



VAJIRAM & RAVI

(Institute for Civil Services Examination)

DECEMBER 2020

the RECITALS

Explore Current Affairs Through Q&A



Featured
Articles



Mains
Q & A



Prelims
Q & A

Bridging
Gaps

Human Development Approach

Brexit

5 Years of Paris Climate Accord

| | |
|--|---------------|
| Message From The Desk Of Director | 1 |
| 1. Feature Article | 2-11 |
| a. Human Development Approach | |
| b. Brexit | |
| c. Five Years of Paris Climate Accord | |
| 2. Mains Q&A | 12-23 |
| 3. Prelims Q&A | 24-66 |
| 4. Bridging Gaps | 67-129 |
| 1. Postal Ballot System For NRIs | |
| 2. Waqf Boards | |
| 3. Declare Elections Void If NOTA Has Most Votes | |
| 4. Review Petition | |
| 5. Three Capitals For Andhra Pradesh | |
| 6. Role Of Governor In Calling An Assembly Session | |
| 7. Privilege Motion: Maharashtra Assembly Challenges Supreme Court | |
| 8. Composite Floor Test' In Bodoland Council | |
| 9. Convicted Legislators Cannot Be Barred For Life From Contesting Polls | |
| 10. Delimitation Should Be Based On 2031 Census | |

11. Karnataka's Anti-Cow Slaughter Bill
12. Revisit Seventh Schedule of Constitution
13. Partners in Population and Development
14. Catch The Rain Campaign
15. Nature Index 2020
16. Hybrid Renewable Energy Park
17. Facebook Antitrust Issue
18. US Currency Watch List
19. Revised DTH Guidelines
20. Electricity (Rights of Consumers) Rules, 2020
21. Green National Highway Corridors
22. France's New National Security Bill
23. Bangladesh Relocates Rohingyas to Bhasan Char island
24. Chinese Factory in Sri Lanka
25. Tibetan Policy and Support Act
26. Crisis in Nepal
27. U.S. Lifts Sudan's Designation as a State Sponsor of Terrorism
28. Bribery for Presidential Pardon Scheme
29. Indian Army Chief's Visit to Saudi Arabia and UAE
30. Visit of External Affairs Minister of India to Qatar
31. India-Vietnam Virtual Bilateral Summit
32. Virtual Summit Between India and Bangladesh
33. India-Uzbekistan Virtual Bilateral Summit
34. SCO Comes to India
35. Asia-Pacific Broadcasting Union
36. Legion of Merit Award
37. Export of Akash Missiles
38. Superinfections
39. The Cancer Genome Atlas 2020 Conference
40. Plasmodium Ovale Malaria
41. Havana Syndrome
42. World AIDS Day
43. Lab-grown Meat
44. National Maritime Domain Awareness Centre
45. Quantum Key Distribution (QKD) Technology

46. Satellite-Based Narrowband IoT (Internet of Things) Network
47. Submarine Optical Fibre Cable Connectivity
48. Nuclear Magnetic Resonance (NMR) Test
49. SIPRI Report on Arms Market
50. BSF Raising Day
51. Cryogenic Propellant Tank (C32 LH2)
52. Arecibo Telescope
53. 2020 SO
54. Mutated Novel Coronavirus
55. Intentional Genomic Alteration
56. Pneumosil
57. Shigella Infection
58. Hypothermia
59. Ammonia
60. National Security Directive on the Telecommunication Sector
61. Aquifer Mapping Program
62. Mission Sagar-III
63. TiHAN-IIT Hyderabad
64. Digital Ocean Platform
65. DRDO Systems Handed to Defence Services
66. Coastal Radar Chain Network
67. Medium Range Surface to Air Missile (MRSAM)
68. Shaheen-IX
69. IND-INDO CORPAT
70. PASSEX
71. S-400 Air Defence Systems
72. F/A-18 Super Hornet Fighter Jets
73. E-20 Fuel
74. Great Conjunction
75. National Mathematics Day
76. Elephant Corridors In India
77. Emissions Gap Report 2020
78. State of the Global Climate 2020 Report
79. Participatory Guarantee Scheme (PGS)
80. Narmada Landscape Restoration Project (NLRP)

81. Extreme Weather Events in India
82. Malayan Giant Squirrel
83. Indian Peacock Soft-shelled Turtle
84. Tso Kar Wetland
85. Myristica Swamp Treefrog
86. Kolar Leaf-Nosed Bats
87. Indus Valley Diet
88. Annapurna Idol
89. Aadi Mahotsav
90. Swarnim Vijay Varsh



From the Desk of the Director

Dear Students

The preparation of current affairs magazine is an evolutionary process as its nature and content keeps changing according to the demands of Civil Service Exam. As you are aware about the importance of current affairs for the prelims as well as mains exam, our aim is to follow an **integrated approach** covering all stages of examination from prelims to interview. Keeping these things in mind, we, at Vajiram and Ravi Institute, are always in the process of evolving our self so as to help aspirants counter the challenges put forward by UPSC.

In fulfillment of our objective and commitment towards the students, we have introduced some changes in our current affairs magazine. The CA Magazines, now with the name of “**The Recitals**”, will have four sections. These are:

1. **Feature Article:** As you are aware of the fact that civil service mains exam has become quite exhaustive and analytical, especially since 2013 after the change in syllabus, we have decided to focus on 2-3 topics every month that will provide an insight into the issue so as to help students understand the core of the issue. This will help in Essay writing as well as Mains Exam.
2. **Mains Q&A:** New students quite often struggle to find out that in what way the given topic is useful for them and in what form questions can be framed from the article. To help those students, we at Vajiram and Ravi have designed an innovative way to teach current affairs. Now, we will cover the current issues through questions and answers so as to make it more targeted towards exam. This will not just provide the information and analysis on current issues but will also help in learning the art of answer writing. Further the related information on the topics on which questions have been framed but that is outside the purview of answer will be given in the Box as ‘**Extra Mile**’.
3. **Prelims Q&A:** This section will contain prelims based MCQs that will test your diligence while reading the current issues. These MCQs will be of UPSC standard and will contain detailed explanation. Students are advised to attempt these MCQs honestly and read the Explanation carefully. The idea is to also provide students with a question bank of around 600 current affairs MCQs (50 Qs × 12 months = 600 Qs) just before their prelims examination, which will act as revision on issues spanning over the entire year.
4. **Bridging Gaps:** This section will contain miscellaneous topics which has not been covered through Q&A. That is why it is called Bridging Gaps, meaning the left-over topics.

So, the new magazine is a complete overhaul of what we have been doing for so long. We hope that the new beginning will be to the liking of students.

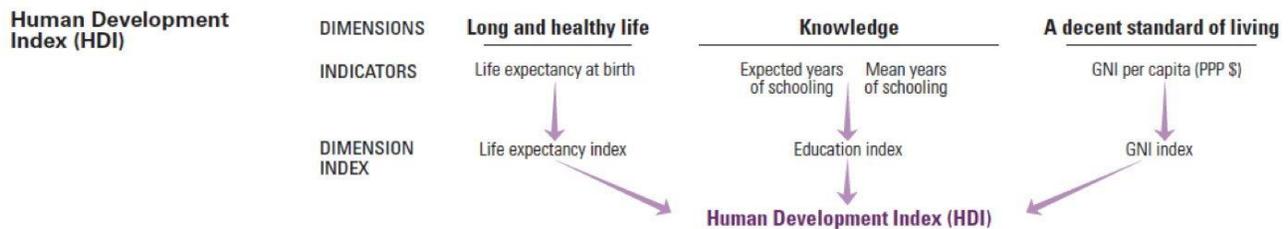
Thanks

Best Wishes

Human Development Approach

Human development is about expanding human freedoms and opening more choices for people to chart their own development paths for a meaningful life according to their diverse values rather than about prescribing one or more particular paths.

The human development approach has much to contribute in addressing the collective paralysis in the face of alarming planetary change. The human development concept emerged 30 years ago precisely as a counterpoint to myopic definitions of development. It reminds that economic growth is more means than end. More material resources matter, when fairly distributed and within planetary boundaries, because they expand people's opportunities, from one generation to the next.



Human Development Report

- The United Nations Development Programme (UNDP) has released the Human Development Report (HDR) 2020. The HDR is an annual report published by the Human Development Report Office of the United Nations Development Programme (UNDP).
- The report was first launched in 1990 by the Pakistani economist Mahbub ul Haq and Indian Nobel laureate Amartya Sen. Its goal was to place 'people' at the center of the development process in terms of economic debate, policy and advocacy.
- The Human Development Index (HDI) is a summary measure of average achievement in three basic dimensions of human development: a long and healthy life, being knowledgeable and have a decent standard of living.
- The health dimension is assessed by life expectancy at birth, the education dimension is measured by mean of years of schooling for adults aged 25 years and more and expected years of schooling for children of school entering age. The standard of living dimension is measured by gross national income per capita
- This year for the first time, the UNDP has introduced a new metric to reflect the impact caused by each country's per-capita carbon emissions and its material footprint.
- The new metric called the Planetary Pressures-adjusted HDI, or PHDI measures the amount of fossil fuels, metals and other resources used to make the goods and services consumed by a country.

Highlights Of The Report

- Norway has topped the index, followed by Ireland, Switzerland, Hong Kong and Iceland.
- Singapore was ranked 11, Saudi Arabia 40, and Malaysia was at 62 in the global index, representing the top bracket among the Asian countries with very high human development.

- Sri Lanka (72), Thailand (79), China (85) and Indonesia and Philippines (both 107), and Vietnam (117), among others, were high human development countries.
- India, Bhutan, Bangladesh, Myanmar, Nepal, Cambodia, Kenya and Pakistan were ranked among countries with medium human development with ranks between 120 and 156.

Increasing Stress On Earth

- Though humanity has achieved significant progress but it has destabilized the systems upon which it relies for survival.
- Scientists believe that for the first time, instead of the planet shaping humans, humans are knowingly shaping the planet. This has been referred as the **Anthropocene – the Age of Humans** - a new geologic epoch.
- Covid-19 has exposed the inequalities as well as weaknesses in social, economic, and political systems, and threatens reversals in human development.
- Although this year’s report does not account for the impact of COVID, it projected that in 2020, global HDI would fall below for the first time in the three decades since the Index was introduced.

Miles to go

Though India improved its absolute value of the Human Development Index (0.645 in 2019 from 0.642 the previous year), it dropped a place in the overall ranking

| Country | HDI rank (2019) | Change from 2018 |
|--------------|-----------------|------------------|
| Russia | 52 | -3 |
| Sri Lanka | 72 | 1 |
| Brazil | 84 | 0 |
| China | 85 | 2 |
| South Africa | 114 | 1 |
| India | 131 | -2 |
| Bangladesh | 133 | 1 |
| Nepal | 142 | 1 |
| Pakistan | 154 | 0 |

Planetary Pressures-adjusted HDI

- Planetary-Pressures Adjusted HDI – or PHDI adjusts the HDI, to include two more elements: a country’s carbon dioxide emissions and its material footprint. The index shows how the global development landscape would change if both the wellbeing of people *and* also the planet were central to defining humanity’s progress.
- With the resulting PHDI a new global picture emerges, painting a less rosy but clearer assessment of human progress. For example, more than 50 countries drop out of the very high human development group, reflecting their dependence on fossil fuels and material footprint.
- Norway, which tops the HDI, falls 15 places, leaving Ireland at the top of the index. Australia falls 72 places in the ranking, while the United States and Canada would fall 45 and 40 places respectively, reflecting their disproportionate impact on natural resources.
- The report states that, no country has been able to achieve a very high level of development without putting a huge stress on natural resources.
- Despite these adjustments, countries like Costa Rica, Moldova, and Panama move upwards by at least 30 places, which shows that lighter pressure on the planet is possible.

Highlights From India

- India dropped two ranks in the United Nations’ Human Development Index this year, standing at 131 out of 189 countries. However, if the Index was adjusted for PHDI, India would move up eight places in the ranking.
- Between 1990 and 2019, India’s HDI value increased from 0.429 to 0.645, an increase of 50.3%, which puts the country in the medium human development category.
- In 2019, the expected years of schooling in India was 12.2 years, compared with 11.2 years in Bangladesh and 8.3 years in Pakistan.

- India's Gross National Income (GNI) per capita has increased by about 273.9% between 1990 and 2019. However, India's gross national income (GNI) per capita on the basis of purchasing power parity (PPP), fell from \$6,829 in 2018 to \$6,681 in 2019. In South Asia, the average GNI was \$6,532 and among medium HDI countries it was \$6,153.
- Life expectancy for Indian's at birth was 69.7 years in 2019, slightly lower than the south Asian average of 69.9 years. However, it is slightly higher than the average of medium human development index groupings in the world at 69.3 years. Bangladesh has life expectancy of 72.6 years and Pakistan 67.3 years.

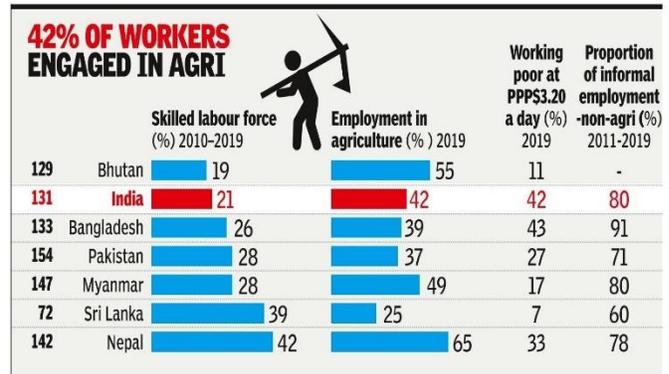
INDIA HAS 8.6 DOCS PER 10,000

| Countries/ categories | Hospital beds per 10,000 | Doctors per 10,000 | Countries/ categories | Hospital beds per 10,000 | Doctors per 10,000 |
|-----------------------|--------------------------|--------------------|-----------------------|--------------------------|--------------------|
| Very high* | 52 | 31.2 | Myanmar | 10 | 6.8 |
| High* | 31 | 17 | Bangladesh | 8 | 5.8 |
| Medium* | 7 | 7.9 | Pakistan | 6 | 9.8 |
| Low* | 5 | 1.9 | Afghanistan | 4 | 2.8 |
| China | 43 | 19.8 | Nepal | 3 | 7.5 |
| Sri Lanka | 42 | 10 | India | 5 | 8.6 |
| Bhutan | 17 | 4.2 | | | |

*Development

Status Of Health Infrastructure

- On the parameter of (hospital) bed availability, India ranks 155th out of 167 countries. India has just five hospital beds per 10,000 Indians. The countries with fewer beds to population ratio than India include Uganda, Senegal, Afghanistan, Burkina Faso, Nepal and Guatemala
- The poor bed availability points to India's failure to expand its health infrastructure with the growth in population. However, there is greater focus in India on creating more doctors in India and the report states that India has 8.6 doctors per 10,000 population.
- 76 countries have fewer doctors per 10,000 population than India, which includes several countries with vastly better health indices. Countries in the very high human development category typically have about 25 to 50 doctors per 10,000 and 25-35 beds per 10,000.
- In the next category of high human development countries, the availability of beds ranges from 10 to 45 per 10,000 and the availability of doctors ranges from 15 to 40 per 10,000. There are several in this group with a lower doctor-population ratio than India, but none which have fewer beds per 10,000.



Status of Labour Force

- The report defines skilled labour as people who are 15 years or older and have "intermediate" or "advanced" level of education as classified by the UNESCO.
- As per the report, only one in five Indians in the labour force is "skilled". With the figure at 21.2%, India is 129th among 162 countries for which this data is available.
- The countries closest to India are Ivory Coast, Sudan, Liberia and Cameroon, most of which are classified in the low human development category. Others with similar level of skill in their labour force are mostly in sub-Saharan Africa.
- India's labour force also has a high proportion of employment in agriculture and the informal sector with nearly half of its workforce classified as "working poor". Working poor are employed people who live on less than \$3.20 a day in purchasing power parity terms (about Rs 70 a day at the 2020 rate).

- The share of agriculture and the informal sector in India's employed people is comparable with its neighbours, but other large economies have a very small proportion. In Japan, for instance, only 3% of the workforce is in agriculture. For the US, Germany, France and the UK, the proportion is even lower.

Skilled Workforce Across The World

- Nearly all countries at the top of the skilled workforce list are advanced economies with very high Human Development Index.
- Japan, which tops this list, is ranked 19th in the overall HDI ranking and has 99.9% of its labour force classified as skilled. Belarus, the US, Lithuania and Russia have over 96% of their labour force classified as skilled.
- Apart from the US, Japan and Canada, most countries at the top of this list with over 90% of their labour force being skilled are from eastern Europe.
- In Nepal and Sri Lanka, nearly 40% of the labour force is skilled, while it is 28.1% in Myanmar, 27.8% in Pakistan and 25.8% in Bangladesh. Bhutan's skilled workforce at 19.5% is lower than India's proportion.

Way Ahead

- While humanity has achieved incredible things, it is clear that it has taken the planet for granted. Humans need to transform their relationship with the planet — to make energy and material consumption sustainable, and to ensure every young person is educated and empowered.
- Inequalities within and between countries, with deep roots in colonialism and racism, mean that people who have more, capture the benefits of nature and export the costs. This chokes opportunities for people who have less and minimizes their ability to do anything about it.
- Easing planetary pressures in a way that enables all people to flourish in this new age requires dismantling the gross imbalances of power and opportunity that stand in the way of transformation.
- The next frontier for human development is not about choosing between people or trees; it's about recognizing, today, that human progress driven by unequal, carbon-intensive growth has run its course.
- By tackling inequality, capitalizing on innovation and working with nature, human development can take a transformational step forward to support societies and the planet together.

BREXIT

The U.K. **sealed a historic trade deal with the European Union**, avoiding a bitter breakup and preparing the ground for a new relationship with its biggest commercial partner. The deal was sealed just a week before the country leaves the EU's single market and customs union.

Background

- A referendum was held in June, 2016, to decide whether the UK should leave or remain in the European Union. Leave won by 51.9% to 48.1%. The referendum turnout was 71.8%, with more than 30 million people voting.
- Since then, Britain struggled to secure a deal with EU so as to ensure smooth exit from the union. Finally, in December 2020, UK managed to secure the deal.

Key Highlights

- The new partnership agreement will regulate ties from Jan. 1 on everything from trade to transport, energy links and fishing.
- The deal radically overhauls the framework for businesses on both sides of the Channel and frees the British Parliament from many of the constraints imposed by EU membership.
- It will allow for **tariff and quota-free trade in goods** after Dec. 31, but that will **not apply to the services industry or the financial services sector**.
- The agreement will establish frameworks for common standards in aviation, business subsidies, labour rights and the environment, as well as law enforcement.

What Will Happen in Northern Ireland?

- The UK and EU have agreed that checks **will not take place at the border between Northern Ireland and the Republic of Ireland** (Northern Ireland's 310-mile border with the Republic of Ireland is the only land border between the UK and the EU).
- **Northern Ireland will continue to follow many of the EU's rules**, meaning that lorries can continue to drive across the border without having to be inspected.
- However, there will be a **new "regulatory" border between Northern Ireland and Great Britain** (England, Scotland and Wales). That is because, unlike Northern Ireland, Great Britain won't have to follow EU rules in future.
- This means some checks on goods moving between Great Britain and Northern Ireland will be needed.

Analysis

- Agreeing to let **goods cross the border** without onerous tariffs ensured that the most vital supplies — namely, food and medicine — were accessible across Europe. For the EU, reaching a deal avoids poisoning relations with a key diplomatic and commercial neighbor for years, and provides a basis for further cooperation in future.

- However, businesses will still **face border checks** for which surveys have shown that they are unprepared. Some pointed out that **it would lead to transport chaos**, which in turn would lead to shortages of fresh produce and delays in delivery of products.
- Also, in claiming that **there were “no non-tariff barriers” to selling goods after Brexit**, the Britain government had ignored the tens of millions of customs declarations, health assessments and other checks that businesses will now be responsible for.
- **Consumers in Northern Ireland** face the prospect of shortages of some goods as firms adjust to the new paperwork.
- The deal **doesn't protect trade in services**. U.K. financial services firms will be deprived of the passport that allows them to offer their services across the bloc.
- Firms from JPMorgan Chase & Co. to Goldman Sachs Group Inc. are among the companies that have already shifted about 7,500 employees and \$1.6 trillion of assets out of the U.K. because of Brexit.
- That **loss is especially painful for Britain**, which ran a surplus of 18 billion pounds, or \$24 billion, on trade in financial and other services with the European Union in 2019, but a deficit of 97 billion pounds, or \$129 billion, on trade in goods.
- The result of the deal is that the **European Union retains all of its current advantages in trading, particularly with goods**, and the **U.K. loses all of its current advantages in the trade for services**.
- The deal also did little to **assuage European migrants**, some of whom left Britain during the pandemic and are now struggling to determine whether they need to rush back to establish a right to settle in Britain before the split is finalized on Dec. 31.
- Hence, it can be said that, Brexit was not like most other trade agreements. **It was about erecting barriers, not taking them down**, within a European market that is unusually well connected.

Impact on India

- It is premature to assess the gains for India from the agreement between European Union (EU) and the UK, Indian goods would not get many benefits from this pact.
- However, **India can explore opportunities in service sectors** like IT, architecture, research and development and engineering in both the markets as the EU-UK pact does not cover services.
- For example, in the IT sector, India's competitor in the EU, particularly in the lower segment of services, is Poland. Now, because Poland will have restrictions on the free movement of professionals, that may be to the advantage of India.
- Indian companies who have **based their headquarters either in the UK or the EU to serve both the markets may face some challenges** due to restrictions on the movement of professionals.
- India should now aggressively pursue free trade agreements (FTAs) separately with both the regions. **India had a lot of contentious issues while negotiating FTA with the EU.**
- However, there is a possibility of doing a favourable free trade pact with the UK as the UK could have a different stand on these issues.

- PM Modi's invitation to his UK counterpart Boris Johnson as the chief guest for the Republic Day could be the perfect occasion for both sides to start some preliminary discussions for a trade deal

India – UK Bilateral Trade

- The bilateral trade between India and the UK dipped to USD 15.5 billion in 2019-20 from USD 16.9 billion in 2018-19.
- The **UK is India's 14th largest trade partner** and **India has a \$2 billion trade surplus with the UK.**
- A study carried out by the Commonwealth Secretariat found a well-negotiated bilateral trade deal between the UK and India has the potential to increase bilateral trade by 26%.

Five Years of Paris Climate Accord

Prime Minister of India will address the **Climate Ambition Summit** on the occasion of the fifth anniversary of the landmark Paris Agreement. The virtual summit is being **hosted by the United Nations (UN) and the United Kingdom** and is being co-hosted by France in partnership with Chile and Italy.

Paris Agreement

- The Paris Agreement is a **legally binding international treaty on climate change**. It was adopted by 196 Parties at COP 21 in Paris, on 12 December 2015 and entered into force on 4 November 2016.
- Its goal is to **limit global warming to well below 2**, preferably to 1.5 degrees Celsius, compared to pre-industrial levels.
- To achieve this long-term temperature goal, countries aim to reach global peaking of greenhouse gas emissions as soon as possible to achieve a climate neutral world by mid-century.
- The Paris Agreement is a landmark in the multilateral climate change process because, for the first time, a binding agreement brings all nations into a common cause to undertake ambitious efforts to combat climate change and adapt to its effects.

How Does The Paris Agreement Work?

- Implementation of the Paris Agreement requires economic and social transformation, based on the best available science. The Paris Agreement works on a **5- year cycle of increasingly ambitious climate action** carried out by countries. By 2020, countries submit their plans for climate action known as **nationally determined contributions (NDCs)**.
- **NDCs**: In their NDCs, countries communicate actions they will take to reduce their Greenhouse Gas emissions in order to reach the goals of the Paris Agreement. Countries also communicate in the NDCs actions they will take to build resilience to adapt to the impacts of rising temperatures.

Long-Term Strategies

- To better frame the efforts towards long-term goal, the Paris Agreement invites countries to formulate and submit by 2020 long-term low greenhouse gas emission development strategies (LT-LEDS).
- LT-LEDS provide the long-term horizon to the NDCs. Unlike NDCs, they are not mandatory. Nevertheless, they place the NDCs into the context of countries' long-term planning and development priorities, providing a vision and direction for future development.

How Are Countries Supporting One Another?

The Paris Agreement provides a framework for financial, technical and capacity building support to those countries who need it.

- **Finance:**
 - The Paris Agreement reaffirms that developed countries should take the lead in providing financial assistance to countries that are less endowed and more vulnerable, while for the first time also encouraging voluntary contributions by other Parties.



- Climate finance is needed for mitigation, because large-scale investments are required to significantly reduce emissions.
- Climate finance is equally important for adaptation, as significant financial resources are needed to adapt to the adverse effects and reduce the impacts of a changing climate.
- **Technology:**
 - The Paris Agreement speaks of the vision of fully realizing technology development and transfer for both improving resilience to climate change and reducing GHG emissions.
 - It establishes a technology framework to provide overarching guidance to the well-functioning Technology Mechanism. The mechanism is accelerating technology development and transfer through its policy and implementation arms.
- **Capacity-Building**

Not all developing countries have sufficient capacities to deal with many of the challenges brought by climate change. As a result, the Paris Agreement places great emphasis on climate-related capacity-building for developing countries and requests all developed countries to enhance support for capacity-building actions in developing countries.

Progress Tracking

- With the Paris Agreement, countries established an **enhanced transparency framework (ETF)**. Under ETF, starting in 2024, countries will report transparently on actions taken and progress in climate change mitigation, adaptation measures and support provided or received. It also provides for **international procedures for the review of the submitted reports**.
- The information gathered through the ETF will feed into the Global stocktake which will assess the collective progress towards the long-term climate goals. This will lead to **recommendations for countries to set more ambitious plans** in the next round.

Challenges In Achieving Targets

- Although 151 states have indicated that they will submit stronger targets before December 31, **only 13 of them, covering 2.4 per cent of global emissions, have submitted such targets**. States have been slow to update their national contributions for 2025-2030.
- **The IPCC 1.5 degrees Celsius Report** indicated that to stay within a reasonable chance of achieving 1.5 degrees Celsius, global carbon dioxide **emissions have to fall by 45 per cent** from the 2010 levels by 2030. But current national contributions are not on track for such a fall.
- For many there is a **mismatch between short-term actions and long-term commitments**. There is a significant “**overshoot**” in terms of **GHGs** in the short and medium-term, and a reliance on **negative emissions** (such as carbon dioxide removal) technologies to get there in the long-term.
- **Accountability** under the Paris Agreement is limited. **States are not obliged to achieve their self-selected targets** and there is no mechanism to review the adequacy of individual contributions. States are only asked to provide justifications for the fairness and ambition of their targets.
- **The transparency framework** does not contain a robust review function, and the compliance committee is facilitative and limited to ensuring compliance with a short list of binding procedural obligations.

- The spreads of goals and commitments across the states are not fair and equitable. Every state is not doing its fair share. The issue of equity and fairness, side-stepped in the Paris Agreement, is emerging in climate litigation before national and regional courts.

Achievements So Far

- Although climate change action needs to be massively increased to achieve the goals of the Paris Agreement, the years since its entry into force have already sparked low-carbon solutions and new markets.
- More and more countries, regions, cities and companies are establishing carbon neutrality targets. Zero-carbon solutions are becoming competitive across economic sectors representing 25% of emissions. This trend is most noticeable in the power and transport sectors and has created many new business opportunities for early movers.
- By 2030, zero-carbon solutions could be competitive in sectors representing over 70% of global emissions.

India's Commitment To The Paris Climate Agreement

- India aims to **restore around 26 million hectares of degraded land by 2030.**
- Currently, India is **contributing only 6.8% of global emissions** and its per capita emissions are only 1.9 tonnes (per capita).
- India's NDCs under the Paris Agreement is 2 degree compliant. The country is also likely to meet and possibly **overachieve its NDCs under the Paris Agreement**, the emissions gap report 2020 noted.
- India's installed capacity of **renewable energy has also increased by 226% in the past five years** to over 89 GW now and India has a target of increasing installed renewable energy capacity to 450 GW by 2030.
- India is projected to meet its pre-2020 climate pledge, also called the Cancun pledge, made in 2010.

Way Forward

- Net zero pledges need to be **credible, accountable and fair** to get us to a stable climate.
- Not all states will be in a position to pledge net zero targets, nor should they be expected to. All states, including India, can, however, pledge actions that are credible, accountable and fair.
- **Credible short-term commitments, with a clear pathway to medium-term decarbonisation**, that take into account the multiple challenges states face, such as on air pollution, and development, might well be the more defensible choice for some.
- **Issues of fairness and justice**, both between and within generations, are "unavoidable".

MAINS Q&A

1. Recently Andhra Pradesh High Court rejected a plea for recusal of Judge from hearing petitions filed against the proposed sale of government lands under “Mission Build AP”. In this light, discuss what is Recusal of a judge and rules governing it?

Answer

The Constitution vests a lot of power and certain amount of immunity in judges. Fairness and impartiality are the fundamental qualities to be possessed by a judge. Once it appears to the judge that he cannot deliver justice in an impartial manner, ethically he is expected to recuse.

Recusal of a Judge

- Recusal is “**removal of oneself as a judge or policymaker in a particular matter**, especially because of a conflict of interest”.
- It has been a practice in the Supreme Court that in serious issues like **inter-state water disputes, judges from the state concerned do not sit on the bench to decide them**.
- The right to recuse is left to the **discretion of the judges**. A judge should ideally recuse from a proceeding in which his impartiality might reasonably be questioned due to the possibility of personal bias or prejudice or if he has been a lawyer or judge in the matter at some stage.
- At times, parties involved raise apprehensions about a **possible conflict of interest**.
 - For example, if the case pertains to a company in which the judge holds stakes, the apprehension would seem reasonable.
 - Similarly, if the judge has, in the past, appeared for one of the parties involved in a case, the call for recusal may seem right.

Issues Involved

- A recusal **inevitably leads to delay**. The case goes back to the Chief Justice, who has to constitute a fresh Bench.
- There are possibilities that judges using their discretion to **recuse from the case and not doing their judicial duty**.
- The lawyers can unfairly take advantage of this, by requesting judges to recuse themselves from cases if they feel that they are not going to receive a favourable verdict.

Rules Governing the Recusal

- Currently there are **no written rules on the recusal of judges** from hearing cases listed before them in constitutional courts. It is left to the discretion of a judge.
- The **reasons for recusal are not disclosed** in an order of the court. Some judges orally convey to the lawyers involved in the case their reasons for recusal, many do not. Some explain the reasons in their order. The decision rests on the conscience of the judge.
- In one of its landmark decisions, Supreme Court held that if a judge is shown to have a pecuniary concern in the result of a matter, then the judge has to be inevitably recused from hearing the matter.
- However, in cases where the concern of the judge is something other than pecuniary, the recusal would not be mandatory. There should be an enquiry for analysing the extent of such an interest. Then judge can be disqualified after being subjected to either the principle of "real danger" or "reasonable apprehension".

- **Reasons on record:** In **National Judicial Appointments Commission judgment, 2015** the Justice who was a member of the Constitution Bench, highlighted the need for judges to **give reasons for recusal as a measure to build transparency.**

Conclusion

It is the constitutional duty, as reflected in one's oath, to be **transparent and accountable**, and hence, a **judge is required to indicate reasons for his recusal from a particular case.**

Bar Councils and other associations are vested with enough powers to ensure that Judges give the reasons for recusal as a matter of mandatory requirement. It is the duty of Bar to ensure their client knows why the judge recused from their specific matter. There has to be a **requirement of statutory obligation** on the judges to inform the litigants as to why there is a decision to recuse from hearing. **Recusal should be used sparingly** like the emergency provision in the Indian Constitution.

2. **Three vaccine developers have made applications in India to seek emergency use approval for Covid-19 vaccines which are still under trials. What is emergency use authorization (EUA)? What are the regulatory provisions for emergency approval of vaccines in India? How is it different from EUA guidelines of US FDA?**

Answer

Vaccines, like medicines, require the approval of a regulatory authority before they can be administered to people. In India, the **Central Drugs Standard Control Organisation (CDSCO)** is the national regulatory body for Indian pharmaceuticals and medical devices. The final approval is granted only after the completion of trials and evaluation of results. The overall approval process takes a long time, in order to ensure that the medicine or vaccine is completely safe and efficient. The quickest approval for any vaccine until now happened four and a half years after it was developed. This was for a vaccine for mumps, granted in the 1960s.

However, in emergency conditions, like the present one, regulatory authorities across the world have developed mechanisms to grant emergency use authorisation to medicines, vaccines etc. In India, clinical trials of new drugs and vaccines, and their approvals, are governed by the **New Drugs and Clinical Trials Rules, 2019**. These Rules do not use the term "emergency use authorisation". This term is used mainly by the regulatory agencies in the US and some other countries. However, the Indian regulatory system also has provisions for "special situations" like the current one.

