers and organic fertilisers. To bring down the subsidy burden on chemical fertilisers.
- The scheme will have no separate budget and will be financed through the "savings of existing fertiliser subsidy" under schemes run by the Department of Fertilizers.
- 50% of subsidy savings will be passed on as a grant to the state that saves the money.

- 70% of the grant provided under the scheme can be used for asset creation and The remaining 30% grant money can be used for rewarding and encouraging farmers, panchayats, farmer producer organisations and self-help groups that are involved in the reduction of fertiliser use and awareness generation.

3) KRITAGYA 3.0: Indian Council of Agricultural Research with its National Agricultural Higher Education Project and Crop Science Division is organizing Hackathon 3.0 “KRITAGYA” on promoting ‘speed breeding for crop improvement’.

- The definition of KRITAGYA is KRI for Krishi meaning Agriculture, TA for Taknik meaning Technology and GYA for Gyan meaning Knowledge.
- In this competition, students, faculty and innovators/entrepreneurs from any university/technical institutions across the country can apply and participate in the program as a group.

4) Seed Treaty: Seed treaty or also known as the International Treaty of Plant Genetic Resources for Food and Agriculture (ITPGRFA) is a major legally binding international agreement to conserve, use and manage plant genetic resources.

- It was adopted by FAO in 2001 and came into force in 2004. India is a party to it.
- The Treaty aims at: Recognizes the contribution of farmers to the diversity of crops. Provides access to plant genetic materials; Ensures sharing of the benefits.
- The treaty enables sharing of 64 of our most important crops through an easily accessible global pool of genetic resources.

5) SOVA virus attack: A new banking malware is targeting bank customers using SOVA android Trojan with the ability to harvest usernames and passwords. The malware hides itself within fake android applications displaying logos of legitimate applications like Chrome, Amazon, and NFT (non-fungible token) platforms and deceives users into installing them.

20.9.22

1) Ambedkar Circuit: The Union Tourism and Culture Minister recently announced a special tourist train to cover the “Ambedkar Circuit”.

- Ambedkar Circuit covers Madhya Pradesh’s Mhow, Ambedkar’s birthplace; Nagpur, where he converted to Buddhism; the residence in Delhi where he lived during his last years; and Dadar in Maharashtra, where his body was cremated.
- The Tourism Ministry has drawn up an action plan for various circuits under its Swadesh Darshan scheme.
- Swadesh Darshan Scheme is a Central Sector scheme launched in 2014-15 by the Ministry of Tourism and Culture for the integrated development of theme-based tourist circuits.
- Under the Swadesh Darshan scheme, the Ministry of Tourism provides Central Financial Assistance – CFA to State Governments, Union Territory Administrations for the infrastructure development of circuits.

2) Death penalty: A three-judge Bench led by the Chief Justice of India said the presentation of mitigating factors by an accused to avoid the “extreme penalty of death” was a “valuable right”.

- The mitigating circumstances consisted of: The possibility of reformation and rehabilitation of an accused and His/her mental health and his antecedents.
- Machi Singh vs State of Punjab (1983): Guiding principles for death sentence: In this case, the Supreme Court elucidated the doctrine of “rarest of rare” and set down some guiding principles in death sentence cases.
- Bachan Singh vs State of Punjab (1980): This verdict established the doctrine of “rarest of rare” crime in handing down capital punishment while mandating a comparative analysis of aggravating and mitigating circumstances in connection to the accused.

3) Swachh Sujal Pradesh: Andaman and Nicobar (A&N) Islands have got India’s 1st Swachh Sujal Pradesh certification (by Jal Shakti Ministry). The certification is provided for ensuring 3 things:

- Safe and secure drinking water supply, ODF Plus status, awareness about cleanliness and convergence of schemes.
- All the villages of A&N islands have received Har Ghar Jal Certification.

4) Liveliness of fingerprints: UIDAI has introduced a new security layer for the Aadhaar-enabled Payment System (AePS) to prevent the use of fake fingerprints to fraudulently withdraw money.

- Liveness detection in biometrics is the ability of a system to detect if a fingerprint or face (or other biometrics) is real (from a live person present at the point of capture) or fake (from a spoof artefact or lifeless body part).

5) National Logistics Policy 2022: The National Logistics Policy 2022 was announced for the first time in Union Budget 2020.

- This policy sets the roadmap for developing a more interconnected and tech-driven framework for building cost and operational efficiency in the sector.
- It aims to promote smooth movement of goods across India and boost competitiveness of the Indian goods in the domestic and international markets.
- its focus areas are Integration of Digital System (IDS), Unified Logistics Interface Platform (ULIP), Ease of Logistics (ELOG) and System Improvement Group (SIG).

21.9.22

1) National Assessment and Accreditation Council (NAAC): The NAAC is an autonomous body under the University Grants Commission (UGC).

- It assesses and certifies Higher-level Educational Institutions (HEIs) with gradings as part of accreditation.
- Only higher education institutions that are at least six years old, or from where at least two batches of students have graduated, can apply for NAAC accreditation.
- The accreditation is valid for five years.
- The ratings of institutions range from A++ to C. If an institution is graded D, it means it is not accredited.
- NAAC relies heavily on self-assessment reports of applicant institutions.

2) Kurmi: Kurmis blocked railway tracks in various parts of eastern India demanding Scheduled Tribe (ST) status and inclusion of Kurmali language in the eighth schedule of the Constitution.

- Kurmi is traditionally a non-elite tiller caste in the lower Gangetic plain of India.
- They are present in southern regions of Awadh, eastern Uttar Pradesh and parts of Bihar.

3) Long Range Radio (LoRa): Institute for Development and Research in Banking Technology (IDRBT, an Institute under the RBI) has developed a new low-cost financial network to take banking to remote areas.

- LoRa technology is a wireless modulation technique in the physical layer, allowing long-range communication using a chirp spread spectrum. LoRa technology uses dedicated radios, which are not usually present in end-user devices, limiting interferences from other devices.
- Banks can use this as their own dedicated private network instead of using a third-party network which is presently based either on a satellite link or wired (fibre).

4) Directorate of Enforcement (ED): it is a multi-disciplinary organization mandated with investigation of offences of money laundering and violations of foreign exchange laws.

- It functions under the Department of Revenue of the Ministry of Finance.
- The statutory functions of the Directorate include enforcement of following Acts:
- Conservation of Foreign Exchange and Prevention of Smuggling Activities Act, 1974 (COFEPOSA), Foreign Exchange Management Act, 1999 (FEMA), Prevention of Money Laundering Act, 2002 (PMLA) and Fugitive Economic Offenders Act, 2018 (FEOA):

5) Bench Strength and binding nature of judgments: A Constitution Bench has recently decided that a decision delivered by a Bench of largest strength is binding on any subsequent Bench of lesser or coequal strength.

- The Supreme court stated that the majority decision of a bench of larger strength would prevail over the decision of a bench of lesser strength, irrespective of the number of judges constituting the majority
- Simply put, the court verdict establishes that a 4-3 majority view will overrule a unanimous view of a bench of 5 judges — only because the former is a numerically superior bench.
- Doctrine of Precedence: Under this, courts refer to their older ruling as precedence on related matters. The precedential legitimacy of a larger bench ruling must be considered a thumb rule for stability in the law.

22.9.22

1) Nizam's Sword: Nizam's Sword is an item being set to return to India from the Glasgow Life museums. The sword was purchased in 1905 by General Sir Archibald Hunter

- Nizam's tulwar (sword) is a 14th century ceremonial sword of Indo-Persian design possible from around 1350 CE.
- The sword is shaped like a snake. It has serrated edges and a damascene pattern, with gold etchings of an elephant and tigers.
- The sword was exhibited by Mahbub Ali Khan, Asaf Jah VI, Nizam of Hyderabad (1896-1911) at the 1903 Delhi or Imperial Durbar.

2) Hybrid Propulsion System: The Indian Space Research Organisation (ISRO) has successfully tested a hybrid motor, which will pave way for a new propulsion system for the upcoming launch vehicles.

- Unlike solid-solid or liquid-liquid combinations, a hybrid motor uses solid fuel and liquid oxidiser.
- The motor used Hydroxyl-terminated polybutadiene (HTPB) as fuel and liquid oxygen (LOX) as the oxidiser.
- The use of liquids facilitates throttling (regulated supply of fuel), and the control over the flow rate of LOX enables the re-start capability.
- It is scalable and stackable, potentially paving the way for a new propulsion system for the forthcoming launch vehicles
- The test was supported by ISRO's Liquid Propulsion Systems Centre (LPSC).

3) Shrinkflation: Shrinkflation is the practice of reducing the size of a product while maintaining its sticker price. It is a form of hidden inflation.

- Raising the price per given amount is a strategy employed by companies, mainly in the food and beverage industries, to stealthily boost profit margins or maintain them in the face of rising input costs.
- Shrinkflation is also referred to as package downsizing
- It may refer to a macroeconomic situation where the economy is contracting while also experiencing a rising price level.

4) Dharamshala Declaration: At the National Conference of State Tourism Minister, the "Dharamshala Declaration" was adopted for developing "sustainable and responsible tourism" and positions India as a "global leader in the tourism sector by 2047".

- Tourism's current contribution is 6.8% of the Indian GDP

5) PLI Scheme for Solar Cell Manufacturing: The Union Cabinet on Wednesday cleared a ₹19,500-crore scheme to incentivise the manufacturing of domestic solar cell modules to reduce the industry's reliance on China-made panels.

- This is under the National programme on High-Efficiency Solar PV Modules
- The PLI will be disbursed to firms after they set up their manufacturing units and the money disbursed over five years.
- Nodal body: Ministry of New and Renewable Energy

23.9.22

1) Khader Committee: The M.A. Khader committee on school education was set up by the government against the backdrop of the Right to Education Act to study various aspects of school education from preschool to higher secondary.

- The committee has recommended a change in school timings from 8 am to 1 pm.
- It recommends a comprehensive change in teacher training to address the second generation challenges of education.
- The main recommendation was to unify the classes from first through tenth, higher secondary and vocational higher secondary departments under one directorate.

2) PM-CARES Fund: PM CARES (PM Citizens' Assistance and Relief in Emergency Situation Fund) was launched in 2020, following COVID-19 to combat, and containment and relief efforts against the coronavirus outbreak and similar pandemic-like situations in the future.

