



# VAJIRAM & RAVI

( Institute for Civil Services Examination )

## AUGUST 2020

# *the* RECITALS

Explore Current Affairs Through Q&A



**Featured  
Articles**

Vaccine Diplomacy



**Mains  
Q & A**

Age of Marriage



**Prelims  
Q & A**

**Bridging  
Gaps**

<b>Message From The Desk Of Director</b>	<b>1</b>
<b>1. Feature Article</b>	<b>2-9</b>
a. Vaccine Diplomacy	
b. Age of Marriage	
<b>2. Mains Q&amp;A</b>	<b>10-22</b>
<b>3. Prelims Q&amp;A</b>	<b>23-66</b>
<b>4. Bridging Gaps</b>	<b>67-133</b>
1. Clause 6 of Assam Accord	
2. Hindu Women's Inheritance Rights	
3. Blockchain Technology In Voting	
4. Digital India Land Records Modernization Programme (DILRMP)	
5. Domicile-Based Job Quota	
6. New Rules for J&K Administration	
7. Demand for 6th Schedule Status for Arunachal Pradesh	
8. Identification Of Minorities At State Level	
9. Rashtriya Swachhata Kendra	
10. Muslim Women's Rights Day	
11. Swasthya Portal	
12. Dhanwantari Rath	

13. Namath Basai
14. ARIIA 2020
15. Swachh Survekshan 2020
16. Remote Learning Reachability report
17. Women in Research and Development
18. Universal Ratification Of Convention On Child Labour
19. Kisan Rail
20. Gramodyog Vikas Yojana
21. Business Responsibility Reporting
22. Bhadbhut Project
23. RBI's Contingency Fund
24. Krishi Megh
25. HLEG On Agricultural Exports
26. Umbrella Entity For Retail Payments Systems
27. Transparent Taxation
28. National Strategy For Financial Inclusion
29. Mahatma Ayankali
30. Pulikkali
31. Israel-UAE Peace Deal
32. Executive Order Against Hiring H-1B Visa Holders for Federal Contracts
33. Mediterranean Drilling by Turkey
34. Sri Lanka To Abolish 19<sup>th</sup> Amendment To Constitution
35. Africa Declared Free of Wild Polio
36. Mauritius Oil Spill
37. 1947 Pact on Gurkha Soldiers
38. Mandarin Dropped from the List of Foreign Language
39. Pakistan Unveils New Map
40. UK Plans Coin In Mahatma Gandhi's Honour
41. India's Assistance for Major Connectivity Project in Maldives
42. India-Singapore Defence Policy Dialogue
43. India-Canada IC-IMPACTS Annual Research Conference
44. Indian Tricolour Hoisted at Times Square
45. Air Bubbles Agreement
46. Supply Chain Resilience Initiative
47. ASEAN-India Network of Think Tanks
48. India, Uzbekistan Held Meeting of National Coordination Committee
49. 17<sup>th</sup> Meeting of India-Vietnam Joint Commission

50. BRICS Innovation Base
51. Meeting of The BRICS Anti-Drug Working Group
52. Fifth World Conference Of Speakers Of Parliament
53. Loan Agreement for Mumbai Urban Transport Project-III
54. Draft Defence Production and Export Promotion Policy 2020
55. Pinaka Missile System
56. NSCN(I-M) Released the Confidential Nagaland Framework Agreement
57. Sputnik V
58. Vaccine Development Process
59. Electronic Vaccine Intelligence Network
60. Sarbecovirus
61. Use Of Aspirin To Prevent Cataract
62. Mega Labs
63. COVAX Facility
64. Converting PPE Into Biofuels
65. Tick-Borne Virus
66. Post-Germination Growth in Plants
67. Tanystropheus
68. Submarine Optical Fibre Cable (OFC)
69. Sarthak: Offshore Patrol Vessel
70. Hindustan Urvarak & Rasayan Limited (HURL)
71. Project Cheetah of Indian Arm Forces
72. Bharat Air Fibre
73. Student Entrepreneurship Award
74. Time Capsules
75. Dwarf Planet Ceres
76. Sunspot Group: AR2770
77. Space Bricks
78. SalivaDirect
79. Flavonoids
80. Magnetic Hyperthermia-Mediated Cancer Therapy (MHCT)
81. Ulcerative Colitis
82. Tattoo Sensor for Monitoring Health Parameters
83. DNA Technology Regulation Bill, 2018
84. Digital Quality of Life Index, 2020
85. Swadeshi Microprocessor Challenge
86. Bureau of Police Research and Development (BPR&D)

87. Expert Committee To Review Charter Of DRDO Labs
88. Super App
89. Fly Ash
90. INS Viraat
91. Mission Based Deployments (MBD)
92. Chandrayaan-2
93. Omega Centauri
94. Asteroid 2018VP1
95. Seed Ball/Bomb Technique
96. Sea Level Rise (SLR)
97. National Transit Pass System (NTPS)
98. World Biofuel Day 2020
99. World Elephant Day
100. Forest Cover Loss Threatens Hornbills In Arunachal
101. Dhole or Asiatic Wild Dog
102. Plastic Pollution In The Atlantic Ocean
103. Bioethanol Blending Of Petrol
104. Harit Path Mobile App
105. NDC–Transport Initiative for Asia (TIA)
106. Dragonfly Festival
107. Wildfires in California
108. World Solar Technology Summit