Regulatory Provisions In India

- The 2019 rules provide for "**accelerated approval process**" in several situations that would include the current pandemic.
- In such situations, there is a provision for granting approval to a drug that is still in clinical trials, if there is evidence that the product has meaningful therapeutic benefit.
- Accelerated approval may also be granted to a new drug if it is required for the treatment of a serious, or life-threatening condition, or disease of special relevance to the country, and addresses medical needs that are not being fulfilled.
- Further, the 2019 rules state that a new drug, or a vaccine, can be considered for approval if remarkable effectiveness is reported even from phase-II trials.
- In such cases, additional post license studies may be required after approval to generate the data on larger population. Thus, the approval granted to drugs or vaccines that are still in clinical trials is temporary, and valid only for one year.

Provision For Trials Not Conducted In India

- The 2019 Rules do not mention whether data from a trial conducted in another country can be considered while assessing an application for accelerated approval to a drug or vaccine to be used in India.
- However, in the current case, Indian health authorities have said that the approval for such vaccines will depend on the evaluation of data by scientists and experts.
- In making this assessment, the expert committee in India would look at data generated during trials conducted in other countries as well.

EUA Guidelines By US FDA

- Some provisions in the 2019 Rules are different from the specific guidelines provided by the US Food and Drugs Administration (FDA), for approval of vaccines for Covid-19.
- According to FDA, an emergency use authorisation can be considered **only after sufficient data from phase-3 trials** are generated, and an application cannot be made on the basis of data only from phase-1 or phase-2 trials.
- It has also said that preliminary phase-3 data should show at least 50% effectiveness in preventing the disease. Moreover, this data has to be generated from over 3,000 individuals who have been a part of the trials.

Although the guidelines by US FDA are more stringent, the subject expert committees in India will carefully evaluate the risks and the potential benefits, to assess whether the vaccine will be significantly helpful in controlling Covid-19 and only then will allow it to be introduced in the country.

Extra Mile

- Three vaccine developers have made applications to the Central Drug Standard Control Organisation (CDSCO), India's drug regulator, **seeking emergency use approval** for their candidate Covid-19 vaccines which are still under trials.
- **Vaccine Candidates**
 - **COVISHIELD:** Developed by the Pune-based Serum Institute of India and is the version of the vaccine developed by Oxford University and AstraZeneca.
 - **COVAXIN:** Developed by the Bharat Biotech, a Hyderabad-based company, in collaboration with National Institute of Virology, an ICMR institute in Pune
 - **BNT162b2:** Developed by the US pharmaceutical major Pfizer in collaboration with BioNTech.

3. **The Ministry of Education recently released the Policy on School Bag 2020. Highlight the issues related to weight of the school bag, along with the various recommendations of the policy.**

Answer

- The Ministry of Education recently released the **Policy on School Bag 2020**. The Policy includes various recommendations based on surveys and studies conducted by the National Council of Educational Research and Training (NCERT).
- The survey collected data from 3,624 students and 2,992 parents from 352 schools, which include Kendriya Vidyalayas and state government schools.

Issues With The Weight Of The School Bag

- Heavy school bags are a common cause of backache in school-going children. Moreover, it can affect their spinal posture, foot shape and walk.
- It is universally acknowledged that the weight of the school bag to be carried by students should be related primarily to the individual's body weight.
- At the same time, it is also important to look at other factors contributing to this load, such as, capacity to carry weight, mental or physical disorder, disability, disease, distance for which the bag is to be carried, etc., which cannot easily be measured.

Recommendations Of The Policy

- Weight of school bag needs to be monitored and checked on a regular basis in the school. For this, every school needs to keep a digital weighing machine in the school premises.
- The weight of school bag for students between classes 1-10 should not be more than 10 per cent of their body weight and there should be no bags for pre-primary students.
- School bag needs to be light-weight with proper compartments and contain two padded and adjustable straps that can fit on both the shoulders. Wheeled carriers should not be allowed as it may hurt children while climbing stairs.
- For selecting a textbook for children, the criterion of weight should be taken into consideration and weight of each textbook should be printed on the textbook by the publishers.
- Schools need to ensure that there are facilities to provide good quality mid-day meals, so that children do not have to carry a lunch box. Further, it is the duty and responsibility of school management to provide good quality water in the school, so that children do not have to carry water bottle in school bags.
- Children with special needs can be provided double set of textbooks, through book banks in schools. Further, lockers may be installed in classes for students with disabilities for storing books and other items.

Recommendations For Home Work

- The policy also gives recommendations about homework for students at various levels, starting with no homework for children up to Class 2.
- Children in classes 3, 4 and 5 should be given a maximum of two hours of homework per week. For Classes 6 to 8, the homework should be a maximum of one hour a day.
- For children in Classes 9 to 12, the policy recommends a maximum of two hours of homework every day.

Guidelines For Implementation

- **School Bag Awareness Programme** needs to be held in the beginning of every academic session, where parents and students would be given an orientation on this issue.
- Sharing of textbooks among students should be promoted so that children sitting together need not carry all the textbooks every day.
- There are lessons when the textbook is not used at all. With adequate planning, students should be given an advance notice by the subject teacher so that they can leave textbooks at home when they are not required.
- Teachers should engage students in activity based teaching-learning process, where students can go beyond textbooks.

Children are the future of the nation and their good health and stress free mind contributes to nation building. Therefore, every school irrespective of its management (Government, Government aided, unaided) should ensure the implementation of School Bag Policy for the betterment of the children.

- 4. The Permanent Court of Arbitration (PCA) recently ruled against India in the retrospective tax issue related to Cairn Energy. What is retrospective taxation and arbitration? Delineate the issue along with PCA's ruling.**

Answer

- The Permanent Court of Arbitration at The Hague has ruled that the Indian government was wrong in applying retrospective tax on Cairn Energy Plc.
- This is the second ruling against the Indian government at international tribunals over the retrospective tax issue in three months. In September, 2020, a separate international arbitration tribunal had ruled against India's decision to levy retrospective taxes on Vodafone Group.

Retrospective Taxation

- Retrospective taxation allows a country to pass a rule on taxing certain products, items or services, and deals, and charge companies for dealings before the date on which the law is passed.
- Countries use this provision to correct any shortcomings in their taxation policies that may have allowed companies to take advantage of such shortcomings.

Arbitration

- Arbitration is a form of alternative dispute resolution (ADR), in which a dispute is submitted, to one or more arbitrators who make a decision on the dispute.
- In choosing arbitration, the parties opt for a private dispute resolution procedure instead of going to court. Arbitration is used instead of going to a court because it is often quicker and not as expensive.
- It is often used for the resolution of commercial disputes, particularly in the context of international commercial transactions.

Cairn Dispute

- In 2006-07, as a part of internal rearrangement, Cairn UK transferred shares of Cairn India Holdings to Cairn India. The Income Tax authorities claimed that Cairn UK had made capital gains through the transfer of shares and demanded tax of Rs 24,500 crore for the same.
- Due to different interpretations of capital gains, the company refused to pay the tax, and cases were filed at the Income Tax Appellate Tribunal (ITAT) and the High Court. While Cairn had lost the case at ITAT, a case on the valuation of capital gains is still pending before the Delhi High court.
- Later, in 2011, Cairn Energy sold majority of its India business, Cairn India, to mining company Vedanta. Cairn UK was however not allowed to sell a minor stake of about 10 per cent by the income tax authorities. Authorities had also seized Cairn India shares as well as dividends that the company paid to its parent UK firm.

PCA's Ruling

- In its judgment, the PCA said the Cairn tax issue was not just a tax related issue but an investment related dispute, and therefore comes under the jurisdiction of the international arbitration court.
- The tribunal, ruled that India's claim of past taxes over the 2006-07 internal reorganisation of Cairn's India business was not a valid demand.

- It ruled that the Indian government's retrospective demand violated the guarantee of fair and equitable treatment under the UK-India Bilateral Investment Treaty.
- The judgment has asked the Indian government to pay \$1.2 billion (roughly Rs 8,800 crore) to Cairn Energy Plc, plus interest and cost of arbitration. It also said that India must not make any more attempts to recover the alleged tax liability or any interest and or penalties.

Future Outlook

- While the order does not contain a provision for challenge or appeal, the government said it would study the arbitration award and take a decision on the further course of action, including legal remedies.
- India has recently challenged the Vodafone verdict in Singapore. The government believes taxation is not covered under investment protection treaties and the law on taxation is a sovereign right of the country.
- According to experts, if India does not pay Cairn the above mentioned amount, Cairn can use the arbitration award to approach courts to seize any overseas property owned by India to recover the money.

Applying the principle of uniformity of approach suggests that the government may appeal the verdict in the Cairn case as well, however this would send a wrong signal to the investor community. Instead, India should focus on meeting its aspirations of attracting global investments by ensuring policy stability and creating a robust regulatory framework.

5. The government recently issued special types of zero coupon bonds to recapitalise Punjab & Sind Bank. What are zero coupon bonds (ZCBs)? Give details of the ZCBs issued to Punjab & Sind Bank and their impact.

Answer

- Recently, the government has used a financial innovation to recapitalise Punjab & Sind Bank by issuing the bank Rs 5,500-crore worth of non-interest bearing bonds. Bank recapitalisation, means investing more capital in banks to improve their balance sheet.
- The bonds are being referred to as special types of zero coupon bonds issued by the government after proper due diligence.

Zero Coupon Bonds

- A coupon is a periodic interest received by a bondholder from the time of issuance of the bond till the maturity of the bond.
- Zero coupon bonds, also known as discount bonds, do not pay any interest to the bondholders. Instead, the holders get a large discount on the face value of the bond.^[1]
- On maturity, the bondholder receives the face value of his investment. In simple words, the investor purchasing a zero coupon bond, profits from the difference between the buying price and the face value.
- Face value, also known as par value is the amount of money stated on a bond. For example, if a bond certificate says \$1,000, the face value is \$1000. Bonds pay the face value at maturity, and calculate coupons (interest) as a percentage of the face value.

- Many bonds are issued at their face value, but discount bonds are not issued at face value but at a price lower than the face value.

Bonds Issued to Punjab & Sind (P&S) Bank

- Unlike the previous recapitalisation bonds which carried interest and were sold to different banks, the bonds issued to P&S bank are non-interest bearing non-transferable special securities.
- They are special types of bonds issued by the Central government specifically to Punjab & Sind Bank and have a maturity of 10-15 years.
- As per RBI guidelines, the bonds will be held under the held-to-maturity (HTM) category of the bank. Held-to-maturity (HTM) securities are purchased to be owned until maturity.
- The ZCBs issued to P&S bank are different from traditional zero coupon bonds, as they are being issued at par (on par value/face value) and not at a discount. Normally ZCBs are issued at a discount and are tradable.

Analysis Of The Move

- It is a rarest of the rare situation in which the government recapitalisation exercise has been done through securities that do not give interest to the subscribing entity or institution.
- According to experts, the government has found an innovative way to capitalise P&S bank, which will not affect the fiscal deficit of the government, as there is no cash outgo and at the same time provide much needed equity capital to the banks.
- The market value of the bonds issued to P&S bank, would be around Rs 2,750 crore. Since, the bonds are from held-to-maturity category, Punjab & Sind Bank will value the bonds at cost, i.e. Rs 5,500 crore. In this way the government will infuse Rs 5,500 crore into equity capital of Punjab & Sind Bank.
- The recapitalisation will increase the lending capacity of the bank and will facilitate the bank to use this capital to expand its banking activities for agriculture, rural and MSME sectors.

Thus, it is an innovative solution by the government where it is using Rs 100 to create an impact of Rs 200 in the economy. However, this financial illusion is not a permanent solution for the banking sector's problems and it only gives the government more time to come up with robust measures to address the issues in the banking sector.

6. The Lucknow Municipal Corporation (LMC) recently issued municipal bonds. What are municipal bonds and why there is a need for municipal finance? What are the conditions for approval of municipal bonds?

Answer

Lucknow Municipal Corporation (LMC) recently issued municipal bonds. Ahmedabad was the first city in south Asia to launch a municipal bond in 1998. Various other cities including Amravati, Vishkhapatnam, Surat, Bhopal, Indore, Pune etc. have issued municipal bonds in the past.

Municipal Bonds

- A municipal bond is a kind of debt instrument where investors give loans to local Urban Local Bodies (ULBs). It helps to raise funds from the stock market. Bidding takes place on an electronic trading platform after the bond is listed on the exchange.

- Municipal bonds are issued by civic bodies for specific projects and usually have a 10-year tenure. The ULB pays the annual interest on the bonds to the investor at the decided rate.
- The face value (cost) of each instrument slot (piece) of a municipal bond is a minimum of Rs 10 lakh. Bonds are issued to institutional and high net worth individuals. It can be subscribed to (purchased) by a single investor or multiple investors.

Need For Municipal Finance

- According to the World Bank, the scale of urbanisation in India is only 33%, whereas the size of the urban population is about 429 million – much larger than that of many other countries. Although it is an indicator of positive development, a host of challenges also accompanies rapid urbanisation.
- Local bodies oversee various expenditures on local services, including transportation, water and sewers, garbage collection and disposal, safety, housing, health, recreation and culture, education and social expenditures.
- Government budgetary allocation is not sufficient. Thus, municipal bodies fund these services and the infrastructure associated with them from a variety of sources under municipal finance, including municipal bonds.
- Municipal bonds are an integral part of the AMRUT scheme and the urban local bodies are encouraged to use the bond market for funding.
- Under AMRUT, ULBs are paid Rs 13 crore for every Rs 100 crore raised via bonds, subject to a maximum limit of Rs 26 crore for each ULB. This incentive helps the ULBs to repay the lender, including the interest component on the bond.

Conditions For Approval Of Bonds

- The bonds can only be issued after an in-depth analysis of the debt paying capacity of the ULB, which is based on various parameters including the balance sheet for the past five years.
- Credit rating firms assess the financial health of the ULBs and give credit ratings. This indicates that the ULB has the capacity to repay the annual amount owed to the lender.
- AA++ is considered to be the best rating — which was given to Ahmedabad and Surat. The next best rating is the AA rating.
- It is compulsory to open an escrow account, in which the Central government transfers all the annual incentives (Rs 13 crore per Rs 100 crore bond issued) so that the payment to be made to the investor is assured.
- ULBs also share an information memorandum, that carries details of the ULB and its financial performance.

Benefits Of Municipal Bonds

- The difference between a bank loan and a municipal bond is that an institution can issue a bond only if it has favourable credit ratings.
- The bond also increases the number of investors available to the civic body, as compared to a loan from a single bank.
- Bonds lead to transfer of funds from the Centre, increase in transparency and efficient revenue generation.

Thus, along with providing much needed funding and promoting sound corporate governance standards in ULBs, municipal bonds can go a long way in transforming cities in the country, by supporting these geographical growth engines and creating equitable habitation spaces.

Escrow Account

An escrow account is a third party account where funds are kept before they are transferred to the actual beneficiary. It provides security against scams and frauds especially with high asset value and dispute-prone sectors like real estate.

AMRUT

- Atal Mission for Rejuvenation and Urban Transformation (AMRUT) was launched in 2015 for urban transformation by implementing urban revival projects.
- Its purpose is to:
 - Ensure that every household has access to a tap with the assured supply of water and a sewerage connection.
 - Increase the amenity value of cities by developing greenery and well maintained open spaces (e.g. parks) and
 - Reduce pollution by switching to public transport or constructing facilities for non-motorized transport (e.g. walking and cycling).
- **Focus areas:** Water Supply; Sewerage management; Storm water drainage to reduce flooding; Non-motorized urban transport; Green space/parks.

7. **IBSA alliance has been overshadowed by BRICS in recent years. However, IBSA is equally important, if not more, for India. Critically comment.**

Answer

- IBSA is a unique Forum which brings together India, Brazil and South Africa, three large democracies and major economies from three different continents, facing similar challenges.
- It was launched through the Brasilia Declaration in 2003 and soon it became a unique voice for the Global South. However, it started to lose its relevance in the wake of the emergence of BRICS.

BRICS Overshadowed IBSA

- Since its first summit in 2009, BRICS today can be seen as an **important driver in the politico-economic sphere** among the comity of nations.
- The significance of BRICS was also substantially enhanced due to the **presence of Russia and China, both permanent members of the UNSC.**
- The BRICS nations collectively represented **26% of the landmass** of the world and 46% of its population. They collectively contributed to **18% of the global GDP.**
- BRICS leaders kept on **meeting at the regular interval.** On the other hand, IBSA has been unable, until now, to hold its sixth summit. Last IBSA summit was held in 2011.
- The BRICS countries' common interests are reflected in various policy areas: a joint development bank and the consolidation of an agreement for a reserve fund.
- However, IBSA's survival largely depends on the identification of common interests and India's greater engagement.

IBSA: Equally important for India

- IBSA is the true **inheritor of solidarity among developing countries**, which was nurtured from the Bandung Conference (1955) through UNCTAD and G-77.
- It is the champion of **South-South Cooperation**, and the advocate of a coordinated response by developing economies to secure the Sustainable Development Goals (SDGs).
- The glue that binds IBSA countries together is their faith in democracy, diversity, plurality, inclusivity, human rights and rule of law.
- IBSA was found to **coordinate on global and regional political issues**, such as, the *reform of the global institutions of political and economic governance, WTO/Doha Development Agenda, climate change, terrorism etc.*

Conclusion:

- IBSA Trilateral Forum cannot be rendered obsolete. The special responsibilities it bears cannot be discharged by BRICS.
- In fact, strengthening IBSA could increase the effectiveness of BRICS and encourage it to follow a more balanced approach on key issues of interest to India, Brazil and South Africa.
- A series of events held during 2018-19, marking its 15th anniversary, and the meeting of experts held in 2019 in Kochi imparted new momentum to the endeavour to revitalise IBSA.

BRICS Media Forum

- The **fifth** presidium meeting of the BRICS Media Forum was held virtually.
- At the end of meeting, the participating nations decided to work together to **jointly combat the “virus of disinformation” in the pandemic era.**
- The participating leaders expressed concern regarding disinformation being “transmitted globally at warp speed on the technological platforms such as Facebook, Twitter, Google, WhatsApp, and Instagram”.
- Besides affecting lives and well-being of millions of people and the safety and integrity of society, it also poses threat to the mainstream media.

About BRICS Media Forum

- **Launched in 2015**, the BRICS Media Forum mechanism was **proposed by Xinhua News Agency** and jointly initiated with mainstream media from Brazil, Russia, India and South Africa.
- The forum aims to establish an efficient coordination mechanism among BRICS media, advance innovation-driven media development and gather stronger momentum for the development of BRICS countries through exchange and pragmatic cooperation under the mechanism.
- The presidium is the **decision-making body of the forum** and holds a meeting regularly ahead of the opening of the forum.

8. Central Bureau of Investigation (CBI) as a premier investigating agency is losing its credibility and there is an urgent need to reform CBI. Discuss.

Answer

The 2019 **turf war in the CBI and the ouster of its director** would be the second incident after the **Jain hawala fiasco** where corruption and a cover-up within the agency has been dragged and vigorously

debated in the public domain. The image of a premier investigating agency suffered a serious setback when the Supreme Court of India termed CBI as **caged parrot with many masters**.

Need For Reform

- **Guided By Pre-independence Act:** The CBI is **still guided by DPSE Act 1946**, whose provisions hamper the accountability and autonomy of the institutions. The Guwahati HC in a judgement termed CBI as **unconstitutional** as it has no statutory backing.
- **Politically inclined** – There have been instances where CBI has been politically biased as it is vulnerable to undue political pressure. During the **coal block investigation**, the CBI was asked to share the findings with the government.
- **Delays in case solving** – shows the inefficiency and inefficacy of this top most investigating agency of India.
- The **carrot of post-retirement benefit** makes CBI chief prone to toeing the lines of incumbent government.
- **Corruption and Nepotism** – Ex-CBI director Joginder Singh in his book revealed about the prevalent corruption and nepotism within the agency.

Way Forward

- A CBI act should be promulgated on par with the Customs Act or the Income Tax Act, so that CBI officers enjoy independent investigation powers outside the CrPC, without having to be at the mercy of the State governments.
- Tenures of CBI officials must not be tinkered with, except under extraordinary circumstances.
- There should be permanent recruitment to top posts as deputations are temporary and lead to lack of accountability and efficiency as understanding the new system takes time.
- Provide a cooling of period of at least 5 years to address misuse of postretirement benefits.

Conclusion

- CBI's motto is "**Industry, Impartiality, Integrity**" and the organization needs to practice these three qualities in true spirit, which would automatically make it a role model for other investigation agencies in the Nation to follow.
- By placing CBI **under a constitutional head** instead of the CVC's superintendence, we can take the first step.
- The public perception of the CBI must be of the highest order. This is possible if the **guidelines – laid down by SC in Vineet Narain case – for the directors** is implemented properly.

CBI Brings out Updated Crime Manual

- CBI has brought out a revised crime manual after 15 years by keeping sight of latest developments in law, investigation techniques and procedures. The **crime manual was last updated in 2005**.
- The purpose of revising the guidelines was aimed at enhancing the speed and quality of investigation in consonance with global best practices, considering the strides in information and communication technology.

What is Crime Manual?

- CBI's crime manual lays down the standard operating procedures for the agency to implement in matters pertaining to special investigations, economic offences and cyber-crimes.

Key Highlights:

- The revised manual introduced **changes in the standard operating procedures**- specially to probe digital crimes in the cyber world and those across national boundaries.
- Cases at the heads-of-branches level will now have to be **completed within six months** while those supervised at the senior level of heads of zones will have to be **completed within nine months** from the earlier deadlines of around one year.

Background:

- CBI had set up a **task force under Additional Director Praveen Sinha** to make necessary changes in the crime manual.
- Based on its guidelines the necessary changes have been made.

c) Both 1 and 2

d) Neither 1 nor 2

Answer: D**Explanation:**

Minorities Rights Day is observed every year across the nation on December 18. This day is observed to **protect the rights of minority communities**, as a contribution to nation-building, to ensure the security of minorities in their particular language, caste, religion, culture, tradition, etc.

History

- December 18 was declared as The Minorities Rights Day in 1992 by the United Nations after the agency adopted the **Statement on the individual's Rights belonging to religious or Linguistic National or Ethnic Minorities**.
- It is observed in India by the National Commission for Minorities (NCM) which was established by The Union Government under the **National Commission for Minorities Act, 1992**.
- **Ministry For Minority's Rights:** It was branched out of the Ministry of Social Justice and Empowerment in the year 2006 to ensure that the universal, and civil, political, economic, social and cultural rights were granted to the minorities.
- Initially, as many as five religious communities, Muslims, Christians, Sikhs, Buddhists, and Zoroastrians (Parsis) were notified as minority communities by the Union Government. In 2014, Jains were also notified as another minority community.
- According to the 2011 Census data, **minorities constitute 19.30 per cent (23.37 crore) of India's population**. These include Muslims (14.2 per cent), Christians (2.3 per cent), Sikhs (1.3 per cent), Buddhists (0.7 per cent), Jains (0.4 per cent) and Parsis.
- Jammu and Kashmir, Punjab, Meghalaya, Mizoram, Nagaland and Lakshadweep are the **only states where any notified minority is in majority**.

3. Which of the following are communicable diseases?

1. Pertussis
2. Cataract
3. Hepatitis B
4. Zika Virus disease
5. Tuberculosis

Choose the correct option using the codes below:

a) 2, 3 and 4 only

b) 3, 4, and 5 only

c) 1, 2 and 5 only

d) 1, 3, 4 and 5

Answer: D**Explanation:**

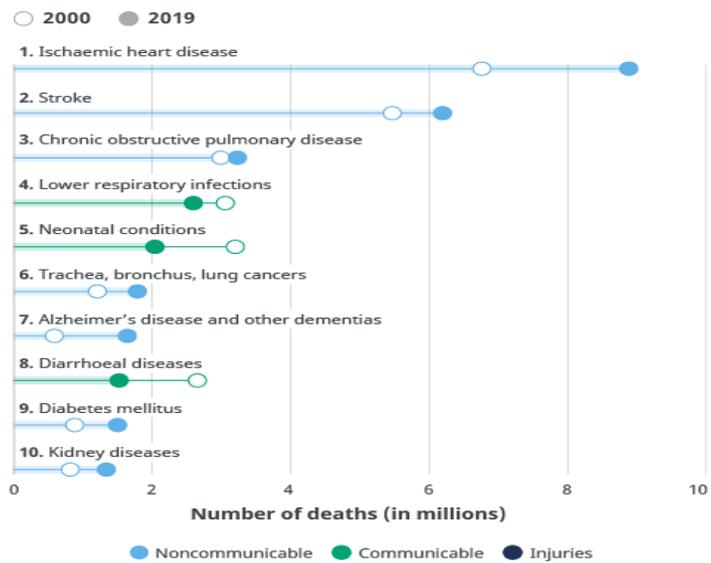
The World Health Organization recently released the **2019 Global Health Estimates**. The report gives comprehensive data for population health, including life expectancy, mortality and morbidity, and burden of disease at global, regional and country levels. The report gives trends for more than 160 diseases and injuries annually from 2000 to 2019.

Key Findings

A. Increase in non-communicable Diseases

- Non-communicable diseases now form 7 of the world’s top 10 causes of death. This is an increase from 4 of the 10 leading causes in 2000. All non-communicable diseases together accounted for 74% of deaths globally in 2019.
- Heart disease has remained the leading cause of death at the global level for the last 20 years. However, it is now killing more people than ever before.
- The number of deaths from heart disease increased by more than 2 million since 2000, to nearly 9 million in 2019. It now represents 16% of total deaths from all causes.
- Alzheimer’s disease and other forms of dementia are now among the top 10 causes of death worldwide, ranking 3rd in both the Americas and Europe in 2019.
- Women are disproportionately affected and globally 65 per cent of deaths from Alzheimer’s and other forms of dementia were among females.
- Deaths from diabetes increased by 70 % globally between 2000 and 2019, with an 80 % rise in deaths among males.
- In the Eastern Mediterranean, deaths from diabetes have more than doubled and represent the greatest percentage increase of all WHO regions.

Leading causes of death globally



Source: WHO Global Health Estimates.

B. Decline In Communicable Diseases

- There has been a global decline in deaths from communicable diseases but it still remains a major challenge in low- and middle-income countries.
- 6 of the top 10 causes of death in low-income countries are still communicable diseases, including malaria (6th), tuberculosis (8th) and HIV/AIDS (9th).
- In 2019, pneumonia and other lower respiratory infections were the deadliest group of communicable diseases and together ranked as the fourth leading cause of death.
- However, compared to 2000, lower respiratory infections are claiming fewer lives compared to the past, with the global number of deaths decreasing by nearly half a million.
- Tuberculosis is also no longer in the global top 10 causes of death. It moved from 7th place in 2000 to 13th in 2019, with a 30% reduction in global deaths. However, it remains among the top 10 causes of deaths in the African and South-East Asian regions, where it is the 8th and 5th leading cause respectively.
- HIV/AIDS dropped from the 8th leading cause of death in 2000 to the 19th in 2019, reflecting the success of efforts over the last two decades.

C. Increase In Disability

- The new projections state that people are living longer but with more disability. In 2019, people were living more than 6 years longer than in 2000, with a global average of more than 73 years in 2019

compared to nearly 67 in 2000. However, on average, only 5 of those additional years were lived in good health.

- To a large extent, the diseases and health conditions that are causing the most deaths are responsible for the greatest number of healthy life-years lost.
- Heart disease, diabetes, stroke, lung cancer and chronic obstructive pulmonary disease were collectively responsible for nearly 100 million additional healthy life-years lost in 2019 compared to 2000.
- Injuries are another major cause of disability and death, with the African region recording a significant rise in road traffic injuries since 2000. Globally, 75% of deaths from road traffic injuries are among males.

Way Ahead

- The estimates are another reminder that there is a need to rapidly increase prevention, diagnosis and treatment of non-communicable diseases.
- Strong primary health care is clearly the foundation on which everything rests, from dealing with non-communicable diseases to managing a global pandemic.
- Thus, there is an urgent need to drastically improve primary health care equitably and holistically.

Note: Pertussis, Hepatitis B, Zika Virus disease and Tuberculosis are communicable diseases. Cataract is a non-communicable disease.

4. The Universal Declaration of Human Rights was adopted in 1948 by:

- a) United Nations General Assembly
- b) United Nations Security Council
- c) United Nations Economic and Social Council
- d) None of the above

Answer: A

Explanation

- Human Rights Day is observed every year on 10 December. On this day, in 1948 the United Nations General Assembly adopted the Universal Declaration of Human Rights (UDHR).
- This year's Human Rights Day theme is "Recover Better - Stand Up for Human Rights". It is linked to the Covid-19 pandemic with the focus on the need to building back better by ensuring human rights are the centre of the recovery efforts.

Universal Declaration of Human Rights (UDHR)

- The UDHR is a milestone document that proclaims the inalienable rights which everyone is entitled to as a human being - regardless of race, colour, religion, sex, language, political or other opinion, national or social origin, property, birth or other status.
- Considered a foundational text in the history of human and civil rights, the **Declaration consists of 30 articles** detailing an individual's "basic rights and fundamental freedoms". It affirms their universal character as inherent, inalienable, and applicable to all human beings.
- Although **not legally binding**, the contents of the UDHR have been incorporated into subsequent international treaties, regional human rights instruments, and national constitutions and legal codes.

the earlier definition, that included mental retardation and permanent inability to move, speak, hear and see.

- Moreover, the revised definition recognises deformities and injuries of acid attack victims as disabilities, entitling them to various relief measures.

Statistics On Disability

- As per the 2019 NSO report on disability, about 2.2% of India's population lives with some kind of physical or mental disability.
- prevalence of disability in India. Moreover, a higher proportion of men were disabled in India compared with women.
- Inability to move without assistance (locomotor disability) was the most common disability and more men experienced locomotor disability than women. These numbers were self-reported. In other words, the respondents were asked if they experienced any difficulty in performing tasks like moving, talking, etc.

Future Outlook

- In the 2021 census, disability will be defined as per the Rights of Persons with Disabilities (RPwD) Act of 2016.
- The 2011 census also estimated the number of people with disabilities at close to 2.68 crore (or 2.2% of the population) -- that is more than the entire population of Australia.
- Disability was more prevalent in rural areas than in urban areas and rural men had the highest
- The department of disability affairs is also in the process of creating a national database of PwDs, which will contain information on those with certificates issued by competent medical authorities.

Rights of Persons with Disabilities Act, 2016

- The RPwD Act, 2016 replaced the Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1995.
- It fulfills India's obligations to the United National Convention on the Rights of Persons with Disabilities (UNCRPD), to which India is a signatory. According to the RPwD Act, disability has been defined based on an evolving and dynamic concept.
- The Act puts the responsibility on appropriate governments to take effective measures to ensure that the PwDs get their rights equally like others.
- Additional benefits such as reservation in higher education (not less than 5%), government jobs (not less than 4 %), reservation in allocation of land, poverty alleviation schemes (5% allotment) etc. have been provided for persons with benchmark disabilities.
- As per the Act, a person with **benchmark disability** means a person with not less than forty percent of a specified disability. Every child with benchmark disability between the age group of 6 and 18 years will have the right to free education.
- Government funded educational institutions as well as the government recognized institutions will have to provide inclusive education to the children with disabilities.
- To strengthen the Accessible India Campaign, stress has been given to ensure accessibility in public buildings (both government and private).

7. COVAX is a global initiative led by:

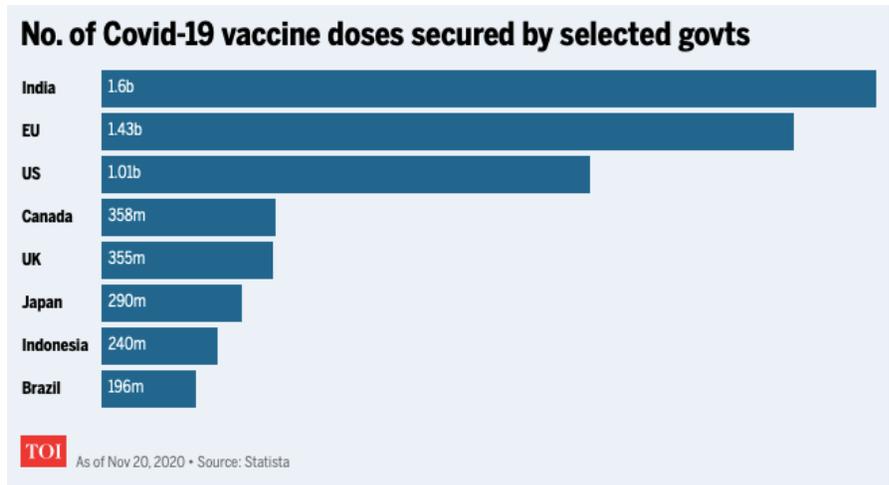
- a) Coalition for Epidemic Preparedness Innovations
- b) World Health Organization
- c) GAVI
- d) All of the above

Answer: D

Explanation

- A global vaccine procurement analysis "Launch and Scale Speedometer" by Duke University, has been tracking advanced commitments between countries and vaccine developers. According to the analysis, India is the largest buyer of COVID-19 vaccines in the world, after concluding contracts to get 1.6 billion doses.