- Contribution is voluntary (no budget support). PM is ex-officio Chairman
- Contribution to it qualifies under tax benefits
- It has been created not by law, not by notification. Minimum donation accepted is Rs 10

3) Maharatna Company Status: Power sector-focussed non-banking finance company (NBFC) REC Ltd. has been accorded the status of a 'Maharatna' Central Public Sector Enterprise.

- Incorporated in 1969, REC focuses on power sector financing and development across India.
- It provides financial assistance to state electricity boards, state governments, central/state power utilities, independent power producers, rural electric cooperatives and private sector utilities.
- REC has played a key role in the success of the flagship schemes such as DDUGJY, SAUBHAGYA and is currently the nodal agency for Revamped Distribution Sector Scheme (RDSS).

MAHARATNA	NAVRATNA	MINIRATNA	OTHER PSUs
PSUs with an average annual net profit of over Rs 2,500 crore for three years or average annual net worth of Rs 10,000 crore for three years or average annual turnover of Rs 20,000 crore for three years.	PSUs with a score of 60 (out of 100), based on six parameters such as net profit, net worth and total manpower cost. It must first be a Miniratna and have four independent directors before it can be made a Navratna.	PSUs which have made profits continuously for the last three years or earned a net profit of Rs 30 crore or more in one of the three years. It should have a positive net worth for last three years.	PSUs which are not included in any of the previous three categories.

4) DART Mission: NASA will launch its first planetary defense test mission named the Double Asteroid Redirection Test (DART).

- The DART spacecraft will be launched on a SpaceX Falcon 9 rocket.
- The aim is to test the newly developed technology that would allow a spacecraft to crash into an asteroid and change its course.
- DART will be the first demonstration of the kinetic impactor technique to change the motion of an asteroid in space.
- The target of the spacecraft is a small moonlet called Dimorphos (Greek for "two forms").
- Dimorphos orbits a larger asteroid named Didymos (Greek for "twin").
- DART will also carry a small satellite or CubeSat named LICIAcube (Light Italian CubeSat for Imaging of Asteroids).
- LICIAcube is expected to capture images of the impact and the impact crater formed as a result of the collision.

5) 1st annual Breakthrough Agenda Report 2022: A report on the progress of how countries have aligned their action plan and investment for clean technology commitment to mitigate climate change.

- The Breakthrough Agenda is an unprecedented international clean technology plan to help keep 1.5°C in reach. It provides a framework for countries and businesses to join up and strengthen their actions every year.
- It has been released by the International Energy Agency, the International Renewable Energy Agency and the UN Climate Change High-Level Champions.
- 1st set of agendas came up in COP26 last year (also known as Glasgow Breakthroughs) on sectors such as-
- Power, Road (Zero emission vehicles by 2030), steel (Near-zero emission), Hydrogen (Affordable renewable and low carbon hydrogen globally available by 2030.), Agriculture (Climate-smart, sustainable agriculture by 2030)

24.9.22

1) Fridays for Future: The Fridays for Future (FFF) campaign is a youth-led and youth-organised global climate justice movement that started in 2018, when 15-year-old Greta Thunberg began a school strike for climate.

- These are Global Climate Strikes that focuses on providing a platform for the most affected people and areas (MAPA) to voice their demands.

2) Carbon Dating: Carbon-14 dating or radiocarbon dating is a widely-used method applied to establish the age of organic material, things that once lived.

- The dating method makes use of the fact that the isotope of carbon called C-14, which is radioactive, decays at a rate that is well known.

- The most abundant isotope of carbon in the atmosphere is carbon-12. A very small amount of carbon-14 is also present.
- Carbon-12 is stable and does not decay, while carbon-14 is radioactive.
- Carbon-14 reduces to one-half of itself in about 5,730 years. This is what is known as its 'half-life'.
- Carbon dating cannot be used to determine the age of non-living things, like rocks,

3) Advanced Dvorak Technique (ADT): The Advanced Dvorak Technique (ADT) utilizes longwave-infrared, temperature measurements from geostationary satellites to estimate tropical cyclone (TC) intensity.

- During day time, images in the visible spectrum were used while at night, the ocean would be observed using infrared images.
- The Dvorak technique said to be one of the greatest meteorological innovations, has undergone several advancements since its inception.

4) Special Assistance to States for Capital Investment: The Government of India has launched a Scheme Special Assistance to States for Capital Investment for 2022-23.

- Under this Scheme, financial assistance is provided to the States Governments in the form of a 50-year interest-free loan for capital investment projects.
- Capital investment is the money spent on acquiring assets while revenue expenditure indicates daily operations expenses like salaries and pensions.

5) Swarm drone: Defence Ministry has unveiled the second edition of the 'Mehar Baba' swarm drone competition by the Indian Air Force (IAF) for Indian start-ups.

- Swarm drones consist of a number of drones controlled from the same station and coordinate with each other to complete the mission.
- It will help them develop a swarm drone-based system to detect foreign objects (even of sub-centimetre size) on aircraft operating surfaces.
- Indian Army has inducted Swarm drones into operational use.



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Places in News

- 1) Sentosa Island: Sentosa Island is celebrating golden jubilee year (1972-2022).
 - Sentosa Island is a tiny island off the coast of Singapore.

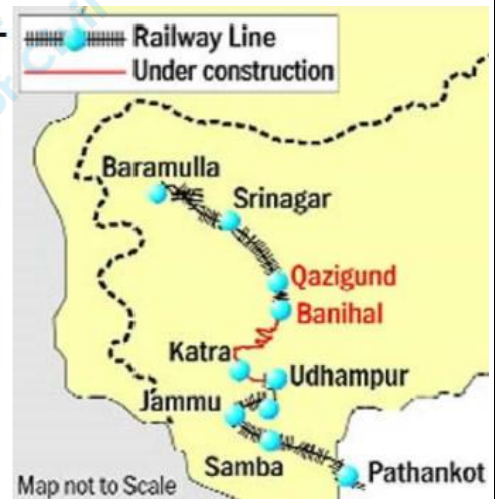
- 2) Chile rejects its new constitution for being too progressive: The 170-page, 388-Article document promised to legalise abortion, provide universal health care, mandate gender parity in government, empower labour unions, and tighten regulations on mining. It also sought to define Chile as a “plurinational” state that would recognise its 11 Indigenous groups, who make up some 13% of the population — they could have their own governing structures and legal systems.



- 3) Vembanad lake: This is the largest lake in Kerala and the longest Lake in India.
 - It is separated from the Arabian Sea by a narrow barrier island and is a popular backwater stretch in Kerala.
 - Vallam Kali (i.e Nehru Trophy Boat Race) is a Snake Boat Race held every year in the month of August in Vembanad Lake.
 - In 2002, it was included in the list of wetlands of international importance, as defined by the Ramsar Convention.
 - It is the second-largest Ramsar site in India only after the Sundarbans in West Bengal.

- 4) Udhampur-Srinagar-Baramulla Rail Link: Udhampur-Srinagar-Baramulla Rail link Project (USBRL) having length of 272 Km long Railway Line from Udhampur to Baramulla joining the Kashmir valley with rest of the country and has been declared as National Project in 2002.

UDHAMPUR-SRINAGAR-BARAMULLA RAIL LINK



- Chenab Bridge: It is the world's highest railway bridge and is part of the Udhampur-Srinagar-Baramulla rail link project (USBRL).

- 5) Uzbekistan: SCO summit held at Samarqand. Babur and other Timurid princes were expelled from Samarkand before coming to India.

- Aral sea: The Aral Sea a landlocked endorheic sea in Central Asia, straddles the boundary. between Uzbekistan to the south and west and Kazakhstan to the north and east.



- 6) Manasbal lake: After a gap of 33 years, Manasbal Lake is once again open for training drills after raging militancy forced the Navy to abandon it.

- It's a freshwater lake with picturesque hills and pristine waters. The Mughal Garden, called the Jaroka Bagh, (meaning bay window) built by Nur Jahan overlooks the lake.
- It is the deepest lake in India and is called the Bird's paradise.

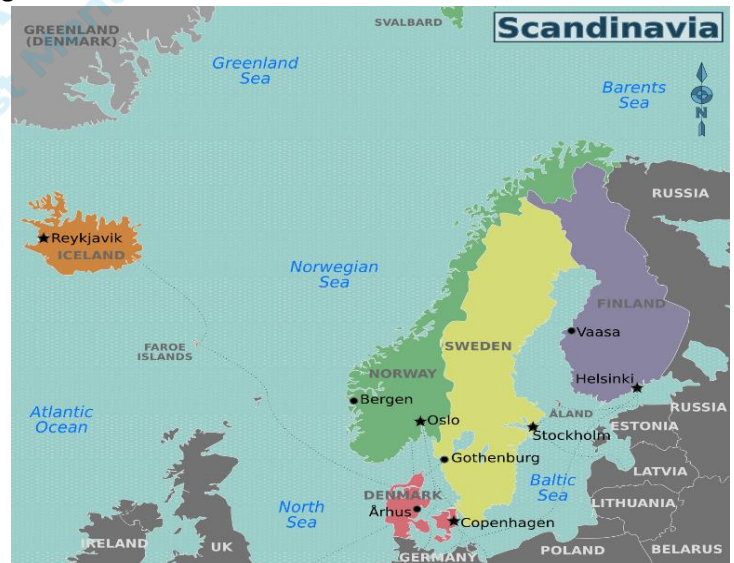
7) Colour revolutions:

- **Orange Revolution:** It refers to a series of protests that occurred in Ukraine between November 2004 and January 2005. The movement was in response to reports from international and domestic observers that claimed that the country's 2004 Presidential election runoff between Viktor Yushchenko, an ally of the West, and then incumbent President Viktor Yanukovich, who was backed by Moscow, was rigged in favour of the latter.
- **Tulip Revolution:** Also called the First Kyrgyz Revolution, the movement led to the ouster of Kyrgyzstan's President Askar Akayev in early 2005. These protests were in response to the parliamentary elections in February, in which Akayev's allies and family members won.
- **Jasmine Revolution:** The popular uprising that occurred between December 2010 to January 2011 in Tunisia was in response to the underlying corruption, unemployment, inflation and lack of political freedoms in the country. The protests not only led to Ali's ouster in January 2011, but also inspired a wave of protests in North Africa and the Middle East, which came to be known as the Arab Spring.