## *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

## *Vaccine Diplomacy*

As the SARS CoV-2 pandemic is raging across the world, **a race has already ensued for the discovery of a vaccine**. According to the WHO, as of May 2020, there are eight vaccine candidates already in different phases of clinical trials around the world. Besides, countries are also **busy in forging alliances across ideological spectrum** so as to get early access of the discovered vaccine. This indicates that the COVID pandemic – its therapeutics and accessibility to a possible vaccine – **have been woven into the foreign policy as well**.

While the discovery of a vaccine is the need of the hour, many countries have indicated to use the discovered vaccine as a tool to further their strategic interests. **China has begun promising early access** to countries of strategic interest as it seeks to shore up its global standing after a pandemic that has strained geopolitical ties. **India is also developing a plan** to help immediate neighbours and other African countries with the vaccines.

### **What Is Vaccine Diplomacy**

- Vaccine diplomacy is the branch of global health diplomacy that relies on the use or delivery of vaccines. It offers innovative **opportunities to promote foreign policy and diplomatic relations between adversarial nations**.
- Vaccine diplomacy could also lead to the development and testing of some highly innovative neglected disease vaccines.
- Central to vaccine diplomacy is its **potential as a humanitarian intervention** and its proven role in mediating cessation of hostilities and even cease-fires during vaccination campaigns. In this case, the lead actor may come from an international organization, such as WHO or the UNICEF, or an associated nongovernmental organization.
- Vaccine diplomacy is often used by representative nations to **project power, outreach to the developing world and targeted initiatives for least-developed countries**.

### **Vaccine Diplomacy and India**

- The Union government is **working on at least five distinct ways**, ranging from free vaccines to guaranteed supply, in which it can help its immediate neighbours as well as countries in West Asia, Africa and even Latin America.

- The strategies include:
  - Free distribution to immediate neighbours such as Bangladesh, Afghanistan and other SAARC nations
  - Heavily Subsidised supplies as part of India's international commitments for equitable distribution
  - Striking market price purchase deals with countries, with supply guarantees
  - Approach nations for co-production of Indian vaccines once approved.
- The idea is to **leverage the country's standing as the world's vaccine factory to consolidate diplomatic ties**. Indian pharmaceutical companies will be among the largest producers of a coronavirus vaccine once it is available and will ensure supplies to friendly nations in the neighborhood.
- Recently, in August 2020, Indian Foreign Secretary informed that **India will supply the COVID-19 vaccine to neighbouring country Bangladesh on a priority basis**. Earlier, Bangladesh was also persuaded to **refuse an offer by China** for conducting human trials of its COVID-19 vaccine among the Bangladeshi citizens.
- It should be kept in mind that any platform India sets up for the supply of vaccines has to **respect licensing agreements**.

### How Things stand for India

- **Three vaccines being tested** among people in India; two of these are indigenous and the third is the global front runner from UK's Oxford-AstraZeneca candidate.
- A committee is working on a roadmap for procuring, supplying and administering the vaccine among people. An emergency authorisation has not been ruled out for any shot that seems promising.

### Opportunity for India

- India is known for **mass production of vaccines and selling** them at **affordable costs** to multilateral organizations like GAVI. Indian manufacturers also **account for 60% of vaccines supplied to UNICEF's global immunization programmes**.
- If a successful vaccine emerges elsewhere, India could still leverage its strong biotech industrial base to partner with foreign firms and institutions for mass production of vaccines.

- The need to mass produce vaccines to end the pandemic will lead to a number of post-development partnerships between biotech firms. In this respect, **Indian vaccine manufacturers are better positioned** to clinch more deals as they have the necessary ‘skilled’ workforce and R&D infrastructure for mass production.

### Conclusion

- Vaccine diplomacy may result in early discovery of the vaccine. However, the questions over the **‘equitable’ distribution of vaccines** will remain unresolved.
- The issue of equitable distribution of vaccines appears timely, given the past behaviour of **developed countries to place bulk orders and hoard vaccines**, at the expense of other countries.
- Additionally, **exorbitant prices** will lead to denial of vaccines to the population in the global south. At the heart of this **affordability debate is the “patent monopoly”** usually enjoyed by the firm that discovers the vaccine first.
- Keeping this in mind, WHO has developed the **COVAX facility to ensure equitable access** to Covid-19 vaccines. So far, 172 countries have engaged with this facility.

[For detailed discussion on **Vaccine Nationalism**, please refer the prelims section of June 2020 edition of CA magazine]

## *Age of Marriage*

Despite having a law against child marriages for the last 90 years, child marriages are still a reality in the country. A report published by the United Nations Population Fund (UNFPA), this year, said that while child marriages were almost universally banned, yet they happen 33,000 times a day, every day, all around the world. An estimated 650 million girls and women alive today were married as children, and by 2030, another 150 million girls under the age of 18 will be married.