- India has purchased 500 million doses of the Oxford University-AstraZeneca vaccine candidate, one billion from the US company Novavax and 100 million doses of the Sputnik V candidate from Russia's Gamaleya Research Institute.
- Moreover, a domestic vaccine candidate by Bharat Biotech has also entered Phase 3 trials recently.



- Since, most vaccine candidates need two doses of vaccination, the 1.6 billion doses would cover 800 million people or 60 % of India's population.
- According to experts, this might be enough to develop herd immunity, a form of indirect protection from infectious disease that occurs when a sufficient percentage of a population has become immune to an infection.

Vaccine Procurement Across The World

- India is followed by the European Union which has confirmed 1.58 billion doses and the US, that has managed to purchase just over a billion doses.
- High-income countries currently hold a confirmed 3.8 billion doses, upper middle-income countries hold 829 million doses, and lower middle-income countries hold more than 1.7 billion doses.
- The analysis doesn't include China and Russia, both of which have their own vaccine programmes for citizens.
- The researchers have not been able to find evidence of any direct deals made by low-income countries, suggesting that such countries will be entirely dependent on the 20 per cent population coverage from COVAX.
- **COVAX** is a global initiative led by the WHO, the Coalition for Epidemic Preparedness Innovations (CEPI) and international vaccine alliance organization Gavi.

- As per WHO, cannabis is by far the most widely cultivated and trafficked illicit drug in the world.
- Global attitudes towards cannabis have changed significantly since the commencement of the 1961 Convention. Currently, over 50 countries allow medicinal cannabis programmes, and its recreational use has been legalised in Canada, Uruguay and 15 US states.

Significance of The Decision for Cannabis Industry

- The reclassification of cannabis by the UN agency, although significant, would **not immediately change its status worldwide** as long as individual countries continue with existing regulations.
- Still, this **could impact the process**, as many nations follow the lead of international protocols while legislating.
- The CND decision would **add momentum to efforts for decriminalising cannabis** in countries where its use is most restricted, while further legalising the substance in others.
- **Scientific research into marijuana's medicinal properties** is also expected to grow.

Risk of Legalising Cannabis

- It is not accurate that cannabis is harmless. Its immediate effects include **impairments in memory and in mental processes**, including ones that are critical for driving.
- Long-term use of cannabis may lead to the development of addiction of the substance, **persistent cognitive deficits**, and of mental health problems like **schizophrenia, depression and anxiety**.
- Exposure to cannabis in adolescence **can alter brain development**.
- There is a widespread belief that if cannabis is legalised and regulated, its harms can be minimised. However, that is not completely true.
- With legalisation comes commercialisation and this comes at a cost which has been seen with tobacco and alcohol over the last century. The **morbidity and mortality associated with tobacco and alcohol rank amongst the top 10** in terms of the global disease burden.

Status of Cannabis In India

- Under India's ***Narcotic Drugs and Psychotropic Substances (NDPS) Act, 1985***, the production, manufacture, possession, sale, purchase, transport, and use of cannabis is a ***punishable offence***.
- Charas, defined as the separated resin in any form, obtained from the cannabis plant, is also covered by the NDPS Act.
- With this decision in place, India should carefully consider all the risks, and consider alternatives.
 - It could decriminalise cannabis but **forbid commercialisation**.
 - If India were to liberalise its policy on cannabis, it should ensure that there are **enough protections for children, the young, and those with severe mental illnesses**, who are most vulnerable to its effects.
 - Finally, **treatments** for those who become addicted to cannabis should be offered.

United Nations Commission on Narcotic Drugs

- The United Nations Commission on Narcotic Drugs (CND) was established by the United Nations Economic and Social Council (**ECOSOC**) as one of its functional commissions in 1946. It is headquartered in **Vienna**.
- It is the central drug policy-making body within the United Nations system and has important functions under the international drug control conventions.
- The CND reviews and analyses the global drug situation, considering the interrelated issues of prevention of drug abuse, rehabilitation of drug users and supply and trafficking in illicit drugs.

- The CND consists of 53 states, serving four-year terms. The members are elected from the members of the United Nations and members of the specialized agencies and the Parties to the Single Convention on Narcotic Drugs, 1961.

Single Convention on Narcotic Drugs, 1961

- The Single Convention on Narcotic Drugs, 1961 is an international treaty to prohibit production and supply of specific drugs. The Convention has 186 state parties.
- Earlier treaties had only controlled opium, coca, and derivatives such as morphine, heroin and cocaine.
- The Convention, adopted in 1961, consolidated those treaties and broadened their scope to include drugs whose effects are similar to the drugs specified.

Cannabis Plant

- According to the WHO, cannabis is a generic term used to denote the several psychoactive preparations of the plant **Cannabis sativa**.
- The major psychoactive constituent in cannabis is **Delta-9 tetrahydrocannabinol (THC)**.
- The **Mexican name 'marijuana'** is frequently used in referring to cannabis leaves or other crude plant material in many countries.
- Most species of cannabis are **dioecious plants** that can be identified as either male or female. The **unpollinated female plants are called hashish**.
- **Cannabis oil (hashish oil)** is a concentrate of cannabinoids — compounds which are structurally similar to THC — obtained by solvent extraction of the crude plant material or of the resin.

10. Which of the following statements is correct regarding Post Matric Scholarship to students belonging to Scheduled Castes (PMS-SC) scheme:

- a) PMS-SC is entirely funded by the central government.**
- b) PMS-SC is entirely funded by the state governments.**
- c) PMS-SC is jointly funded by the central government and state governments.**
- d) None of the above.**

Answer: C

Explanation

- The Cabinet Committee on Economic Affairs has approved major changes in the Centrally Sponsored Scheme 'Post Matric Scholarship to students belonging to Scheduled Castes (PMS-SC)'.
- The scheme has been in existence since 1944 and has helped students to pursue any post-Matric course starting from class 11 onwards, with the government meeting the cost of education.
- Due to this scheme, the Gross Enrolment Ratio (higher education) among the SCs has increased from 6 % in 2002-03 to 23 % in 2018-19.
- However, there have been issues due to the current fund-sharing formula. Under the current formula, the Centre provides only funds above the 'committed liability', which in effect translates to about 11 per cent of the total cost. This led to many states ending the scheme.

- There has also been a huge increase in the proportion of children with anaemia in most states. Gujarat is the state with the highest proportion of anaemic children, 80%, a significant increase from about 63% in the last survey.

Child Mortality Indicators

- However, child mortality indicators have improved in most states with some like Jammu & Kashmir and Assam showing significant improvement.
- The **neonatal mortality rate (NMR)** which is deaths in the first four weeks of life, dropped in 15 states and UTs in comparison to NFHS-4.
- **Infant mortality rate (IMR)**, which accounts for deaths before the completion of one year, and the **under-five mortality rate (UMR)** fell in 18 states and UTs.

| SHARP REVERSALS IN CHILD HEALTH | | | | | | |
|---------------------------------|--------------------------|--------------------------|-------------------------------|-------------------------------|--------------|--------------|
| | Wasted children 2019-20* | Wasted children 2015-16* | Underweight children 2019-20* | Underweight children 2015-16* | IMR 2019-20# | IMR 2015-16# |
| Andhra Pradesh | 16.1% | 17.2% | 29.6% | 31.9% | 30.3 | 34.9 |
| Telangana | 21.7% | 18% | 31.8% | 28.4% | 26.4 | 27.7 |
| Assam | 21.7% | 17% | 32.8% | 29.8% | 31.9 | 47.6 |
| Bihar | 22.9% | 20.8% | 41% | 43.9% | 46.8 | 48.1 |
| Gujarat | 25.1% | 26.4% | 39.7% | 39.3% | 31.2 | 34.2 |
| Karnataka | 19.5% | 26.1% | 32.9% | 35.2% | 25.4 | 26.9 |
| Kerala | 15.8% | 15.7% | 19.7% | 16.1% | 4.4 | 5.6 |
| Maharashtra | 25.6% | 25.6% | 36.1% | 36% | 23.2 | 23.7 |
| West Bengal | 20.3% | 20.3% | 32.2% | 31.6% | 22 | 27.5 |
| J&K | 19% | 12.2% | 21% | 16.6% | 16.3 | 32.4 |

*Data are for children under 5; #per 1,000 live births

Miscellaneous Findings

- Sex ratio of the total population (females per 1,000 males) rose in 17 states and UTs in comparison to NFHS-4. The states which observed a drop in sex ratio of the total population were Himachal Pradesh, Kerala, Andaman and Nicobar Islands, Jammu and Kashmir and Ladakh.
- The survey found considerable improvement in vaccination coverage among children aged 12-23 months across all States/UTs.
- The fertility rate has further declined, and contraceptive use has increased in most Phase I States.
- Women’s empowerment indicators (including women with bank account) also show considerable progress.
- However, anaemia among women remains a major cause of concern. In all the states, anaemia is much higher among women compared to men.
- Despite efforts, there has been an increase in child marriages in Tripura, Manipur and Assam, while states like West Bengal and Bihar still have high prevalence of child marriages.

Significance Of The Findings

- Between NFHS-3 (2005-06) and NFHS-4 (2015-16), India registered its most significant reduction in child malnutrition.
- This happened due to various interventions like nutrition missions, Integrated Child Development Services, the introduction of MGNREGA and expansion of Public Distribution System among others.
- The latest results show that health-wise India’s status has worsened since 2015, despite improvements in water availability and sanitation methods.
- Worsening child malnutrition, as well as rising levels of anaemia in women (especially pregnant ones), is an indicator that Indian children born in the past 5 years are likely suffering from both cognitive and physical deficiencies.

Future Outlook

- The second phase of the survey covering the remaining 12 States and 2 UTs was suspended due to Covid-19. Its results are expected to come out in May 2021.
- The second phase will cover some of the biggest states such as Uttar Pradesh, Madhya Pradesh, Punjab and Jharkhand.
- Experts expect the second phase data on child malnutrition to be even worse, due to the all-round adverse impact of Covid-19 on personal incomes, food availability, healthcare provisioning etc.

National Family Health Survey

- NFHS is a large-scale nationwide survey of representative households, in which the data is collected over multiple rounds.
- The MoHFW has designated **International Institute for Population Sciences** in Mumbai as the nodal agency and the survey is a collaborative effort of IIPS; ORC Macro, Maryland (US); and the East-West Center, Hawaii (US).
- The survey is funded by the **United States Agency for International Development (USAID)** with supplementary support from UNICEF.

12. SANKALP program comes under:

- a) Ministry of Women and Child Development
- b) Ministry of Skill Development and Entrepreneurship
- c) Ministry of Education
- d) None of the above

Answer: B

Explanation

Ministry of Skill Development and Entrepreneurship (MSDE) recently conducted a special Recognition of Prior Learning (RPL) program for workers, with Department of Panchayati Raj (DoPR) in Chandauli and Varanasi.

Recognition of Prior Learning (RPL) Program

- The programme is implemented under SANKALP Programme of MSDE and supported by **World Bank**.
- RPL recognizes the value of learning acquired outside a formal setting and provides a government certificate for an individual's skills.
- Candidates receive exposure to concepts of digital and financial literacy and an accidental insurance coverage for three years free of cost.
- No fee is charged from a candidate for participating in the RPL program and every successfully certified candidate receives Rs 500.
- Under the program, MSDE is supporting the State Skill Development Missions (SSDMs) and District Skill Committees (DSCs) in facilitating successful execution of the programme.
- It aims to align the competencies of the pre-existing workforce of the country to the standardized framework.

- Supporting formalization of the informal learning of youth will supplement their efforts in finding sustainable livelihood opportunities and reduce inequalities based on privileging certain forms of knowledge over others.
- The initiative will contribute in development of rational and realistic state skill development plans, finally leading to a well-grounded national plan for skill development.

Skill Acquisition and Knowledge Awareness for Livelihood Promotion (SANKALP)

- SANKALP is an outcome-oriented centrally sponsored programme of Ministry of Skill Development & Entrepreneurship (MSDE). It focuses on the overall skilling ecosystem covering both Central & State agencies.
- It aims to implement the mandate of the National Skill Development Mission (NSDM) by identifying four key result areas:
 - i) Institutional Strengthening (at National, State & District level)
 - ii) Quality Assurance of skill development programs
 - iii) Inclusion of marginalised population in skill development
 - iv) Expanding skills through Public Private Partnerships (PPPs).

13. Consider the following statements regarding RTGS and NEFT payment systems:

1. Under RTGS, settlement of fund transfer occurs in batches.
2. No maximum limit is imposed by RBI on NEFT fund transfer.
3. RBI does not levy any processing charge for RTGS transactions.

Which of the statements given above is/are correct?

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

Answer: B

Explanation

- From December 14 onwards, the Reserve Bank of India (RBI) has allowed **round the clock (24x7) transfer of funds** through Real-Time Gross Settlement (RTGS). This makes India one of the few countries in the world to operate its RTGS system round-the-clock throughout the year.
- The current move comes within a year of the RBI allowing round the clock transfer of funds through NEFT. NEFT is the popular mode for small-value transactions.

Background

- In June 2019, the **Nandan Nilekani committee** appointed by RBI had suggested various measures for promoting digital payments in the country. The committee had suggested that there should be round-the-clock RTGS and NEFT facilities.
- Further, the customers must be allowed a reasonable number of digital payment transactions with no charges.
- Among other things, the panel had suggested that there should be no convenience fee on payments made to government agencies by customers and recommended that payment systems use machine-driven, online dispute resolution systems to handle complaints.

Impact Of The Current Change

- Round the clock availability of RTGS will provide extended flexibility to businesses for making payments and will enable introduction of additional settlement cycles in ancillary payment systems.
- It will also help to enhance operations of Indian financial markets and cross-border payments.

Real-Time Gross Settlement (RTGS)

- RTGS is a payment system in which the money is transferred to the beneficiary’s account in real-time and on a gross basis.
- **Real Time** means the processing of instructions takes place at the same time, when they are received. **Gross Settlement** means that the settlement of fund transfer instructions occurs individually.
- Thus, RTGS is a payment system where there is real-time settlement of fund-transfers, individually on a transaction-by-transaction basis. It is maintained by the Reserve Bank of India.
- RTGS is meant for large-value instantaneous fund transfers. The minimum amount to be transferred through RTGS is Rs 2 lakh, with no maximum transfer limit.
- From July, 2019, the Reserve Bank has removed the processing charges levied by it for RTGS transactions.

NEFT

- National Electronic Funds Transfer (NEFT) is a nation-wide centralised payment system owned and operated by the RBI.
- The NEFT system is available round the clock throughout the year on all days and it operates in batches of half-hourly intervals throughout the day.
- Thus, fund transfers through the NEFT system do not occur in real-time basis and the fund transfer is settled in half-hourly batches.
- NEFT fund transfer starts from Re. 1 and there is no maximum limit imposed by the RBI for funds transfer through NEFT. However, banks may place amount limits based on their own risk perception with the approval of its Board.
- From July, 2019, the Reserve Bank has removed the processing charges levied by it for NEFT transactions.

| BASIS OF COMPARISON | NEFT | RTGS |
|------------------------|--------------------|--------------------|
| Minimum transfer value | Re. 1 | Rs. 2 lakh |
| Payment options | Online and offline | Online and offline |
| Maximum transfer value | No limit | No limit |
| Settlement type | Half hourly basis | Real time |

14. Which of the following are applications of Technical Textiles?

- a) Sports wear
- b) Road development
- c) High altitude combat gear
- d) All of the above

Answer: D

Explanation:

- Ministry of Textiles has invited proposals for constitution of a dedicated Export Promotion Council (EPC) for Technical Textiles. The constitution of an Export Promotion Council for Technical Textiles is part of one of the components of the **National Technical Textiles Mission**.

Answer: B

Explanation

- The United Nations (UNCTAD) has declared **Invest India** as a winner of the **United Nations Investment Promotion Award 2020**.
- The award recognizes and celebrates the outstanding achievements and best practices of Investment Promotion Agencies (IPAs) across the globe and is the most coveted award for IPAs.
- The evaluation was based on UNCTAD's assessment of work undertaken by 180 Investment Promotion Agencies.

Invest India

- Invest India is the National Investment Promotion and Facilitation Agency of India and act as the first point of reference for investors in India.
- It is a non-profit venture set up in 2009 under the **Department for Promotion of Industry and Internal Trade**, Ministry of Commerce and Industry.
- UNCTAD has highlighted good practices followed by Invest India such as the Business Immunity Platform, Exclusive Investment Forum webinar series and its social media engagement.
- Invest India has also shared long-term strategies and practices being followed for investment promotion, facilitation and retention at UNCTAD's high-level brainstorming sessions.

UNCTAD

- UNCTAD was established by the United Nations General Assembly in 1964, as a permanent intergovernmental body. With a permanent secretariat in **Geneva**, the UNCTAD reports to the UN General Assembly and United Nations Economic and Social Council.
- The creation of UNCTAD was based on concerns of developing countries over the international market, multi-national corporations, and great disparity between developed nations and developing nations.
- It was established to provide a forum where the developing countries could discuss the problems relating to their economic development.
- The primary objective of UNCTAD is to formulate policies relating to all aspects of development including trade, aid, transport, finance and technology.
- It also monitors performance of investment promotion agencies and identifies global best practices.
- One of the principal achievements of UNCTAD has been to conceive and implement the **Generalised System of Preferences (GSP)**. It was argued in UNCTAD that to promote exports of manufactured goods from developing countries, it would be necessary to offer special tariff concessions to such exports.
- Accepting this argument, the developed countries formulated the GSP scheme under which manufacturers' exports and import of some agricultural goods from the developing countries enter duty-free or at reduced rates in the developed countries.

16. Consider the following statements about Krishna Godavari (KG) basin:

- 1. The KG basin is located on the west coast of India.**
- 2. The KG basin has the deepest offshore gas field in Asia.**

Which of the statements given above is/are correct?

a) 1 only

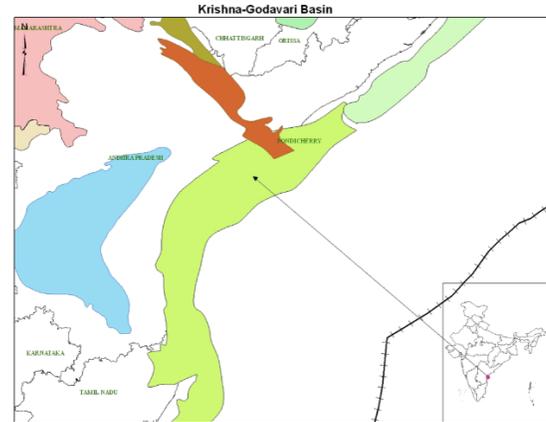
b) 2 only

c) Both 1 and 2

d) Neither 1 nor 2

Answer: B**Explanation**

- **Reliance Industries Ltd (RIL) and British Petroleum (BP)** have announced the start of gas production from R cluster in the Krishna Godavari D6 (KG-D6) block. Located at a depth of more than two kilometres, the R Cluster is the **deepest offshore gas field in Asia**.
- R Cluster is the first of three deep water gas projects in the KG-D6 block jointly developed by RIL and BP. The other two clusters are Satellites Cluster and MJ.
- Production of gas from the R cluster was expected to start in May 2020 but was delayed due to the impact of the Covid-19 pandemic. The Satellite cluster is expected to start production in 2021.
- RIL has a participating interest of 66.7% in the KG-D6 block and BP has a participating interest of 33.3% in the block.

**Krishna Godavari Basin**

- The delta plain formed by Krishna and Godavari rivers in the state of Andhra Pradesh and the adjoining areas of Bay of Bengal, on the east coast is known as Krishna Godavari Basin.
- It is a proven hydrocarbon reserve with an inland part that covers an area of 28,000 sq. km and an offshore part that covers an area of 2.02 lakh sq. km. Several oil and gas fields are located both on land and offshore parts of the basin.
- The region is primarily known for the D-6 block where Reliance Industries discovered the biggest natural gas reserves in India.

Significance

- In FY20, demand for natural gas in India was around 153 MMSCMD and around half the demand was met through imports. Increasing domestic production of natural gas is important to reduce India's dependence on imports and improve energy security.
- The three clusters mentioned above are a key part of the plan to boost domestic production of natural gas and to increase the share of natural gas in India's overall energy consumption from 6.2% now to 15% by 2030.
- The three clusters in the Krishna Godavari Basin are expected to produce around 30 MMSCMD (Million standard cubic metres per day) of natural gas or about 15% of India's projected demand for natural gas by 2023.
- The R cluster field alone is expected to have a peak production of 12.9 MMSCMSD or about 10% of India's current natural gas output.

17. New Development Bank's headquarters is in:

a) Beijing

b) Moscow

c) Shanghai

d) Johannesburg

Answer: C

Explanation

- India and the New Development Bank (NDB) have signed a loan agreement for lending \$1 billion towards supporting India's economic recovery from Covid-19.
- The loan will support expenditures on rural infrastructure related to natural resource management (NRM) and rural employment generation under Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS).
- The funding is under NDB's Policy on fast-track emergency response to Covid-19. It has a tenor of 30 years, including a 5-year grace period.
- The programme will improve the livelihood of rural poor along with providing income opportunities to migrant workers who returned home due to job loss caused by Covid-19 pandemic.
- The World Bank has also approved four projects worth over \$800 million.
- The projects include strengthening India's social protection architecture, promoting nutrition-supportive agriculture for tribal households in Chhattisgarh, enhancing quality education in Nagaland and improving safety and performance of existing dams across states.

New Development Bank (NDB)

- The New Development Bank (NDB), formerly referred to as the BRICS Development Bank, is a multilateral development bank established by the BRICS states (Brazil, Russia, India, China and South Africa). The bank is headquartered in **Shanghai**.
- During the sixth BRICS Summit in Fortaleza (2014), the leaders signed the Agreement establishing the New Development Bank (NDB).
- The Bank supports public or private projects through loans, guarantees, equity participation and other financial instruments.
- Moreover, the NDB cooperates with international organizations and other financial entities, and provides technical assistance for projects to be supported by the Bank.
- All members of the United Nations can be members of the bank; however, the share of the BRICS nations can never be less than 55% of voting power.

18. Which of the following statements is correct regarding Petroleum and Natural Gas Regulatory Board (PNGRB)?

- a) PNGRB is a statutory body.
- b) PNGRB has the power to prevent restrictive trade practices by entities involved in the petroleum industry.
- c) PNGRB has the power to regulate transportation rates of natural gas.
- d) All of the above

Answer: D

Explanation

- The Petroleum and Natural Gas Regulatory Board (PNGRB) has notified a **unified tariff structure** for 14 natural gas pipelines. The move is aligned with the government's emphasis on boosting the consumption of natural gas in the country.

- The existing tariff is based on the *distance of transportation of gas* - the longer the distance, the higher the charge.
- Due to this, consumers that were at a greater distance had to pay higher charges compared to the consumers who were near the source.

New Tariff Structure

- Under the new unified tariff structure, PNGRB has notified a **two-zone tariff structure**.
- Under **Zone-1**, buyers that are within 300-km from the source of gas (gas field or Liquefied Natural Gas import terminal) will be charged a fixed tariff for the transport of gas.
- Under **Zone-II**, buyers beyond 300-km from the source of gas will be charged a separate fixed tariff.
- The tariff for Zone-I will be around 40 per cent of the tariff for Zone-II. Unified tariff will be determined by the Board for each financial year before the start of the financial year.

Impact Of The Change

- Entities that are away from the source, for example in Uttar Pradesh, Bihar and especially in the north-east will benefit substantially from the change, as they will now pay a lesser tariff.
- The new tariff structure would help to create a single gas market in the country by attracting investment into gas transmission infrastructure and make it more easily accessible.
- However, it will lead to an immediate increase in tariff for companies which use natural gas as an input and have set up fertilizer units and power plants close to gas terminals on the west coast in Gujarat (near the source).
- The change would have an impact of over Rs 400 crore on fertilizer units located along the Hazira-Vijaipur-Jagdishpur pipeline alone, producing the majority of India's urea output. The **Ministry Of Fertilizers** also pointed out that this would lead to an increase in the subsidy burden on the government.

Possible Legal Challenges

- Many consumers who already have agreements in place for the transport of gas at lower prices based on the existing tariff, may challenge the current change in the Court.
- A further legal challenge to the regulation could come from the potential violation of the bidding process through the change in regulations.
- Experts note that customers located within the first zone of such pipelines are entitled to the low transport tariff rates that were bid by pipeline operators. A hike in tariff rates for them which is likely under the new regulations would be a violation of the bidding process.
- There was no legal member on the board of the PNGRB, when the new regulation was notified. This can be another reason for a legal challenge. The position of a legal member on the board of PNGRB has been vacant since March, 2020.
- The Supreme Court had recently suspended the functioning of the Central Electricity Regulatory Commission for its failure to appoint a legal member.

Petroleum and Natural Gas Regulatory Board

- Petroleum and Natural Gas Regulatory Board (PNGRB) is a statutory body constituted under the Petroleum and Natural Gas Regulatory Board Act, 2006.
- PNGRB was established to protect the interests of consumers and entities involved in activities relating to petroleum, petroleum products and natural gas.

- Its primary functions include regulation of refining, transportation, distribution, storage, marketing, supply and sale of petroleum products and natural gas.
- It has the power to monitor prices and take corrective measures to prevent restrictive trade practice by the entities involved in the petroleum and natural gas sector. It also has the power to regulate transportation rates of natural gas

19. The Dedicated Freight Corridor does not pass through which of the following states:

- a) Haryana
- b) Rajasthan
- c) Andhra Pradesh
- d) Jharkhand

Answer: C

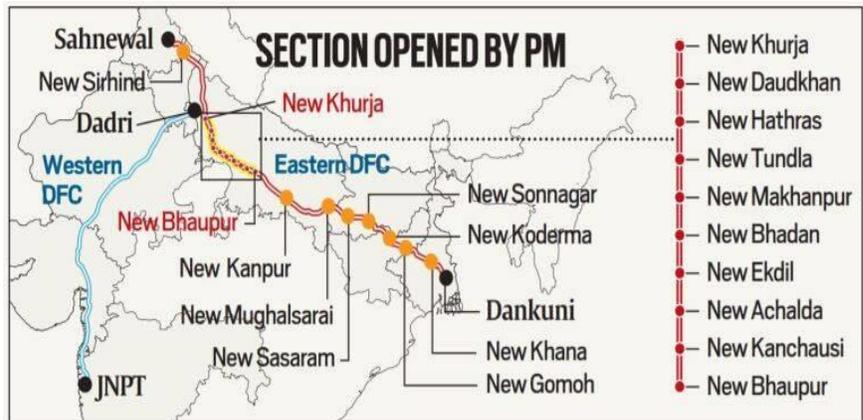
Explanation

- The Prime Minister recently inaugurated the 351-km ‘**New Bhaupur- New Khurja section**’ in Uttar Pradesh of the Eastern Dedicated Freight Corridor (EDFC). He also inaugurated the EDFC’s Operation Control Centre (OCC) at Prayagraj, Uttar Pradesh.
- The OCC will be the command centre for the entire route of the EDFC and will control and monitor all systems, including train operation and power supply system. It is said to be one of the largest control centres in the world.

Dedicated Freight Corridor

- The Dedicated Freight Corridor consists of **two arms** - Eastern Dedicated Freight Corridor (EDFC) and Western Dedicated Freight Corridor (WDFC).
- The over 1800-km long **Eastern DFC** starts at Sohnewal (Ludhiana) in Punjab and ends at Dankuni in West Bengal. It passes through Haryana, Uttar Pradesh, Bihar and Jharkhand.
- The other arm is **Western DFC** of around 1500 km, from Dadri in Uttar Pradesh to Jawaharlal Nehru Port in Mumbai, touching all major ports along the way. It passes through the states of Haryana, Rajasthan, Gujarat and Maharashtra.

- There is also a section under construction between Dadri and Khurja to connect the Eastern and Western arms.
- The DFC is being constructed by the Dedicated Freight Corridor Corporation of India Limited (**DFCCIL**). DFCCIL has been set up as a special purpose vehicle to build and operate dedicated freight corridors.



- The **World Bank** is funding majority of the EDFC and the WDFC is being funded by the Japan International Cooperation Agency.
- Work is in progress on different sections of the DFC and they are at different stages of completion. Several sections are expected to begin operations in the next two years.

Bitcoin

- The origin of Bitcoin is unclear. A person, or a group of people, with the identity of Satoshi Nakamoto are believed to have conceptualised an accounting system after the 2008 financial crisis.
- Nakamoto published a paper about an electronic cash system, which would allow online payments to be sent directly from one party to another without going through a financial institution.
- Bitcoin, often described as a cryptocurrency, a virtual currency or a digital currency - is a type of money that is **completely virtual**.
- Each Bitcoin is basically a **computer file** which is created and stored electronically in a 'digital wallet' app on a smartphone or computer. It's like an online version of cash.
- The wallet is a kind of a virtual bank account that allows users to send or receive bitcoins, pay for goods or save Bitcoins.
- Bitcoins are generally identified with a Bitcoin address, which comprises 26-35 alphanumeric characters (numbers and letters) starting with either "1" or "3". This address represents the destination of a Bitcoin.

Acquiring A Bitcoin

There are **three main ways** in which people can get Bitcoins:

- i) People can **buy Bitcoins** using 'real' money (US dollars, rupee, etc). Many marketplaces called "bitcoin exchanges" allow people to buy or sell bitcoins using different currencies.
- ii) People can **acquire bitcoins by selling goods and services** for which people pay through Bitcoins.
- iii) Bitcoins can be created using a computer. People compete to "mine" bitcoins using computers to solve complex math puzzles. This is how bitcoins are created and is called **Bitcoin Mining**.

One unique aspect of Bitcoin is that only 21 million units will ever be created. However, transactions can be denominated in sub-units of a Bitcoin. A Satoshi is the smallest fraction of a Bitcoin.

Pros and Cons

- Nakamoto proposed an idea for a publicly available, open ledger that would contain all the Bitcoin transactions, in an anonymous and an encrypted form. This ledger is called **blockchain**.
- Though each bitcoin transaction is recorded in a public log, names of buyers and sellers are never revealed and only their wallet IDs are revealed.
- This keeps bitcoin users' transactions not only private but it also lets them buy or sell anything without easily tracing it back to them. That's why it has become the preferred currency for buying drugs online or other illicit activities.
- International payments through Bitcoins are easy and cheap because bitcoins are not tied to any country or subject to regulation. Small businesses may like them because there are no credit card fees.
- As every transaction is recorded publicly so it's very difficult to copy Bitcoins, make fake Bitcoins or spend Bitcoins which people don't own.
- However, it is possible that people may lose their Bitcoin wallets or delete their Bitcoins and lose them forever. There have also been thefts from websites that let people store Bitcoins.

Rise In Bitcoin prices

- Globally, large players like payments firm PayPal, and Indian banks like SBI, ICICI Bank, HDFC Bank and Yes Bank, have given legitimacy to cryptocurrency through some of their decisions. For example,

these Indian banks have allowed their customers to use their bank accounts to conduct cryptocurrency trading.

- The biggest factor in the recent price rise is the fact that some pension funds and insurance funds took have started to keep a small part of their portfolio in Bitcoins. This reduced the availability of Bitcoins in the market which led to an increase in price.
- The **Supreme Court struck down the ban on the trading of virtual currencies** in India that was imposed by the RBI.
- Experts point that generally there is huge volatility in Bitcoins, as it does not have any underlying asset and the price is mostly based on supply and demand.
- Another reason for the volatility is that Bitcoins are not regulated. If the cryptocurrency is regulated, it could reduce the volatility in the Bitcoin prices and increase its acceptability across the world.

21. Recently, Bangladesh has signed its first Preferential Trade Agreement (PTA) with any country in the world. This country is

- a) India
- b) China
- c) Nepal
- d) Bhutan

Answer: D

Explanation

- Bangladesh signed its first Preferential Trade Agreement (PTA) with **Bhutan** allowing duty free access to a range of goods between the two countries. This is the first PTA Bangladesh has signed with any country in the world.
- Under the PTA 100 Bangladeshi products will get duty free access to Bhutan. At the same time, 34 items from Bhutan will get duty free access into Bangladesh.
- The **trade volume between the two countries** is approximately **50 million dollars** with 7.56 million of export and 42.09 million import into Bangladesh.
- The agreement was signed on the **occasion marking the 50 years of diplomatic ties** between the two countries. In 1971, **Bhutan was the first country in the world**, followed by India as the second, to recognise Bangladesh as an independent country.

22. Recently, the Indian government has announced its decision to open three Indian Missions in which of the following countries?

- a) Estonia, Paraguay and Dominican Republic
- b) Uzbekistan, Paraguay and Dominican Republic
- c) Estonia, Uzbekistan and Paraguay
- d) Estonia, Paraguay and Uzbekistan

Answer: A

Explanation

- The Cabinet has approved the opening of three Indian Missions in **Estonia, Paraguay and Dominican Republic** in 2021.