- 8) **Scandinavian Countries:** Norway, Sweden, Denmark are the Scandinavian Countries. Scandinavia is sub-region in Northern Europe covering the Scandinavian Peninsula.

Nordic countries: The Nordic Countries are a group of countries in northern Europe. There are 5 Nordic countries, Denmark, Sweden, Norway, Finland, and Iceland.



- 9) **Vistula spit:** Poland opens Vistula spit canal to bypass Russia in Baltic sea.

10) Kyrgyzstan-Tajikistan Conflict:



Military exercises:

Country	Army	Navy	Air force
Australia	AUSTRA HIND	AUSINDEX	Exercise Pitch Black (biennial)
Japan		JIMEX (biennial, since 2012)	
USA	YUDHABHAYAS	MALABAR	RED FLAG
	VAJRA PRAHAR	RIMPAC (Multilateral)	
France	SHAKTI	'VARUNA	Exercise Desert Knight 21
			Garuda exercise
Bangladesh	SAMPRIITI	Bongosagar	Table Top Ex
UK	AJEYA WARRIOR	KONKAN	INDRADHANUSH
Oman	AL NAGAH	Naseem-Al-Bahr	EASTERN BRIDGE

- 1) Exercise KAKADU (started in 1993)**, is a multilateral regional maritime engagement exercise hosted by the Royal Australian Navy (RAN).

 - Indian navy participates in the Multinational Naval Ex Kakadu, Australia
- 2) INS TARKASH MISSION:** Reinforcing the Indian Navy's commitment to maritime security, INS Tarkash is currently mission deployed in the Gulf of Guinea (GoG) for anti-piracy operations.

 - The exercise marks the first joint operational deployment by India and Nigeria, in support of Anti-piracy operations, in the GoG.
 - INS Tarkash is the second Talwar-class frigate constructed for the Indian Navy. She was built at the Yantar shipyard in Kaliningrad, Russia.

MCQ

1) Consider the following statements:

1. Aadhaar is only a proof of residence and not a proof of citizenship.
2. The Supreme Court in the Lal Babu Hussein case in 1995 states that a person cannot be denied of benefits in case of Aadhaar based authentication failure.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Ans: a) In Lal Babu Hussein Case (1995), the SC had held that the Right to vote cannot be disallowed by insisting only on four proofs of identity.

- Voters can rely on any other proof of identity and obtain the right to vote.
- In Puttaswamy Judgment, the SC held that a person would not be denied of benefits in case Aadhaar based authentication could not take place.
- Also, the Puttaswamy judgment, held that the use of biometric based authentication and verification, did not lead to the creation of a “surveillance state”.
- Moreover, Aadhaar is only a proof of residence and not a proof of citizenship.

2) A negative trade balance with a large current account deficit (CAD) can have which of the following consequences for India?

1. High inflation in the economy
2. Pulling out of FII from the economy
3. Depreciation of the domestic currency

Select the correct answer code:

- a) 1, 3
- b) 1, 2
- c) 1, 2, 3
- d) 2, 3

Ans: c) High CAD results in currency depreciation directly. Currency depreciation can directly feed into inflation. Thus, a high CAD fuels directly into the domestic economy. Along with fiscal deficit, it leads to high inflation in the economy. An overall consequence is that FII and other investors will not find the domestic market worthy enough to invest and pull off from it.

3) Which of the following applications are launched by the National Pharmaceutical Pricing Authority (NPPA)?

1. Aarogya Setu
2. Pharma Sahi Daam
3. Pharma Jan Samadhan
4. Integrated Pharmaceutical Database Management System

Which of the statement(s) given above is/are correct?

- a. 2 and 3 only
- b. 3 and 4 only
- c. 2, 3 and 4 only
- d. 1, 2, 3 and 4

Ans: c) Pharma Jan Samadhan

- It is part of Digital India initiative, which aims at empowering the citizen through a transparent, accountable and responsive governance system.
- It provides the consumer with an effective and time bound grievance redressal system to effectively deal with complaints related to pricing, shortage and non-availability of medicines.
- Pharma Sahi Daam: It is an online search tool for checking prices of Scheduled/Non-Scheduled medicines instantly at the time of purchasing medicines and for searching medicine substitutes.
- Integrated Pharmaceutical Database Management System: IPDMS 2.0 is an integrated, responsive, cloud-based application developed by NPPA with technical support from Centre for Advance Computing (C-DAC).
- It is envisaged to optimise synergies in operations in order to promote the government’s thrust on ‘Ease of Doing Business’. It would provide a single window for submissions of various forms as mandated under Drug Price Control Order (DPCO), 2013.

4) Article 142 of the Indian Constitution, sometimes in news is related to

- a) Appellate jurisdiction of Supreme Court in appeals from High Courts
- b) Measures taken by the Supreme Court to do complete justice.
- c) Original jurisdiction of the Supreme Court
- d) Conferment on the Supreme Court of powers to issue certain writs

Ans : b) Article 142 “provide(s) a unique power to the Supreme Court, to do “complete justice” between the parties, i.e., where at times law or statute may not provide a remedy, the Court can extend itself to put a quietus to a dispute in a manner which would befit the facts of the case.

5) Consider the following statements about Nuclear Matrix:

1. The nuclear matrix is a three-dimensional filamentous protein network, found in the nucleoplasm.
2. It provides a structural framework for organizing chromatin, while facilitating transcription and replication.

Select the correct code

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Ans : c)

6) Consider the following statements:

1. Yellow sea separates China and Korean Peninsula.
2. Sea of Japan separates Japan and China.

Which of the above statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Ans : a)



7) The terms Anubis and Roaming Mantis, sometimes seen in the news recently, refers to?

- a. Malwares
- b. Exoplanets

- c. Super Computers
- d. Genome sequencing methods

Ans: a) Malwares in mobile banking

8) Which of the following national and international events monitors Ozone pollution?

1. Gothenburg Protocol
2. Bonn Convention
3. National Air Quality index
4. System of Air Quality and Weather Forecasting

Select the correct answer code:

- a) 1, 2, 3
- b) 1, 3, 4
- c) 3, 4
- d) 1, 2, 3, 4

Ans: b) The 1999 Gothenburg Protocol to Abate Acidification, Eutrophication and Ground-level Ozone is a multi-pollutant protocol designed to reduce acidification, eutrophication and ground-level ozone. The Protocol is part of the Convention on Long-Range Transboundary Air Pollution.

- The Convention on Migratory Species (CMS), also known as the Bonn Convention, aims to conserve terrestrial, aquatic and avian migratory species throughout their range.
- Ozone has been classified and monitored as one of the eight pollutants under National Air Quality index.
- Ozone is monitored as one of the Pollutants under SAFAR (System of Air Quality and Weather Forecasting).

9) Which of the following statements with respect to Social Auditors is/are correct?

1. A social auditor is defined as an individual registered with a Self-Regulatory Organization (SRO) under the Institute of Chartered Accountants of India (ICAI).
2. A person who wants to become a social auditor must qualify a certification program to be conducted by the National Institute of Securities Market (NISM).
3. Institute of Social Auditors of India will be the supervisory body to oversee the functioning of social auditors.

Which of the statements given above are correct?

- a. 1 and 2 only

- b. 1 and 3 only
- c. 2 and 3 only
- d. 1, 2 and 3

Ans: d) The CA Institute's central council has approved the formation of a Self-Regulatory Organization (SRO) to oversee the functioning of social auditors under the SEBI-notified framework for social stock exchanges.

- The SRO is proposed to be named as "Institute of Social Auditors of India" and will be set up as a Section 8 company under the Companies Act 2013, under the aegis of ICAI.
- The new class of auditors viz the social auditors will be an important pillar of social stock exchange since they will help install the confidence in the sector.
- To pursue the role of a social auditor, an individual must qualify a certification program to be conducted by the National Institute of Securities Market (NISM) and hold a valid certificate.

ICAI is closely working with NISM in developing the course curriculum and the study material for the social auditor's certification program.

10) Which of the following forms the part of Income from Abroad while calculating Gross National Product (GNP)?

1. External Grants
2. Private Remittances
3. Interest on External Loans

Select the correct answer code:

- a) 1, 2
- b) 1, 3
- c) 2, 3
- d) 1, 2, 3

Ans: d) GNP does not include intermediary goods and services to avoid double-counting since they are already incorporated in the value of final goods and services.

- The items which are counted in the segment 'Income from Abroad' is: (i) Private Remittance, (ii) Interest on External Loans, (iii) External Grants

11) Which of the following can aid furthering the government's objective of Financial Inclusion?

1. Affordable payment and remittance services
2. Promoting savings by opening zero balance bank account.
3. Disbursal of interest free loans to economically weaker section

4. Financial advice to the disadvantaged groups

Select the correct answer code:

- a) 1, 3
- b) 2, 4
- c) 1, 3, 4
- d) 1, 2, 3, 4

Ans: D) Financial inclusion means that individuals and businesses have access to useful and affordable financial products and services that meet their needs – transactions, payments, savings, credit and insurance – delivered in a responsible and sustainable way.

12) Consider the following statements regarding Green Bonds:

1. They are equity income instrument specifically dedicated to raising money for climate and environmental projects.
2. Green bonds are asset-linked which can be issued by both public and private sector.
3. Green bond offerings cannot exceed more than 1000 crore in India.

Which of the above statement(s) is/are correct?

- a. 1 and 2 only
- b. 2 only
- c. 1 and 3 only
- d. 3 only

Ans: B) A green bond is a fixed-income instrument specifically dedicated to raising money for climate and environmental projects.

- Green bonds are asset-linked and backed by the issuing entity's balance sheet.
- They work just like any other corporate or government bond.
- The first green bond was issued in 2007 by the European Investment Bank, followed by the World Bank in 2008.
- In India, several public organizations, banks, and private companies have issued green bonds and India's first green bond was issued by Yes Bank in 2015.
- Initially, green bond issuances will only be a few tranches of its weekly government securities offerings and may not exceed more than Rs. 25,000 crore.