UNICEF estimates suggest that each year, at least 1.5 million girls under the age of 18 are married in India. Thus, India contributes to the largest number of child brides in the world and accounts for a third of the global total. According to an analysis by National Commission for Protection of Child amongst the married girls aged 15 to 19 years, 31.5% girls were found to have babies. Almost a quarter of the married girls in the age group of 15 to 16 years had at least one baby.

The incidence of child marriages, especially of minor girls, are higher amongst the socially, economically and educationally backward sections. Principal reasons are concerns for her safety as she attains puberty, customs, less awareness of laws, dowry which increases in direct proportion to the age and education of the girl prompting the parents to look for more educated boys.



Whatever the reasons may be one cannot overlook the crippling effect that child marriages have on the overall growth of the child, especially the girl as her exposure to sex and its related issues adversely impact her health.

### **Task Force To Reconsider Age Of Marriage For Women**

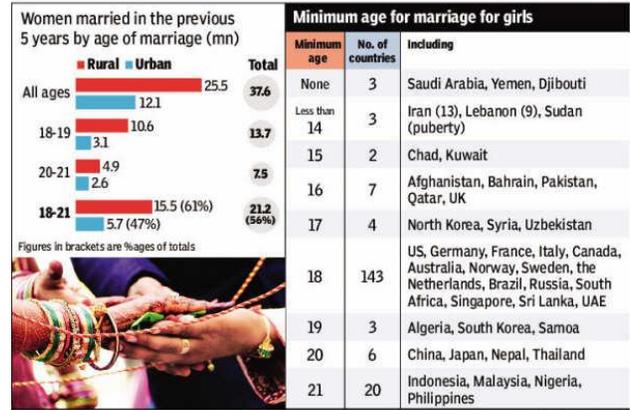
- In his address to the nation on the 74th Independence Day, the Prime Minister said that the central government has set up a task force to reconsider the minimum age of marriage for women.
- The task force has the mandate to examine matters related to the age of motherhood, and measures to lower the maternal and child mortality rate.
- It will examine the correlation of age of marriage and motherhood with health, medical well-being, and nutritional status of the mother and the child, during pregnancy, birth and after the birth.
- It will examine the possibility of increasing the age of marriage for women from the present 18 years to 21 years.

- It has to suggest suitable legislations or amendments in existing laws and a detailed plan with timelines to implement these recommendations.

### Minimum Age Of Marriage In India

- Personal laws of various religions in India that deal with marriage have their own standards.
- For Hindus, Section 5(iii) of The Hindu Marriage Act, 1955 sets 18 years as the minimum age for the bride and 21 years as the minimum age for the groom. However, **child marriages are not illegal** — even though they can be declared void at the request of the minor in the marriage.
- In Islam, the marriage of a minor who has attained puberty is considered valid. A person attains puberty when he/she reaches sexual maturity and is capable of reproduction.
- The Special Marriage Act, 1954 and the Prohibition of Child Marriage Act, 2006 also prescribe 18 and 21 years as the minimum age of consent for marriage for women and men respectively.
- Additionally, sexual intercourse with a minor is rape, and the ‘consent’ of a minor is considered invalid since she is considered to be incapable of giving consent at that age.

#### **61% OF RURAL MARRIED WOMEN IN 18-21 BRACKET**



### Evolution Of The Law

- For women, the change from child marriage being a norm to outlawing it has been an arduous fight against religious and social conservatives.
- The Indian Penal Code in 1860 criminalised sexual intercourse with a girl below the age of 10, introducing the first legal framework for a minimum age of consent for girls.
- Increasing the age by even just two years to 12 in the Age of Consent Bill in 1927 was opposed by many nationalists who saw the move as imperial interference with local customs.
- In 1929, the Child Marriage Restraint Act set 16 and 18 years as the minimum age of marriage for girls and boys respectively. The law is popularly known as the **Sarda Act** after Harbilas Sarda, a judge and a member of Arya Samaj.

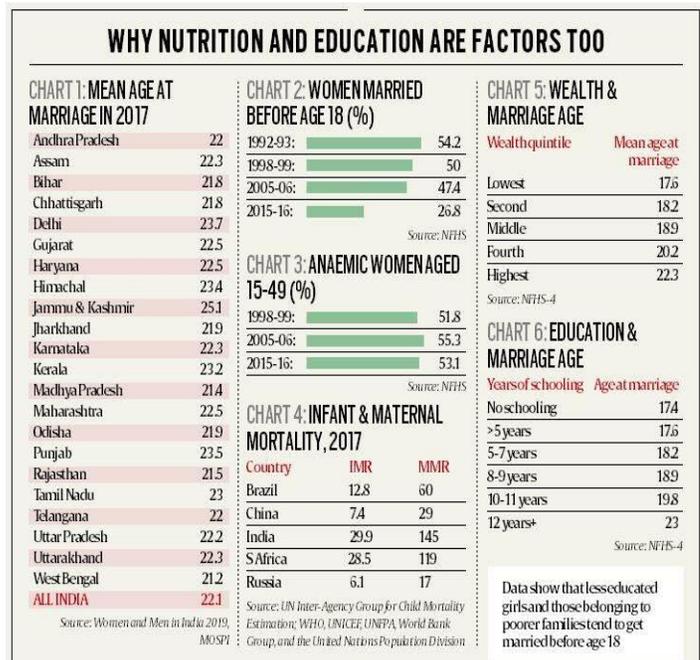
- From then, it took nearly five decades when it was eventually amended in 1978 to bring the law to its current standard of 18 years for women and 21 for men.