- It aims to promote mutual trust and confidence through greater understanding of defence and security challenges as well as enhancement of transparency and openness.

26. Consider the following statements regarding the United Nations Alliance of Civilizations (UNAOC):

- 1. It was established in 2005, as the political initiative of Mr. Kofi Annan, former UN Secretary-General.**
- 2. Its aim is to promote understanding across diverse communities.**

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

Explanation

- Recently, UN General Assembly organized “**Culture of Peace**” session. UNGA is organizing such sessions each year since 1997.
- During the session, India raised concerns over **UN Alliance of Civilizations (UNAOC) resolutions**.

Key Highlights:

- India criticized **UNAOC for its “selectivity”** in seeking to protect Abrahamic religions — Islam, Christianity and Judaism over others.
- India highlighted the fact that UN fails to acknowledge the rise of hatred and violence against Buddhism, Hinduism and Sikhism.
- It urged the United Nations to **expand its criticism of hatred and violence against religions** beyond the three Abrahamic religions.

Background:

- India has been concerned by an **increase in intrusive language** from the UN bodies concerned.
- Earlier, UNAOC issued a statement of “grave concern” over the Delhi riots of February 2020 that it said resulted in casualties of “mostly Muslims”.
- Bodies like UNAOC and the UN Human Rights Council have criticised the Citizenship (Amendment) Act.

What is the UN Alliance of Civilizations (UNAOC)?

- The UNAOC was **established in 2005**, as the **political initiative of Mr. Kofi Annan**, former UN Secretary-General and co-sponsored by the Governments of Spain and Turkey.
- Since its inception, it is devoted to promoting understanding across diverse communities.
- UNAOC features programming in the areas of **Education, Youth, Migration and Media**. Many programmes engage more than one area.

27. The SCO online International exhibition is developed and curated by

- a) Indian Museum, Kolkata**
- b) State Museum of Oriental Art, Russia**

- c) Museum of Pakistan
- d) National Museum, New Delhi

Answer: D

Explanation

- The **first ever SCO Online Exhibition on Shared Buddhist Heritage** was launched during the 19th Meeting of the SCO Council of Heads of Government (SCO CHG).
- The meeting was held in New Delhi, in virtual format.
- It was launched by M. Venkaiah Naidu, Vice President of India & Chair of the SCO Council of Heads of Government in 2020
- This SCO online International exhibition, first ever of its kind, is **developed and curated by National Museum, New Delhi.**
- This online international exhibition presents an excellent opportunity for visitors to access, appreciate and compare Buddhist art antiquities from SCO countries on a single platform and from the comfort of their home.

28. Which of the following statements regarding Organization of Petroleum Exporting Countries Plus (OPEC+)

1. OPEC and its partners are collectively known as OPEC+.
2. It is a group of 24 oil-producing nations.

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: C

Explanation

- OPEC+ has **agreed to increase production by 500,000 barrels** per day beginning in January 2021.
- Many non-OPEC allies, such as Russian and Kazakhstan, have been calling for a gradual increase to production curbs. However, Saudi Arabia wanted to keep the current level of cuts in place until the end of the first quarter.
- Earlier, OPEC+ had agreed to reduce output to support the global oil market as the **COVID-19 pandemic has weakened fuel demand.**

About OPEC+

- OPEC+ is a **group of 24 oil-producing nations.** It is made up of the **14 members of the Organization of Petroleum Exporting Countries (OPEC),** and **10 other non-OPEC members,** including Russia.
- The **10 non-OPEC members** are - Azerbaijan, Bahrain, Brunei, Kazakhstan, Malaysia, Mexico, Oman, Russia, South Sudan and Sudan
- The OPEC bloc is nominally led by Saudi Arabia, the group's largest oil producer, while **Russia is the biggest player among the non-OPEC countries.**

c) Both 1 and 2

d) Neither 1 nor 2

Answer: D

Explanation

- **Indian Navy's second Project 17A** Frigate 'Himgiri' was launched at the Garden Reach Shipbuilders and Engineers Limited (GRSE) in Kolkata.
- Himgiri is the **second of the total seven** Nilgiri-class Project 17A stealth guided missile frigates that are being constructed for the Indian Navy.
- Under Project 17A, a **total of seven ships** are being built, out of which four are being built at Mazagon Dock Shipbuilders Limited (MDL) and three at GRSE.

Background

- The Indian Navy's lead Project 17A Frigate INS Nilgiri was launched at the MDL shipyard in Mumbai in September 2019.
- INS Himgiri is the **second to be launched** from the batch. INS Nilgiri is planned to be commissioned in August 2022 and INS Himgiri in August 2023.

Offshore Patrol Vessel: Saksham

- Goa Shipyard Ltd launched the **fifth and final Offshore Patrol Vessel (OPV)** for the Indian Coast Guard.
- The ICGS Saksham was constructed under the **Indigenous Offshore Patrol Project**. It is equipped to handle emergencies along the coast, piracy and anti-terrorism missions and will be deployed in protecting the Exclusive Economic Zone of India.
- It should be noted that more than 70 per cent indigenisation has been achieved for these OPVs.

About Indigenous Off Shore Patrol Project

- This project was launched in 2016. Under this project, **five Indian Coast Guard Ships are to be launched**.
- Two Offshore Patrol Vessels, namely ICGS Sachet and ICGS Sujeet, have already been commissioned. The third in the series is called ICGS Sajag and ICGS Sarthak is the fourth in the series.

31. Which of the following countries has recently launched Beresheet 2 Mission?

a) China

b) India

c) USA

d) Israel

Answer: D

Explanation

- **Israel** launched Beresheet 2 Project with the aim of **landing an unmanned craft on moon** in 2024.
- The Beresheet 2 project will aim to send three spacecraft — **an orbiter and two landers** — to the moon.
- The first Beresheet, or "Genesis," spacecraft was built by **SpacEL** and state-owned **Israel Aerospace Industries**.

2. It suggests mainstreaming of surveillance by making individual electronic health records the basis for surveillance.
3. It lays out India's vision 2035 for public health surveillance through the integration of the three-tiered public health system into Ayushman Bharat.

Which of the above statements are correct?

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

Answer: B

Explanation

- NITI Aayog recently released a white paper titled 'Vision 2035: Public Health Surveillance in India'. Jointly prepared by Niti Aayog and University of Manitoba in Canada, the white paper puts forward the vision for India's public health surveillance.
- This vision is to be achieved by 2035 through the integration of three-tiered public health system into Ayushman Bharat.

Vision

- To make India's public health surveillance system more responsive and predictive to enhance preparedness for action at all levels.
- Develop a citizen-friendly public health surveillance system that will ensure individual privacy and confidentiality, enabled with a client feedback mechanism.
- India will provide regional and global leadership in managing events that constitute a public health emergency of international concern.

Building Blocks For The Vision

- An interdependent federated system of governance architecture between the Centre and States;
- Enhanced use of new data analytics, data science, artificial intelligence, and machine learning; and
- Advanced health informatics.

Recommendations

- Establish a governance framework that is inclusive of political, policy, technical, and managerial leadership at the national and state level.
- Identify broad disease categories that will be included under public health surveillance.
- Enhance surveillance of non-communicable diseases and conditions in a step-wise manner.
- Prioritize diseases that can be targeted for elimination as a public health problem, regularly.
- Improve core support functions, core functions, and system attributes for surveillance at all levels; national, state, district, and block.
- Establish mechanisms to streamline data sharing, capture, analysis, and dissemination for action.
- Encourage innovations at every step-in surveillance activity.
- All through this process, consider strengthening human resource capacity, laboratory infrastructure, referral networks, and community-based surveillance.

Advantages of Tour of Duty Model:

- Help in attracting more youth to join the Army and **fill up officers' vacancies**.
- **Reduce burgeoning defence pensions**, which make up nearly 30% of the defence budget.
- Presents an **opportunity to the youth** who do not want to make defence services their permanent vocation, but still want to experience the adventure of military professionalism.
- Help to channelise the youth energy into positive utilisation of their potential, thereby **combating the issue of unemployment**.
- Entire nation will benefit from trained, disciplined, confident, diligent and committed young men or women who have done the three-year service.
- The **cost of training of a three-year service per officer is much less** in comparison to the cost incurred on Short Service Commission (SSC) officers.
 - The **cost incurred on an officer, who leaves after 10 or 14 years, is Rs 5 crore-Rs 6.8 crore**, which includes the cost of pre-commission training, pay, allowances, gratuity, leave encashment among others.
 - The corresponding **cost for a three-year service will be Rs 80 lakh-85 lakh**.

41. SolarWinds Hack, recently in news, is related to

- a) **India's initiative to promote solar energy**
- b) **Outermost part of the Sun's atmosphere**
- c) **Green bond to promote investment in solar panels**
- d) **Recent cyber attack in USA**

Answer: D

Explanation

- A cyberattack, **SolarWinds hack**, recently discovered in the **United States**, has emerged as one of the biggest ever to target the US government, its agencies and several other private companies.
- This is being called a **'Supply Chain' attack**: Instead of directly attacking the federal government or a private organisation's network, **the hackers target a third-party vendor**, which supplies software to them.
 - In this case, the **target was an IT management software called Orion**, supplied by the Texas-based company SolarWinds.
 - Orion has been a dominant software from SolarWinds with clients, which include over 33,000 companies.
- The hackers **gained access to victims via trojanized updates** to SolarWinds' Orion IT monitoring and management software.
- Once installed, the **malware gave a backdoor entry to the hackers to the systems and networks of SolarWinds' customers**. It was also able to thwart tools such as anti-virus that could detect it.

42. Climate Change Performance Index (CCPI) recently in news was released by

- a) **United Nations Environment Programme (UNEP)**

b) Germanwatch

c) United Nations Framework Convention on Climate Change (UNFCCC)

d) None of the above

Answer: B

Explanation

India ranked high along with the European Union and the United Kingdom in the latest edition of the Climate Change Performance Index (CCPI) released by non-profit **Germanwatch**.

Highlights Of The Report

- **No country** was doing enough to meet the goals of **2015 Paris Agreement**, according to the index. Six G20 countries were ranked among very low performers. The United States, with a rank of 61, was the worst performer.
- No country was rated very high on indicators defining the **'renewable energy' category**. Since the energy sector contributes greatly to a country's carbon emissions, the results of the 'renewable energy' rating indicate how much room exists for improvement in mitigating emissions by means of accelerated deployment of renewable energy.
- Also, no country was rated very high on indicators in the **'GHG Emissions' category**.
- Political momentum on climate policy was growing despite the postponement of the 26th Conference of Parties to the UNFCCC, as several countries had updated their Nationally Determined Contributions (NDCs).

India Specific Findings

- India, for the second time in a row, **continued to remain in the top 10**. The country scored 63.98 points out of 100. Last year, India had been ranked at 9th position, with an overall score of 66.02.
- It received high ratings on all CCPI indicators **except 'renewable energy'**, where it was categorized as having a 'medium' performance. India has been ranked at **27th out of 57 countries** under the category this time. Last year, the country was ranked at 26th.
- India needs to focus more on renewable energy, both, as a mitigation strategy and for its post-novel coronavirus disease (COVID-19) green recovery.
- **Policy Framework**
 - India's improved policy framework has been responsible for the country's good performance in this global index. However, the report underlined the need for long-term planning.
 - India's performance under **'climate policy'** was rated as 'medium'. India's **reluctance to update its Nationally determined contributions (NDCs)** might be due to fears of lack of reciprocity from the developed countries.
 - Unlike the other two 'BASIC' countries of China and South Africa, India is yet to announce its mitigation strategy. The strategy should include post-COVID-19 recovery plans. These include **reducing fossil fuel subsidies, phasing out coal**, better coordination between the central and state governments and raising self-sufficiency by domestic manufacturing in the renewable sector.
- **India's Emissions**
 - Although India had one of the largest growth trends, **per capita emissions stayed at a comparatively low level**, rated very high for their well-below 2 degrees celsius compatibility.

Postal Ballot System For NRIs

Election Commission (EC) has approached the Law Ministry to permit Non Resident Indians (NRI) to cast their votes from overseas through postal ballots.

Need For Introducing Postal Ballots For NRIs

- The EC had received representations from the Indian diaspora about facilitating voting through postal votes since travelling to India only for this purpose is a “costly affair”.
- The NRIs cannot leave the country of their residence owing to specific **compulsions of employment, education or other engagements**.
- According to a UN report of 2015, **India’s diaspora population is the largest in the world at 16 million people**. Registration of NRI voters, in comparison, has been very low: a little over one lakh overseas Indians registered as voters in India. In last year’s Lok Sabha elections, roughly 25,000 of them flew to India to vote.
- The Commission informed the government that it is “technically and administratively ready” to extend the **Electronically Transmitted Postal Ballot System (ETPBS)** to voters abroad for elections next year in Assam, West Bengal, Kerala, Tamil Nadu and Puducherry.

Current Process Of Voting For Indian Citizens Living Abroad

- An NRI can vote in the constituency in which her place of residence, as mentioned in the passport, is located.
- They can **only vote in person** and will have to produce her passport in original at the polling station for establishing identity.
- Voting rights for NRIs were **introduced only in 2011, through an amendment to the Representation of the People Act 1950**.

How Will Voting By Postal Ballots Work For NRIs?

- According to the EC proposal, any **NRI interested in voting through the postal ballot in an election will have to inform the Returning Officer (RO)** not later than five days after the notification of the election. On receiving such information, the RO will dispatch the ballot paper electronically.
- The NRI voters will **download the ballot paper, mark their preference on the printout and send it back along with a declaration** attested by an officer appointed by the diplomatic or consular representative of India in the country where the NRI is resident.
- It’s not clear, at this moment, if the voter will return the ballot paper herself through ordinary post or drop it off at the Indian Embassy, which may then segregate the envelopes constituency-wise and send them to the Chief Electoral Officer of the state concerned for forwarding to the RO.

Concerns Associated With The Proposal

- A 12-member committee was set up after the 2014 Lok Sabha elections to study mainly three options — voting by post, voting at an Indian mission abroad, and online voting.
- The committee ruled out online polling as it felt this could compromise “**secrecy of voting**”. It also shot down the proposal to vote at Indian missions abroad as they **do not have adequate resources**.
- However, in 2015, the panel finally recommended that NRIs should be given the “**additional alternative options of e-postal ballot and proxy voting**”, apart from voting in person.

Proxy Voting Rights For NRIs

- Under **proxy voting**, a registered elector can delegate his voting power to a representative. The Law Ministry has accepted the recommendation on proxy voting.
- The Union Cabinet passed the proposal on proxy voting rights for NRIs in 2017. The government then brought a **Bill amending the Representation of the People Act 1950**. The Bill was passed by Lok Sabha and was awaiting Rajya Sabha's approval when it lapsed with the dissolution of the 16th Lok Sabha. **This proposal hasn't been revived yet.**

For more on postal ballot, please refer The Recitals June 2020

Waqf Boards

Union Minister for Minority Affairs has announced that Waqf Boards will be established in **Jammu-Kashmir and Leh-Kargil for the first time since independence** and the process of establishing the Waqf Boards has been started.

What Is A Waqf?

- Waqf is the **property given in the name of God for religious and charitable purposes**. In legal terms, permanent dedication by a person professing Islam, of any movable or immovable property for any purpose recognised by the Muslim law as pious, religious or charitable.
- A waqf can be formed through a deed or instrument, or a property can be deemed waqf if it has been used for religious or charitable purposes for a long period of time. The **proceeds are typically used to finance educational institutions, graveyards, mosques and shelter homes**.
- **A Waqf can be either public or private**. Public Waqfs are created to serve charitable ends, while private Waqfs are often willed down to a property owner's direct descendants. A **person creating the waqf cannot take back the property and the waqf would be a continuing entity**.
- There are only **two conditions** that anyone must meet to be able to create a Waqf. They must be of sound mind, and they must hold a valid ownership claim over the property or asset. **The creator of Waqf or a 'Waqif' need not be a Muslim**, as long as he/she professes belief in the principles of Islam.

How Is A Waqf Governed

- Waqfs in India are governed by the **Waqf Act, 1995**. A survey commissioner under the Act lists all properties declared as waqf by making local investigation, summoning witnesses and requisitioning public documents.
- The waqf is **managed by a mutawali**, who acts as a supervisor. It is similar to a trust established under the Indian Trusts Act, 1882, but trusts can be set up for a broader purpose than religious and charitable uses. **A trust established can also be dissolved by the board unlike a waqf**.

Waqf Board

- A Waqf board is a **legal body that ensures the appropriate administration of Waqf**. This amounts to ensuring that any Waqf is properly maintained and managed, with any rent or revenue produced by the asset or property utilised appropriately under the provisions of Mohamadeen law. These laws may vary depending on **whether a Waqf board is either Sunni or Shia**.
- Every Waqf board is required to **appoint custodians** whose job it is to ensure that both, the waqf, and any revenue it generates, are employed or used for their designated purpose. The most well-known Waqf board is **India's Central Waqf Council (CWC)**, set up in 1964, which advises and oversees the functioning of state-level Waqf boards across the country.

- **Each state has a Waqf Board headed by a chairperson**, one or two nominees from the state government, Muslim legislators and parliamentarians, Muslim members of the state Bar Council, recognised scholars of Islamic theology and mutawalis of the waqfs with an annual income of Rs 1 lakh and above.
- The Waqf Board has powers under the law to **take measures for the recovery of lost properties of any waqf, to sanction any transfer of immovable property** of a waqf by way of sale, gift, mortgage, exchange or lease. However, the sanction shall not be given unless at least two thirds of the members of the Waqf Board vote in favour of such transaction.

Declare Elections Void If NOTA Has Most Votes

- A petition has been moved in the Supreme Court seeking directions to the Election Commission of India to **nullify the election results and hold a fresh election if maximum votes have been polled in favour of None of the Above (NOTA)** in a particular constituency.
- It also sought directions to **restrict the contesting candidates from taking part in the fresh election**, who have participated in the nullified election.

Petitioner's Arguments

- Percentage of candidates with criminal antecedents and their chances of winning has actually increased steadily over the years. Out of 539 MPs, 233 MPs (43%) have declared criminal cases against them. Out of the 542 winners analysed after the 2014 election, 185 (34%) had declared criminal cases against themselves. If these (directions) would be implemented, then the **political parties would be forced to give tickets to honest and patriotic candidates**.
- Political parties **choose contesting candidates in a very undemocratic manner without consulting electors**. If candidates on whom the **political parties spend crores of rupees** are rejected, they would abstain from doing so.
- Right to reject and elect new candidate **will give power to the people to express their discontent**. Thus, the right to reject contesting candidates would mean **true democracy**, as the people would be able to elect their representatives in true sense. It will **make contesting candidates accountable in their process**.
- The injury caused to public is extremely large and continue till date, as the right to reject is an integral part of **Article 19**, but the Centre and ECI did nothing to declare the election result invalid and hold fresh election if maximum votes are polled in favour of NOTA.

In all, the right to reject will check corruption, criminalization, casteism, communalism, linguism and regionalism.

What Is NOTA

- In **PUCL v. Union Of India** (September 27, 2013), the Supreme Court had ruled that a NOTA option “may be provided in EVMs” so that voters are able to exercise their “**right not to vote while maintaining their right of secrecy**”.
- Election Commission of India (ECI) said that if a situation arose where the number of NOTA votes exceeded the number of votes polled by any of the candidates, the candidate with the highest number of votes would be declared winner. This, it said, was in accordance with **Rule 64 of the Conduct of Elections Rules, 1961**. This provision made the NOTA option almost redundant.
- NOTA was used for the first time in the 2013 Chhattisgarh Assembly Elections, while the **2014 Lok Sabha polls was the first national election to give this option to the voters**.

Two Reasoned Orders of Maharashtra and Haryana

- The State Election Commission (SEC) of Maharashtra was the first to understand the spirit of the SC judgment. It issued a reasoned order on June, 2018 saying, “If it is noticed while counting, that **NOTA has received highest number of valid votes, then the said election for that particular seat shall be countermanded and fresh elections shall be held for such post.**”
- This was commendable, but it stopped short of giving NOTA the teeth that the court wanted. It meant that the **same candidates could contest the new election**, which meant that the result could be the same as earlier.
- The SEC of Haryana, in an order on November, 2018, stated that if “all the contesting candidates individually receive lesser votes than NOTA,” then not only would “none of the contesting candidates be declared as elected,” but “**all such contesting candidates who secured less votes than NOTA shall not be eligible to re-file the nomination/contest the re-election.**”

There Was A Similar Provision Before NOTA. What Was It?

- Before the NOTA option came in existence, **people casting negative votes were required to enter their names in a register and cast their vote on a separate paper ballot.**
- Under Section 49 (O) of the Conduct of Elections Rules, 1961, a voter could enter his electoral serial number in Form 17A and cast a negative vote. The presiding officer would then put a remark in the form and get it signed by the voter. This was done to prevent fraud or misuse of votes.
- This provision was, however, deemed unconstitutional by the SC as it **did not protect the identity of the voter.**

Other Countries Which Allows NOTA

- Colombia, Ukraine, Brazil, Bangladesh, Finland, Spain, Sweden, Chile, France, Belgium and Greece allow their voters to cast NOTA votes.
- The US also allows it in a few cases. The state of Texas in the US permits the provision since 1975. The option, however, has faced opposition there.

Review Petition

Activist-lawyer Prashant Bhushan has moved the Supreme Court seeking a direction that his two pleas, in which he has sought **review of the orders convicting and sentencing him for contempt of court** for his tweets against the judiciary.

What Is A Review Petition And When Can It Be Filed?

- Review means when the court re-examines the decisions made by itself, the examination of any legislation made by the government or any act of the administrative organizations; it rectifies the error in an act, judgment, or legislation.
- A judgment of the Supreme Court becomes the law of the land, according to the Constitution. It is final because it provides certainty for deciding future cases. However, under **Article 137, the Supreme Court has the power to review any of its judgments or orders.** This departure from the Supreme Court’s final authority is entertained under specific, narrow grounds.
- When a review takes place, the law is that it is **allowed not to take fresh stock of the case but to correct grave errors** that have resulted in the miscarriage of justice. The court has the power to **review its rulings to correct a “patent error” and not “minor mistakes of inconsequential import”**. It is rare for the Supreme Court to admit reviews.

- In a 1975 ruling, Justice Krishna Iyer said a review can be accepted “only where a glaring omission or patent mistake or like grave error has crept in earlier by judicial fallibility”.

Grounds Under Which A Petitioner Can Seek Review Of An SC Verdict

- In a 2013 ruling, the Supreme Court itself laid down **three grounds** for seeking a review of a verdict it has delivered —
 - i) **The discovery of new and important matter or evidence** which, after the exercise of due diligence, was not within the knowledge of the petitioner or could not be produced by him;
 - ii) **Mistake or error** apparent on the face of the record;
 - iii) **Any other sufficient reason**. In the landmark case of **Chajju Ram v. Neki**, the court specified that “any sufficient reason” means a reason that is analogous to the other two grounds.
- In another 2013 ruling (**Union of India v. Sandur Manganese & Iron Ores Ltd**), the court laid down **nine principles on when a review is maintainable**. A review is by no means an appeal in disguise whereby an erroneous decision is reheard and corrected but lies only for patent error. It added that the **mere possibility of two views on the subject cannot be a ground for review**.

Cases Where Review Lies

- **Non-appealable cases**– Non-appealable cases are cases where no right is given to the suffered party or when an appeal is rejected on the grounds of incompetence or being time-barred. The party who has suffered can hence file for review.
- **Where appeal lies but is not preferred**- In cases where the benefit of an appeal lies but is not preferred by the party, the party can file for a review but the review must not be against the order because that would be going into the facts which are not entertained by the courts.
 - When the party has already filed for an appeal before the court which is pending, in such cases the petition for review will not be entertained by the court. However, if the review petition is filed first and the appeal is filed subsequently then the court’s jurisdiction to review can’t be questioned under law.

Who Can File A Review Petition?

- It is not necessary that only parties to a case can seek a review of the judgment on it. As per the Civil Procedure Code and the Supreme Court Rules, **any person aggrieved by a ruling can seek a review**.
- However, the court does not entertain every review petition filed. It **exercises its discretion to allow a review petition** only when it shows the grounds for seeking the review.

Court’s Procedure to Consider a Review Petition

- As per 1996 rules framed by the Supreme Court, **a review petition must be filed within 30 days of the date of judgment or order**. While a judgment is the final decision in a case, an order is an interim ruling that is subject to its final verdict. In certain circumstances, the court can condone a delay in filing the review petition if the petitioner can establish strong reasons that justify the delay.
- The rules state that review petitions would ordinarily be entertained **without oral arguments by lawyers**. It is heard “**through circulation**” by the judges in their chambers. In exceptional cases, the court allows an oral hearing. In a 2014 case, the Supreme Court held that review petitions in all death penalty cases will be heard in open court by a Bench of three judges.
- Review petitions are also heard, as far as practicable, by the **same combination of judges who delivered the order or judgment** that is sought to be reviewed. If a judge has retired or is unavailable, a replacement is made keeping in mind the seniority of judges.

What If A Review Petition Fails?

- As the court of last resort, the Supreme Court's verdict should not result in a miscarriage of justice. **In Roopa Hurra v Ashok Hurra (2002)**, the court itself evolved the concept of a **curative petition**, which can be heard after a review is dismissed to prevent abuse of its process.
- A curative petition is also **entertained on very narrow grounds** like a review petition, and is **generally not granted an oral hearing**.

Three Capitals For Andhra Pradesh

Telugu Desam Party national president N. Chandrababu Naidu challenged Chief Minister Y.S. Jagan Mohan Reddy to hold a referendum on the idea of three capitals.

Background

- Last year, the Chief Minister of Andhra Pradesh (AP) came up with the idea of having **three capitals** for the state, on the lines of **South Africa**.
- Subsequently, his government passed a legislation (The Andhra Pradesh Decentralisation and Equal Development of All Regions Bill, 2020) naming **Visakhapatnam as the Executive Capital and Kurnool as the Judicial Capital while retaining Amaravati as the Legislative Capital**.
- The matter is now sub-judice as the farmers who had given up over 33,000 acres of their fertile lands for the development of Amaravati city, moved the Andhra Pradesh High Court opposing the relocation of the state capital.

Rationale Behind Three Capitals

The AP government says it wants to ensure equal and balanced development, instead of concentrating on just once place, and thereby develop three state capitals.

A. Recommendation By Various Committees

According to the government, decentralization was the central theme in recommendations of all major committees that were set up to suggest a suitable location for the capital of Andhra Pradesh.

- **Justice B N Srikrishna Committee**, set up in 2010, to look into the demand for a Telangana state, said Rayalaseema and North Coastal Andhra were economically the most backward, and the "concentration of development efforts in Hyderabad is the key reason for demand of separate states".
- **K Sivaramakrishnan Committee**, appointed in 2014, to identify locations for the new capital of AP said the state should see decentralised development and that one mega capital city was not desirable.
- **G N Rao Committee**, in its December 2019 report, recommended three capitals for balanced growth, and four regional commissionerates along the lines of Karnataka.

B. Boston Consulting Group's Recommendations

- The government had also sought an opinion from the global management consulting firm Boston Consultancy Group, which had given its recommendations in January, 2020.
- BCG recommended that Visakhapatnam should be the seat of the Governor, Chief Minister, and all government departments, and a High Court Bench, and have provisions for a Legislative Assembly for use in an emergency.
- Further, Vijayawada/Amaravati should have the Assembly and a High Court Bench and Kurnool should have the High Court and tribunals.

C. High-Powered Committee

- A high-power Committee appointed by the government to study the recommendations of the G N Rao Committee and the BCG suggested that the state should be demarcated into zones with separate zonal planning and development boards in order to ensure inclusive development.
- It further recommended that infrastructure projects focused in Rayalaseema and North Coastal Andhra should be prioritised.

Major Practical Problems

The government argues that the Assembly meets only after gaps of several months, and government Ministers, officers, and staff can simply go to Amaravati when required. However, **coordinating between seats of legislature and executive in separate cities will not be easier and seems to be a logistics nightmare.**

- The Executive capital Visakhapatnam is 700 km from judicial capital Kurnool, and 400 km from legislative capital Amaravati and the Amaravati-Kurnool distance is 370 km. The time and costs of travel will be significant.
- The AP Police are headquartered in Mangalagiri, 14 km from Vijayawada, and senior IPS officers who may be required to visit the Secretariat will have to travel 400 km to Visakhapatnam. Likewise, government officers who may have to appear in the High Court will have to travel 700 km to Kurnool, which does not have an airport.
- All officers and Ministerial staff who may have to be at hand to brief Ministers when the Assembly is in session, will probably have to stay put in Amaravati, leaving behind their other responsibilities in Visakhapatnam. This will add **a significant burden in terms of travel time and travel costs** and will **adversely affect the efficiency and quality** of governance in the State.
- Moreover, there is no blue print as to meet the Infrastructure requirement at the three capitals.

Other Examples Of Multiple Capital Cities

Several Countries In The World Have Implemented The Concept.

- **In South Africa**, three cities serve as capitals of the country– Pretoria (executive), Cape Town (legislative), and Bloemfontein (judicial).
- **In Sri Lanka**, Sri Jayawardenepura Kotte is the official capital and seat of national legislature, while Colombo is the de facto seat of national executive and judicial bodies.
- **Malaysia** has its official and royal capital and seat of national legislature at Kuala Lumpur, and Putrajaya is the administrative centre and seat of national judiciary.

Among Indian States

- **Maharashtra** has two capitals– Mumbai and Nagpur (which holds the winter session of the state assembly).
- **Himachal Pradesh** has capitals at Shimla and Dharamshala (winter).
- **The former state of Jammu & Kashmir** had Srinagar and Jammu (winter) as capitals.

Role Of Governor In Calling An Assembly Session

- Kerala Governor has turned down a request by the Chief Minister to summon a special sitting of the Assembly to debate the new three central farm laws.
- This raises questions on the **role of a Governor and the contours of the powers he or she has under the Constitution.**

Who Can Summon A Session Of The Assembly?

- **Article 174:** According to Article 174 of the Constitution, “**The Governor shall from time to time summon the House or each House of the Legislature** of the State to meet at such time and place as he thinks fit”. The provision also puts on the Governor the responsibility of ensuring that the **House** is summoned **at least once every six months**.
- **Article 163:** Although it is the Governor’s prerogative to summon the House, according to Article 163, the **Governor is required to act on the “aid and advice” of the Cabinet**. So, when the Governor summons the House under Article 174, this is not of his or her own will but on the aid and advice of the Cabinet.

Can The Governor Refuse The Aid And Advice Of The Cabinet?

- There are a few instances where the Governor can summon the House despite the refusal of the Chief Minister who heads the Cabinet.
- **When the Chief Minister appears to have lost the majority** and the legislative members of the House propose a no-confidence motion against the Chief Minister, then the Governor can decide on his or her own on summoning the House.
- But the actions of the Governor, when using his discretionary powers can be challenged in court.

Supreme Court Verdict

- A number of rulings by the Supreme Court has settled the position that the **Governor cannot refuse the request of a Cabinet that enjoys majority in the House** unless it is patently unconstitutional.
- The latest in the line of rulings is the landmark **2016 Constitution Bench ruling** in which the Supreme Court looked into the **constitutional crisis in Arunachal Pradesh** after the Governor had imposed President’s Rule in the state. The court read the power to summon the House as a “**function**” of the **Governor** and **not a “power” he enjoys**.
- The SC verdict stated that “In ordinary circumstances during the period when the Chief Minister and his Council of Ministers enjoy the confidence of the majority of the House, the power vested with the Governor under **Article 174** to summon, prorogue and dissolve the house(s) must be exercised in consonance with the aid and advice of the Chief Minister and his Council of Ministers. In the above situation, **he is precluded from taking an individual call on the issue at his own will, or in his own discretion**.”

Sarkaria Commission’s View on the Role of Governor

- Sarkaria Commission of 1983, which reviewed the arrangements between the Centre and the states, had said that “so long as the Council of Ministers enjoys the confidence of the Assembly, its advice in these matters, unless patently unconstitutional, must be deemed as **binding on the Governor**.”
- It is only where such advice, if acted upon, would lead to an infringement of a constitutional provision, or where the Council of Ministers has ceased to enjoy the confidence of the Assembly, that the question arises whether the Governor may act in the exercise of his discretion”.

Way Forward

- Since the Governor’s powers are limited with regard to summoning the House, there can be **no legal ground to deny a request for summoning the session**. In the political slugfest, the **Governor’s refusal can be challenged in court**.
- The **political nature of the office of the Governor**, especially in Opposition-ruled states, has been underlined in several instances by courts. The constitutional checks and balances and landmark court rulings account for this and limit the discretionary powers of the Governor.