13) With reference to the port wine stain, consider the following statements:

1. A port wine stain is caused by an abnormal development of blood vessels, sometimes called a capillary malformation.
2. Port wine stains are not the same as a similar birthmark that is known as 'strawberry hemangiomas'.

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

Ans: C) A port wine stain is caused by an abnormal development of blood vessels, sometimes called a capillary malformation, due to a mutation early in the pregnancy when the baby is developing in the womb.

- Port wine stains are not the same as a similar birthmark that is known as 'strawberry hemangiomas'. This is a non-cancerous tumour that is formed under the skin due to the clumping of blood vessels, and appears as a somewhat raised, dark red patch.

14) Which of the following ideally should not be features of a democratic polity?

1. Military can take over civilian institutions if they fail to deliver on democratic hopes
2. Censorship of the press
3. The Government should not be run by non-elected individuals.

Select the correct answer code:

- a) 1, 2
- b) 2, 3
- c) 1, 3
- d) 1, 2, 3

Ans: A) Democracy is a form of government that allows people to choose their rulers. In a democracy: only leaders elected by people should rule the country, and people have the freedom to express views, freedom to organise and freedom to protest. Option 1 and 2 go against these two basic tenets.

15) Consider the following statements regarding the African Swine Fever (ASF):

1. It is a highly contagious bacterial disease that causes the eruption of nodules in the skin of the pig.
2. It is not a threat to human health and cannot be transmitted from pigs to humans.

Which of the above statement(s) is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Ans: B) African swine fever (ASF) is a highly contagious viral disease of domestic and wild pigs, whose mortality rate can reach 100%.

ASF is not a threat to human health and cannot be transmitted from pigs to humans. There is currently no effective vaccine against ASF.

16) Hubballi and Dharwad are twin cities in the Indian state of:

- A. Karnataka
- B. Goa
- C. Punjab
- D. Gujarat

Ans: A)

17) Which of the following are the sources of arsenic contamination.

1. Weathering of rocks and minerals followed by leaching and runoff.
2. Intense exploitation of groundwater
3. Iron coprecipitation
4. Burning of coal

Select the correct answer code:

- a) 1, 2, 3
- b) 1, 2, 4
- c) 2, 3, 4
- d) 1, 2, 3, 4

Ans: B) The sources of arsenic are natural or may partly stem from anthropogenic activities like intense exploitation of groundwater, application of fertilizers, burning of coal and leaching of metals from coal-ash tailings.

- Arsenic is introduced into soil and groundwater during weathering of rocks and minerals followed by subsequent leaching and runoff.
- Among the various arsenic removal technologies, lime softening and iron coprecipitation have been reported to be the most effective.

18) Consider the following statements regarding Triple Dip:

1. During a triple dip event, El Niño lasts across three winter seasons in the northern hemisphere.
2. It causes extended southwest monsoon season for India & the rest of south Asia and leads to overactive Atlantic Hurricane.

Which of the above statement(s) is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Ans: B) During a triple dip event, La Niña lasts across three winter seasons in the northern hemisphere.

- La Niña is the cooler than the normal phase of the El Niño Southern Oscillation (ENSO) phenomenon in the central and eastern equatorial Pacific Ocean.
- During a La Niña event, the sea surface temperatures over the central and eastern Pacific oceans become cooler than normal.
- This makes the trade winds and associated storms blowing above them stronger than usual.
- These strong trade winds and storms cause more rainfall over some regions such as Southeast Asia, especially Indonesia and many parts of Australia.
- However, it drastically reduces rainfall in other areas such as the Horn of Africa and western United States.
- The protracted La Niña, the first triple dip of the 21st century and only the third since 1950, may also lead to an overactive Atlantic Hurricane season in 2022.

19) With reference to the Artemis I, consider the following statements:

1. Artemis I will send a rocket without a crew on a monthlong journey around the Moon.
2. The programme aims to increase women’s participation in space exploration.

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

Ans: C) Artemis I will send a rocket without a crew on a monthlong journey around the Moon. The programme aims to increase women’s participation in space exploration. In addition, the Artemis I mission will carry two mannequins designed to study the effects of

radiation on women’s bodies so that NASA can learn how to protect female astronauts better.

20) Consider the following statements regarding Tribunals.

1. Tribunal is a quasi-judicial body that have the power to try cases of special matter which are conferred on them by statutes.
2. For effective delivery of justice, the members of the Tribunals must be compulsorily trained in Law.
3. The tenure, terms and conditions of service of the members of the Administrative tribunal are entirely in the hands of the executive.

Which of the above statements is/are correct?

- a) 1, 2
- b) 1, 3
- c) 1 only
- d) 1, 2, 3

Ans: B)

No.	Court of Law	Tribunal
1.	A court of law is a part of the traditional judicial system whereby judicial powers are derived from the state.	An Administrative Tribunal is an agency created by the statute and invested with judicial power.
2.	The Civil Courts have judicial power to try all suits of a civil nature unless the cognizance is expressly or impliedly barred.	Tribunal is also known as the Quasi-judicial body. Tribunals have the power to try cases of special matter which are conferred on them by statutes
3.	Judges of the ordinary courts of law are independent of the executive in respect of their tenure, terms and conditions of service etc. Judiciary is independent of Executive	Tenure, terms and conditions of the services of the members of Administrative Tribunal are entirely in the hands of Executive (government).
4.	The presiding officer of the court of law is trained in law.	The president or a member of the Tribunal may not be trained as well in law. He may be an expert in the field of Administrative matters.

21) Consider the following statements regarding Special Maternity Leave:

1. A baby born with no signs of life at or after 28 weeks of gestation may be defined as stillbirth.
2. A 90-day special maternity leave will be granted for both government and private sector women employees in case of stillbirth or death of an infant.
3. It is applicable only to a woman with less than two surviving children and for a child born only in an authorised hospital.

Which of the above statement(s) is/are correct?

- a. 1 and 2 only
- b. 2 and 3 only
- c. 1 and 3 only
- d. 1, 2 and 3

Ans: C) The Centre has decided to grant a 60-day special maternity leave for women Central government employees in case of stillbirth or death of an infant within a few days of birth.

The order said that in case an employee has already availed maternity leave till the death of the child, it may be converted into any other kind of leave available in her leave account.

A medical certificate would not be insisted in such a case and a special maternity leave of 60 days may be granted.

The condition for death of a child soon after birth may be defined as up to 28 days after birth. The benefit of special maternity leave shall be admissible only to a woman Central government servant with less than two surviving children.

22) With reference to the Oncolytic viruses (OVs), consider the following statements:

1. Oncolytic viruses (OVs) are viruses that selectively target and kill cancer cells while sparing normal ones.
2. The journal Cancer Cell study notes that these viruses also enhance the immune system's ability to recognise and terminate cancer cells.

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

Ans : C) Oncolytic viruses (OVs) are viruses that selectively target and kill cancer cells while sparing normal ones. The study notes that these viruses also enhance the immune system's ability to recognise and terminate cancer cells.

Although long theorised, the research into oncolytic virotherapy picked up only in the 1960s. Of late, there have been several trials looking at different viruses for cancer treatment.

The latest study focused on the virus known as myxoma and it found that T-cells infected with myxoma virus can lead to a type of cancer cell death not previously observed.

23) Consider the following statements regarding National Legal Services Authority (NALSA).

1. National Legal Services Authority (NALSA) is a constitutional body that provides free legal services to weaker sections of society.

2. Chief Justice of India is the Patron-in-Chief.
3. In every State, State Legal Services Authority has been constituted to give effect to the policies and directions of the NALSA and to give free legal services to the people and conduct Lok Adalats in the State.

Which of the above statements is/are correct?

- a) 1, 2
- b) 3 only
- c) 2, 3
- d) 1, 3

Ans: C) NALSA has been constituted under the Legal Services Authorities Act, 1987, to provide free legal services to weaker sections of society.

The aim is to ensure that opportunities for securing justice are not denied to any citizen by reasons of economic or other disabilities.

Composition: As per section 3(2) of Legal Service Authorities Act, the Chief Justice of India shall be the Patron-in-Chief. Second senior-most judge of Supreme Court of India is the Executive-Chairman.

24) Consider the following statements regarding the Studentship Program for Ayurveda Research Ken (SPARK) Program:

1. It is a joint initiative of the Central Council for Research in Ayurvedic Sciences (CCRAS) and the Department of Health Research.
2. It aims to provide grant-in-aid to Government & Non-Government organizations for the roll out AYUSH interventions for improving health status of the population.

Which of the above statement(s) is/are incorrect?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Ans: C) Studentship Program for Ayurveda Research Ken (SPARK) Program

It is the first national level fellowship for Ayurveda undergraduates.

It is an initiative of the Central Council for Research in Ayurvedic Sciences (CCRAS), the Ministry of AYUSH. It aims to support the research ideas of young undergraduate students enrolled in Ayurveda Colleges across India.

The selected fellows will be offered a financial support of Rs. 50,000 under the fellowship.

25) With reference to the Methamphetamine, consider the following statements:

1. Crystal methamphetamine or crystal meth is a form of the drug that looks like glass fragments or shiny, bluish-white rocks.
2. It is chemically similar to amphetamine.

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

Ans: C)

26) Consider the following statements regarding Contempt of Court.

1. The expression 'contempt of court' has not been defined by the Constitution.
2. The Supreme Court and High Courts derive their contempt powers from The Contempt of Court Act, 1971.
3. Fair and reasonable criticism of judicial acts and comment on the administrative side of the judiciary do not amount to contempt of court.

Which of the above statements is/are correct?

- a) 1, 2
- b) 1, 3
- c) 2, 3
- d) 1, 2 and 3

Ans: B) The expression 'contempt of court' has not been defined by the Constitution.

- Contempt of Court refers to the offence of showing disrespect to the dignity or authority of a court.
- The Supreme Court and High Courts derive their contempt powers from the Constitution.
- As per the Contempt of Courts Act 1971, contempt refers to the offence of showing disrespect to the dignity or authority of a court.
- innocent publication and distribution of some matter, fair and reasonable criticism of judicial acts and comment on the administrative side of the judiciary do not amount to contempt of court.