**Prohibition of Child Marriage Act, 2006**

- Prohibition of Child Marriage Act (PCMA), 2006 has a threefold purpose i.e. prevention of child marriages, protection of children involved and prosecution of offenders.
- This law has declared child marriage to be a cognizable and non-bailable offence. An injunction can be issued by the court to prohibit its solemnization and if a marriage is solemnized after the injunction, then such a marriage shall be declared as null and void.
- This law also prescribes punishment for performing, conducting and abetting child marriage. Even the parents are to be punished for promoting or permitting child marriage.
- The law also prescribes punishment to an adult male for marrying a child and also requires the husband to provide maintenance to his minor bride till her remarriage.

**Reasons For Increasing Age Of Marriage For Women**

- Early marriages causing early pregnancies are inherently linked to higher rates of maternal and infant mortality. Under age mothers are generally malnourished and have been found to have anaemia.
- Although maternal mortality rate has been declining, the move to increase the minimum age of marriage could boost the fight.
- Further, there is no reason why the law makes the presumption that the minimum age of marriage must be different for men and women.
- It perpetuates benevolent sexism or the stereotype that women are more mature and therefore, can be given greater responsibilities at a younger age in comparison to men. The reflection of patriarchy in personal laws must change to fit the framework of the Constitution.



- As India progresses further, opportunities open up for women to pursue higher education and careers. However, early marriage and motherhood reduce women's access to these increasing opportunities.

### **Opposition To Different Legal Age Of Marriage For Men And Women**

- According to the Law Commission, having different legal age of marriage for men and women leads to the stereotype that wives must be younger than their husbands and therefore recommended a uniform age of marriage for boys and girls.
- Further, the National Human Rights Commission in 2018 recommended that there should be a uniform age of marriage for boys and girls
- Even the Supreme Court, in the Independent Thought case, when it looked at child marriage, said that it's accepted universally that a child is someone who's under the age of 18, and that should be the age of marriage.
- The international treaty Committee on the Elimination of Discrimination against Women (CEDAW), also proposes the abolition of laws that assume women have a different physical or intellectual rate of growth than men and recommends 18 as the age of marriage. In 140 countries the age of marriage is 18 for both men and women.
- Having separate age of marriage is also in contravention of Articles 14 and 21 of the Constitution, that guarantee the right to equality and the right to live with dignity.
- Moreover, the unequal age of marriage impacts girls more adversely. Both girls and boys get two years' time after their age of marriage to repudiate their underage marriage under the PCMA, 2006, which for a girl is only till she turns 20, but for a boy it is until he turns 23. At 19 or 20, a girl is at a fairly young age to have the capacity or the wherewithal to annul the marriage.

### **Reasons For Not Increasing The Age Of Marriage For Women**

- Eighteen is the age of attainment of adulthood in India by most legal yardsticks. It is the age of consent for boys and girls, age when they attain voting rights, licence to drive, and even register a company. That men have to wait till 21 to lawfully marry has its share of critics.
- Two decades of comparatively rapid economic growth have dramatically altered gender indicators like marriage age and total fertility rate (TFR). The NFHS indicates that women aged 20-24, who married before turning 18, fell sharply from 47.4% to 26.8% from 2005-06 to 2015-16. Thus, women's agency is rising organically with educational levels.

- To increase age of marriage to 21 years would mean that girls might have to face persecution up till 21 years. Data shows that law has been used predominantly by parents against eloping daughters.
- It has become a tool for parental control and for punishment of boys or men whom girls choose as their husbands, as most of the cases that are taken to court are self-arranged marriages.
- Then there are cases related to arranged marriages, which are sometimes brought by parents or husbands to dissolve or to nullify marriages that have broken down because of domestic violence, dowry or compatibility issues. So, nowhere is age an issue in people's minds.
- Moreover, the change will leave the vast majority of Indian women who marry before they are 21 without the legal protections that the institution of marriage otherwise provides, and make their families liable for prosecution.
- At the current age of marriage for women and men, it is found that implementation of the child marriage law is very hard. This shows the limitations of laws in the absence of enabling socio-economic conditions.
- There is also a need to recognise child marriage as a human rights violation as it endangers the lives of young girls by exposing them to increased domestic violence, marital rape, early pregnancies.
- Thus, instead of raising the age of marriage it is important to have the PCMA declare child marriages void ab initio, which means that all child marriages would be considered as invalid marriages.
- This would help young girls who are forced into marriages and want to come out of it. Rendering all child marriages invalid will also make them unacceptable.
- An issue like child marriage is a social issue and an economic issue. While there is the Right to Education Act, 2009, the quality of education is poor and doesn't show a way out of inter-generational poverty. Poor families don't see any value in continuing education.
- Poor families thrive on domestic work and a girl often gets pulled out of school to help at home. So, it is not that girls only leave education because of marriage. Thus, it is important to ensure an increase in the scope of the Right to Education for girls right up to vocational studies.