Privilege Motion: Maharashtra Assembly Challenges Supreme Court

- Questioning the boundaries of the judiciary's powers, both Houses of the Maharashtra State Legislature passed proposals stating that they **will not take cognizance of or reply to any notice sent by the High Court or the Supreme Court** in the Breach of Privilege motion against Republic TV editor and anchor Arnab Goswami.
- Both the proposals stated that replying to such notices could mean accepting that the judiciary can keep a check on the legislature and would be **"inconsistent with the basic structure of the Constitution"**.

Background

- The genesis of the proposal is the privilege motion filed by the members of Maharashtra Vikas Aghadi Government against Republic TV editor and anchor.
- Republic TV editor was accused of using **"derogatory language" and making baseless remarks** against Maharashtra Chief Minister and also frequently insulting ministers, Lok Sabha and Vidhan Sabha members during TV debates.
- Republic TV editor had moved the Supreme Court to challenge one of the privilege motions filed.

Doctrine Of Separation Of Power

- The doctrine of separation of power is a part of the **basic structure** of the Indian Constitution, even though it is not specifically mentioned in its text.
- It implies that the three pillars of democracy, namely the executive, judiciary and legislature, perform separate functions and act as separate entities.
- One of the features of the doctrine is that **one arm of the state should not interfere in the functioning of the other organs** or exercise a function of another organ.

Legal Provisions Invoked by The State Assembly While Passing The Proposal

The proposal cites two articles of the constitution as the basis of its argument.

- **Articles 194** lays down the **powers and privileges of the Houses of Legislatures**. It states that there shall be freedom of speech in the Legislature of every State and no member of the Legislature of a State shall be liable to any proceedings in any court in respect of anything said or any vote given by him in the Legislature or any committee thereof, and no person shall be so liable in respect of the publication by or under the authority of a House of such a Legislature of any report, paper, votes or proceedings.
- **Article 212** states that the validity of any proceedings in the Legislature of a State shall not be called in question on the ground of any alleged irregularity of procedure and no officer or member of the Legislature of a State in whom powers are vested by or under this Constitution for regulating procedure or the conduct of business, or for maintaining order, in the Legislature shall be subject to the jurisdiction of any court in respect of the exercise by him of those powers.

What Is A Privilege Motion?

- Parliamentary privileges are **certain rights and immunities enjoyed by members of Parliament**, individually and collectively, so that they can "effectively discharge their functions".
- When any of these rights and immunities are disregarded, the offence is called a **breach of privilege and is punishable under law of Parliament**. A notice is moved in the form of a motion by any member of either House against those being held guilty of breach of privilege. Each House also claims the right to punish as contempt actions which, while not breach of any specific privilege, are offences against its authority and dignity.

Rules Governing Privilege

- Rule No 222 in Chapter 20 of the Lok Sabha Rule Book and correspondingly Rule 187 in Chapter 16 of the Rajya Sabha rulebook governs privilege. It says that a **member may, with the consent of the Speaker or the Chairperson, raise a question involving a breach of privilege** either of a member or of the House or of a committee thereof.
- The rules however mandate that any notice should be relating to an incident of recent occurrence and should need the intervention of the House. Notices have to be given before 10 am to the Speaker or the Chairperson.
- **Role of the Speaker/Rajya Sabha Chair:** The Speaker/RS chairperson is the **first level of scrutiny of a privilege motion**. The Speaker/Chair can decide on the privilege motion himself or herself or refer it to the privileges committee of Parliament. If the Speaker/Chair gives consent under Rule 222, the member concerned is given an opportunity to make a short statement.

Privileges Committee

- In the Lok Sabha, the Speaker nominates a **committee of privileges consisting of 15 members** as per respective party strengths. A report is then presented to the House for its consideration.
- The Speaker may permit a **half-hour debate** while considering the report. The Speaker may then pass final orders or direct that the report be tabled before the House.
- A resolution may then be moved relating to the breach of privilege that has to be unanimously passed.

Composite Floor Test' In Bodoland Council

The Gauhati High Court ordered a “**composite floor test**” in Assam’s Bodoland Territorial Council (BTC) on or before December 26, 2020.

Background

- The single-judge bench passed the order after hearing a petition by the BTC’s former chief executive member. The petitioners had **challenged the constitutional validity of the appointment of Council’s chief executive member, his deputy and three others as executive members**.
- The petition said the **Election Rules, 2004, were violated** when the Governor allowed the United People’s Party Liberal (UPPL), Bharatiya Janata Party (BJP) and the Gana Shakti Party (GSP) combine to form the Council instead of inviting the Bodoland People’s Front (BPF), which won 17 of the 40 BTC seats to emerge as the single largest party.
- The BTC falls under the Sixth Schedule of the Constitution and the **Governor is its constitutional head**.

What Is A Floor Test?

- A floor test is primarily taken to know **whether the executive enjoys the confidence of the legislature**. It is a constitutional mechanism under which a Chief Minister appointed by the Governor can be asked to **prove majority on the floor of the Legislative Assembly** of the state.
- When a single party secures the majority of the seats in the house, the Governor appoints the leader of the party as the Chief Minister. In case the majority is questioned, the leader of the party which claims majority has to move a vote of confidence and prove majority among those present and voting.
- The Chief Minister has to resign if they fail to prove their majority in the house. This happens both in the parliament and the state legislative assemblies.

Composite Floor Test

- Composite Floor Test is conducted only **when more than one person stakes claim to form the government.**
- When the majority is not clear, the governor might call for a special session to see who has the majority. The majority is **counted based on those present and voting.** This can also be done through a **voice vote** where the member can respond orally or through division voting. Some legislators may be absent or choose not to vote.
- In division vote, voting can be done through electronic gadgets, ballots or slips. The person who has the majority will form the government. In case of tie, the speaker can also cast his vote.

Convicted Legislators Cannot Be Barred For Life From Contesting Polls

Centre told the Supreme Court that Convicted lawmakers cannot be debarred from contesting elections for life. This move came in response to a petition that sought convicted legislators to be treated on par with convicted bureaucrats, who are debarred for life from government service. As per the petitioner, life ban on conviction should uniformly apply for members of the judiciary, executive and the legislature and there **should not be any discrimination** of one from the other.

A public servant or a government employee is **debarred for life** on conviction for offences under the Indian Penal Code, money laundering law, foreign exchange violation, UAPA, among other laws. While the MPs and MLAs are governed by *Representation of the People Act (RP Act)*, which prescribes a **six-year disqualification** from contesting polls for an offence that is punishable with a prison sentence of two years and above.

Counter Arguments By Central Government

- The Union Ministry of Law and Justice said an elected representative of the people **can't be equated with public servants** who are banned for a lifetime on conviction.
- While public servants were governed by "**service conditions**," such conditions do not exist for lawmakers. The elected representatives are **ordinarily bound by the oath** that they have taken to serve the citizens of their constituency in particular and the country in general. Their conduct is bound by propriety, good conscience and they are expected to generally work in the interest of the nation.
- Legislators, however, are not above the law. Offences under IPC apply to them as much as any other person. There was no discrimination between a public servant and a legislator.
- The Centre's stand differs from that taken by the Election Commission, which endorsed a life ban as necessary to "champion the cause of decriminalisation of politics".

Delimitation Should Be Based On 2031 Census

A paper launched by the Pranab Mukherjee Foundation (PMF) steered that the subsequent delimitation should be a **two-step course of**:

- i) **Delimitation Commission** should be set up to redraw boundaries of constituencies on the idea of the 2031 Census
- ii) **State Reorganisation Act** be handed to separate States into smaller ones.

Key Points

- **84th Amendment to the Constitution** in 2002 had put a freeze on the delimitation of Lok Sabha and State Assembly constituencies until the primary Census after 2026.

- While the **present boundaries have been drawn on the idea of 2001 Census**, the variety of Lok Sabha seats and State Assembly seats remained frozen on the idea of the 1971 Census.
- The population according to the last census preceding the freeze was 50 crore, which in 50 years has grown to 130 crore. This has caused a **massive asymmetry in the political representation in the country**.

What Is Delimitation?

- Delimitation is the act of **redrawing boundaries of Lok Sabha and State Assembly seats to represent changes in population**. In this process, the number of seats allocated to different states in Lok Sabha and the total number seats in a Legislative Assembly may also change.
- The main objective of delimitation is to provide **equal representation to equal segments of a population**.
- It also aims at a fair division of geographical areas so that **one political party doesn't have an advantage over others in an election**.
- Delimitation is carried out by an independent Delimitation Commission.

How Often Has Delimitation Been Done?

- Delimitation is done on the basis of the preceding Census. The **first such exercise in 1950-51 was carried out by the President, with the help of the Election Commission**. Following the Delimitation Commission Act in 1952, all such exercises have been conducted by Delimitation Commissions — set up in 1952, 1963, 1973 and 2002.
- There was **no delimitation after the 1981 and 1991 Censuses**. This was a fallout of the provision that the ratio between the number of Lok Sabha seats in a state and the population of the state is, as far as practicable, the same for all states.
- Although unintended, this meant that **states that took little interest in population control could end up with more seats in Parliament**, while the southern states that promoted family planning could end up with fewer seats. Amid these concerns, the **Constitution was amended in 1976 to suspend delimitation until 2001**.
- Another amendment extended the freeze on the number of seats until 2026, by when the country was projected to achieve a **uniform population growth rate**. So, the last delimitation exercise between July 2002 and March 31, 2008, based on the 2001 Census, only readjusted boundaries of existing Lok Sabha and Assembly seats and reworked the number of reserved seats.

Karnataka's Anti-Cow Slaughter Bill

Karnataka government has passed the Karnataka Prevention of Slaughter and Preservation of Cattle Bill (2020) in the Assembly. The Bill envisages a ban on all forms of cattle slaughter and stringent punishment for offenders.

Anti-Cow Slaughter Bill – Definition And Punishment

- **Definition:** Under the new law, **buffalo has also been included in the definition of 'cattle'**. While 'beef' is defined as the **flesh of cattle in any form**, the word 'cattle' is defined as "cow, calf of a cow and bull, bullock, and he or she buffalo below the age of thirteen years".
- **Power to Conduct Searches:** Police officers *ranked sub-inspector and above* or a competent authority will have the power to search premises and seize cattle and materials used or intended to use to commit the offence. Such seizures, if any, will then be reported before the Sub-Divisional Magistrate without unreasonable delay.

- **Punishment:** The bill provides for punishment of 3-7 years with a penalty between Rs 50,000 to 5 lakh, in case a person is found indulging in illegal transportation, smuggling, atrocities and slaughtering of cattle in Karnataka. For the second or consequent offence, the penalties will be between Rs 1 lakh to Rs 10 lakh.
- **Gau Shalas:** The Bill also terms shelters established for the protection and preservation of cattle registered with the Department of Animal Husbandry and Fisheries as 'gau shalas'.

Criticisms Against The Bill

- The government **should have instituted socio-economic study** and the report could have been presented in front of the public for their opinion before taking the decision.
- The anti-cow slaughter bill was not just **harsh and unscientific** but also **against the interests of farmers**. Karnataka witnessed drought in 15 out of the last 20 years and farmers had sold their cattle when there was no harvest and feed. In such cases, farmers will not be able to sell if the bill is passed.
- Before taking the decision to ban cow slaughter, the government should consider **purchasing all unproductive cattle or the government should reimburse farmers** to look after the cattle.
- It is estimated that the average lifespan of a bull is 10 years then there will be 34 crore bull in the next 10 years, and more than 6 crore cows will stop producing milk every year. Rs 100 is needed every day to **look after one cow which works out at Rs 36,500 per annum**.
- There are **only 159 cow shelter houses in the state** to look after the cattle and the state government has failed to provide feed for the existing cattle. It would be impossible for the government to feed all the cattle if the farmers decide to send them to cow shelters.

Revisit Seventh Schedule of Constitution

Fifteenth Finance Commission (FFC) chairman N.K. Singh underlined the need for revisiting the Seventh Schedule of the Constitution, which specifies allocation of powers between the Centre and states.

Need To Revisit Seventh Schedule of Constitution

- Commission on Centre-State Relations, headed by Justice **M M Punchhi**, had in 2010 recommended that there should be a **consultation process between Union and the States via an Interstate Council for legislation on concurrent subjects**. It was of the opinion that the Union should only transfer those subjects into the concurrent list which were central to achieving **demonstrable national interest**.
- Since then, there have been far-reaching changes both in terms of political stability, technology and emerging new challenges of national priority. Hence there is a need to constitute a high-powered committee of domain experts who must recognise the contemporary context of technology, global interdependence and changes in our national priorities.
- The national priorities understandably encompass a number of areas where the federal government has taken initiatives, **like education, health, electricity and infrastructure**.
- The Centrally Sponsored Schemes (CSS) should be flexible enough to allow states to adapt and innovate. We also need a **more credible policy for rationalisation of CSS and Central outlays** than have been possible so far.

Total public outlay on these CSS are close to Rs 6-7 lakh crore per annum. The central government alone spends over Rs 3.5 lakhs crore, which is 1.2 per cent of current GDP.

- There is a need for continuity on **aligning the fiscal consolidation roadmap of the Centre and states** in a more harmonious symmetry. A differentiated debt path of states which recognises the present constraints and issues of legacy debt must be handled with sagacity and sensitivity. This is more required in times of adversities like the world is facing now due to the pandemic.

Consultative Forum For Credible Policy Dialogue

- FFC chairman also talked about the need for another forum for ongoing consultative dialogue after the abolition of the Planning Commission.
- With the abolition of the Planning Commission, many economists and policymakers have argued about an **institutional vacuum**. Though the National Development Council (NDC) is still in existence, no work has been assigned to it nor did it have any meetings since the inception of NITI Aayog's Governing Council (which has almost the same composition and roles as NDC).
- So, the states have pleaded for **a credible institution acting as a link for a policy dialogue with the Centre**. Though the NITI Aayog has emerged as a credible think-tank and their work in the sphere of Centre-state relations needs to be recognised. However, the states are keen to have a ***different kind of a policy-based consultative forum***.

Partners in Population and Development

- India's Minister for Health and Family Welfare recently addressed the Inter-Ministerial Conference by Partners in Population and Development (PPD).
- The Conference was titled "Nairobi Commitments and the 2030 Agenda: Taking stock and looking ahead to post COVID-19 Crisis".
- As a member of PPD, India reaffirmed its commitments made at the Nairobi Summit.

Nairobi Summit

- The Nairobi Summit, also known as ICPD+25, was held in 2019 in Nairobi, Kenya, to celebrate the 25th anniversary of the Cairo conference.
- The Nairobi Summit made new pledges to achieve zero preventable maternal deaths, zero unmet need for family planning, and zero gender-based violence and harmful practices by 2030.

Measures Taken By India

- At the recent conference, India shared that it is committed to ensuring Universal Health Coverage through its flagship programme, **Ayushman Bharat**. Under the National Health Protection Scheme, it is providing health care coverage of USD 7000 per family per year, effectively covering over 500 million Indians.
- With aspirations of achieving Universal Health care, India's **National Health Policy 2017** aims at raising public health expenditure to 2.5 percent of the GDP
- India is making efforts to substantially reduce the unmet need for contraception by increasing the range of contraceptives and improving accessibility and quality of family planning services.
- To achieve the SDG target of reducing Maternal Mortality Rate to less than 70 by 2030, it is implementing a program called **SUMAN** which means Safe Motherhood Assurance.
- Recognizing the concern of increase in probabilities of unsafe abortions during such times, India has laid a special emphasis on provision of safe abortion services besides postpartum and post-abortion contraception.

- It is also working on promoting alternate service delivery mechanisms with promotion of telemedicine services, digital platforms for trainings, improving finances and streamlining supply chain systems.

PPD

- PPD is an inter-governmental alliance of 27 developing countries with a mission to expand and improve South-South collaboration in the fields of family planning and reproductive health, population and development.
- PPD was created at the 1994 International Conference on Population and Development (ICPD), when ten developing countries formed an intergovernmental alliance to help implement the Cairo Program of Action (POA).
- This POA, endorsed by 179 nations, stresses the need to establish mechanisms to promote development through the sharing of experiences in reproductive health (RH) and family planning (FP). The Secretariat of PPD is located in Dhaka, Bangladesh

Catch The Rain Campaign

- The National Water Mission (NWM) under Ministry of Jal Shakti has launched the '**Jal Shakti Abhiyan II: Catch the Rain**' awareness campaign.
- The NWM has initiated the campaign in collaboration with Nehru Yuva Kendra Sangathan (NYKS) under the Ministry of Youth Affairs & Sports. The collaboration with NYKS is a step to engage people at the grassroots.
- The tagline of the campaign is "**catch the rain, where it falls, when it falls**" and aims to nudge all stakeholders to create rainwater harvesting structures (RWHS) suitable to the climatic conditions and sub-soil strata to store rainwater.
- This is because rains falling in the four/five months of monsoon are the only source of water for most parts of the country.
- The awareness generation phase of campaign will run from mid-December 2020 to March 2021.
- NYKS will undertake the awareness campaign through various **Information Education Communication (IEC) activities** which will include conducting education and motivational programmes and mass awareness campaigns.
- NYKS teams will also meet the district administrations, line departments and water agencies, hold meetings with pradhans, local influencers and volunteers and also prepare plans for the water conservation to be taken up in the next phase of the campaign.

Activities Planned

- Drives to make water harvesting pits, rooftop RWHS and check dams.
- Removal of encroachments and de-silting of tanks to increase their storage capacity.
- Removal of obstructions in the channels which bring water to them from the catchment areas.
- Repairs to traditional water harvesting structures like step-wells and using defunct bore-wells and old wells to put the water back to aquifers.

National Water Mission

- National Water Mission is one of the eight National Missions under the National Action Plan on Climate Change.

- The main objective of NWM is conservation of water, minimizing wastage and ensuring its more equitable distribution both across and within States through integrated water resources development and management.
- NWM has identified **five goals** as under:
 - i) Comprehensive water database in public domain and assessment of the impact of climate change on water resource.
 - ii) Promotion of citizen and state actions for water conservation, augmentation and preservation.
 - iii) Focused attention to vulnerable areas including over-exploited areas.
 - iv) Increasing water use efficiency by 20%, and
 - v) Promotion of basin level integrated water resources management.

Nature Index 2020

- The **Nature Index 2020 Artificial Intelligence** was recently released by Nature. The index tracks contributions to research articles published in 82 high-quality natural-science journals, chosen by an independent group of researchers.
- The Index provides counts of article publication at the institutional and national level and is an indicator of global high-quality research output and collaboration.
- The current supplement explores artificial intelligence (AI), one of the most rapidly advancing and controversial topics in scientific research.
- The Index uses **Count and Share** to track research output. A country/territory or an institution is given a Count of 1 for each article that has at least one author from that country/territory or institution.

Highlights Of The Index

- The United States has historically been the leader in AI-related research output, accumulating the highest number of publications over the past two decades.
- Between 2015 and 2019, in terms of global output for AI research, the US was the leader, with the UK, Germany and China in second, third and fourth place, respectively.
- In each year from 2016 to 2019, China produced more AI-related papers than any other nation. Over this period, China's output of AI-related research increased by just over 120%, whereas output in the US increased by almost 70%.
- In 2019, India has been the third most productive country in AI research, with over 23,000 papers. On the overall AI Index, it is at the 20th position in a list dominated by European countries.

Lack Of Diversity In AI

- AI's influence continues to grow, but there is lack of diversity of researchers in the field. As of 2019, fewer than 14% of AI research authors were women.
- Researchers in East Asia, Europe and North America authored 86% of papers published in 2018 and researchers in regions including Latin America, the Caribbean, the Middle East, north Africa, sub-Saharan Africa and south Asia represented the remaining 14%.
- In the United States in 2020, only 1.7% of technical roles at Facebook were held by Black people.
- Due to this lack of diversity, the world will miss the perspectives that could shape the solutions to the current and future challenges. Thus, it is important to create structures that will support long-term, positive changes.

Nature

- Nature is a weekly international journal that publishes high quality research in all fields of science and technology.
- It also provides authoritative and insightful news and interpretation of current and upcoming trends affecting science, scientists and the wider public.

Hybrid Renewable Energy Park

- The Prime Minister recently laid the foundation stone for a 30,000 MW (megawatt) hybrid renewable energy park close to the Indo-Pak border in Kutch district.
- One of the largest of its kind in the world the energy park will come up on more than 70,000 hectares area, which is equal to the size of countries like Bahrain and Singapore and will be bigger than the biggest metro cities in India.
- There are two zones of this park. The first zone will be a 49,600-hectare hybrid park zone that will accommodate wind and solar power plants of 24,800 MW capacity. The second zone will be an exclusive wind park zone spread over 23,000 hectares.
- The project site is about 25 km from Khavda village, which is the last point that can be accessed by civilians in the area. The site has been chosen because it is a complete wasteland.
- The exclusive wind park zone will come up within 1-6 km of the international border. The hybrid park zone will be located 6 km from the border.
- At the exclusive wind zone park, Solar Energy Corporation of India (SECI) will set up wind projects under the competitive bidding route policy.
- PowerGrid Corporation of India will evacuate the power produced at this park.

Benefits

- The mega project will not only help in better utilisation of a vast patch of desert, but also help in securing the land border.
- It is expected to play a major role in fulfilling the nation's vision of generating power of 450 gigawatt by the year 2030.
- The project will benefit both farmers and the industry and is expected to create employment opportunities for 1 lakh people.
- Also, the project would reduce pollution as it will help in stopping carbon dioxide of 5 crore tonnes entering the atmosphere every year, which is equivalent to planting as many as nine crore trees.

Facebook Antitrust Issue

- The US Federal Trade Commission and 48 states in the US have filed antitrust lawsuits against Facebook.
- The case has been filed under **Section 2 of the Sherman Act**, which the FTC enforces through Section 5 of the FTC Act. Section 2 of the Sherman Act prohibits companies from using anti-competitive means to acquire or maintain a monopoly.
- The Federal Trade Commission is an independent agency of the United States government. Its principal mission is to enforce U.S. antitrust laws and to promote consumer protection.

Accusations In The Lawsuits

- According to the complaint, Facebook is the world's dominant personal social networking service and has monopoly in the market for personal social networking services.
- This position has given huge profits to Facebook. Last year alone, Facebook generated revenues of over USD 70 billion and profits of more than USD 18.5 billion.
- The FTC has alleged that Facebook is illegally maintaining its personal and social networking monopoly through anticompetitive behaviour for years. It also accuses Facebook of imposing anti-competitive conditions on software developers.
- Facebook recognised that Instagram was an innovative personal social network and a threat to Facebook's monopoly power. So, it bought Instagram in 2012, instead of competing with it.
- By 2012, WhatsApp had emerged as the clear global “category leader” in mobile messaging. Facebook perceived that mobile messaging apps also threatened its monopoly power, so it chose to buy WhatsApp in 2014, instead of competing with it.
- Facebook’s behaviour harms competition, leaves consumers with few choices for personal social networking and deprives advertisers of the benefits of competition.

Outcomes Sought by FTC

- The lawsuit seeks “divestitures of assets, including Instagram and WhatsApp”. It means if the FTC wins, Facebook might be forced to sell Instagram and WhatsApp, two products that are crucial to driving the company's growth.
- The FTC also wants to prohibit Facebook from imposing anti-competitive conditions on software developers. This means Facebook will have to seek prior notice and approval for future mergers and acquisitions.

Facebook’s Response

- Facebook claimed that it is not true that it has no competition, and gave examples of Apple, Google, Twitter, Snapchat, Amazon, TikTok and Microsoft.
- Facebook has also questioned complaints against its acquisitions and said that the FTC had cleared the Instagram deal and the WhatsApp transaction had been reviewed by the European Union as well.
- It claims that regulators correctly cleared these deals because they did not threaten competition. The lawsuit creates uncertainty about the US government’s merger and review process and will have negative consequences for innovation and investment.

FTC’s Response

- FTC claims that the lawsuit challenges more than just the acquisitions. It is challenging a multi-year behaviour to monopolize the personal social networking market.
- Moreover, the FTC says that it can – and often does – challenge approved transactions when they violate the law.

Future Outlook

- Antitrust cases, particularly large ones often take years to complete. A similar case against Microsoft in 1998, took almost two years to reach a decision that Microsoft should be split. Later, Microsoft and the Justice Department reached a settlement in 2001 and the company was not split.
- Instead, several restrictions were place on Microsoft on how the company sold and licensed its products. It is likely, that similar restrictions may be applied on Facebook after the completion of the case.

US Currency Watch List

- The United States has once again included India in its currency manipulation watch list. India had been placed on this watch list in 2018 but was removed in 2019.
- The new watch list also names China, Japan, Korea, Germany, Italy, Singapore, Malaysia, Taiwan and Thailand. Switzerland and Vietnam have been declared as outright currency manipulators.
- The term currency manipulator is given by the US government to countries it feels are engaging in unfair currency practices by deliberately devaluing their currency against the dollar.
- The practice would mean that the country in question is artificially lowering the value of its currency to gain an unfair advantage over others.
- This is because the devaluation would reduce the cost of exports from that country and artificially show a reduction in trade deficits as a result.

Parameters Used

- As per the US Treasury, the following three pre-conditions need to be satisfied for a country to be named as currency manipulator and two of the three conditions to be placed on the watchlist:
 - A bilateral trade surplus of more than \$20 billion with the US;
 - A current account surplus of at least 3 percent of GDP; and
 - Net purchases of foreign currency of 2 percent of country's GDP over a 12-month period.
- Once on the Monitoring List, an economy will remain there for at least two consecutive reports to help ensure that any improvement in performance is durable and is not due to temporary factors.

Reasons for India's Inclusion

- India satisfies the first and third condition, thus making it to the watch list.
- India, which has for several years maintained a "significant" bilateral goods trade surplus with the US, crossed the \$20 billion mark. Bilateral goods trade surplus totalled \$22 billion in the first four quarters through June 2020.
- Based on the central bank's intervention data, India's net purchases of foreign exchange accelerated notably in the second half of 2019.
- This pushed net purchases of foreign exchange to \$64 billion—or 2.4% of GDP—over the four quarters through June 2020.

Impact

- The designation of a country as a currency manipulator does not immediately attract any penalties, but tends to impact the confidence about a country in the global financial markets.
- For India, it would not lead to any meaningful change in diplomatic and trade ties with the US. However, it may keep RBI somewhat guarded on aggressive forex intervention if capital flows continue to flow in India.

Revised DTH Guidelines

- The Union Cabinet has approved **100% Foreign Direct Investment (FDI)** in direct-to-home (DTH) service. So far the FDI was limited to 49%.
- The licences will now be issued for 20 years with a renewal provision after every 10 years. At present, DTH licences are issued for 10 years.

- The licence fee has also been lowered from 10 per cent of gross revenue to 8 per cent. The fee will have to be paid quarterly instead of annual payment at present.
- The government has also allowed DTH operators to share infrastructure.

Impact

- A 20-year licence period will provide stability and will be beneficial for players due to the large capital investments that they have made.
- Currently, India has 18 crore television sets, out of which 6 crore operate on DTH.
- The revised guidelines may also enable DTH service providers to invest for more coverage leading to increased operations and higher growth. This will lead to regular payments and new employment opportunities.

Electricity (Rights of Consumers) Rules, 2020

- The central government recently notified the Electricity (Rights of Consumers) Rules, 2020.
- Power distribution companies, whether public or private entities, are essentially geographical monopolies. This leaves the end consumer with no alternative to shift even if they are unhappy with the services being offered to them — unlike the telecom sector where consumers can easily migrate to other service providers.
- The new rules attempt to address this issue by putting in place a structure to make discoms more accountable to the end consumers, placing them at the centre of the regulations.

- The rules include key areas covering the obligation of the distribution licencees, metering arrangements, release of new connections, and a grievance redressal and compensation mechanism, among others.

THE NEW RULES

■ Discoms to establish a centralised 24x7 toll-free call centre

■ Robust grievance redressal mechanism

■ Discoms to supply electricity on request

■ New connections to be given within 7 days in urban, 15 in other municipal and 30 in rural

Highlights of The Rules

- The new rules provide for transparent, time-bound and simple processes for getting new connections or even modification in existing connections.
- It stipulates a maximum time of 7 days in metro cities and 15 days in other municipal areas and 30 days in rural areas to provide new connection and modify an existing connection.
- No connection shall be given without a metre and the meter should be a smart pre-payment meter or pre-payment meter. There would be provision for testing of metres as well as replacement of defective or burnt or stolen meters.
- The distribution licensee shall supply 24x7 power to all consumers. However, the Commission may specify lower hours of supply for some categories of consumers like agriculture.
- The distribution licensee shall put in place a mechanism, preferably with automated tools to the extent possible, for monitoring and restoring outages.
- Consumer will have the option to pay bills online or offline and there will be provision for advance payment of bills. There will also be 24x7 call centre services for the consumers.

Standards of Performance

- The rules also provide that the commission (power regulator) shall notify the standards of performance for the distribution licensees.
- A compensation amount would be paid to the consumers by the discoms for violation of standards of performance.
- The standards of performance for which the compensation is required to be paid include no supply to a consumer beyond a particular duration; number of interruptions in supply beyond the limits; time taken for connection, disconnection, reconnection, shifting etc.

Consumer As Prosumer

- For the first time, the concept of prosumers — an emerging category of consumers — has been recognised under the rules. Prosumers are those who consume as well as produce energy.
- While the prosumers will maintain consumer status and have the same rights as the general consumer, they will also have the right to set up renewable energy (RE) generation unit, including roof top solar photovoltaic (PV) systems.

Grievance Redressal

- There will be a Consumer Grievance Redressal Forum (CGRF), which will include both consumer and prosumer representatives.
- Grievance redressal has been made easy by making it multi-layered and the number of consumer's representatives have been increased from one to four. Maximum timeline of 45 days is specified for grievance redressal.

Analysis

- Currently, some state electricity regulatory commissions (SERCs) do have provisions for compensation if the stated performance benchmarks are not met.
- However, not all states adhere to them, or have user friendly procedures for receiving the compensation. The new rules attempt to fix this by paving the way for an automatic compensation mechanism.
- The rules are also an important step towards furthering the ease of doing business across the country. Implementation of these Rules shall ensure that new electricity connections, refunds and other services are given in a time bound manner.
- There is some concern that these rules violate the domain of the State Electricity Regulatory Commissions (SERCs), as they may be inconsistent with the performance benchmarks that have already been specified by SERCs. However, the real challenge will lie in their effective implementation.
- While these are welcome steps, the larger issue of introducing competition in the power distribution segment — the weakest link in the power chain — remains.
- The government had earlier hoped to introduce the model of separation of carriage and content. Doing so would have allowed consumers the freedom to choose their electricity supplier.
- This would have increased competition, forcing discoms to improve their performance standards, and adopt a more consumer centric approach.

Green National Highway Corridors

- The World Bank and the Indian government recently signed a pact for a \$500-million project to build safe and green national highway corridors.
- The \$500-million loan from the International Bank for Reconstruction and Development (IBRD) has a maturity of 18.5 years including a grace period of five years.
- The highway corridors will be developed in Rajasthan, Himachal Pradesh, Uttar Pradesh and Andhra Pradesh.

Benefits

- The Green National Highways Corridors Project will support MoRTH construct 783 km of highways in various geographies by integrating safe and green technology designs such as local and marginal materials, industrial byproducts, and other bioengineering solutions.
- Historically, the transport sector in India has offered limited employment opportunities for women. The project will support the Ministry with an in-depth analysis of gender-related issues in transport sector.
- It will also help in creating jobs for women by training women-led micro enterprises and women collectives to implement green technologies in the highway corridors.
- It is imperative that the infrastructure investments are climate resilient. To this effect, disaster risk assessment of about 5,000 km of national highway network will also be undertaken under the project.
- The project will provide efficient transportation for road users in the four states, connect people with markets and services and promote efficient use of construction materials, among others.

France's New National Security Bill

France has been rocked by street protests after the government introduced a controversial security bill in the Parliament. The bill seeks to provide greater powers and protections for the police officers. The three articles of the bill have caused the controversy.

Key Highlights Of The Bill:

- **Article 21 and 22** of the proposed “**global security**” law allow the police and the paramilitary forces to **use body cameras and drones to film citizens**. It also allows the recorded footage to be **livestreamed to the command post**.
- **Article 24** penalises publishing “the image of the face or any other element of identification” of a police or paramilitary official who is acting in a “police operation”.
- If the dissemination is done with the intent of harming their physical or mental integrity, the punishment will be imprisonment for up to 1 year, with a maximum fine of 45000 euros.

Analysis:

- Human rights groups have expressed concern that Article 24 would make it harder to cover public events and **record instances of police violence**.
- It would also **curtail press freedom** and lead to less police accountability. Once the bill is passed, courts would decide if images were shared online with "intent to harm" or not.
- However, there are many who support the bill. Analysts have pointed to a rightward shift of the French electorate, especially after the recent terror attacks including the beheading of school teacher.