27) Consider the following statements regarding National Single Window System (NSWS):

1. It is a digital platform to guide the investors to identify and apply for approvals as per their business requirements.
2. Invest India, under the guidance of the Department for Promotion of Industry and Internal Trade (DPIIT), manages this project.
3. All States and Union Territories are part of the system and can access all the Ministries at the Central level.

Which of the above statement(s) is/are correct?

- a. 1 only
- b. 2 and 3 only
- c. 1 and 2 only
- d. 3 only

Ans: C) The National Single Window System (NSWS) is a digital platform for guidance of investors to identify and to apply for approvals as per their business requirements.

- Currently, the portal hosts applications for approvals from 21 Central Departments and 16 State Governments.
- The platform is built to serve as an advisory tool to identify approvals based on user input and is to be used for guidance purpose only.
- Currently, 24 of the 32 Ministries/Departments have on-boarded NSWS, and with respect to services, 181 out of the total 368 services identified as relevant, have been on-boarded.
- Invest India, under the guidance of the Department for Promotion of Industry and Internal Trade (DPIIT), manages the National Single Window System project.

28) Mamangam was a 28-day-long medieval trade festival celebrated in

- a) Tamil Nadu
- b) Telangana
- c) Kerala
- d) Goa

Ans: C) Mamangam was a 28-day-long trade festival celebrated once every 12 years in Kerala on the banks of the Bharathappuzha, also known as Nila.

29) Kushiyara river, recently in news flows through which of the following countries?

- a. Bangladesh and India
- b. India, Bangladesh and Myanmar

- c. China and Myanmar
- d. Myanmar and Laos

Ans: A) Kushiya River: It originates from the northern hills of Assam in India as river Barak.

- It flows further creating the border between Nagaland and Manipur states.
- The river enters Bangladesh in Kachar district, it then separates into two branches.
- The northwest arm is the surma and the south western arm is the Kushiya.
- The Kushiya rejoins with the Surma at Markuli in Ajmiriganj upazila and flows south upto Bhairab Bazar receiving the name Kalni.
- The Kalni meets with the Dhanu, a branch of the Surma and renamed as the meghna.

30) Consider the following statements regarding UN peacekeeping forces.

1. According to UN Charter every Member State is legally obligated to pay their respective share for peacekeeping.
2. Peacekeeping forces are contributed by UN member states on voluntary basis.
3. Civilian personnel cannot be part of UN peacekeepers.

Which of the above statements is/ are correct?

- a) 2, 3
- b) 1, 2
- c) 1, 3
- d) 1, 2, 3

Ans: B) United Nations Peacekeeping is a joint effort between the Department of Peace Operations and the Department of Operational Support. Every peacekeeping mission is authorized by the Security Council.

- The financial resources of UN Peacekeeping operations are the collective responsibility of UN Member States. According to UN Charter every Member State is legally obligated to pay their respective share for peacekeeping.
- UN peacekeepers (often referred to as Blue Berets or Blue Helmets because of their light blue berets or helmets) can include soldiers, police officers, and civilian personnel. Peacekeeping forces are contributed by member states on a voluntary basis. Civilian staff of peace operations are international

civil servants, recruited and deployed by the UN Secretariat.

31) Consider the following statements regarding Dematerialisation (DEMAT):

1. Dematerialization (DEMAT) is the move from physical certificates to electronic bookkeeping.
2. It applies only to stocks and not to other forms of investment such as bonds, mutual funds, and government securities.
3. It is mandatory for an investor to have a DEMAT account to purchase or redeem mutual fund shares.

Which of the above statement(s) is/are incorrect?

- a. 1 and 2 only
- b. 1 and 3 only
- c. 2 and 3 only
- d. 1, 2 and 3

Ans: C) Dematerialization (DEMAT) is the move from physical certificates to electronic bookkeeping.

- DEMAT accounts are required by some trading institutions due to the fact they are the most accurate form of record keeping.
- It is not mandatory for an investor to have a dematerialisation account to purchase or redeem mutual fund shares.
- India's demat account tally topped the 100 million-mark for the first time
- The DEMAT account tally isn't representative of unique investor count in the country.
- Dematerialization applies not only to stocks, but also to other forms of investment such as bonds, mutual funds, and government securities.

32) Consider the following statements.

1. Millets have short growing season and lower water requirement for cultivation as against paddy and wheat.
2. Government provides Minimum Support price for selected millets.
3. Millets helps in carbon sequestration.

Which of the above statements is/are correct?

- a) 1, 2
- b) 1, 3
- c) 2, 3
- d) 1, 2, 3

Ans: D)

33) Consider the following statements regarding Legionellosis Disease:

1. It is a viral disease caused by the virus pneumophila.
2. The most common form of transmission is inhalation of contaminated aerosols produced in conjunction with water sprays.
3. The disease can be treated and prevented by the Pneumococcal vaccine.

Which of the above statement(s) is/are correct?

- a. 1 only
- b. 2 only
- c. 3 only
- d. 1, 2 and 3

Ans: B) The bacterium *L. pneumophila* was first identified in 1977, as the cause of an outbreak of severe pneumonia in a convention centre in the USA in 1976.

- The most common form of transmission of *Legionella* is inhalation of contaminated aerosols produced in conjunction with water sprays, jets or mists of contaminated water sources.
- Infection can also occur by aspiration of contaminated water or ice, particularly in susceptible hospital patients.
- Legionnaires' disease has an incubation period of 2 to 10 days (but up to 16 days has been recorded in some outbreaks).
- Treatments exist, but there is currently no vaccine available for Legionnaires' disease.
- Death occurs through progressive pneumonia with respiratory failure and/or shock and multi-organ failure.
- Untreated Legionnaires' disease usually worsens during the first week.

34) Consider the following statements regarding Arms Trade Treaty (ATT)

1. It establishes common international standards for the regulation of the international trade in ammunition, weapons parts, and arms components.
2. The treaty regulates the domestic sale or use of weapons in any country.
3. Recently India joined the treaty.

Which of the above statement is/are correct?

- (a) 1 only
- b) 1, 2
- c) 2, 3
- d) 1, 2, 3

Ans: A)

- Arms Trade Treaty (ATT): It is an international treaty that regulates the international trade in conventional arms.
- It seeks to prevent and eradicate illicit trade and diversion of conventional arms by establishing international standards governing arms transfers.
- The ATT contributes to international and regional peace, security and stability, reducing human suffering, and promoting cooperation, transparency and responsible action among the international community.
- The Treaty came into force on 24 December 2014. The ATT Secretariat is headquartered in Geneva, Switzerland. India has not yet joined the treaty.

35) Arrange the following countries based on the size of their economy (lowest to highest):

1. India
2. United Kingdom
3. China
4. United States of America
5. Germany

Choose the correct code.

- a. 1-2-3-4-5
- b. 5-4-3-2-1
- c. 2-1-5-3-4
- d. 1-5-2-4-3

Ans: C) India has overtaken the U.K. to become the world's fifth-largest economy and is now behind only the US, China, Japan, and Germany.

36) Gogra-Hotsprings area is located in:

- A. Ladakh
- B. Sikkim
- C. Nagaland
- D. None of the above

Ans: A) India and China announced that their Armies have begun to disengage from Patrolling Point-15 in the Gogra-Hotsprings area of eastern Ladakh, marking a step forward towards ending the stand-off ongoing since May 2020.

- The move comes ahead of the Shanghai Cooperation Organisation (SCO) summit in Uzbekistan next week, in which Prime Minister

Narendra Modi and Chinese President Xi Jinping are expected to participate.

37) Consider the following statements regarding Sand Mining

1. Sand is the second most harvested resource after water but it is categorized as minor mineral in India.
2. In India, Sand Mining has been permitted till a depth of 3 metres.

Which of the above statement(s) is/are incorrect?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Ans: D) Sand is the second-most harvested natural resource after water.

- Despite this, sand is categorized as a 'minor mineral' in India.
- In India, Mining depth should be restricted to 3 meters and distance from the bank should be one-fourth of river width and should not be less than 7.5 meters.

38) Vostro account, sometimes seen in news is used in the context of

- a) Zero balance Account
- b) Foreign exchange transactions
- c) Providing Subsidies to the Targeted Beneficiaries
- d) Bank account without any expiry

Ans: B) A vostro account is an essential part of correspondent banking in which a foreign bank acts as an agent providing financial services on behalf of a domestic bank.

- Vostro accounts enable domestic banks to provide international banking services to their clients who have global banking needs.
- Vostro account services include executing wire transfers, performing foreign exchange transactions, enabling deposits and withdrawals, and expediting international trade.

39) With reference to the Human Development Index (HDI) 2021, consider the following statements:

1. India ranks 130 out of 191 countries in the Human Development Index (HDI) 2021.
2. It measures average achievement of a country in three basic dimensions of human development, a long

and healthy life, education and a decent standard of living.

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

Ans: B) India ranks 132 out of 191 countries in the Human Development Index (HDI) 2021, after registering a decline in its score over two consecutive years for the first time in three decades.

- The drop is in line with the global trend since the outbreak of the COVID-19 pandemic during which 90% of the countries have fallen backward in human development.
- Index is part of the Human Development Report 2021-2022 released by the United Nations Development Programme.
- The HDI measures average achievement of a country in three basic dimensions of human development — a long and healthy life, education and a decent standard of living.
- It is calculated using four indicators — life expectancy at birth, mean years of schooling, expected years of schooling, and the Gross National Income (GNI) per capita.

40) Consider the following statements with respect to Money Mules, sometimes seen in the news recently?

1. It refers to describe innocent victims who are duped by fraudsters into laundering stolen/illegal money via their bank account(s).
2. Acting as a money mule is illegal and punishable in India.

Which of the statement(s) given above is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Ans: C) Fraudsters contact customers via emails, chat rooms, job websites or blogs, and convince them to receive money into their bank accounts, in exchange of attractive commissions.

- The fraudsters then transfer the illegal money into the money mule's account.

- The money mule is then directed to transfer the money to another money mule's account – starting a chain that ultimately results in the money getting transferred to the fraudster's account.
- When such frauds are reported, the money mule becomes the target of police investigations.

41) With reference to the spent nuclear fuel, consider the following statements:

1. It is nuclear fuel that has been irradiated in a nuclear reactor.
2. It is no longer useful in sustaining a nuclear reaction in an ordinary thermal reactor.