Poverty, limited access to education and economic prospects, and security concerns are the known reasons for early marriage. Without improving other welfare mechanisms including educational and employment opportunities for women, the increase in age of marriage will only delay the problem and not remedy it.

## MAINS Q&A

1. The Supreme Court will be re-examining its 2005 judgment that held that Scheduled Castes and Scheduled Tribes (SC/STs) cannot be further sub-classified for the purpose of reservation. In this light, critically discuss the need for Sub-categorisation of Scheduled Castes and Scheduled Tribes in India?

### Answer

A five-judge Constitution Bench of the Supreme Court reopened the legal debate on sub-categorisation of Scheduled Castes and Scheduled Tribes for reservations, or what is commonly referred to as “**quota within quota**” for SCs and STs. The ruling is likely to reignite the debate on application of the so-called **creamy layer principle to SC/STs**.

### Identification Of SCs And STs In India

The Constitution, while providing for special treatment of SCs and STs to achieve equality, does not specify the castes and tribes that are to be called Scheduled Castes and Scheduled Tribes. This power is left to the central executive — the President.

As per **Article 341**, those castes notified by the President are called **SCs and STs**. A caste notified as SC in one state may not be a SC in another state. These vary from state to state to prevent disputes as to whether a particular caste is accorded reservation or not.

### Need for Sub-Categorisation of SCs/STs

- SC and ST communities **don't constitute a homogenous group** and can be further sub-classified to ensure the benefits of reservation in government jobs and higher education institutions percolate down to weaker sections.
- This **inequality within the Scheduled Castes** is underlined in several reports, and special quotas have been framed to address it.
  - For example, in Andhra Pradesh, Punjab, Tamil Nadu and Bihar, special quotas were introduced for the most vulnerable Dalits. In 2007, Bihar set up the **Mahadalit Commission** to identify the castes within SCs that were left behind.
  - In Tamil Nadu, a **3% quota within the SC quota is accorded to the Arundhatiyar caste**, after the Justice M S Janarthanam report stated that despite being 16% of the SC population in the state, they held only 0-5% of the jobs.
- Reservation for weaker sections was not contemplated by the Constitution makers in perpetuity and the constitutional goal of social transformation cannot be achieved without taking into account changing social realities.
- Supreme Court has engaged with the argument on whether the benefits of reservation have trickled down to the “**weakest of the weak**” and the **concept of a “creamy layer” within SCs was upheld** by the court in a 2018 judgment in **Jarnail Singh v Lachhmi Narain Gupta**. While this concept applies to Other Backward Castes, it was applied to promotions of Scheduled Castes for the first time in 2018.
- Categorization would achieve **equitable representation of all SCs** in government service and would bring about “real equality” or “proportional equality”.
- In the federal structure, the State, as well as the Parliament have a constitutional directive for the upliftment of Scheduled Castes, Scheduled Tribes.

### Arguments Against Sub-Categorisation of SCs/STs

- The test or requirement of social and educational backwardness cannot be applied to Scheduled Castes and Scheduled Tribes. The **special treatment is given to the SCs due to untouchability with which they suffer**. In a 1976 case, **State of Kerala v N M Thomas**, the Supreme Court laid down that **“Scheduled Castes are not castes, they are class**.
- In the 2005 decision in **E V Chinnaiah v State of Andhra Pradesh and Others**, the Supreme Court ruled that **only the President has the power to notify the inclusion or exclusion of a caste as a Scheduled Caste, and states cannot tinker with the list**.
- Allowing states to change the proportion of reservation **may lead to appease one vote-bank or the other**. A watertight President’s list was envisaged to protect from such potential arbitrary change.
- In the Jarnail Singh case, the court held that the **objective of reservation is to ensure that all backward classes march hand in hand** and that will not be possible if only a select few get all the coveted services of the government.
- Applying creamy layer to scheduled castes and scheduled tribes which would mean that some sections of these communities would be deprived of affirmative action.

### Conclusion

State’s obligation is to undertake the emancipation of the deprived section of the community and eradicate inequalities. When the reservation creates inequalities within the reserved castes itself, it is required to be taken care of by the State making sub-classification and adopting a distributive justice method.

2. **Recently the Union Cabinet has approved creation of a National Recruitment Agency (NRA). In this light, discuss the role of National Recruitment Agency and how it will benefit government job aspirants?**

### Answer

The Union Cabinet approved creation of a National Recruitment Agency (NRA) to conduct an online **Common Eligibility Test (CET)** for selecting candidates for majority of central government jobs.