France Counters Islamist Radicalisation

- The French cabinet presented a draft law that targets “radical Islamism”. The bill, aims to crack down on Islamic radicalism and envisages a range of measures, including school education reforms to ensure Muslim children do not drop out, stricter control on mosques and preachers.
- Once the law comes into force, French mosques could see **increased surveillance of their activities, such as financing.**
- The government would have greater powers to shut down places of worship receiving public subsidies if they go against republican principles such as gender equality.
- Under French secularism laws, there is already a ban on state employees displaying religious symbols that are conspicuous, such as the crucifix or hijab. This ban would now be **extended beyond government bodies to any sub-contracted public service.**

Bangladesh Relocates Rohingyas to Bhasan Char island

The Bangladesh government has **relocated 1,642 Rohingya to Bhasan Char**, an island in the Bay of Bengal under the Hatiya upazila of Noakhali. The relocation is part of a phased shift of over 100,000 refugees from the overcrowded camps in Cox’s Bazar.

Need for Relocation

- Over 1 million Rohingya, persecuted Muslim minority from Myanmar, were given shelter in several camps around Cox’s Bazar. The camps have become the **world’s largest refugee settlement** since 2017.
- The relocation became imperative in the face of growing concern over the extreme congestion in the camps of Cox’s Bazar and to avert any risk of death due to landslides and other unwarranted incidents.
- The relocation was also planned to **mitigate security concerns** in the country. There were reports of growing criminal activities and rapid radicalisation of the refugees.

Bhasan Char

- Located near the mouth of the river Meghna where it flows into the Bay of Bengal, **Bhasan Char surfaced only in 2006 from the sediment deposited by the river.**
- Located close to the much larger Sandwip, Bhasan Char spans 40 sq km.

Criticism:

- Bhasan Char is less an island and more mud flat, and is vulnerable to going under water from tides and flooding. Much of it is submerged during the monsoon.
- People relocated to the island can engage in farming and livestock breeding, but will not be able to “transact money” as **Bangladesh is yet to officially recognise them as refugees and refers to them only as “stateless” people.**



Who are the Rohingyas?

- The Rohingyas are the predominantly Muslim ethnic minority group with Benagli dialect.

- An estimated 800,000 Rohingyas lived in Myanmar's western Rakhine State. They were not regarded as one of the country's 135 official ethnic groups and were denied citizenship under Myanmar's 1982 Citizenship Law.

Chinese Factory in Sri Lanka

- Sri Lanka announced the first **large-scale Chinese investment in manufacturing** in the country, a \$300-million tyre factory near a strategic deep-sea port.
- The factory will be **adjacent to the Hambantota port**, which was leased to a Chinese company in 2017 after Sri Lanka failed to service the \$1.4-billion debt from Beijing used to build it.
- The Sri Lankan government has extended generous tax concessions to the tyre plant.

[Also refer the topic “**Chinese Assistance to Sri Lanka**” from October 2020 edition of CA magazine]

Tibetan Policy and Support Act

The US Congress has passed The **Tibetan Policy and Support Act of 2020** (TPSA). The act reaffirms the right of Tibetans to choose a successor to their spiritual leader, the Dalai Lama.

Key Highlights

- The act calls for **establishing a US consulate in Tibet**.
- It also emphasised on building an international coalition to ensure that the next Dalai Lama is appointed solely by the Tibetan Buddhist community without China's interference.
- It authorises assistance to NGO in support of Tibetan communities in Tibet.
- It places **restrictions on new Chinese consulates in the United States** until a US consulate has been established in Lhasa, Tibet.

Analysis

- The Act passed by US has been hailed by the Tibetans, who were concerned over the possibility of the Chinese Government making an attempt to **install someone loyal to it as the 15th Dalai Lama**.
- The proposed legislation will empower the US Government to **impose sanctions on the Chinese Government officials**, who might try to interfere in the process of selecting the next incarnation of the Dalai Lama.
- On the other hand, China is accusing the US of meddling in its internal affairs. It has asked Trump administration against signing the legislation into law.
- China has already started the process to identify its version of the reincarnation of the 14th Dalai Lama. This means if the Tibetan people decide to continue with the institution of the Dalai Lama, **there could be two Dalai Lamas**. Just as there are **two Panchen Lamas** and **two claimants to the title of the 17th Karmapa**, the head of wealthy Karma Kagyu school.

Background

- The Dalai Lama, then 23, had crossed into Arunachal Pradesh's Tawang in April 1959 to escape the Chinese that had invaded Tibet nine years earlier.
- The Dalai Lama and the thousands of Tibetans who followed him were settled in the Himalayan town of Dharamshala in Himachal Pradesh where he has been living in exile ever since.

- China has been attempting to dismantle Tibetan Buddhism since then. It arrested **Gedhun Choekyi Nyima in Tibet**, just three days after he was proclaimed as the **11th Panchen Lama**, the second highest Lama of Tibetan Buddhism, in May 1995. He has never been seen since.
- Instead, Beijing selected its own **six-year old Gyaltzen Norbu as the 11th Panchen Lama** six months later and enthroned him at Shigatse monastery.

[Also refer the topic “**Tibetan Parliament-In-Exile**” from November 2020 edition of CA magazine]

Crisis in Nepal

- Prime Minister of Nepal, K P Sharma Oli, dissolved the country’s House of Representatives, which is the lower house of Parliament, two years short of its five-year tenure. He also recommended that mid-term elections should be held on April 30 and May 10, 2021.
- Oli came to power in 2018 with two-thirds support in parliament, becoming the **first prime minister in the last three the decade to receive such a historic mandate**.

Why Did Oli Dissolve Parliament

- The dissolution of parliament by the Nepali prime minister was unilateral and it was taken to prevent detractors in his own party from tabling a no-confidence motion.
- Earlier, in the 2017 national election, Oli’s party CPN-UML and Pushpa ‘Prachanda’ Kamal Dahal’s party CPN (Maoist Centre) forged an electoral alliance.
- Both the leaders had decided to **merge their parties to form the Nepal Communist Party**. Along with the unification, Oli and Prachanda reached an agreement on power-sharing.
- The genesis of current crisis lies in this agreement. As per the agreement, Oli had to hand over leadership of the government to Prachanda after two-and-a-half years. But Oli refused to do so.

Constitutional Position

- Constitutional experts are of the view that the constitution of Nepal does not allow Oli to dissolve parliament as there are still chances to form a new government. They have described this as “**irresponsible,**” “**unconstitutional and undemocratic,**” even a “**constitutional coup.**”
- However, supporters are of the view that in the parliamentary system, the PM can take the decision to call for elections if he faces a crisis.
- **Article 76 of the constitution**, if the prime minister “fails to obtain a vote of confidence or the Prime Minister cannot be appointed, the President shall, on recommendation of the Prime Minister, dissolve the House of Representatives and appoint a date of election so that the election to another House of Representatives is completed within six months”.
- According to the new constitutional provision, elections can only be called if parliament fails to form a government that is either coalition, led by the largest party, or a minority government with a mandate to take a vote of confidence within a certain stipulated time frame.
- Hence, all eyes are now on the court. It would not be an understatement to say Nepal’s political direction depends entirely on the court’s verdict.

Chinese Involvement

- China had sent a **high-level team to Kathmandu** in an effort to prevent a split in the ruling Nepal Communist Party (NCP) and end the political crisis. The four member Chinese team was led by Vice Minister of the Communist Party Guo Yezhouand.

- China's political profile in Nepal has been on the rise in the recent years with billions of dollars of investments under Chinese Belt and Road Initiative.
- Apart from the focus on trade and connectivity, China has also worked to build defence ties with Nepal as evident from defence minister Wei Fenghe's visit to Kathmandu.
- Hence, it is crucial for the Chinese leadership to ensure a stable government in Nepal.

Role of India

- India is seeking to maintain a safe distance and it has described the developments in Nepal as its "internal affairs" as per its democratic process.
- Instability in Nepal is of serious concern for India as it will provide space for China to intervene in Nepali politics, allowing it to shape a government in Kathmandu that is favorable to Beijing.
- However, Delhi has **little role to play** but watch the internal dynamics of Nepal's domestic politics play out.

U.S. Lifts Sudan's Designation as a State Sponsor of Terrorism

- The United States formally **rescinded Sudan's status as a state sponsor of terrorism** thereby removing the biggest barrier to the African country's access to international lending institutions and economic development.
- The State Department continues to designate **North Korea, Iran & Syria** as state sponsors of terrorism

Key Highlights

- Sudan was designated as a **state sponsor of terrorism in 1993**, in part for its support of militant Palestinian organizations such as Hamas, as well as for harboring al-Qaeda leader Osama bin Laden.
- In return for its removal from the terrorism list, Sudan pledged to normalize relations with Israel.
- It also agreed to pay \$335 million to settle claims by victims of the 1998 bombings of U.S. embassies in Kenya and Tanzania and the bombing of the USS Cole off Yemen's coast in 2000.

Bribery for Presidential Pardon Scheme

The US Justice Department is investigating an alleged bribery scheme that was **directing money to officials** in the White House **in exchange for a presidential pardon or commutation**.

What Is A Presidential Pardon

- The Constitution gives Presidents of USA the constitutional **right to pardon or commute the sentence of people who have broken federal laws**.
- The Supreme Court had held that this power is "**granted without limit**" and **can't be restricted by Congress**.
- The President has the power to **pardon individuals for nearly any crime committed and is not answerable for his pardons**.
- However, there are a few limitations. The power only applies to federal crimes and not state crimes. Also, the President cannot issue a pardon in the case of impeachment of officials.

Indian Army Chief's Visit to Saudi Arabia and UAE

- India's army chief Manoj Mukund Naravane made a six-day **visit to the United Arab Emirates (UAE) and Saudi Arabia**.
- This was the **first such visit to the two Gulf countries** by the head of the Indian military.

Significance Of This Visit:

- Gen. Naravane's visit comes in the midst of fast-paced developments in the Gulf region including **normalisation of Israel's relations with several Arab countries** as well as situation arising out of the **assassination of Iran's top nuclear weapons scientist** Mohsen Fakhrizadeh.
- This visit was aimed at **strengthening the country's strategic and defence cooperation** with the two nations. India has had historically close economic ties with Gulf nations, as it imports a significant part of its petroleum products from the region.
- However, in last few years, India has **focused on boosting security and defence ties** with these nations. This visit was in line with this newly found desire.
- The Gulf region is also home to **8.5 million Indian workers**, with more than 2.7 million living in Saudi Arabia and nearly 30 percent of the UAE's total population comprising Indians.
- UAE and Saudi Arabia have traditionally maintained close military ties with India's archrival Pakistan. However, this equation **seems to have been changing in favour of New Delhi**. This is evident from the following incidents:
 - In February 2019, India was invited as the **"Guest of Honour"** to address the Inaugural Plenary of **46th Session** of the Council of Foreign Ministers of the **Organisation of Islamic Cooperation**, held in Abu Dhabi.
 - Both Saudi and UAE have conferred their respective highest civilian awards on PM Modi
 - The UAE and Saudi Arabia are building a massive \$42bn petrochemical plant in the Indian state of Maharashtra
 - After the abolition of Article 370, Saudi Arabia and the UAE have maintained silence on the issue of Kashmir, angering Islamabad.
 - In October 2019, both **India and Saudi Arabia** had announced their **first joint naval drills** to take place in March 2020.
 - In March 2018, **India and the UAE** conducted their **maiden naval exercise titled 'Gulf Star 1'** as an expansion of the comprehensive strategic partnership between the two countries.
- This visit will open a **new avenue of defence cooperation**, joint exercises and training in land warfare. It would also forge closer cooperation on **issues such as counterterrorism**.
- Reports around this visit already have highlighted a **potential sale of the BrahMos missile system**. This opening in the Gulf for defence equipment can place Indian indigenous weapon systems not only for sale, but **also offer joint-development schemes**.
- This can be done on the same model as India, UAE and Saudi have been working in the field of energy security.

Why Gulf Countries are Looking Towards India?

- With President Donald Trump losing the 3 November election, there is uncertainty about the future course of US foreign policy with regards to the Middle East.
- Turkey, under Recep Tayyip Erdogan, is increasingly asserting its power in the region and interfering in its affairs.

- The Arab world's relations with Pakistan appear to be on a decline. These ties started deteriorating with **Pakistan's refusal to join a Saudi- UAE coalition in Yemen** and an upswing in their ties with Turkey and Malaysia.
- China is getting closer to Iran much to the discomfort of other countries in the region.
- OIC member states have realised **India's growing stature in international diplomacy and economic growth** as well as its **lucrative market** of 1.25 billion people, not to forget its **large Indian expat population** that provides skilled manpower to Arab nations.
- On the military front, **India's strong response to Chinese intrusions in Ladakh** has also enhanced the country's image within the international community.
- Indian diplomacy too is doing well- the friction caused by the Nepal government claiming Kalapani area died down with Gen Narvane visiting Nepal where he was conferred the prestigious rank of honorary army chief of Nepal army.
- India offers the **Gulf states both access to defence technology, technical expertise** and space to setup new tech ecosystems as countries such as Saudi plan their exit from being an oil reliant economy and diversify.
- However, more significantly, India is also in a good space to cash in from the likes of Saudi and UAE getting more comfortable in taking control of their own security and hedging an over-reliance on the US-provided security blanket.
- New Delhi is also being seen as an influential peace-maker as well as a reliable partner in the field of security cooperation amid the rapidly changing scenario in West Asia.

Visit of External Affairs Minister of India to Qatar

- External Affairs Minister Dr. S. Jaishankar paid a two-day visit to Qatar.
- Both sides discussed ways to strengthen the multifaceted bilateral relationship in areas such as energy, trade, investment, food processing, healthcare, education, culture, defence and security.
- EAM extended invitation to Deputy PM and Foreign Minister of Qatar to visit India for the **first Joint Commission Meeting in 2021**.
- India and Qatar enjoy strong economic, cultural and people-to-people ties. Qatar hosts more than 7 lakh Indians. The bilateral trade was US\$ 10.95 billion in 2019-20.
- India and Qatar have also worked together to face the Covid-19 pandemic and coordinated smooth operation of flights under an Air Bubble arrangement.

India-Vietnam Virtual Bilateral Summit

- PM Modi held Virtual Summit with his counterpart of Vietnam Nguyen Xuan Phuc.
- Even during pandemic, in 2020, both countries continued to maintain high-level exchanges. Vice-President of Vietnam H.E. Ms. Dang Thi Ngoc Thinh came to India in February 2020 on an official visit.
- Both Prime Ministers had a telephone conversation in April 2020 to discuss the situation arising out of the COVID-19 pandemic.
- The **17th edition of the Joint Commission Meeting** (virtual) co-chaired by the two Foreign Ministers was held in August 2020. **Raksha Mantri** held an online meeting with his counterpart on 27 November 2020.

Key Highlights

1. List of Outcomes:

- **India-Vietnam Joint Vision for Peace, Prosperity and People** - To guide the future development of India - Vietnam Comprehensive Strategic-Partnership
- Plan of Action for period 2021-2023 for further implementation of Comprehensive Strategic Partnership - To implement the "Joint Vision for Peace, Prosperity and People"
- **Implementing Arrangement on Defence Industry Cooperation** - To provide a framework for promoting cooperation between the defence industries of the two countries
- **Agreement for US\$ 5 million Indian Grant Assistance for Army Software Park at National Telecommunications University**, Nha Trang, Vietnam - To facilitate setting up of IT infrastructure at the Army Software Park in Telecommunications University, Nha Trang, with provision for training and services in the field of software applications.
- **Implementing Arrangement between Centre for United Nations Peacekeeping Operations** - To identify specific activities for development of cooperation in the field of UN Peacekeeping
- **MOU between India's Atomic Energy Regulatory Board and Vietnam Agency for Radiation and Nuclear Safety** - To promote mutual cooperation between the regulatory bodies of the two countries in the fields of radiation protection and nuclear safety
- **MOU between CSIR-Indian Institute of Petroleum and Vietnam Petroleum Institute** - To promote cooperation in petroleum research and training
- **MOU between Tata Memorial Centre of India and Vietnam National Cancer Hospital**
- **MOU between National Solar Federation of India and Vietnam Clean Energy Association**

2. Announcements made

- Implementation of the **High-Speed Guard Boat Manufacturing Project** for Vietnam Border Guard Command under the US\$ 100 million Defence Line of Credit extended by India to Vietnam
- Completion and handing over of **seven Development Projects with Indian 'Grant-in-Aid' Assistance of US\$ 1.5 million** for the benefit of local community in Vietnam's Ninh Thuan province.
- Enhancing the number of annual Quick Impact Projects from currently five to ten commencing FY 2021-2022.
- Three new Development Partnership projects in **heritage conservation in Vietnam** (F-block of Temple at My Son; Dong Duong Buddhist Monastery in Quang Nam province; and Nhan Cham Tower in Phu Yen province).
- Launch of bilateral project for **preparing an Encyclopedia on India - Vietnam Civilizational and Cultural Relations**.

Virtual Summit Between India and Bangladesh

- A Virtual Summit was held between PM Modi and PM of Bangladesh Sheikh Hasina.
- India and Bangladesh have continued to maintain regular exchanges at the highest level. PM Hasina paid an official visit to India in October 2019. PM Modi delivered a video message on the historic occasion of Mujib Borsho in March 2020. Both leaders have remained in regular touch during the COVID pandemic.

Key Highlights

- List of MoUs/Agreements signed during the India-Bangladesh Virtual Summit:
 - Framework of Understanding on Cooperation in the Hydrocarbon Sector
 - MoU regarding Indian Grant Assistance for Implementation of High Impact Community Development Projects through Local Bodies and other Public Sector Institutions
 - Protocol on Transboundary Elephant Conservation
 - MoU for Supply of Equipment & Improvement of Garbage/Solid Waste Disposal Ground at Lamchori Area for Barishal City Corporation
 - MoU on Cooperation in the field of Agriculture
 - MoU between Father of the Nation Bangabandhu Sheikh Mujibur Rahman Memorial Museum, Dhaka, Bangladesh and the National Museum, New Delhi, India
- Reiterating the highest priority India attaches to Bangladesh under India's Neighbourhood First Policy, India assured that **vaccines would be made available to Bangladesh** as and when produced in India.
- India also offered **collaboration in therapeutics and partnership in vaccine production**.
- Bangladesh deeply appreciated the warm gesture of India in organizing various events on the occasion of ongoing '**Mujib Borsho**'.
- The two Prime Ministers **jointly unveiled a commemorative postal stamp issued by the India** on the occasion of birth centenary of Bangabandhu Sheikh Mujibur Rahman.
- Both sides noted that the filming of the biopic on Bangabandhu Sheikh Mujibur Rahman, under the direction of Indian film director Shyam Benegal will commence in January 2021.
- Both sides agreed to commemorate the **fiftieth anniversary of the Liberation War and the establishment of diplomatic relations between India and Bangladesh**.
- Bangladesh PM requested the Indian side to consider Bangladesh's proposal to name the historic road from Mujib Nagar to Nodia on Bangladesh-India border as "**Shadhinota Shorok**" commemorating the historic significance of the road during Bangladesh's Liberation War.
- They jointly inaugurated the newly restored railway link between Haldibari (India) and Chilahati (Bangladesh).

India-Uzbekistan Virtual Bilateral Summit

- A Virtual Summit was held between PM Modi and President of Uzbekistan Mr. Shavkat Mirziyoyev. This was the **first bilateral 'Virtual Summit'** meeting between India and a Central Asian country.
- India and Uzbekistan have continued to maintain high level exchanges in the recent past. The visits of Prime Minister Modi to Uzbekistan in 2015 and 2016 and President Mirziyoyev to India in 2018 and 2019 have imparted a new dynamism to the strategic partnership.

Key Highlights:

- List of Agreements/MoUs signed:
 - MoU between National Institute of Solar Energy, India and International Solar Energy Institute, Uzbekistan
 - MoC between the Ministry of Electronics and Information Technology of India and the Ministry for Development of Information Technologies of Uzbekistan in the area of Digital Technologies

- Dollar Credit Line Agreement between Export-Import Bank of India and Government of Uzbekistan
- MoC between Indian Computer Emergency Response Team (CERT-In) and the State unitary enterprise "Cybersecurity center" of Uzbekistan
- MoU on High Impact Community Development Projects between India and Uzbekistan;
- MoU between Sardar Vallabhbhai Patel National Police Academy of India and the Academy of the Ministry of Internal Affairs of Uzbekistan
- MoU between Central Board of Indirect Taxes and Customs of India and the State Customs Committee of Uzbekistan on exchange of information on pre-arrival of goods moved across the state border
- Agreement on Mutual Recognition of results of products Conformity Assessment between Bureau of Indian Standards (BIS) and The Uzbek Agency for Standardization, Metrology and Certification
- President of Uzbekistan thanked India for the **assistance rendered to Uzbekistan in its fight against the COVID-19 pandemic.**
- Both India and Uzbekistan have a mutually identified target of USD 1 billion for bilateral trade.
- Both sides noted the prospects for greater opportunities in the free economic zones of the two countries, including in the **Uzbek-Indian free pharmaceutical zone in the Andijan region.**
- The Indian side confirmed the **approval of USD 448 million of Line of Credit** to be extended by India for **four developmental projects in Uzbekistan** in the fields of road construction, sewerage treatment and information technology.
- The Uzbek side conveyed its desire to explore the **possibility of implementing priority developmental projects in Uzbekistan** as part of the **USD 1 billion Line of Credit offered by India for Central Asian countries** during the 2nd meeting of the India-Central Asia Dialogue.
- Both sides welcomed the holding of the **first-ever joint military exercises in November 2019** coinciding with the visit of Defence Minister of India to Uzbekistan.
- Both the Sides welcomed the holding of the **first bilateral dialogue between the National Security Councils in Tashkent** in September 2019.
- President of Uzbekistan welcomed the establishment of an **India Room in the Armed Forces Academy of Uzbekistan** and thanked for the Indian assistance in the ongoing development of an IT Room in the Academy.
- The Indian side welcomed the Uzbek proposal to hold **trilateral dialogue among India, Iran and Uzbekistan** to promote connectivity through the Chabahar port.

SCO Comes to India

- India chaired the **19th meeting of the Council of Heads of Governments (CHG)**, i.e., Prime Ministers, of the Shanghai Cooperation Organisation (SCO) in a virtual format.
- This was the **first summit meeting of the SCO to be hosted by India** since it became its member in 2017.
- It should be noted that **India refused to endorse Belt Road Initiative (BRI)** of China at the summit.

India's Initiatives

- India had assumed the Chair of the SCO CHG, in November 2019, at the conclusion of the term of Uzbekistan.

- During the course of its Chairmanship, India particularly focused on creating **three new pillars of cooperation**: Startups and Innovation, Science and Technology, and Traditional Medicine.
- During its chairmanship, India organised in the virtual format, the **first-ever SCO Young Scientists Conclave**, in which more than 200 young scientists participated.
- India also hosted the **first-ever Consortium of SCO Economic Think Tanks** as well as the **first-ever SCO Startup Forum**.
- In the B2B format, the Federation of Indian Chambers of Commerce and Industry convened the **first SCO Business Conclave** with special emphasis on cooperation amongst MSMEs.
- On the cultural-humanitarian side, India implemented PM Modi's commitment at the Bishkek Summit in 2019 by launching the **first-ever SCO Digital Exhibition on Shared Buddhist Heritage by the National Museum** and translating 10 classics of Indian regional literature into Russian and Chinese.
- India also proposed to host an SCO Culinary Festival in 2021.

Significance of SCO for India:

- India's security, geopolitical, strategic and economic interests are closely intertwined with developments in the region.
- As an SCO member, India will be able to play a major role in addressing the threats of **terrorism, radicalism and instability**. The Regional Anti-Terrorism Structure (RATS) of SCO specifically deals with issues relating to security and defence.
- In addition, the Central Asian region is **richly endowed with natural resources** and vital minerals.
- However, there is **lack of direct land connectivity** to this region. Joining the SCO will be a welcome diplomatic boost to India's efforts to connect with Central Asia.
- Being a full member of the SCO India would be in a position to **plan its policy to effectively deal** with China's ambitious initiative of One Belt, One Road and "China Pakistan Economic Corridor" (CPEC).
- Stable Afghanistan is in India's interest. SCO will provide a platform for India to play more active role in Afghanistan.

Challenges Faced by India at SCO:

- The SCO has been increasingly seen by the West as **an organization to forward Chinese interests**. India will have to focus on the act of balancing between the US and China.
- **Growing convergence with China and Russia** will be another challenge for India.
- **Differences between India and Pakistan** might hamper the functioning of the SCO.
- All members of SCO have supported OBOR except India. It might lead to **isolation of India on this platform**.
- It would be difficult for India to **overcome the burden of geography** and make tangible gains in terms of trans-regional connectivity.

About SCO:

- The Shanghai Cooperation Organisation (SCO) is a permanent intergovernmental international organisation, created in June 2001 in Shanghai (China) by the Republic of Kazakhstan, the People's Republic of China, the Kyrgyz Republic, the Russian Federation, the Republic of Tajikistan, and the Republic of Uzbekistan.

- SCO comprises **eight member states**, namely the Republic of India, the Republic of Kazakhstan, the People's Republic of China, the Kyrgyz Republic, the Islamic Republic of Pakistan, the Russian Federation, the Republic of Tajikistan, and the Republic of Uzbekistan.
- SCO counts **four observer states**, namely the Islamic Republic of Afghanistan, the Republic of Belarus, the Islamic Republic of Iran and the Republic of Mongolia.
- This organization represents **approximately 42% of the world's population, 22% of its land area and 20% of its GDP.**

Asia-Pacific Broadcasting Union

- Prasar Bharati CEO Shashi Shekhar Vempati has been elected as the vice president of Asia-Pacific Broadcasting Union (ABU).
- ABU was established in 1964. It has Secretariat in Kuala Lumpur, Malaysia.
- It is a non-profit, non-governmental, professional association of broadcasting organisations. It assists development of broadcasting in region.
- ABU is also member of the World Broadcasters' Union.

Legion of Merit Award

- US President Donald Trump has conferred **The Legion of Merit, Degree Chief Commander** — to Prime Minister **Narendra Modi**, along with Australian PM Scott Morrison and former Japanese PM Shinzo Abe.
- The Legion of Merit, in the highest degree of the Chief Commander, is a prestigious award conferred by the President of the US, typically upon Heads of State or Heads of Government of other countries. The award is being given **since 1943**.
- There have been **two Indian recipients of the honour in the past**: Field Marshal K M Cariappa in 1950, and Gen S M Srinagesh in 1955.

Export of Akash Missiles

- The govt has **approved the export of indigenously-developed surface-to-air Akash missile system.**
- It has set up a **high-level committee** for faster approvals for export of the indigenous 'Akash' missiles, and other weapons systems and air platforms.
- This will comprise of the **defence minister, External Affairs Minister and National Security Advisor.**

Significance:

- This move will help to achieve **the target of \$5 billion defence exports.** India has set a target of clocking defence exports worth \$5 billion by 2024.
- It will also help in improving **strategic relations with friendly foreign** countries. Several friendly nations including the ASEAN nations Vietnam, the Philippines, and UAE in the Middle East have shown interest in buying the indigenous 'Akash' missile system.

The Akash Missile system will be the **first-ever weapons platform** to be exported.

But India has been building fast patrol boats, helicopters and ammunition and radars for global customers.

India exported defence equipment worth Rs 10,745 crore in 2018-19 - seven times the figure in 2016-17.

- So far, Indian defence exports included parts/components etc. The export of **big platforms was minimal**. This initiative would help the country to improve its defence products and **make them globally competitive**.
- It will boost our **vision of becoming Atmanirbhar** in the defence sector. It will also enhance India's stature in the global market as a weapons exporter.

About Akash Missile:

- The missile has been **designed by DRDO** and has been **produced by defence PSU Bharat Electronics Ltd (BEL)**. It has an **indigenous content of 96%**.
- The missile has a **range of 25 km**. It was inducted into the Indian Air Force in 2014 and in the army a year later.
- It has the capability to engage multiple targets in Group Mode or Autonomous Mode, simultaneously.

Superinfections

- Researchers at **Sweden's Karolinska Institutet** have released findings on "**superinfections**".
- A superinfection is a **second infection** superimposed on an earlier one, especially by a **different microbial agent that is resistant** to the treatment being used against the first infection.
E.g., Influenza is caused by a virus, but the most common cause of death in influenza patients is secondary pneumonia caused by bacteria, rather than the influenza virus itself.
- The researchers cite the example of the **Spanish flu**, which was an influenza pandemic that swept across the world in 1918–20. The Spanish flu disproportionately hit young healthy adults and the reason for this was "superinfections" caused by bacteria, in particular pneumococci.
- Pneumococcal infections are most common cause of community-acquired pneumonia and a leading global cause of death. A prior influenza virus infection is often followed by a pneumococcal infection.
- The new study found that **different nutrients and antioxidants**, such as vitamin C, **leak from the blood** creating an environment in the lungs that favours growth of the bacteria. The bacteria adapt to the inflammatory environment by increasing the production of an enzyme called **HtrA**. The presence of **HtrA weakens the immune system and promotes bacterial growth** in the influenza-infected airways.
- The researchers suggest the results could be used **to find new therapies for double infections** between the influenza virus & pneumococcal bacteria. It can also contribute to research on Covid-19.

The Cancer Genome Atlas 2020 Conference

- The **Minister of Science and Technology** has virtually inaugurated the **2nd TCGA (The Cancer Genome Atlas) 2020 Conference**.
- TCGA is a **landmark cancer genomics program** that molecularly characterized over 20,000 primary cancers and matched normal samples spanning 33 cancer types.
- It is a joint effort between the **US- National Cancer Institute** and the **National Human Genome Research Institute** which began in 2006, bringing together researchers from diverse disciplines and multiple institutions.
- On similar lines, the establishment of an '**Indian Cancer Genomics Atlas (ICGA)**' has been initiated by a consortium of key stakeholders in India led by CSIR, Government of India.
- It is aimed at **improving clinical outcomes in cancer** and other chronic diseases.

Plasmodium Ovale Malaria

- A not very common type of malaria, **Plasmodium ovale**, has been identified in a jawan in **Kerala**.
- P ovale is very **similar to P vivax, which is not a killer form**. Symptoms include fever for 48 hours, headache and nausea, and the treatment modality is the same as it is for a person infected with P vivax. P ovale is **no more dangerous than getting a viral infection**.
- It is termed ovale as about **20% of the parasitised cells are oval in shape**.
- P ovale malaria is **endemic to tropical Western Africa**. It has also been detected in the Philippines, Indonesia and Papua New Guinea, but is still relatively rare in these areas.

Malaria

- Malaria is a **life-threatening disease caused by parasites** that are transmitted to people through the bites of infected female **Anopheles mosquitoes**. It is **preventable and curable**.
- There are **five kinds of malarial parasites** — Plasmodium falciparum, Plasmodium vivax (the commonest ones), Plasmodium malariae, Plasmodium ovale and Plasmodium knowlesi.
- In 2018, the **National Vector-borne Disease Control Programme (NVBDCP)** estimated that approximately 5 lakh people suffered from malaria.
- The recent **World Malaria Report 2020** said cases in India dropped from about 20 million in 2000 to about 5.6 million in 2019.

World Malaria Report 2020

The World Health Organisation recently released the World Malaria Report 2020. The report provides an assessment of the burden of malaria at global, regional and country levels. It tracks investments in malaria programmes and research as well as progress across all intervention areas. The 2020 report is based on information received from national malaria control programmes and other partners in 87 malaria-endemic countries.

Global Findings

- In 2019, global malaria cases stood at 229 million, an estimate that has remained unchanged over the last four years. The deaths from the disease have dropped slightly to around 4.09 lakh in 2019 compared to 4.11 lakh in 2018.
- As in past years, the African Region had more than 90% of the overall disease burden. Since 2000, the region has reduced its malaria death toll by 44%, from an estimated 680,000 to 384,000 annually.

Progress Against Malaria Control

- According to the report, 1.5 billion malaria cases and 7.6 million deaths have been avoided since 2000.
- According to the report, 21 countries eliminated malaria over the last 2 decades; of these, 10 countries were officially certified as malaria-free by WHO.
- However, progress has slowed in recent years, particularly in countries with a high burden of the disease. Funding shortages have led to critical gaps in access to proven malaria control tools. In 2019, total funding reached US \$3 billion against a global target of \$5.6 billion.

Findings From India

- India has made considerable progress in reducing its malaria burden and is the only high endemic country to have reported a decline of 17.6% in cases during 2019 as compared to previous year.

- States like Odisha, Chhattisgarh, Jharkhand, Meghalaya and Madhya Pradesh together accounted for nearly 45.47% of total malaria cases in the country in 2019. They were also responsible for 63.64% malaria deaths.
- In India, between 2000 and 2019, malaria cases dropped by over 83% to around 3.38 lakh, whereas deaths declined by 92%.
- Malaria Control Efforts In India
 - The Indian government intensified malaria elimination efforts with the launch of the **National Framework for Malaria Elimination (NFME)** in 2016.
 - It was followed by the **National Strategic Plan For Malaria Elimination (2017-22)**, launched in 2017, which laid down strategies for the next five years.