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

Ans : C) Spent nuclear fuel, occasionally called used nuclear fuel, is nuclear fuel that has been irradiated in a nuclear reactor (usually at a nuclear power plant).

- It is no longer useful in sustaining a nuclear reaction in an ordinary thermal reactor and depending on its point along the nuclear fuel cycle, it may have considerably different isotopic constituents.

42) Consider the following statements with reference to Startup SETU

1. It will connect start-ups in India to investors across the world and start-up ecosystem leaders.
2. The interaction in SETU will be supported through the mentorship portal, UMANG, under the Startup India initiative.

Which of the above statement(s) is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Ans: D) Supporting Entrepreneurs in Transformation and Upskilling Programme (SETU)

- The Ministry of Commerce and Industry has recently launched the US Startup SETU initiative.
- The initiative would connect start-ups in India to US-based investors and start-up ecosystem leaders.
- It will provide mentorship and assistance in various areas including funding, market access and commercialization.

- SETU is designed to break the geographical barriers between mentors based in US that are willing to invest in entrepreneurship and sunrise startups in India.
- The interaction will be supported through the mentorship portal under the Startup India initiative Mentorship, Advisory, Assistance, Resilience, and Growth program (MAARG).
- MAARG is a single-stop solution finder for startups in India.

43) Consider the following statements.

1. UN Framework Convention on Climate Change (UNFCCC) does not explicitly acknowledge the differentiated responsibility of nations to fight climate change.
2. The Warsaw International Mechanism (WIM) for Loss and Damages, was the first formal acknowledgment of the need to compensate developing countries struck by climate disasters.

Which of the above statements is/are correct?

- (a) 1 only
- (b) 2 only
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Ans: B) The UN Framework Convention on Climate Change (UNFCCC), the 1994 international agreement that lays down the broad principles of the global effort to fight climate change, explicitly acknowledges this differentiated responsibility of nations. It makes it very clear that rich countries must provide both the finance and the technology to the developing nations to help them tackle climate change. It is this mandate that later evolved into the \$100 billion amount that the rich countries agreed to provide every year to the developing world.

- It was after much struggle that the developing countries and NGOs managed to establish a separate channel on loss and damages at international climate change negotiations. The Warsaw International Mechanism (WIM) for Loss and Damages, set up in 2013, was the first formal acknowledgment of the need to compensate developing countries struck by climate disasters.

44) Bhitarkanika National Park is located in:

- A. Odisha
- B. Tamil Nadu

- C. Karnataka
- D. Gujarat

Ans: A)

45) Consider the following statements with respect to Indo-Pacific Economic Framework (IPEF):

1. The Indo-Pacific Economic Framework (IPEF) was initiative of United Nations Conference on Trade and Development.
2. It has four pillars and India agreed to become a member of IPEF on all the four pillars.
3. Except Cambodia, Laos and Myanmar, other Southeast Asian nations are a part of the IPEF.

Which of the above statement(s) is/are correct?

- a. 1 and 2
- b. 2 only
- c. 1 and 3 only
- d. 2 and 3 only

Ans: D) Indo-Pacific Economic Framework (IPEF)

India has agreed to the three pillars of IPEF and for now opted to remain out of the IPEF's trade pillar.

- The IPEF has four pillars: Trade, Supply chains; Clean energy, decarbonisation and infrastructure; Tax and anti-corruption.
- IPEF was launched in 2022 by the US President Joe Biden in Japan.
- The 14-members of IPEF include Australia, Brunei, Fiji, India, Indonesia, Japan, Malaysia, New Zealand, Philippines, Singapore, South Korea, Thailand, the United States and Vietnam.
- Unlike trade agreements, this framework does not look for providing greater market access
- Except Cambodia, Laos and Myanmar, other Southeast Asian nations are a part of the IPEF.

46) Consider the following statements regarding trade ties between India and Bangladesh.

1. Under the provisions of the South Asian Free Trade Area (SAFTA), Bangladesh extends preferential tariffs to Indian exports of products outside the 'sensitive list' of items.
2. Protocol on Inland Waterways Trade and Transit (PIWTT) has been in place to facilitate trade and transit through inland waterways.
3. Currently, six Border Haats are functional on the India-Bangladesh border for boosting the local

economy as well as strengthening people to people tie between the two Countries.

Which of the above statements is/are correct?

- a) 1, 2
- b) 2 only
- c) 2, 3
- d) 1, 2, 3

Answer: A) Under the provisions of the South Asian Free Trade Area (SAFTA), Bangladesh extends preferential tariffs to Indian exports of products outside the 'sensitive list' of 993 items. In 2011, India announced duty-free, quota-free access to Bangladesh for all tariff lines except tobacco and alcohol.

- To facilitate trade and transit through inland waterways, a Protocol on Inland Waterways Trade and Transit (PIWTT) has been in place since 1972.
- MoUs were signed in 2015 on the use of the Chittagong and Mongla Ports for Movement of Goods to and from India.

47) With reference to the Uniform Civil Code (UCC), consider the following statements:

1. Article 49 of the Constitution, lays down that the state shall endeavour to secure a Uniform Civil Code (UCC) for the citizens throughout the territory of India.
2. The code would be applicable to all religious communities in matters such as marriage, divorce, inheritance, adoption.

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

Answer: B) The expert committee formed by the Uttarakhand government to examine ways for the implementation of a Uniform Civil Code (UCC) has launched a website, seeking public opinion on the plan.

- Headed by retired Justice Ranjana Prakash Desai (who is also the head of the Delimitation Commission), the committee has sought suggestions and recommendations from residents.
- The Committee will also prepare a report on implementing a UCC in Uttarakhand.
- Article 44 of the Constitution, lays down that the state shall endeavour to secure a Uniform Civil Code (UCC) for the citizens throughout the territory of India. The code would be applicable to all religious

communities in matters such as marriage, divorce, inheritance, adoption.

48) Consider the following statements regarding Ni-kshay Mitra Initiative

1. It is a vital component of the Pradhan Mantri TB Mukh Bharat Abhiyaan.
2. It provides a platform for donors to provide various forms of support to those undergoing TB treatment.

Which of the above statement(s) is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : C) The Ni-kshay Mitra initiative forms a vital component of the Pradhan Mantri TB Mukh Bharat Abhiyaan.

- This initiative seeks to ensure adequate and nutritional food for those being treated for tuberculosis.
- Ni-kshay Mitra portal provides a platform for donors (Ni-kshay Mitras) to provide various forms of support to those undergoing TB treatment.
- The donors could be a wide range of stakeholders from elected representatives, political parties, to corporates, NGOs, and individuals.
- Pradhan Mantri TB Mukh Bharat Abhiyaan is aimed at working towards TB elimination from the country by 2025.
- The 'Abhiyaan' has been envisioned to bring together all community stakeholders to support those on TB treatment and accelerate the country's progress towards TB elimination.
- The 'Abhiyaan' is a step towards garnering community support towards a patient-centric health system.

49) Which of the following rivers originate outside the Indian Territory?

1. Brahmaputra
2. Sutlej
3. Chenab
4. Ravi

Select the correct answer code:

- a) 1, 2
- b) 1, 3, 4
- c) 1, 2, 3
- d) 3, 4

Answer : A

50) With reference to the Operation London Bridge, consider the following statements:

1. It is the name of a funeral plan for Queen Elizabeth II.
2. The plan includes the announcement of her death, the period of official mourning, and the details of her state funeral.

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

Answer : C

51) With reference to the Liquid nano urea, consider the following statements:

1. Plants require nitrogen to produce protein and they get practically all of it from soil bacteria that dwell in the roots.
2. It was developed at IFFCO's Nano Biotechnology Research Centre (NBRC) in Kalol, Gujarat.

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

Answer : C) Plants require nitrogen to produce protein and they get practically all of it from soil bacteria that dwell in the roots.

- These bacteria break down atmospheric nitrogen or nitrogen from compounds like urea into a form that plants can use.
- Currently, conventional granular urea is one of the most important nitrogenous fertilisers in the country, with a high nitrogen content (46%).
- This new product is expected to replace the usage of urea granules.
- It was developed at IFFCO's Nano Biotechnology Research Centre (NBRC) in Kalol, Gujarat.
- IFFCO is a multi-state cooperative society (based in New Delhi).
- The society works in the fertiliser manufacturing and marketing sector.

52) The anthropogenic factors that influence a freshwater system are

1. Change in an aquatic habitat
2. Engineering of river channels
3. Widespread land cover change
4. Irrigation and other consumptive use of water

Select the correct answer code:

- a) 1, 2, 3
- b) 1, 3, 4
- c) 2, 3, 4
- d) 1, 2, 3, 4

Answer : D

53) With reference to the India's Engagement with Russia's Far East, consider the following statements:

1. India is the first country in the world to open a consulate in Vladivostok (Sangam' of Eurasia and Pacific).
2. India and Russia agreed to open a maritime route between Chennai and Vladivostok to give impetus to cooperation between India and Russian Far East.

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

Answer : C) India is the first country in the world to open a consulate in Vladivostok (Sangam' of Eurasia and Pacific).

- Indian PM was the chief guest at 5th EEF (2019), first by an Indian Prime Minister.
- In 2019, India announced a commitment to an "Act Far-East" policy, with an aim to increase cooperation with this area.
- International Trade and commerce: India and Russia agreed to open a maritime route between Chennai and Vladivostok to give impetus to cooperation between India and Russian Far East.
- This connectivity project along with International North-South Corridor will bring India and Russia physically closer.

54) With reference to the PM Gati Shakti, consider the following statements:

1. It fixes targets up to 2024-25 for all infrastructure ministries.

2. The implementing Agency is NITI Aayog.

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

Answer : A) The Rs 100 lakh crore national master plan includes 11 industrial corridors, achieving a Rs 1.7 lakh crore turnover in defence production and having 38 electronics manufacturing clusters and 109 pharma clusters by 2024-25.

- It fixes targets up to 2024-25 for all infrastructure ministries.
- Implementing Agency: National Networking Group
- National Networking Group will consist of experts or officials from all the stakeholder departments.

55) Who among the following was the first to call Mahatma Gandhi the "father of the nation"?