### **National Recruitment Agency**

- NRA has been envisioned as ‘a specialist body bringing the state-of-the-art technology and best practices to the field of central government recruitment’.
- The NRA will be a **society registered under the Societies Registration Act, 1860** and government will be doling out ₹1,517.57 crore to set it up.
- **Composition:** The chairman of the NRA will be of the rank of Secretary to the Government of India. The agency will also have representatives from Staff Selection Commission (SSC), the Railway Recruitment Boards (RRBs) and by the Institute of Banking Personnel Selection (IBPS).

### **Role of NRA**

- NRA will conduct a Common Eligibility Test (CET) for **all non-gazetted posts**, including Group B and C (non-technical) jobs.
- The NRA will conduct a **separate CET each for the three levels of graduate, higher secondary (12th pass) and the matriculate (10th pass)** candidates for those non-technical posts to which recruitment is currently carried out by SSC, IBPS and RRB.

- Based on the screening done at the CET score level, final selection for recruitment shall be made through separate specialised Tiers (II, III, etc.) of examination which shall be conducted by the respective recruitment agencies. The curriculum for CET would be common.
- The NRA will **set up examination centres in every district of the country**. A special focus will be on creating examination infrastructure in the 117 'Aspirational Districts'.

#### **Benefit To Government Job Aspirants**

- **Single Exam:** NRA will benefit around 25 million aspirants who apply for multiple government jobs every year and have to apply for each exam separately. Now they will be able to apply once for a single or multiple recruitment exams in various departments and take the Common Eligibility Test (CET). Its score will be valid for 3 years.
- **CET reduce the lengthy recruitment cycle:** As some of the recruitment departments have decided to skip their second level test and go ahead with the recruitment based on CET score, it will reduce the time taken by the agencies to hire the candidates.
- **Save their time and energy:** Candidates, who clear CET once, will be eligible to attempt for the second level exam (mains) thrice (once every year). They will not have to appear for the PT/ screening test again for three years.
- **No restriction on the number of attempts** to be taken by a candidate to appear in the CET subject to the upper age limit.
- **Choice of centres:** Candidates will have the facility to give a choice of centres and they would be allotted the chosen centres, based on availability. They will be given an option to schedule their own tests at their choice centres.
- **Single exam will reduce the financial burden on candidates:** Candidates will not have to incur additional expenses for travel, boarding, lodging to reach their exam centres that are usually far from their home town.
- **Medium of CET:** CET would be available in a number of languages, benefitting aspirants from different regions of country. The exam will be conducted in 12 languages that are in the Eighth Schedule of the Constitution of India.

#### **Conclusion**

The establishment of National Recruitment Agency will be a milestone in recruitments for government jobs. This is helpful for all the parties involved – job seekers, recruiting institutions & government by saving money and effort.

3. **The Prime Minister has recently launched the National Digital Health Mission (NDHM). What is the National Digital Health Mission and how it will enhance the provision of effective and inclusive health services. Also highlight how is it going to protect the data collected under NDHM.**

#### **Answer**

The National Digital Health Mission (NDHM) was launched by the Prime Minister on 74<sup>th</sup> Independence Day. It comes under the **Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PMJAY)** and the **National Health Authority (NHA)**, the attached office of the Ministry of Health & Family Welfare, will design, build, roll-out and implement the NDHM.

The NDHM is envisioned to create a **national digital health ecosystem** that supports **universal health coverage** in an efficient, accessible, inclusive, affordable, timely and safe manner. The NDHM includes six key building blocks or digital systems - **HealthID, DigiDoctor, Health Facility Registry, Personal Health Records, e-Pharmacy and Telemedicine.**

Under the NDHM, every citizen will be given an **Health ID card** on which confidential medical data, such as prescriptions, diagnostic reports and discharge summaries, will be stored digitally. It will be used for the purposes of *uniquely identifying persons, authenticating them, and threading their health records* (only with the informed consent of the patient) across multiple systems and stakeholders.

**Digi Doctor Platform** would allow doctors to sign up on the app along with their details and contact numbers. They would also be assigned a digital signature that they could use for prescriptions. The **Health Facility Registry** will be a single repository of all the health facilities in the country.

### **Effective and Inclusive Healthcare**

- The components of NDHM will enable access to healthcare through a **citizen-centric approach by leveraging information technology** and other associated technologies.
- The creation of a National Health ID will reduce the risk of **preventable medical errors** and significantly increase the quality of medical care.
- The NDHM is a **voluntary scheme** — HealthID is entirely voluntary for citizens. Citizens can choose to generate their Health Account or ID using their Aadhaar card or digitally authenticable mobile number by using their basic address-related details and email ID. The **use of Aadhaar, therefore, is not mandatory.** This would help in ensuring **wide coverage of the mission.**
- It also has been designed to **reach out to the unconnected, marginalised, digitally illiterate, remote, hilly, and tribal population.**