WHO's Malaria Response

- WHO's work on malaria is guided by the **Global Technical Strategy for Malaria 2016-2030 (GTS)**, approved by the World Health Assembly in 2015.
- The strategy includes four global targets for 2030, along with interim targets to track progress. The 2030 targets are:
 - i) Reducing malaria case incidence by at least 90%.
 - ii) Reducing malaria mortality rates by at least 90%.
 - iii) Eliminating malaria in at least 35 countries; and
 - iv) Preventing a resurgence of malaria in all countries that are malaria-free.
- Near-term GTS targets for 2020 include global reductions in malaria case incidence and death rates of at least 40% and the elimination of malaria in at least 10 countries.
- According to report, the 2020 target for reductions in malaria case incidence will be missed by 37% and the mortality reduction target will be missed by 22%.

Havana Syndrome

- A report by the **National Academies of Sciences (NAS)** has found “**directed**” microwave radiation to be the plausible cause of *neurological illness*, referred to as “Havana syndrome”.
- Havana syndrome is a set of medical signs and symptoms experienced by **United States and Canadian embassy staff in Cuba in late 2016**.
- The symptoms included nausea, severe headaches, dizziness, sleep problems, and hearing loss.
- “Microwave weapons” are supposed to be a **type of direct energy weapons**, which aim **highly focused energy in the form of sonic, laser, or microwaves**, at a target.
- China had first put on display its “microwave weapon”, called **Poly WB-1**, at an air show in 2014.
- US has also developed a prototype microwave-style weapon, which it calls “**Active Denial System**”.
- It can have **both acute and long-term effects** — without leaving signs of physical damage.

World AIDS Day

- World AIDS Day is observed on **1st December** each year in order to raise awareness and to unite people worldwide in the fight against the global health issue of **Acquired immunodeficiency syndrome (AIDS)**.

- It is also significant **to fight the stigma around it and focus on providing care and support** for those who are already living with the disease.
- Founded in **1988 by the World Health Organization (WHO)**, World AIDS Day was the **first ever global health day**.
- **2020 Theme:** “Ending the HIV/AIDS Epidemic: Resilience and Impact”
- AIDS is caused by the spread of life-threatening **human immunodeficiency virus (HIV)** which attacks the immune system of patient and significantly reduces body’s resistance to other diseases.
- On a global level, there are approximately 38 million people who are living with HIV. It was **first discovered in 1984** and since then, this virus has killed more than 35 million people, making it one of the deadliest pandemics in human history.

Lab-grown Meat

- The **Singapore Food Agency (SFA)** has approved the sale of a lab-grown meat product. This is the first-time cultured meat has been cleared for sale anywhere in the world.
- In its June 2020 Food Outlook Report, the **UN Food and Agriculture Organisation (FAO)** stated that world meat output was set to contract row to 333 million tonnes, 1.7% less than in 2019.
- The disruption has been caused mainly by Covid-19, but it has added to already widespread fears about zoonotic diseases, especially African swine fever and highly pathogenic avian influenza.
- This provides an **opportunity to the alternative meat industry**.
- Plant-based meat is made from plant sources such as soy or pea protein, while cultured meat is grown directly from cells in a laboratory. Both have the same objective: to offer alternatives to traditional meat products that could
 - Feed a lot more people
 - Reduce the threat of zoonotic diseases
 - Mitigate the environmental impact of meat consumption.
- In terms of cellular structure, cultured or cultivated meat is the same as conventional meat — except that cultured meat does not come directly from animals.
- **Benefits:**
 - Compared to conventional beef, cultivated beef **could reduce land use** by more than 95%, **climate change emissions** by 74-87% and **nutrient pollution** by 94%.
 - Since cultivated meat is created in clean facilities, the **risk of contamination by pathogens** such as salmonella and E coli, which may be present in traditional slaughterhouses and meat-packing factories, **is significantly reduced**.
 - It **does not require antibiotics** either, unlike animals raised for meat, thereby reducing the threat posed to public health by growing antibiotic resistance.
- **Challenges:**
 - Ensuring that the products are affordable
 - Dealing with consumer mistrust
 - Resistance from traditional meat producers.

National Maritime Domain Awareness Centre

- The **Information Management and Analysis Centre (IMAC)** of the Indian Navy is set to become a **National Maritime Domain Awareness (NDMA) centre**.
- The IMAC, located in Gurugram and set up after the 26/11 Mumbai terror attacks, is the **nodal agency for maritime data fusion**.
- It was approved by **Defence Acquisition Council in 2012** and became operational in 2014.
- It is the nodal centre of **National Command Control Communication and Intelligence System (NC3I)**.
- The IMAC tracks vessels on the high seas and **gets data from the coastal radars, white shipping agreements, Automatic Identification Systems (AIS) transponders** fitted on merchant ships, air and traffic management systems and global shipping databases.
- It **connects all the operational Centres and lower rungs of the Indian Navy and the Coast Guard** located along the huge coastline and the island territories.

Information Fusion Centre – Indian Ocean region (IFC-IOR)

- In 2018, the Information Fusion Centre – Indian Ocean region (IFC-IOR) was set up within the premises of the IMAC **to coordinate with regional countries on maritime country and act as a regional repository of maritime data**.
- Earlier this year in March, **India joined Indian Ocean Commission (IOC) as Observer** in March along with the United Nations and Japan.
- Based in the southwest of the Indian Ocean, IOC is a five nations regional forum — **Comoros, France (Reunion), Madagascar, Mauritius and Seychelles**. Both the European Union (2017) and China have been observers (2016).

Maritime Domain Awareness (MDA)

- The **International Maritime Organization (IMO)** defines MDA as the effective understanding of anything associated with the maritime domain that could **impact the security, safety, economy, or environment**.
- The maritime domain is defined as all areas and things of, on, under, relating to, adjacent to, or bordering on a sea, ocean, or other navigable waterway, including all **maritime-related activities, infrastructure, people, cargo, and vessels and other conveyances**.

Quantum Key Distribution (QKD) Technology

- The **Defence Research and Development Organisation (DRDO)** has successfully demonstrated communication between its two labs using **Quantum Key Distribution (QKD) technology**.
- In the QKD technology, **encryption keys are sent as qubits in a fibre optic cable**. In quantum computing, a qubit or quantum bit is the **basic unit of quantum information**— the quantum version of the classical binary bit physically realized with a two-state device.
- The QKD is designed in a way that **if an illegitimate entity tries to read the transmission**, it will disturb the qubits - which are encoded on photons - and this will **generate transmission errors**, leading to legitimate end users being immediately informed.
- Quantum Technology is based on the **principles of quantum theory**, developed in the early 20th century, which explains the **nature of energy and matter on the atomic and subatomic level**.

- Quantum technology is manifested through applications in secure communication, disaster management through better prediction, computing, simulation, chemistry, healthcare, cryptography, imaging among others.
- **Four Domains Of Quantum Technologies** - Quantum Communication, Quantum Simulation, Quantum Computation, and Quantum Sensing and Metrology
- **Benefits:**
 - Quantum technology offers **extremely secure connection**
 - **Security infrastructure and scientific research** largely dependent on such systems
 - Secure communications are **vital for defence and strategic agencies**
 - Offers a **robust solution to sharing the keys securely**
 - Countries can use quantum computers to **break encryption protocols easily**
- The government had announced plans to invest Rs 8,000 crore in a **National Mission on Quantum Technologies and Applications (NM-QTA)**—to put India on a par with other countries.

Satellite-Based Narrowband IoT (Internet of Things) Network

- **BSNL** has announced the launch of the **world's first** Satellite-Based Narrowband IoT Network.
- Internet of things (IoT) describes the **network of physical objects** that are embedded with sensors, software, and other technologies **for the purpose of connecting and exchanging data** with other devices and systems **over the Internet**.
- The service has been launched in partnership with **US-based firm Skylo**, which has developed the device for use in India.
- The Narrowband IoT Network **can be used across India** where mobile towers are not present, **including the seas** within the country's jurisdiction.
- This new technology supports the Department of Telecom and NITI Aayog's plan of bringing **indigenous IoT connectivity to India's core sectors**.
- It leverages technology to **provide affordable and innovative telecom services** and products across customer segments.
- This new digital machine connectivity layer will serve as a **complement to smartphone-centric mobile & Wi-Fi networks**, and covers India's full geography to bring online new applications for the first time.

Submarine Optical Fibre Cable Connectivity

- The Union Cabinet has given its approval for provision of **Submarine Optical Fibre Cable Connectivity** between **Kochi and 11 islands of Lakshadweep**.
- The Project would be funded by **Universal Service Obligation Fund**.
- The project would play a vital role for **delivery of e-Governance services** at doorstep of citizens, potential development of fisheries, coconut-based industries and high-value tourism, educational development in terms of tele-education and in healthcare in terms of telemedicine facilities.
- **Submarine Communications Cable**
 - A submarine communications cable is a **cable laid on the sea bed between land-based stations** to carry telecommunication signals across stretches of ocean and sea.

- Submarine cables are laid down by using **specialty-modified ships** as per the plans given by the cable operator.
- Currently 99% of the data traffic that is crossing oceans is carried by undersea cables.
- The **reliability of submarine cables is high**, especially when multiple paths are available in the event of a cable break.
- The **total carrying capacity of submarine cables is in the terabits per second**, while satellites typically offer only 1,000 megabits per second and display higher latency.
- Submarine cables are important to the modern military as well as private enterprise.

Nuclear Magnetic Resonance (NMR) Test

- Honey marketed by prominent brands failed a key test of purity in an investigation conducted by the **Centre for Science and Environment (CSE)**.
- Current **regulations specify around 18 parameters** that honey must comply with for producers to label it 'pure honey'.
- The CSE used **Nuclear Magnetic Resonance (NMR) testing** to ascertain the composition of a product at the molecular level.
- NMR spectroscopy is an analytical chemistry technique **used in quality control** and research for **determining the content and purity of a sample** as well as its molecular structure.
- The NMR test is **not required by Indian law for honey** that is being **marketed locally but is needed for export**.

SIPRI Report on Arms Market

- According to the **Stockholm International Peace Research Institute (SIPRI)**, US and Chinese companies dominated the global arms market in 2019, while the Middle East made its first appearance among the 25 biggest weapons manufacturers.
- **Highlights of the Report:**
 - Sales of arms and military services by the sector's largest 25 companies totalled US\$361 billion in 2019, 8.5 % more than in 2018.
 - In total, 12 US companies appear in the top 25 for 2019, accounting for 61 % of the combined arms sales of the top 25 companies. The top five arms companies in the list were also based in the United States.
 - China came second, accounting for 16% of arms sales last year. Four Chinese arms-producing companies appeared in the top 25 ranking, with three in the top 10.
 - European companies are more internationalised than others.
 - For the first time, a company from West Asia, **EDGE of the United Arab Emirates**, made it into the "Top 25".
 - EDGE is a good illustration of how the combination of high national demand for military products and services with a desire to become less dependent on foreign suppliers is driving the growth of arms companies in the Middle East.

- | |
|--|
| <ul style="list-style-type: none">● Based in Stockholm, SIPRI is an independent international institute dedicated to research into conflict, armaments, arms control and disarmament. |
|--|

- Established in 1966, it provides data, analysis and recommendations, based on open sources, to policymakers, researchers, media and the interested public.

BSF Raising Day

- The Border Security Force celebrated its **56th Raising day on 1st December**.
- BSF is **India's first line of defence**. It was raised in accordance with an Act of the Parliament on 1st December, 1965, soon after the **India-Pakistan War of 1965**.
- The tasks of the BSF are divided into peacetime and wartime.
 - The **peacetime tasks** include preventing smuggling and any other illegal activity, and unauthorised entry into or exit from the territory of India, etc.
 - The **wartime tasks** of the BSF include holding ground in less threatened sectors, etc.
- BSF is deployed on **Indo-Pakistan International Border, Indo-Bangladesh International Border, Line of Control (LoC)** along with Indian Army and in **Anti-Naxal Operations**.
- BSF is one of the five Central Armed Police Forces of Union of India under the administrative control of the **Ministry of Home Affairs (MHA)**.

Cryogenic Propellant Tank (C32 LH2)

- **Hindustan Aeronautics Limited (HAL)** has delivered the biggest **cryogenic propellant tank (C32 LH2)** to the **Indian Space Research Organisation (ISRO)**.
- The C32-LH2 tank is a developmental cryogenic propellant tank of aluminium alloy designed for **improving the payload capability of GSLV MK-III launching vehicle**.
- The tank can load 5755 kg propellant fuel.
- Cryogenic fuels are fuels that **require storage at extremely low temperatures** in order to maintain them in a liquid state.
- These fuels are **used in machinery that operates in space** because ordinary fuel cannot be used there due to the very low temperatures often encountered in space, and due to absence of an environment that supports combustion on Earth.
- It most often **constitutes liquefied gases** such as liquid hydrogen.

Arecibo Telescope

- The massive **Arecibo telescope**, famous for its stellar contributions to astronomy, has collapsed.
- The **Arecibo Observatory**, also known as the **National Astronomy and Ionosphere Center (NAIC)**, is an observatory in Arecibo, Puerto Rico owned by the **US National Science Foundation (NSF)**.
- It was the world's largest single-aperture telescope since it was built in 1963. It was surpassed only in July 2016 by the **Five-hundred-meter Aperture Spherical Telescope (FAST)** in China.
- Being the most powerful radar, Arecibo is the **second-largest single-dish radio telescope** in the world.
- It was used to **observe planets, asteroids and the ionosphere**, making several discoveries over the decades, including finding prebiotic molecules in distant galaxies, the first exoplanets, and the first millisecond pulsar.

● Contributions:

- In 1967, Arecibo was able to **discover that the planet Mercury rotates in 59 days** and not 88 days as had been originally thought.
- Served as a hub in the **search for extraterrestrial life**, and would look for radio signals from alien civilisations.
- In 1993, scientists **Russell Hulse** and **Joseph Taylor** were awarded the **Nobel Prize** in Physics for their work on the observatory in monitoring a binary pulsar, providing a **strict test of Einstein's Theory of General Relativity** and the first evidence for the existence of gravitational waves.

2020 SO

- The **Near-Earth Object called 2020 SO** has been identified as the **rocket booster** by NASA that helped lift its **Surveyor spacecraft** towards the Moon in 1966.
- Earlier in September, the **NASA-funded Pan-STARRS1 telescope** detected an unknown object which followed a curved path in the sky, indicating its proximity to the Earth.
- Initially, the object was thought to be an asteroid orbiting the Earth and was hence given a name by the **Minor Planet Center**.
- However, it is now identified as the **Surveyor 2 Centaur rocket booster**. 2020 SO's orbit around the Sun was similar to that of the Earth's.
- **Surveyor-2**
 - The Surveyor-2 spacecraft was supposed to **make a soft landing on the Moon's surface in September 1966**, during which time **one of the three thrusters failed to ignite** as a result of which the spacecraft started spinning and crashed on the surface.
 - The aim of the mission was to **reconnoiter the lunar surface ahead of the Apollo missions** that led to the first lunar landing in 1969.
 - While the spacecraft crashed into the Moon's surface, the rocket booster disappeared into an unknown orbit around the Sun.
- **Pan-STARRS1 Telescope**
 - The **Panoramic Survey Telescope and Rapid Response System (Pan-STARRS1)** located at Haleakala Observatory, Hawaii, US, consists of astronomical cameras, telescopes and a computing facility that is **surveying the sky for moving or variable objects on a continual basis**.
 - It is a **1.8-meter diameter telescope** located near the summit of Haleakala on the Island of Maui. It is equipped with the world's largest digital camera, with almost 1.4 billion pixels.
 - A similar telescope, **Pan-STARRS2 (PS2)**, has been constructed adjacent to PS1. It has a similar, but slightly larger digital camera, with almost 1.5 billion pixels.
 - The operation of the Pan-STARRS telescopes is mostly **funded by the NASA Near Earth Observation Program**.

Mutated Novel Coronavirus

- A **mutated variant of the novel coronavirus SARS-CoV2** has been associated with recent infections in England.

- UK researchers have **identified this variant as N501Y**. In this variant, one mutation has made the virus more likely to bind with human proteins called **receptors**.
- Simply, it means that **amino acid represented by the letter N**, and present at position 501 in the coronavirus genetic structure, has been replaced in that position with another amino acid, represented by Y.
- It is likely to be a **mutation in the spike protein**. There has been a single nucleotide change in one portion of the spike protein, so there would be **no bearing on the disease biology or even diagnostics**.
- A mutation means a **change in the genetic sequence of the virus**. In the case of **SARS-CoV-2, which is an RNA virus**, a mutation means a change in the sequence in which its molecules are arranged. A mutation in an RNA virus often happens when the virus makes a mistake while it is making copies of itself.
- Mutations are common and are differentiated as follows:
 - **Synonymous mutations** are the majority of the mutations that **cause no alteration in the structure of the proteins** they encode, as they eventually translate to the same amino acids.
 - Another type is **non-synonymous mutation**, which could **result in an amino acid change**.
- Only if the mutation results in a significant change in the protein structure, can the course of a disease be altered.

Intentional Genomic Alteration

- The **US Food and Drug Administration (FDA)** approved a first-of-its-kind Intentional Genomic Alteration (IGA) in a line of domestic pigs referred to as **GalSafe pigs**.
- These pigs may be used for food and human therapeutics. The pig is genetically engineered to **eliminate the presence of alpha-gal**, a type of sugar found in many mammals.
- The **sugar** makes its way into many products, including medications, cosmetics and food, and **can cause allergic reactions in some people**.
- This is the first time that the regulator has approved an **animal biotechnology product for both food and biomedical purposes**.

About IGA

- Intentional genomic alteration in animals means **making specific changes to the genome of the organism using modern molecular technologies** that are popularly referred to as “**genome editing**” or “**genetic engineering**”.
- Such changes in the DNA sequence of an animal may be carried out for research purposes, to produce healthier meat for human consumption and to study disease resistance in animals among other reasons. **Ex:** Using IGAs to make an animal more susceptible to certain diseases such as cancer, which helps researchers get a better understanding of the disease and develop new therapies to treat it.

Genome Editing

- Genome editing is a way of making specific changes to the DNA of a cell or organism.
- **An enzyme cuts the DNA at a specific sequence, and when this is repaired by the cell a change or ‘edit’ is made to the sequence.**

- Genome editing can be used to add, remove, or alter DNA in the genome
- The method is used **for research, to treat a disease and for biotechnology.**

Pneumosil

- The **first indigenous Pneumococcal Polysaccharide Conjugate Vaccine, Pneumosil**, developed by the Serum Institute of India (SII), was launched.
- SII's Pneumosil was developed through a collaboration spanning over a decade with the health organisation PATH and the Bill and Melinda Gates Foundation.
- The vaccine targets the **pneumococcal bacterium**, which causes **pneumonia** and other serious life-threatening diseases such as **meningitis and sepsis**, and is estimated to cause nearly four lakh deaths in children under five years of age each year worldwide.
 - Pneumococcal disease is an infection caused by the bacteria **Streptococcus pneumoniae or pneumococcus**.
 - The carriers can spread it, primarily in droplets from their nose or mouth when they breathe, cough, or sneeze.
- In view of its widespread fatality, the World Health Organization in 2018 recommended the inclusion of the pneumococcal conjugate vaccine (PCV) in routine childhood immunisation programmes in all countries.
- The vaccine will be **much more affordable than the existing ones** manufactured by foreign companies.

Shigella Infection

- A **six cases of shigella infection** and nearly two dozen suspected cases were detected in Kozhikode district of **Kerala**.
- Shigellosis, or shigella infection, is a **contagious intestinal infection** caused by a genus of **bacteria known as shigella**. The bacteria is one of the prime pathogens responsible for causing **diarrhea**, especially in children in **African and South Asian regions**.
- The bacteria, after entering the body through ingestion, **attacks the epithelial lining of the colon resulting in inflammation of the cells** and subsequently the destruction of the cells in severe cases.
- The infection is known to spread **person-to-person** when the bacteria is swallowed accidentally. **Spread through contaminated food and water is the most common form** of transmission across the world.

Hypothermia

- The **Indian Meteorological Department (IMD)** has issued an advisory urging residents of India's northernmost states to **protect themselves from the biting cold by avoiding alcohol**.
- Alcohol can **decrease the core temperature** of the body and **increase the risk of hypothermia** during cold exposure.
- Hypothermia is a **severe medical condition where the body loses heat before it can generate it**, resulting in a dangerously low body temperature.

- While normal body temperature lies at around 37 degrees Celsius, the body temperature of a person suffering from hypothermia drops to below 35 degrees Celsius.
- **Common signs include shivering, slow rate of breathing, slurred speech, cold skin and fatigue.**
- **Alcohol is a vasodilator**, which means that it causes blood vessels to relax and dilate or open.
 - After consuming alcohol, as the body begins to believe that it is warm, one also starts to sweat — a reaction that automatically reduces overall body temperature.
 - Drinking copious amounts of alcohol may affect bodies' ability to detect the cold properly, which is in place to protect from frostbite and hypothermia.

Ammonia

- A major ammonia gas leakage occurred at the **Indian Farmers Fertilizer Cooperative Limited (IFFCO)** unit at Prayagraj, Uttar Pradesh.
- A tri-hydride of nitrogen (NH_3), ammonia is a building block for ammonium nitrate (NH_4NO_3) that is used in agriculture as a **high-nitrogen fertiliser**.
- It is stored for industrial use in **liquid form under high pressure** or in **gaseous form at low temperature**.
- Ammonia interacts immediately upon contact with moisture present in the skin, eyes, oral cavity, respiratory tract to form ammonium hydroxide, which is very caustic and disrupts the cell membrane lipids, ultimately leading to **cellular destruction**.
- It is **highly soluble in water** and is found in soil, air, and water. It is also naturally present in the body and **secreted by the kidneys to neutralise excess acid**.
- However, when inhaled in excess, the **gas is toxic and affects the lungs** with a possibility of causing **chemical pneumonitis** — inflammation of the lung caused by aspirating or inhaling irritants.
- Ammonia is **critical in the manufacturing of fertilizers**, and is one of the largest-volume synthetic chemicals produced in the world. More than 80% of ammonia made is consumed in the manufacturing of fertilizer, and most of the remainder goes into the production of formaldehyde.

National Security Directive on the Telecommunication Sector

- The Cabinet Committee on Security has approved the setting up of a new **National Security Directive** on the telecommunication sector.
- The directive has been issued with an intent to **classify telecom products** and their sources under **'trusted' and 'non-trusted' categories**.
- The government will declare a **list of trusted sources, trusted products** for the benefit of telecom service providers to **maintain the integrity** of the supply chain security.
- Those which meet the criteria of the Department of Telecom's **preferential market access scheme (PMA)** will be certified as **"India Trusted sources"**.
- The government will also create a list of designated sources from whom no procurement can be done.
- The list of the trusted source and product will be decided based on approval of the **National Security Committee on Telecom**.
 - The committee is headed by the **deputy National Security Advisor**.
 - It will consist of members from relevant departments and ministries.

- It will also have **two members from the industry and an independent expert.**
- **Advantages**
 - **Improve the ease of doing business** by providing assessment methodology to Telecom Service Providers (TSPs) and equipment vendors.
 - **Significant boost in ensuring national security** by addressing 5G and supply chain concerns.
 - Strengthen domestic industry by **boosting the use of indigenous products** in the telecom networks.
 - Mobile applications that either have Chinese origins or have central servers in China may also **find re-entry in the market extremely difficult** owing to the new conditions.
 - Chinese telecom equipment vendors like **Huawei and ZTE have been under global scrutiny for allegedly installing ‘backdoor’ or ‘trap door’ vulnerabilities** and spying for the Chinese government and have been banned by several countries.
- Earlier, the Centre had asked all telecom operators to undertake an **‘information security audit’ of their networks**. The objective of the audit was to specifically check for any **‘backdoor’ or ‘trap door’ vulnerabilities** in the telecom networks, which can be exploited to extract information and pass on illegally to agencies around the world.
- A ‘backdoor’ or a ‘trap door’ is a **bug installed in the telecom hardware** that allows companies to listen in or collect data being shared on the network.

Aquifer Mapping Program

- The **Central Ground Water Board (CGWB), Ministry of Jal Shakti** has signed a Memorandum of Understanding (MoU) with the **CSIR-NGRI, Hyderabad** for use of advanced heliborne geophysical survey and other scientific studies under the **Aquifer Mapping Programme**.
- Under phase- I of the project, an area of nearly 1 lakh sq km spreading over **western arid Rajasthan, arid parts of Gujarat and Haryana** would be covered at an estimated cost of 54 Crores.
- **Major Objectives Of The Study**
 - **High resolution aquifer mapping** using heliborne geophysical studies, including identification of sites for artificial recharge, 3D Geophysical model, Geophysical Thematic maps at horizontal and vertical plains etc
 - **Spatial and depth wise distribution of paleochannel network** if any and its linkage with aquifer system.
 - Selecting suitable sites for **groundwater withdrawal** and **water conservation** through artificial or managed aquifer recharge.
- This is the first time the Ministry of Jal Shakti has decided to use the state of the art technology for identification of aquifers in such a large arid/semi-arid area of the country.
- The study is likely to **generate groundwater data in a very short time period**. This will **help in expeditiously finalizing the groundwater management plan** in water stressed areas and **charter the roadmap for sustainable management** of groundwater resources.

National Aquifer Mapping and Management Programme (NAQUIM)

- The programme was initiated as a part of the **Ground Water Management and Regulation scheme** to delineate and characterize the aquifers to develop plans for ground water management.

- One of the major objectives of NAQUIM is to **promote participatory groundwater management**. This is achieved by empowering communities with a seamless flow of information and understanding of local aquifers.
- Aquifer mapping can be defined as a scientific process, wherein a combination of geologic, geophysical, hydrologic and chemical field and laboratory analyses are applied to **characterize the quantity, quality and sustainability of groundwater in aquifers**.
- Aquifer mapping at the appropriate scale can help prepare, implement and monitor the efficacy of various management interventions aimed at **long-term sustainability of precious ground water resources**.
- This in turn will help **achieve drinking water security, improved irrigation facilities and sustainability in water resources development** in the country as a whole.

Mission Sagar-III

- **Indian Naval Ship (INS) Kiltan** delivered 15 Tons of Humanitarian Assistance and Disaster Relief (HADR) Stores for the flood-affected people of **Cambodia** as part of ongoing Mission Sagar-III.
- Mission Sagar-III is part of **India's HADR assistance to Friendly Foreign Countries** during the ongoing pandemic.
- This Mission is a major milestone in India's engagement with the countries in the **Indian Ocean Region**, in line with the vision of **SAGAR (Security And Growth for All in the Region)**.
- It reiterates **India's position as a dependable partner**, and the Indian Navy as the Preferred Security Partner and First Responder.
- The Mission also highlights the **importance accorded to ASEAN countries and further strengthens the existing bonds**.

TiHAN-IIT Hyderabad

- The **Department of Science and Technology** has sanctioned ₹135 crore to IIT Hyderabad under the **National Mission on Interdisciplinary Cyber-Physical Systems (NM-ICPS)** to set up a **Technology Innovation Hub on Autonomous Navigation and Data Acquisition Systems**.
- The Technology Innovation Hub on Autonomous Navigation Systems for Unmanned Aerial Vehicles and Remotely Operated Vehicles at IIT Hyderabad, known as '**TiHAN Foundation**' has been incorporated as a **Section-8 company** by the institute in June 2020.
- It is **India's first Test bed** for Autonomous Navigation Systems (**Terrestrial and Aerial**).
- It focuses on the **R&D of interdisciplinary technologies** in the domain of Autonomous Navigation and Data Acquisition Systems.
- The hub's focus sectors include **Intelligent, Autonomous Transportation and Systems, Agriculture, Surveillance, and Environmental & Infrastructure Monitoring**.

Digital Ocean Platform

- The **Minister for Science and Technology** has launched the '**Digital Ocean**' platform of **Indian National Centre for Oceanic Information Services (INCOIS)** as a one stop-solution for all ocean data requirements.

- It is the **first of its kind platform for ocean data management** which has a set of applications that present heterogeneous oceanographic data with geospatial technology.
- It will facilitate an online interactive web-based environment for data integration, **3D and 4D data visualization, data analysis** to assess the evolution of oceanographic features obtained from multiple sources like on site monitoring devices, remote sensing and model data
- It will help to **share knowledge about the ocean with a wide range of users** including research institutions, operational agencies, strategic users, policy makers etc. It will serve as a **one stop-solution for all the data related needs** of a wide range of users.
- The platform is expected to bring a sea-change in how the oceanographic data is served for a better understanding of oceans. It will play a central role in **sustainable management of oceans and expanding India's 'Blue Economy' initiatives.**

Indian National Center for Ocean Information Services (INCOIS)

- It is an **autonomous organization**, established in 2007, under the **Ministry of Earth Sciences (MoES)**.
- It is located in Hyderabad and is a unit of the **Earth System Science Organization (ESSO)**.
- INCOIS provides **ocean information and advisory services** to various stakeholders including **Potential Fishing Zone (PFZ) advisories, Ocean State Forecast (OSF)**, high wave alerts, tsunami early warnings, storm surge and oil-spill advisories, among others.

DRDO Systems Handed to Defence Services

- The **Minister of Defence** handed over **three indigenously developed Defence Research and Development Organisation (DRDO)** systems to Army, Navy and Air Force.
- The three DRDO systems are:
 - Indian Maritime Situational Awareness System (IMSAS)
 - ASTRA Mk-I Missile
 - Border Surveillance System (BOSS)
- The development of these high technology systems has led to **higher self-reliance in Defence technologies.**

Indian Maritime Situational Awareness System (IMSAS)

- The IMSAS is **state-of-the-art, fully indigenous, high performance intelligent software system** that provides Global Maritime Situational Picture, Marine planning tools and Analytical capabilities to Indian Navy.
- The system provides **Maritime Operational Picture from Naval HQ to each individual ship** in sea to enable Naval Command and Control (C2).

ASTRA Mk-I Missile

- The ASTRA Mk-I is the **indigenously developed first Beyond Visual Range (BVR) Missile**, which can be launched from **Sukhoi-30, Light Combat Aircraft (LCA), Mig-29 and Mig-29K**.
- The missile is designed to **engage and destroy highly manoeuvring supersonic aircraft** and has **all weather day and night capability.**
- With a range of over 110 km and a maximum speed of Mach 4.5 (over 5,500 kmph), the Astra Mk 1 is seen as a game-changer, which can bring back India's air-to-air combat superiority over Pakistan.

Border Surveillance System (BOSS)

- BOSS is an **all-weather electronic surveillance system** successfully designed and developed by Instruments Research & Development Establishment (IRDE), Dehradun.
- The system has been **deployed at Ladakh border area for day and night surveillance.**
- The system facilitates monitoring and surveillance by **automatically detecting the intrusions in harsh high-altitude sub-zero temperature** areas with remote operation capability.
- The system is being produced by Bharat Electronics Limited (BEL), Machlipatnam.

Coastal Radar Chain Network

- In a bid to further expand the coastal radar chain network, India's efforts are in advanced stages to **set up coastal radar stations in Maldives, Myanmar and Bangladesh.**
- **Mauritius, Seychelles and Sri Lanka** have already been integrated into the country's coastal radar chain network.
- Under **Phase-I** of the coastal radar chain network, **46 coastal radar stations have been set up** across the country's coastline.
- Under **Phase-II** of the project, which is currently underway, **38 static radar stations and four mobile radar stations** are being set up by the Coast Guard and is in an advanced stage of completion.
- As part of information exchange regarding traffic on the high seas, the Navy has been authorised by the government to conclude **white shipping agreements with 36 countries and three multilateral constructs.**
- The aim is to **enable real time monitoring of the high seas** for threats and also **expand India's assistance for capacity building** to Indian Ocean littoral states.
- The **need for coastal security** has risen on account of maritime terrorism, infiltration and illegal migration, smuggling and trafficking, piracy and robbery
- The Indian Navy's **Information Management and Analysis Centre (IMAC)** is the nodal agency for maritime data fusion. It is located in Gurugram which was set up after the 26/11 Mumbai terror attacks.

Medium Range Surface to Air Missile (MRSAM)

- India has successfully conducted the first launch of the Army version of the **Medium Range Surface to Air Missile (MRSAM).**
- The MRSAM is an **Air and Missile Defence system** developed by the **Defence Research and Development Organisation (DRDO)** in collaboration with the **Israel Aerospace Industry (IAI).** The MRSAM has been manufactured by **Bharat Dynamics Limited, India.**
- In April 2017, India had signed a contract with Israel for supply of the MRSAM, which is a land-based medium-range Air Defence surface-to-air missile system.
- The MRSAM Army version consists of a **command and control post, multi-function radar and mobile launcher system.**
- The missile is designed to **provide the armed forces with air defence capability** against a variety of aerial threats at medium ranges.
- The missile's explosive warhead, featuring a self-destruct fuse, provides high-probability of kill against enemy targets with **minimal collateral damage.**
- The weapon has the ability to engage multiple targets **simultaneously at ranges of 70km.**

Shaheen-IX

- The **air forces of Pakistan and China** have conducted a joint exercise, **Shaheen (Eagle)-IX**, designed to deepen practical cooperation and improve the actual-combat training level of two sides.
- Shaheen-IX is the ninth in the series of Joint Air Exercises which is conducted each year in both countries on alternate basis. The **first such drill was held in Pakistan in March 2011**.
- China and Pakistan share close military ties. China helps Pakistan to jointly produce JF-17 fighter jets and other armaments.