- a) Jawaharlal Nehru
- b) Sardar Vallabhbhai Patel
- c) Gopal Krishna Gokhale
- d) Subhas Chandra Bose

Answer : D

56) With reference to the Shoonya campaign, consider the following statements:

1. It is a consumer awareness campaign to reduce air pollution by promoting the use of electric vehicles (EVs) for ride-hailing and deliveries.
2. The National Programme on Advanced Chemistry Cell (ACC) Energy Storage (Part III) report was also launched during the event.

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

Answer: C) Shoonya is a consumer awareness campaign to reduce air pollution by promoting the use of electric vehicles (EVs) for ride-hailing and deliveries.

- The campaign has 130 industry partners, including ride-hailing, delivery and EV companies.
- The National Programme on Advanced Chemistry Cell (ACC) Energy Storage (Part III) report was also launched during the event.

- The report highlights that India's \$2.5-billion Production-Linked Incentive (PLI) scheme for Advanced Chemistry Cell (ACC) energy storage is critical for meeting the projected cumulative battery demand of 106–260 GWh by 2030 to successfully realize the country's vision for EV adoption and grid decarbonisation.

57) Consider the following statements.

1. Panthera is the genus of large wild cats that include lion, leopard, and jaguar.
2. Tiger is the largest of all wild cats.
3. India is the only country having Tiger as its national animal.

Which of the above statements is/are correct?

- a) 1 only
- b) 1, 2
- c) 1, 3
- d) 2, 3

Answer: B)

- Panthera: This is the genus of large wild cats that can roar, but can't purr. Among them, the lion, the leopard, and the jaguar are more closely related, while the other strand has the tiger and the snow leopard. The snow leopard is an exception to the rest of the group in that it can't roar.
- Jim Corbett's "large-hearted gentleman with boundless courage", the solitary and strongly territorial tiger is the largest of all wild cats and also the earliest Panthera member to exist. Primarily a forest animal, they range from the Siberian taiga to the Sunderban delta. The national animal of India, Bangladesh, Malaysia, and South Korea, the tiger was voted the world's favourite animal ahead of the dog in a 2004 Animal Planet global online poll.

58) Based on the National Family Health Survey (NFHS) 2021, identify the states that have Fertility Rate above the replacement rate:

1. Bihar
2. Tamil Nadu
3. Kerala
4. Uttar Pradesh
5. Meghalaya

Choose the correct option.

- a. 1 and 4 only
- b. 2 and 3 only
- c. 1, 4 and 5 only

- d. 2, 3, and 5 only

Answer: C) As reported by the National Family Health Survey (NFHS) 2021, only 5 states have a fertility rate above the replacement rate.

- The states are: Bihar (3), Meghalaya (2.9), Uttar Pradesh (2.4), Jharkhand (2.3), and Manipur (2.2). The steady dip in fertility rates has been explained as an effect of increased use of contraception, better health care, and increase in the mean marriage of women.'

59) With reference to the National Sports Development Fund (NSDF), consider the following statements:

1. It is under the union Ministry of Education.
2. It was established in 1998 under the Charitable Endowments Act 1890 and was notified by the Government of India in November, 1998.

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

Answer: B) The National Sports Development Fund (NSDF) under Ministry of Youth Affairs and Sports signed an historic MoU with two Public Sector Undertakings (PSUs) namely NTPC and REC (Rural Electrification Corporation) for development of sports in India.

- The National Sports Development Fund (NSDF) was established in 1998 under the Charitable Endowments Act 1890 and was notified by the Government of India in November, 1998.
- The purpose of the fund is to impart momentum and flexibility to assisting the cause of sports in India.
- It helps sportspersons excel by providing them with varied opportunities to train under coaches of international repute, provide financial assistance for development of infrastructure and other activities for promotion of sports.

60) The stage is all set for the translocation of Cheetahs from Africa to India. In this context which of the following animals cannot be translocated?

1. Rhinos

2. Bisons
3. Wolves
4. Tigers

Select the correct answer code:

- a) 1, 2, 3
- b) 2, 3, 4
- c) 1, 2
- d) All the above animals can be translocated

Answer: D

61) Consider the following statements regarding the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA):

1. The objective of the treaty is to recognise the contribution of farmers to the diversity of crops.
2. It works under the aegis of International Food Policy Research Institute (IFPRI).
3. It is also known as the seed treaty and India is a signatory to the treaty.

Which of the above statement (s) is/are correct?

- a. 1 and 2 only
- b. 1 and 3 only
- c. 2 and 3 only
- d. 1, 2 and 3

Answer : B) International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA)

- It works under the aegis of the Food and Agriculture Organisation of the United Nations.
- It is also known as the Seed Treaty.
- It is comprehensive international agreement for ensuring food security through the conservation, exchange and sustainable use of the world's Plant Genetic Resources for Food and Agriculture (PGFRA). India is a signatory to the treaty.

62) With reference to the "Swachhata" Portal for the Special Campaign 2.0, consider the following statements:

1. It was developed by the Department of Administrative Reforms and Public Grievances (DARPG).
2. It scheduled to begin on October 2 with a focus on Swachhata and Reducing Pendency in Government.

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

Answer : C) Developed by the Department of Administrative Reforms and Public Grievances (DARPG) in the Union Ministry of Personnel, the Portal-www.pgportal.govlin/scdpm22 is dedicated to Swachhata and reducing pendency of work in Government offices.

63) Coalbed methane (CBM) is used for

1. As feedstock for fertilisers
2. As compressed natural gas (CNG) auto fuel
3. Steel plants
4. Methanol production

Select the correct answer code:

- a) 1, 2
- b) 1, 2, 3
- c) 1, 2, 4
- d) 1, 2, 3, 4

Answer : D) Coalbed methane (CBM): CBM, like shale gas, is extracted from what are known as unconventional gas reservoirs — where gas is extracted directly from the rock that is the source of the gas (shale in case of shale gas and coal in case of CBM).

- The methane is held underground within the coal and is extracted by drilling into the coal seam and removing the groundwater. The resulting drop in pressure causes the methane to be released from the coal.
- According to the Central Mine Planning and Design Institute (CMPDI), CBM can be used for power generation, as compressed natural gas (CNG) auto fuel, as feedstock for fertilisers, industrial uses such as in cement production, rolling mills, steel plants, and for methanol production

64) Consider the following statements regarding Shanghai Cooperation Organisation (SCO):

1. It is an intergovernmental organization formed in 2001, currently comprises eight Member States.
2. India is one of the founding members of the SCO.
3. India is the next Chair of SCO for the year 2023 taking over from Uzbekistan.

Which of the above statement(s) is/are correct?

- a. 1 only
- b. 1 and 3 only
- c. 2 and 3 only
- d. 1, 2 and 3

Answer : B) India will take over as the chair of the Shanghai Cooperation Organisation from Uzbekistan in 2023. It is an intergovernmental organization founded in Shanghai on 2001.

- The SCO currently comprises eight Member States (China, India, Kazakhstan, Kyrgyzstan, Russia, Pakistan, Tajikistan and Uzbekistan).
- Four Observer States are interested in acceding to full membership (Afghanistan, Belarus, Iran, and Mongolia).
- Six “Dialogue Partners” (Armenia, Azerbaijan, Cambodia, Nepal, Sri Lanka and Turkey).
- In 2021, the decision was made to start the accession process of Iran to the SCO as a full member, and Egypt, Qatar as well as Saudi Arabia became dialogue partners.
- In the current SCO summit, Iran signed the memorandum to join as a full time member.

65) With reference to the ‘BLO e-Patrika’, consider the following statements:

1. It was released by NITI Aayog.
2. BLOs are the primary source of information for every voter across the length and breadth of the country.

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

Answer : B) The Election Commission of India released a new digital publication ‘BLO e-Patrika’ at an interactive session held with BLOs spread across the States in India. This event was a first-of-its-kind direct interaction by the Commission with the BLOs across the country.

- BLOs are the direct link of the Commission with the people. BLOs are the primary source of information for every voter across the length and breadth of the country.
- The intent behind introducing BLO E-Patrika is to ensure a cascading information model for a better informed and motivated Booth Level Officer.

66) With reference to the Indo-Pacific trilateral development cooperation, consider the following statements:

1. It would facilitate development projects, especially in the framework of the International Solar Alliance.

2. It provides a platform for Indian innovations and startups to demonstrate their relevance to the requirements of other societies.

Which of the statements given above is/are correct?

- A. 1 only
- B. 2 only
- C. Both 1 and 2
- D. Neither 1 nor 2

Answer: C) External Affairs Minister Dr. S Jaishankar said India and France have agreed to work towards the establishment of Indo-Pacific trilateral development cooperation.

- Indo-Pacific trilateral development cooperation would facilitate development projects, especially in the framework of the International Solar Alliance.
- The Indo-Pacific trilateral would also provide a platform for Indian innovations and startups to demonstrate their relevance to the requirements of other societies.
- International Solar Alliance now has formed projects in three countries which shows the impact that India and France make together in Bhutan, Papua New Guinea and Senegal.

67) Consider the following statements.

1. Sovereign equality means all states are equal under international law in spite of inequalities between them in areas such as military power, geographical and population size and economic development.
2. The UN Charter does not recognise the principle of Sovereign equality, but recognises the doctrine of collective security.

Which of the above statements is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) Neither 1 nor 2

Answer: A) Sovereign equality is juridical in nature, i.e., all states are equal under international law inspite of inequalities between them in areas such as military power, geographical and population size, levels of industrialisation and economic development. Sovereign equality, along with collective security, is a fundamental principle of the UN. The UN Charter states that the primary objective of the UN is to save succeeding generations from the scourge of war.

- The UN Charter contains the doctrine of collective security in Article 39: "The Security Council shall determine the existence of any threat to the peace, breach of the peace, or act of aggression and shall make recommendations, or decide what measures shall be taken in accordance with Articles 41 and 42, to maintain or restore international peace and security."

68) Consider the following statements regarding Project Cheetah:

1. It is the world's first inter-continental large wild carnivore translocation project.
2. Under the project, India had recently re-introduced the Asiatic Cheetah in Kuno National Park, Madhya Pradesh.
3. Cheetah is listed as Vulnerable under the IUCN Red list of threatened species.