### **Protection of Data**

- The NDHM is a voluntary scheme and use of Aadhaar is not mandatory for generating Health ID.
- Providing access to and sharing of personal health records is a **prerogative of HealthID holder.** As a measure to protect data confidentiality, access to medical data will have to be given **separately for each visit and that doctors could only access it for a limited time.** The consent can be withdrawn anytime.
- It has been **built within a universe of fundamental rights** and pieces of legislation such as the **Aadhaar Act and the IT Act 2008 as well as the Personal Data Protection Bill 2019.** Thus, it provides effective health services keeping note of individual's privacy and cyber security.
- The National Health Authority (NHA), has also released the draft '**Health Data Management Policy**' to develop a framework for secure processing of personal and sensitive personal data of individuals, who are a part of the National Digital Health Mission. The draft includes various aspects related to health data such as data privacy, consent management, data sharing and protection etc.
- The data, will be stored at three levels — central, state or union territory, and, lastly, at the health facility level. At each level, only that much data will be stored, which is necessary for functionality at that level.
- According to the policy, entities who will have access to NDHM data will have a designated **data protection officer** who can be approached with inquiries or questions by holders of health IDs.
- Those processing the data, including health information providers and health information users are expected to formulate and implement a "**personal data breach (violation) management mechanism**".
- Any data violation can result in the removal of the employee who is responsible for the violation or the cancellation of contracts where service providers are involved.

This completely technology-based initiative would revolutionise the health sector through **effective partnership with all key stakeholders** — doctors, health service providers, technology solution providers and above all citizens. It would also be a purposeful step towards the achievement of the United Nations' **Sustainable Development Goal of Universal Health Coverage**.

4. **The Bureau of Indian Standards (BIS) has released a draft standard for the supply system of piped drinking water. Delineate various provisions of the draft along with the reasons for coming up with the standard.**

### **Answer**

The Bureau of Indian Standards (BIS) has released a draft standard, for the supply system of piped drinking water, called 'Drinking water supply quality management system — requirements for piped drinking water supply service'. It aims to act as a benchmark for maintaining water quality.

At present the standard is not expected to be made compulsory and the decision on making the standard compulsory would be taken by the Ministry of Jal Shakti. After the draft is notified, states or water utilities planning to implement the standard can approach BIS for a license.

### **Background**

- Quality of drinking water had become a big issue, after a BIS report had found last year that tap water in **13 state capitals**, including Bhopal, Chandigarh, Bengaluru, Kolkata and Chennai, did not comply with BIS standards.
- There are certain water supply processes that are followed in rural and underdeveloped parts of the country, but they are based on government circulars and orders, which are not uniform.
- Further, with the announcement of the **Jal Jeevan Mission**, it was felt that a standard should be developed that covers all aspects of water supply.

### **Highlights Of The Draft**

#### **A. Water Supply Process**

- The draft states the requirements for a water supplier or a water utility on how they should establish, operate, maintain and improve their piped drinking water supply service.
- The process begins with the identification of a water source, which can either be groundwater or surface water sources such as rivers, streams or reservoirs.
- Water should then be pumped into the treatment plant and treated to achieve the acceptable drinking standards.
- After the water is released from the plant, there should be reservoirs in the distribution system for storage of this water, and disinfection facilities to remove contamination at any stage of distribution.
- Water should be sampled at the treatment plant every four hours against quality parameters. In the distribution system, the sampling should be done every eight hours at the water reservoirs. Random sampling should also be done at household levels.

#### **B. Quality of Water**

- The draft does not mention how water utilities should treat the water. However, it states that after treatment the drinking water should conform to the Indian Standard (IS) 10500 developed by the BIS.
- The IS 10500 gives acceptable limit of various substances in drinking water, including heavy metals such as arsenic, and other parameters like the pH value of water, the total dissolved solids in it, and the colour and odour.

**C. District Metering Area (DMA)**

The document also states that the concept of district metering area (DMA) should be adopted where possible. DMA is a concept for controlling leakages in the water network. The water network is divided into a number of sectors, called the DMAs, where flow meters are installed to detect leaks.

**D. Water Audit**

A water audit should be conducted on a quarterly basis. The water audit is a calculation of the amount of water put into distribution against the amount that is consumed.

**E. Miscellaneous provisions**

- The draft standard also contains guidelines for top management of the water utility, in terms of accountability and customer focus, establishing a quality policy for their service, and monitoring the quality of water released to people.
- The water utilities are also required to conduct surveys among consumers and obtain feedback on their service.

The BIS standard will help in improving access to clean and potable water which is a fundamental need and a basic human right and will lead to a significant reduction in the incidence of rampant illness associated with consumption of contaminated water and the consequent loss of economic opportunities.

**Extra Mile****Bureau of Indian Standards**

- The Bureau of Indian Standards (BIS) is the **National Standards Body of India** working under the aegis of **Ministry of Consumer Affairs, Food & Public Distribution**. It is established under the Bureau of Indian Standards Act, 1986.
- The organisation was earlier known as the **Indian Standards Institution (ISI)**, which was registered under the Societies Registration Act, 1860. It works towards the development of the activities of standardization and quality certification of goods.
- BIS aids the national economy, by providing safe reliable quality goods, minimizing health hazards to consumers and promoting exports and imports, through standardization, certification and testing.
- The Minister in charge of the Ministry or Department having administrative control of the BIS is the ex-officio President of the BIS.