IND-INDO CORPAT

- The **35th edition of India-Indonesia Coordinated Patrol (IND-INDO CORPAT)** between the **Indian Navy and the Indonesian Navy** was conducted in December 2020.
- **Indian Naval Ship (INS) Kulish**, an indigenously built missile corvette, along with **P8I Maritime Patrol Aircraft (MPA)** undertook coordinated patrol with their Indonesian counterparts.
- To reinforce maritime links, the two navies have been carrying out **CORPAT** along their International Maritime Boundary Line since 2002, with the aim of ensuring safety and security of shipping and international trade in the region.
- CORPATs build up understanding and interoperability between navies and facilitate institution of measures to prevent and suppress **Illegal Unreported Unregulated (IUU) fishing, drug trafficking, maritime terrorism, armed robbery and piracy**.
- As part of Government of India's vision of **SAGAR (Security And Growth for All in the Region)**, the Indian Navy has been proactively engaging with countries in Indian Ocean Region for Coordinated Patrols.
- The other activities include **cooperation in Exclusive Economic Zone (EEZ) Surveillance, Passage exercises and Bilateral/ Multilateral exercises**, towards enhancing regional maritime security.

PASSEX

- The Indian Navy (IN) has conducted a Passage Exercise (PASSEX) with **Russian Federation Navy (RuFN)** in the Eastern Indian Ocean Region (IOR) in December 2020.
- Indian Navy is being represented by *indigenously constructed guided missile frigate Shivalik* and *anti-submarine corvette Kadmatt* **alongwith integral helicopters**.
- The exercise is aimed at **enhancing interoperability, improving understanding and imbibing best practices** between both the friendly navies, and would involve **advanced surface and anti-submarine warfare exercises, weapon firings, seamanship exercises** etc.
- This exercise, being conducted in **Eastern Indian Ocean Region**, reflects strong long-term strategic relationship between the two countries & particularly, defence cooperation in maritime domain.

S-400 Air Defence Systems

- The **United States** has imposed **sanctions on Turkey** over its acquisition of Russian **S-400 air defence systems**.
- The **S-400 Triumf**, (**NATO calls it SA-21 Growler**), is a **mobile, surface-to-air missile system (SAM)** designed by Russia.

- It is the most dangerous operationally deployed modern long-range SAM (MLR SAM) in the world, considered much ahead of the US-developed **Terminal High Altitude Area Defense system (THAAD)**.
- The system can **engage all types of aerial targets** including aircraft, unmanned aerial vehicles (UAV) and ballistic and cruise missiles within the range of 400km, at an altitude of up to 30km.
- The system can track 100 airborne targets and engage six of them simultaneously.
- The system **integrates a multifunction radar, autonomous detection and targeting systems, anti-aircraft missile systems, launchers, and command and control centre**. It is capable of firing three types of missiles to create a layered defence.
- It can also be integrated into the existing and future air defence units of the Air Force, Army, and the Navy.
- **India's View**
 - In 2015, China signed an agreement with Russia to purchase six battalions of the system.
 - China's acquisition of the S-400 system has been viewed as a "game changer" in the region.
 - However, its effectiveness against India is limited. Even if stationed right on the India-China border and moved into the Himalaya mountains, Delhi would be at the limit of its range.
 - India's acquisition is crucial to **counter attacks in a two-front war, including even high-end F-35 US fighter aircraft**.
- In October 2015, **Defence Acquisition Council** considered buying 12 units of S-400 for its defence needs. But, on evaluation, in December 2015, five units were found adequate. The deal is worth about USD 5 billion.

Countering America's Adversaries Through Sanctions Act (CAATSA)

- It was enacted in 2017 to counter Iran, Russia and North Korea through punitive measures.
- It primarily deals with sanctions on Russian interests such as its oil and gas industry, defence and security sectors, and financial institutions, following Moscow's military intervention in Ukraine in 2014 and its alleged meddling in the 2016 US presidential election.

F/A-18 Super Hornet Fighter Jets

- American aviation giant Boeing announced that its **F/A-18 Super Hornet fighter** has demonstrated compatibility with India's aircraft carriers.
- F/A-18 Block III Super Hornet are twin-engine, carrier-capable, multirole fighter aircraft which are capable of tactical strikes, air reconnaissance, air defense, and maritime roles. They also have day and night strike capabilities with precision guided weapons.
- It will offer Indian Navy value in the form of **advanced warfighter technologies at a low acquisition cost and affordable cost-per-flight-hour** because of its ease-of-maintainability design and durability.
- It will also create opportunities for **cooperation in naval aviation between India and the U.S.**
- As part of Boeing's proposed "**By India, for India**" **sustainment program**, the Block III Super Hornets could be serviced in partnership with the Indian Navy as well as India and U.S. based partners throughout the lifecycle of the aircraft.
- This would further **develop advanced expertise in aircraft maintenance in India**, resulting in higher availability of the aircraft, at competitive pricing and reduced risk for the Indian Navy.

E-20 Fuel

- The Ministry of Road Transport and Highways has published a draft notification inviting public comments for **introducing adoption of E20 fuel** to promote green fuel like ethanol.
- Adoption of E20 fuel means **blending of 20% of ethanol with gasoline** as an automotive fuel.
- The **current permissible level of blending is 10% of ethanol** though India reached only 5.6% of blending in 2019.
- **Benefits of E20 Fuel:**
 - Help in reducing emissions of carbon dioxide, hydrocarbons, etc.
 - Help reduce the oil import bill, thereby saving foreign exchange and boosting energy security.
 - Promoting green fuel like ethanol can help reduce Rs 8 lakh crore crude import dependence.
- The government aspires to take the **ethanol economy to Rs 2 lakh crore in the next five years** from Rs 22,000 crore at present.
- Ethanol is a **biofuel** and a **common by-product of biomass left by agricultural feedstock** such as corn, sugarcane, hemp, potato, etc.
- Biofuel, also known as **green fuel**, is a type of **fuel distilled from plants and animal materials**, believed to be **more environmentally friendly** than the widely-used fossil fuels.
- The two most common types of biofuel are **bioethanol and biodiesel**.

Great Conjunction

- After nearly 400 years, **Saturn and Jupiter** – – were brought closest in the night sky on December 21 by an astronomical event called the **“great conjunction”** and popularly referred to as the **“Christmas Star”**.
- The event coincided with **winter solstice (shortest day of the year in terms of hours of sunlight received) in the Northern Hemisphere** and **summer solstice in the Southern Hemisphere**.
- A conjunction is the name given to any event where **planets or asteroids appear to be very close together in the sky** when viewed from the Earth. It is **not unique to Saturn and Jupiter**.
- In **June 2005**, as a result of the “spectacular” conjunction, **Mercury, Venus and Saturn appeared close** together in the sky.
- Astronomers use the word “great” for the conjunction of Jupiter and Saturn because Jupiter and Saturn are the two largest planets in the solar system.
- The “Great Conjunction” **happens once in about 20 years** because of the time each of the planets take to orbit around the Sun. Jupiter takes roughly 12 years to complete one lap around the Sun and Saturn takes 30 years
- Saturn has a larger orbit and moves more slowly because it is not as strongly influenced by the Sun’s gravitational force as planets that are closer to the Sun.

National Mathematics Day

- **National Mathematics Day** is celebrated every year on **December 22** across the nation to recognise and celebrate the works of **Srinivasa Ramanujan**.
- In **2012**, former Prime Minister Manmohan Singh **declared December 22 as National Mathematics Day**.

- It was on this day in 1887, the Indian mathematical genius **Srinivasa Ramanujan was born.**
- In 1916, he was **awarded the Bachelor of Science degree**; the next year he was **elected to the London Mathematical Society.**
- **In 1918, he was elected a Fellow of the Royal Society** for his research on **Elliptic Functions and theory of numbers.** The same year in October he became the **first Indian to be elected a Fellow of Trinity College, Cambridge.**
- Ramanujan made priceless contributions to several mathematical concepts like **infinite series, continued fractions, number theory and mathematical analysis.**
- He also made notable contributions like the hypergeometric series, the Riemann series, the elliptic integrals, the theory of divergent series, and the functional equations of the zeta function.

Elephant Corridors In India

The National Green Tribunal (NGT) has directed the Odisha government to prepare an action plan on 14 identified elephant corridors for providing stress-free migration to jumbos from one habitation to another in the State.

What Are Elephant Corridors?

Elephant corridors are **narrow strips of land that connect two large habitats of elephants.** They are crucial to reduce animal fatalities due to accidents and other reasons. So fragmentation of forests makes it all the more important to preserve migratory corridors.

Significance

- Forests that have turned into farms and unchecked tourism are blocking animals' paths. Animals are thus forced to seek alternative routes resulting in **increased elephant-human conflict.**
- **Weak regulation of ecotourism** is severely impacting important habitats. The movement of elephants is essential to ensure that their populations are genetically viable.
- It also helps to regenerate forests on which other species, including tigers, depend.

Need For Creating Elephant Corridors In India

- Every year, **India loses nearly 400 people and about 50 elephants to man-animal conflict** due to ever shrinking habitat of animal.
- While most of tiger habitat falls within protected area, **only 22% of elephant habitat has some kind of protection.**
- Majority of elephant population in country is **living around human dominated landscapes** which have become hotbeds of human elephant conflict. Besides, elephants are also facing threat of extinction from habitat loss, along with **ivory poaching.**
- Recently **Supreme Court of India held that elephants have the first right on the forest** and added that humans cannot encroach upon elephant habitats and corridors.

Conservation Efforts

International Level

- **Monitoring the Illegal Killing of Elephants (MIKE):** It is an international collaboration that measures the levels, trends and causes of elephant mortality, thereby providing an information base to support international decision-making related to conservation of elephants in Asia and Africa. It was established by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (**CITES**) adopted at the tenth Conference of the Parties in 1997.

- **World Elephant Day:** World Elephant Day is celebrated on August 12 to spread awareness about the critical threats elephants are facing, and to support solutions that will help ensure their survival.
- **Asian Elephant Alliance:** An umbrella initiative by five NGOs, has come together to secure 96 out of the 101 existing corridors used by elephants across 12 States in India. The joint venture is aiming at raising £20 million to secure the 96 remaining elephant corridors, old and new, in the next ten years.

National Level:

- **Surakhsya Portal:** It is a National Portal on human elephant conflict for collection of real time information & also for managing the conflicts on a real time basis.
- **Project Elephant:** It was launched by the Government of India in the year 1992 as a centrally sponsored scheme to protect elephants, their habitat & corridors.
- **Wildlife Protection Act, 1972:** Elephant is listed under Schedule I of Wildlife Protection Act, 1972.
- **Gaj Yatra:** Wildlife Trust of India (WTI) launched Gaj Yatra, a campaign that aims to raise awareness about the shrinking space for India's wild elephants and the importance of securing elephant corridors.

Way forward:

- Conservation of species on the ground, can only be done when one adopts a **multi-boundary approach**. Without landscape connectivity, our small protected areas will end up being islands of conservation with unviable populations that will be highly prone to extinction.
- Just notifying the corridor in a boundary would not be sufficient. Long-term survival and free movement of the elephant population in the landscape can only be possible if the **connecting corridors are revived and restored efficiently**.
- **The corridors should be notified on an urgent basis** by the state forest department and legally protected under an appropriate law. Action should be taken to prevent illegal mining and construction activities and there should be proper analysis for all the proposed mining leases within corridor area.
- The legislature and executive must look after these speechless creatures according to the instruction given under **Article 48-A** of the Indian Constitution.

To read more about Elephants and Project Elephant, refer The Recitals August 2020.

Emissions Gap Report 2020

The United Nations Environment Programme (UNEP) has released its annual Emissions Gap Report 2020. The Emissions Gap Report measures “the gap between anticipated emissions and levels consistent with the Paris Agreement goals of limiting global warming this century to well below 2°C and pursuing 1.5°C”.

Findings From Emission Gap Report 2020 On Key Aspects:

- **Record High GHG emissions:** Global GHG emissions continued to grow for the third consecutive year in 2019, reaching a record high of 52.4 Gigatonne carbon equivalent (GtCO₂e) without land-use change (LUC) emissions and 59.1 GtCO₂e when including LUC.
- **Record carbon emission:** Fossil carbon dioxide (CO₂) emissions dominate total GHG emissions including LUC (65 per cent) and consequently the growth in GHG emissions.
- **Forest fires increasing GHG emissions:** When including the more uncertain and variable LUC emissions, global GHG emissions have grown 1.4 per cent per year since 2010 on average, due to a large increase in vegetation forest fires.

- **G20 countries account for bulk of emissions:** Over the last decade, the **top four emitters** (China, USA, EU27+UK and India) have contributed to 55% of the total GHG emissions without LUC. The top seven emitters (including the Russian Federation, Japan and international transport) have contributed to 65 per cent, with G20 members accounting for 78 per cent.
- **Is the GHG emission rate slowing?** There is some indication that the growth in global GHG emissions is slowing. However, GHG emissions are declining in Organisation of Economic Cooperation and Development (OECD) economies and increasing in non-OECD economies.
- **Consumption-based emissions:** There is a general tendency that rich countries have higher consumption-based emissions (**emissions allocated to the country where goods are purchased and consumed, rather than where they are produced**) than territorial-based emissions, as they typically have cleaner production, relatively more services and more imports of primary and secondary products. Even though rich countries have had higher consumption-based emissions than territorial-based emissions over the last decade, both emission types have declined at similar rates.”
- **COVID-19 pandemic impact on the emission level:** CO2 emissions could decrease by about 7 % in 2020 compared with 2019 emission levels due to COVID-19, with a smaller drop expected in GHG emissions as non-CO2 is likely to be less affected. However, atmospheric concentrations of GHGs continue to rise. Studies indicate that the biggest changes have occurred in transport, as COVID-19 restrictions were targeted to limit mobility.
- **Other GHGs (excluding carbon dioxide) levels:** “Although CO2 emissions will decrease in 2020, the resulting atmospheric concentrations of major GHGs (CO2, methane (CH4) and nitrous oxide (N2O)) continued to increase in both 2019 and 2020.
- **Are countries on track to attain net zero level?** 126 countries covering 51 per cent of global GHG emissions have net-zero goals that are formally adopted, announced or under consideration. If the United States of America adopts a net-zero GHG target by 2050, as suggested in the Biden-Harris climate plan, the share would increase to 63 per cent.”

State of the Global Climate 2020 Report

The **World Meteorological Organisation** released its provisional report on the State of the Global Climate 2020.

Highlights Of The Report

A. Warm Years

- **2011-2020 will be the warmest decade on record**, with the warmest six years being since 2015. The year 2016 has been the warmest year on record and is being followed closely by 2020 temperatures.
- Currently there is **new extreme temperatures on land, sea** and especially in the Arctic. Wildfires consumed vast areas in Australia, Siberia, the US West Coast and South America, sending plumes of smoke circumnavigating the globe.

B. Effect of La Nina

- Record **warm years have usually coincided with a strong El Niño** event, as was the case in 2016. Currently we are now experiencing a **La Niña, which has a cooling effect on global temperatures**, but has not been sufficient to put a brake on this year’s heat. Despite the current La Niña conditions, this year has already shown near record heat comparable to the previous record of 2016.
- The most notable warmth was observed across northern Asia, particularly the Siberian Arctic, where temperatures were more than 5 °C above average.

C. Ocean Heat

- **Ocean heat content for 2019 was highest on record** in the datasets going back to 1960. There is a clear signal for faster heat uptake in recent decades.
- More than 90 per cent of the excess energy accumulating in the climate system as a result of increased concentrations of greenhouse gases go into the ocean. Global mean sea-level in 2020 is similar to that in 2019.

D. Tropical Cyclones And Hurricanes

- The **number of tropical cyclones globally was above average in 2020**, with 96 cyclones as of November 17, 2020. In India, **Cyclone Amphan** near the India-Bangladesh border in the eastern Bay of Bengal, “was the costliest tropical cyclone on record for the North Indian Ocean with reported economic losses in India of approximately **US\$14 billion**”.
- There were **record number of hurricanes in the Atlantic**, including unprecedented back-to-back category 4 hurricanes in Central America in November. Flooding in parts of Africa and South East Asia led to **massive population displacement and undermined food security for millions**.

E. Monsoon

India also had one of its two wettest monsoon seasons since 1994, with nationally-averaged rainfall for June to September 9% above the long-term average. Heavy rain, flooding and landslides also affected surrounding countries.

Participatory Guarantee Scheme (PGS)

- Ministry of Agriculture has declared **Lakshadweep Island as 100 per cent organic under Participatory Guarantee Scheme**. After Sikkim, Lakshadweep is the **first Union Territory (UT) to become 100% organic** as all farming is carried out without the use of synthetic fertilizers and pesticides.
- In September 2020, Lakshadweep administration formally declared that its **entire farming community was practicing organic agriculture** and using organic inputs such as compost, poultry manure, green leaf manure.

What Is The PGS?

- PGS is a **process of certifying organic products**, which ensures that their production takes place in accordance with laid-down quality standards. The certification is in the form of a documented logo or a statement.
- It is a quality assurance initiative that is locally relevant, emphasize the participation of stakeholders, including producers and consumers and **operate outside the frame of third party certification**.

Four Pillars Of PGS

- **Participation:** Stakeholders such as producers, consumers, retailers, Gram Panchayats, and government organisations etc are collectively responsible for designing, operating, and decision-making.
- **Shared Vision:** Collective responsibility for implementation and decision making is driven by a common shared vision. Each stakeholder organisation or PGS group can adopt its own vision conforming to the overall vision and standards of the PGS-India programme.
- **Transparency:** At the grassroots level, transparency is maintained through the active participation of producers in the organic guarantee process, which can include information-sharing at meetings and workshops, peer reviews, and involvement in decisionmaking.

- **Trust:** A fundamental premise of PGS is the idea that producers can be trusted, and that the organic guarantee system can be an expression and verification of this trust.

Advantages Of PGS Over Third-Party Certification

- Procedures are simple, documents are basic, and farmers understand the local language used.
- All members live close to each other and are known to each other. As practising organic farmers themselves, they understand the processes well.
- Because peer appraisers live in the same village, they have better access to surveillance; peer appraisal instead of third-party inspections also reduces costs.
- Mutual recognition and support between regional PGS groups ensures better networking for processing and marketing.
- Unlike the grower group certification system, PGS offers every farmer individual certificates, and the farmer is free to market his own produce independent of the group.

Limitations of PGS

- PGS certification is **only for farmers or communities that can organise and perform as a group** within a village or a cluster of contiguous villages, and is **applicable only to farm activities** such as crop production, processing, and livestock rearing, and off-farm processing “by PGS farmers of their direct products”.
- **Individual farmers or group of farmers smaller than five members are not covered** under PGS. They either have to opt for third party certification or join the existing PGS local group.
- PGS ensures traceability until the product is in the custody of the PGS group, which makes PGS ideal for local direct sales and direct trade between producers and consumers.

Additional Information

About Lakshadweep

- Lakshadweep consists of 36 islands and is **India’s smallest UT**.
- It is a **uni-district UT** and comprises 12 atolls, three reefs, five submerged banks and 10 inhabited islands.
- The islands have a total area of 32 sq km. The **capital is Kavaratti** and it is also the principal town of the UT.
- All islands are 220-440 km away from Kochi.

Narmada Landscape Restoration Project (NLRP)

National Thermal Power Corporation (NTPC), a PSU under Ministry of Power, signed a Memorandum of Understanding (MoU) with Indian Institute of Forest Management (IIFM), Bhopal, to implement the Narmada Landscape Restoration Project.

What is Narmada Landscape Restoration Project (NLRP)?

- The project aims to establish an incentivisation mechanism that can continue to **support the riparian forest and farm communities of the Narmada basin** to maintain sustainable landscape practices.
- This is expected to positively **impact the water quality** and quantity in the Narmada tributaries. It will open new vistas that will manage our watersheds to maintain water quality and **supplement Smart Cities by introducing a smarter way of purification** of urban water supplies.

- NLRP's collaborative and participatory approach will demonstrate the **interdependency of the upstream** sustainably managed forest and farm practices on downstream water resources.
- Through NLRP, NTPC Ltd. is extending its support to demonstrate **nature-based solutions for enhancing ecosystem services**, primarily water.

Implementation:

- The 4-year project will be implemented in Khargone District of Madhya Pradesh, in the catchments of selected tributaries of the River Narmada **between Omkareshwar and Maheshwar dams**.
- IIFM, Bhopal will be jointly implementing this project with **Global Green Growth Institute (GGGI)**.
- **Funding:** It is being implemented in partnership with a **grant-in-aid from NTPC and United States Agency for International Development (USAID)** in equal proportions.

Additional Information**Global Green Growth Institute (GGGI)**

- **Established in 2012 at the Rio+20**, it is a treaty-based international, inter-governmental organization dedicated to supporting and promoting strong, inclusive, and sustainable economic growth in developing countries and emerging economies.
- GGGI supports its member governments to **achieve the commitments expressed under the Paris Climate Agreement** and their Sustainable Development Goal targets.
- **Headquarters:** Seoul, South Korea.

United States Agency for International Development (USAID)

- USAID is the **world's premier international development agency** and a catalytic actor driving development results.
- USAID's work advances U.S. national security and economic prosperity, demonstrates American generosity, and promotes a path to recipient self-reliance and resilience.
- USAID leads international development and humanitarian efforts to **save lives, reduce poverty, strengthen democratic governance** and help people progress beyond assistance.

Extreme Weather Events in India

Over 75% districts in India are hotspots of extreme climate events such as cyclones, floods, droughts, heat and cold waves, according to a study released by the Council on Energy, Environment and Water (CEEW). This is the first time that extreme weather event hotspots in the country have been mapped.

Findings Of The Study

- **India witnessed 250 extreme climate events in 35 years between 1970 and 2005**, it recorded 310 such weather events in only 15 years since then.
- In the last 50 years, the **frequency of flood events increased almost eight times**. Events associated with floods such as landslides, heavy rainfall, hailstorms, thunderstorms, and cloudbursts increased by over 20 times.
- The frequency of floods surged significantly in the last two decades. Between 1970 and 2004, three extreme flood events occurred per year on an average, but after 2005, the yearly average rose to 11. The annual average for districts affected until 2005 was 19, but **after 2005, on average 55 districts were affected by floods each year**.

- Six of India's **eight most flood-prone districts in the last decade are in Assam**. The study found that **over 9.7 crore people are currently exposed to extreme floods in India**.
- The current trend of catastrophic climate events **results from a mere 0.6 degrees Celsius temperature rise in the last 100 years**. India is already the **fifth most vulnerable country globally** in terms of extreme climate events, and it is all set to become the **world's flood capital**.
- The study indicates that while the number of rainy days during monsoon have decreased, single-day extreme rainfall events are increasing, leading to flooding.
- The yearly average of **drought-affected districts increased 13 times after 2005**. Nearly 68 per cent of the districts have faced droughts and drought-like situations. The study also found a shift in the pattern of extreme climate events, such as **flood-prone areas becoming drought-prone and vice-versa**, in over 40 per cent of Indian districts.

Malayan Giant Squirrel

- A first-of-its-kind study by the Zoological Survey of India (ZSI) has projected **that numbers of the Malayan Giant Squirrel could decline by 90% in India by 2050**, and if urgent steps are not taken, the species could be **extinct** in the country in subsequent decades.
- **Only 43.38% of the squirrel's original habitat in India is now favourable to it**; by 2050, the favourable zone could shrink to 2.94% of the area the species was meant to inhabit.

About Malayan Giant Squirrel

- **India is home to three giant squirrel species**; Malayan Giant Squirrel, Indian Giant Squirrel and Grizzled Giant Squirrel. The Malayan Giant Squirrel, is **one of the world's largest squirrel species**.
- **Significance**: The population of the species **indicates the health of the forest**, of the vegetation and plants in the forest on which the species feeds, as well as that of the other symbiotic species that inhabit the region.
- Unlike the nocturnal flying squirrels, giant squirrels are **diurnal, but arboreal** (tree-dwelling) and **herbivorous** like the flying squirrels.
- **Distribution**:
 - It is currently found in parts of **West Bengal, Sikkim, Assam, Arunachal Pradesh, Meghalaya, and Nagaland**. Destruction of its habitat could restrict the squirrel to only southern Sikkim and North Bengal by 2050.
 - It is also distributed through Southern **China, Thailand, Laos, Vietnam, Burma**, the Malayan Peninsula, Sumatra, and Java.
- **Habitat**: It is found mostly in **evergreen and semi-evergreen forests**, from plains to hills at elevations of 50 m to 1,500 m above sea level. In India, 20% of the population of the species is found at elevations between 1,500 m and 2,700 m; the rest live in the plains and up to 1,500 m.
- **Conservation status**: It is listed as **Near Threatened in the IUCN Red List** of Threatened Species.



Indian Peacock Soft-shelled Turtle

Indian Peacock soft-shell turtle was rescued from a fish market in Assam's Silchar.

About Indian Peacock Soft-shelled Turtle

- **Distribution:** This species is confined to India, Bangladesh and Pakistan. It is widespread in the northern and central parts of the Indian subcontinent.
- **Habitat:** It is found in rivers, streams, lakes and ponds with mud or sand bottoms.
- It is omnivorous, juveniles observed feeding on mosquito larvae and fish, while adults consume snails, earthworms, prawns, etc. Animals maintained in captivity are known to eat rice and palm sugar sweetmeats.
- **Conservation status:**
 - **IUCN:** Vulnerable.
 - **Wildlife Protection Act, 1972:** Schedule I.
 - **CITES:** Appendix I.
- **Major Threats:**
 - The species is heavily exploited for its meat and calipee (the outer cartilaginous rim of the shell).
 - Other factors include pollution, river traffic, sand mining, damming of rivers, and conversion of water bodies into agriculture land.
- **29 species of turtles have been recorded in India**, out of which 20 are found in Assam. Unfortunately 90% of the turtles in Assam are facing some kind of threat.



Tso Kar Wetland

- India has added **Tso Kar Wetland Complex in Ladakh** as its **42nd Ramsar site**, which is a second one in the Union Territory (UT) of Ladakh.
- Last month, two wetlands -- the Lonar lake in Maharashtra and Sur Sarovar, also known as Keetham lake, in Agra -- were added to the list of Ramsar sites.

About Tso Kar Wetland

- The Tso Kar Basin is a **high-altitude wetland complex, consisting of two principal waterbodies**, Startsapuk Tso, a freshwater lake of about 438 hectares to the south, and Tso Kar itself, a hypersaline lake of 1800 hectares to the north, situated in the Changthang region of Ladakh, India.
- **It is called Tso Kar, meaning white lake**, because of the white salt efflorescence found on the margins due to the evaporation of highly saline water.
- The Tso Kar Basin is an **A1 Category Important Bird Area (IBA)** as per Bird Life International and a key staging site in the Central Asian Flyway. The site is also one of the most **important breeding areas of the Black-necked Crane** in India. This IBA is also the major breeding area for Great Crested Grebe, Bar-headed Geese, Ruddy Shelduck, Brown-headed Gull, Lesser Sand-Plover and many other species.

To read more about Ramsar sites, refer The Recitals October 2020.

Myristica Swamp Treefrog

- Myristica Swamp Treefrog has been recorded for the first time north of the Shencottah gap in **Vazhachal Reserve Forest** in Thrissur, Kerala.
- **Distribution:** It is a rare arboreal species endemic to the Western Ghats. The frog was first described in 2013 from the lowland Myristica swamps of Arippa, near Kulathupuzha Reserve Forest, in the western foothills of Agasthyamalai.
- **Characteristics:** These frogs are rare and elusive for the reason that they are arboreal and active only for a few weeks during their breeding season. During this season, there is a large aggregation of males that descend from the high canopy of the trees.
- The breeding season, unlike for other frogs, starts in the pre-monsoons season (May) and ends before the monsoon becomes fully active in June.



Kolar Leaf-Nosed Bats

Government of Karnataka along with the Bat Conservation India Trust is formulating a conservation plan for the Kolar Leaf-Nosed Bats. The rare species, which were found only inside the two caves of Kolar district for several years, **became locally extinct** from one of the caves.

About Kolar Leaf-Nosed Bats

- **Distribution:** Kolar leaf-nosed bats' are endemic to India, and are currently only known from one cave in Hanumanahalli village in Kolar district, Karnataka.
- **Habitat and Ecology:** Kolar leaf-nosed bats' roost in a single narrow, inaccessible, subterranean cave on a monolithic granite hill. The surrounding habitat is tropical dry shrubland surrounding by villages and agricultural fields.
- **Significance**
 - Bats are absolutely vital for the ecology as they are **pollinators**, their main diet being nectar. The plants that bloom at night are entirely dependent on bats and moths for pollination.
 - Bats also help in **insect control** and therefore, help in the **protection of crops**.
- **Conservation status:** Listed as **critically endangered** under IUCN list of threatened species.
- **Threats:**
 - They are threatened by **illegal granite mining** occurring in the close vicinity of its only known roost, in a subterranean cave which is on a monolithic granite hill. It has been reported to have abandoned two other roosts due to fires lit for the easier extraction of granite.
 - The perception of bats among people as **ominous disease carriers** harmed the species and made them vulnerable.



Indus Valley Diet

- A new study, titled "Lipid residues in pottery from the Indus Civilisation in northwest India" was recently published in the Journal of Archaeological Science.

- The study, looks at the food habits of the people of the Indus Valley Civilisation (IVC) settlements on the basis of lipid residue analysis found in pottery from Harappan sites in Uttar Pradesh and Haryana.
- The study of lipid residues involves the extraction and identification of fats and oils that have been absorbed into ancient ceramic vessels during their use in the past. It provides chemical evidence for milk, meat, and possible mixtures of products and/or plant consumption.
- Lipids are relatively less prone to degradation and have been discovered in pottery from archaeological contexts around the world.

Findings Of The Study

- The people of IVC in northwest India had a predominantly meat-heavy diet, comprising animals like pigs, cattle, buffalo and sheep, along with dairy products.
- High proportions of cattle bones was also found, which may suggest a cultural preference for beef consumption across Indus populations.
- Wild animal species like deer, antelope, gazelle, hares, birds, and riverine/marine resources were also found in small proportions, suggesting that these diverse resources had a place in the Indus diet.
- The study also talks of a diversity of plant products and regional variation in cropping practices. Both summer and winter-based cropping was practiced.
- Evidence of barley, wheat, rice, different varieties of millets, a range of winter and summer pulses, oilseed and fruit and vegetables, including brinjal, cucumber, grapes, date palm were grown and consumed.

Annapurna Idol

- Recently, the Prime Minister announced that an ancient idol of the goddess Annapurna, stolen from India, is being brought back from Canada.
- This idol was stolen from a temple of Varanasi and smuggled out of the country around 100 years ago somewhere around 1913.
- Annapurna, is the goddess of food. The 18th-century idol, carved in the Benares style, is part of the University of Regina, Canada's collection.
- She holds a bowl of kheer in one hand and a spoon in the other. These are items associated with the goddess of food, who is also the deity of the city of Varanasi.

Aadi Mahotsav

- The virtual edition of Aadi Mahotsav- Madhya Pradesh was recently launched. This year, the main focus is on the tribal craft and culture of Madhya Pradesh.
- Despite the unprecedented circumstances caused due to the pandemic this year, TRIFED has moved the event online and will be hosted on the Tribes India E-Marketplace.
- The event will showcase the tribal traditions of the various tribal communities – by having their crafts and natural produce on display.
- Aadi Mahotsav is a national tribal festival and a joint initiative of Ministry of Tribal Affairs & Tribal Cooperative Marketing Development Federation of India (TRIFED). The initiative was launched in 2017 and last year it was held in Delhi.
- TRIFED essentially plays the role of a service provider & market developer

- Tribes India e-market place is an initiative that showcases the produce and handicrafts of tribal enterprises from across the country and helps them market their produce/ products directly. It is a major leap towards the digitisation of tribal commerce.

Swarnim Vijay Varsh

- The Prime Minister recently lit up the ‘Swarnim Vijay Mashaal’ at the National War Memorial (NWM) in Delhi to begin the 50th-anniversary celebrations of the 1971 India-Pakistan war.
- From 16 December, 2020 India will celebrate 50 Years of Indo-Pak War, also called Swarnim Vijay Varsh (golden victory year) through several events across the country, that will continue for a year.
- Various commemorative events will be conducted pan-India wherein war veterans will be felicitated.
- In December 1971, the Indian Armed Forces secured a decisive and historic victory over Pakistan Army, which led to creation of a Nation - Bangladesh and also resulted in the largest Military Surrender after the World War – II.