Which of the above statement(s) is/are correct?

- a. 1 and 2 only
- b. 1 and 3 only
- c. 2 and 3 only
- d. 1, 2 and 3

Answer: B) Cheetah was declared extinct from India in 1952.

- The basic aim of the Project Cheetah is to revitalise and diversify India's wildlife and its habitat.
- It is world's first inter-continental large wild carnivore translocation project.
- Eight Cheetahs are arriving in India from Namibia and will be released into the Kuno National Park in Madhya Pradesh.
- The project is also aimed at developing metapopulation in India that allows the cheetah to perform its functional role as a top predator.
- Cheetahs will help in the restoration of open forest and grassland ecosystems in India.
- As part of the project, 50 cheetahs will be introduced in various National Parks over five years.

69) Which of the following country is Bhutan's largest trading partner?

- A. India
- B. Sri Lanka
- C. Myanmar
- D. Pakistan

Answer : A

70) Consider the following statements regarding the Atomic Clocks:

1. It combines a quartz crystal oscillator with an ensemble of atoms to achieve greater stability.
2. It contains elements like cesium or calcium and a source of microwave radiation.
3. It is used on board GPS satellites that orbit the Earth to measure time to a very high accuracy.

Which of the above statement(s) is/are correct?

- a. 1 and 2 only
- b. 2 and 3 only
- c. 1 and 3 only
- d. 1, 2 and 3

Answer : D) Atomic Clocks: To determine a spacecraft's distance from Earth, navigators send a signal to the spacecraft, which then returns it to Earth.

- The time the signal requires to make that two-way journey reveals the spacecraft's distance from Earth, because the signal travels at a known speed (the speed of light).
- Most modern clocks, from wristwatches to those used on satellites, keep time using a quartz crystal oscillator. These devices take advantage of the fact that quartz crystals vibrate at a precise frequency when voltage is applied to them. By space navigation standards, quartz crystal clocks aren't very stable. Atomic clocks combine a quartz crystal oscillator with an ensemble of atoms to achieve greater stability.

71) Consider the following statements about India Discrimination report 2022

1. The report indicates patriarchal mindset as a driving factor behind the low Women's Labour Force Participation Rate (LFPR).
2. Discrimination in India causes 100 per cent of employment inequality faced by women in rural areas in the labour market.

Which of the above statement(s) is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : B) Discrimination in India causes 100 per cent of employment inequality faced by women in rural areas in the labour market and 98 per cent in urban areas, according to the latest Oxfam India report.

- The lower wages for salaried women are due to 67 percent of discrimination and 33 percent due to lack of education and work experience.
- The findings of the Oxfam report indicate discrimination as a driving factor behind the low Women's Labour Force Participation Rate (LFPR) in the country.
- The report said LFPR for women in India was only 25.1 per cent in 2020-21 for urban and rural women, which was 42.7 per cent in 2004-05.
- Thus showing the withdrawal of women from the workforce despite rapid economic growth during the same period.
- Caste also acts as a significant barrier while accessing credit for agriculture despite many agricultural labourers from SC or ST communities.

72) Changthang Wildlife Sanctuary, recently seen in news is located in

- Chhattisgarh
- West Bengal
- Ladakh
- Meghalaya

Answer : C) The Changthang Wildlife Sanctuary is a high-altitude wildlife sanctuary located in the Ladakhi adjunct of the Changthang plateau in the Leh District of the union territory of Ladakh. It is important as one of the few places in India with a population of the Tibetan Wild Ass, as well as the rare Black-necked Crane.

73) Consider the following statements regarding Scramjet Engine.

1. It works based on the technology of Air Breathing Propulsion System.
2. The Scramjet engine designed by ISRO uses Hydrogen as fuel and the Oxygen from the atmospheric air as the oxidizer.

Which of the above statements is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Answer : C) The first experimental mission of ISRO's Scramjet Engine towards the realization of an Air Breathing Propulsion System was successfully conducted on August 28, 2016 from Satish Dhawan Space Centre SHAR, Sriharikota.

The Scramjet engine designed by ISRO uses Hydrogen as fuel and the Oxygen from the atmospheric air as the oxidizer.

74) The government has recently constituted an expert panel under the head of M Damodaran for which of the following purposes?

- To strengthen the capabilities of Capital market
- To revamp the guidelines regarding green bonds
- To suggest ways for scaling up of Venture Capital /Private Equity investments.
- To provide suggestions to the government regarding Dematerialised Account

Answer : C

75) Consider the following statements regarding Manasbal Lake

1. It is one of the largest natural stamping grounds of Aquatic birds located in the State of Jammu & Kashmir.
2. It is regarded as the deepest lake in India.

Which of the above statement(s) is/are correct?

- 1 only
- 2 only
- Both 1 and 2
- Neither 1 nor 2

Answer : C)

- Manasbal Lake is located in Ganderbal District in the State of Jammu and Kashmir in India.
- The name Manasbal is said to be a derivative of the Lake Manasarovar.
- The large growth of lotus (*Nelumbo nucifera*) at the periphery of the lake (blooms during July and August) adds to the beauty of the clear waters of the lake.
- The Mughal garden, called the Jaroka, (meaning bay window) built by Nur Jahan overlooks the lake.
- The lake is a good place for bird watching as it is one of the largest natural stamping grounds of Aquatic birds in Kashmir and has the sobriquet of "supreme gem of all Kashmir Lakes".
- The rootstocks of lotus plant which grows extensively in the lake are harvested and marketed, and also eaten by the local people.

76) Consider the following statements about Dugong conservation reserve

1. India's first Dugong Conservation Reserve has been notified in Gulf of Mannar, Tamilnadu.
2. Dugongs are the largest herbivorous marine mammals which primarily thrive on seagrass beds.

Which of the above statement(s) is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answer : B) The country's first 'Dugong Conservation Reserve' has been notified in Palk bay, Tamil Nadu.

- The move was aimed at conserving the endangered species as it would help protect and improve marine fauna. The reserve has been notified in Palk Bay.
- According to an official release, Dugongs are the largest herbivorous marine mammals which primarily thrive on seagrass beds.
- Conservation of these Dugongs would help protect and improve the seagrass beds which are also the breeding and feeding grounds for many fishes and marine fauna.
- Dugongs are protected under Schedule 1 of the Wild Life (Protection) Act, 1972 as their population was on the decline due to habitat loss.

77) Consider the following statements regarding Algae bio-fuels:

1. They are alternative to both liquid fossil fuels and biofuel sources.
2. Algae biomass is converted to oil using the catalytic hydrothermal liquefaction technology.
3. In the above process water is used as solvent to extract oil from the biomass.

Which of the above statement(s) is/are correct?

- a. 1 and 2 only
- b. 2 and 3 only
- c. 1 and 3 only
- d. 1, 2 and 3

Answer: D) They are alternative to fossil fuels that uses algae as its source of energy-rich oils.

- They are also an alternative to commonly known biofuel sources, such as corn and sugarcane.
- Algae can synthesize large volumes of oil (20 times more than that of mustard per acre), grow fast (10

times quicker than terrestrial plants) and capture carbon dioxide (CO₂).

- Microalgae are excellent at converting CO₂ and sunlight into oil-rich biomass, especially when compared to land-based crop plants like oil palm and soy.
- By adapting microalgae to function as cell factories producing energy-dense oils that can easily be refined into renewable diesel and jet fuel, we can reduce greenhouse gas emissions by 70 per cent.
- The major challenges associated with algae biofuel include large water requirements, high cost of growth nutrients, expensive biomass harvesting, and difficult oil extraction from algae cells.

78) The term 'Panchteerth' includes which of the following places that are associated with B R Ambedkar?

1. Janma Bhoomi, Ambedkar's birthplace
2. Shiksha Bhoomi, the place in London where Ambedkar stayed while studying
3. Deeksha Bhoomi, where Ambedkar embraced Buddhism
4. Chaitya Bhoomi, the place of Ambedkar's demise
5. Mahaparinirvan Bhoomi, the place of Ambedkar's cremation

Which of the above statements are correct?

- a) 1, 2
- b) 1, 2, 3
- c) 1, 2, 3, 4
- d) 1, 2, 3, 4, 5

Answers : B) The government had first proposed the Ambedkar Circuit, or Panchteerth, in 2016. Panchteerth would include Janma Bhoomi, Ambedkar's birthplace in Madhya Pradesh's Mhow; Shiksha Bhoomi, the place in London where he stayed while studying in the UK; Deeksha Bhoomi in Nagpur where he embraced Buddhism; Mahaparinirvan Bhoomi or the place of his demise in Delhi; and Chaitya Bhoomi, the place of his cremation, in Mumbai.

79) Consider the following statements.

1. The recent relocation of Cheetahs from Namibia to India was the first in the world where a large carnivore was relocated from one continent to another.
2. The conservation of the cheetah will revive grassland-forests and its biome and habitat.

3. Shergarh Wildlife Sanctuary, which was previously assessed for the translocation of the Asiatic Lion is located in Madhya Pradesh.

Which of the above statements is/are correct?

- a) 1, 2
- (b) 2 only
- c) 2, 3
- d) 1, 3

Answer : A) This is the first time in the world that a large carnivore was relocated from one continent to another.

- The conservation of the cheetah will revive grassland-forests and its biome and habitat, much like Project Tiger has done for forests and all the species found in these forests.
- Shergarh Wildlife Sanctuary is located in Rajasthan.

80) Consider the following statements regarding the Asia-Pacific Institute for Broadcasting Development (AIBD)

1. The Asia-Pacific Institute for Broadcasting Development (AIBD), established in 1977 under the auspices of UNESCO.
2. It is a unique regional inter-governmental organisation servicing members of the UNESCO in the field of electronic media development.

Which of the above statement(s) is/are correct?

- a. 1 only
- b. 2 only
- c. Both 1 and 2
- d. Neither 1 nor 2

Answers : A) The Asia-Pacific Institute for Broadcasting Development (AIBD), established in 1977 under the auspices of UNESCO.

- It is a unique regional inter-governmental organisation servicing countries of the United Nations Economic and Social Commission for Asia and the Pacific (UN-ESCAP) in the field of electronic media development. The AIBD currently has 26 countries as full members represented by 43 organizations, and 52 affiliate members.