**Jal Jeevan Mission**

- Jal Jeevan Mission is a central government initiative under the **Ministry of Jal Shakti**, which was announced by the Prime Minister on the 73rd Independence Day. The mission's goal is to provide all households in rural India, safe and adequate water through household tap connections by 2024.
- Based on a community approach to water, the mission will include information, education and communication as key components. The mission is meant to create a people's movement for water, making it everyone's priority.

**5. India is looking at the option of exiting its Free Trade Agreement (FTA) with ASEAN (AIFTA). What is a Free Trade Agreement? Highlight the issues India has with AIFTA.****Answer**

India has been demanding renegotiation of certain provisions of its free trade agreement with ASEAN, under a review mechanism. The proposed scope of the review include issues like customs procedures,

further liberalisation of trade in goods and exchange of trade data. If these demands are not met, India is also looking at the option of exiting the FTA.

### **Free Trade Agreement**

- Free Trade Agreements (FTA) are the negotiated agreements designed to reduce barriers to trade between the signatories. FTAs generally promote policies that involve the trade of goods without taxes, tariffs, and other trade barriers.
- Countries participate in FTAs in order to boost their industries' access to new markets and customers.
- In addition, FTAs are designed to benefit consumers through an increase in competition in the market which increases supply and, ultimately, reduces prices.

### **ASEAN–India Free Trade Area (AIFTA)**

- The ASEAN–India Free Trade Area (AIFTA) is a free trade area among the ten member states of the Association of Southeast Asian Nations (ASEAN) and India.
- The initial framework agreement of AIFTA was signed in 2003 and the final agreement was signed in 2009. The free trade area came into effect in 2010.
- India places great importance on developing its relationship with ASEAN due to the organization's economic, political, and strategic significance in the larger Asia-Pacific region.
- Further, strong ties with ASEAN can help to expand India's market access, and to build greater connectivity between India's north-eastern states that border the Southeast Asian region.

### **Issues with AIFTA**

#### **a) Increasing Trade Deficit**

- According to a report by the PHD Chamber of Commerce and Industry, India's imports from ASEAN countries has increased significantly in comparison to its exports to ASEAN after signing these agreements.
- India's exports to ASEAN countries was \$23 billion in 2010, which increased only to \$36 billion in 2018. At the same time, India's imports from these countries increased from \$30 billion in 2010 to \$57 billion in 2018.
- A NITI Aayog study reveals that India's trade deficit with ASEAN doubled to \$10 billion in 2017 from \$5 billion in 2011.
- One of the reasons for the growing deficit is the low utilisation of the FTA route by Indian exporters to ASEAN countries because of difficulties faced in negotiating the rules. Thus, a review of the India-ASEAN FTA could help improve utilisation in India by making the pact simpler and more user-friendly.

#### **b) Export Of Chinese Goods To India**

- The presence of Chinese companies in ASEAN countries, has complicated issues, as these Chinese companies use the benefit of lower tariffs to export goods into India.
- AIFTA requires at least 35% value addition in one of the member countries for a product to get duty advantage in India. However, India suspects that some Chinese goods are merely repackaged in a few of the FTA countries and shipped to India without any value addition.

#### **c) Low Benefits On The Services Front**

- India was expected to benefit more on the services front, with software professionals and nurses getting easy access to markets such as Japan, Singapore, South Korea and Malaysia.
- However, the number of fresh visas issued to Indians from Singapore has reduced over a period of time and Japan has denied access to Indian nurses, pointing at lack of Japanese language skills.

### **Way Ahead**

Along with AIFTA, India is also planning to review its existing FTAs with other countries. Thus, going forward, India will seek to ensure that its companies are equal partners in the trade deals, by changing its strategy on FTAs to ensure that the treaties provide economic and strategic benefits and not act as a drain on the nation's resources.

### **6. The issue of GST compensation to states has been brewing for a while now. Explain the GST compensation issue along with the options provided by the Ministry of Finance to resolve it.**

#### **Answer**

Prolonged delay in the release of GST compensation cess and other dues has led to a dispute between the Centre and various States. Under The GST (Compensation to States) Act, 2017, states are guaranteed compensation for loss of revenue due to the implementation of GST for a transition period of five years (2017-22). Under this, States are guaranteed a 14 % tax revenue growth from Fiscal Year (FY) 2017 to FY 2022. FY 2016 was taken as the base year for the calculation of this 14 percent growth.

Compensation payments to states started getting delayed since October 2020, as overall GST collection started to decrease. The Covid-19 pandemic has increased this gap, with GST collections declining 41% in the April-June quarter. As per the Centre's estimates, the States' GST revenue gap in 2020-21 (under the GST regime) will be around ₹3 lakh crore, while cess collections are only projected to reach ₹65,000 crore. This leads to a shortfall of ₹2.35 lakh crore.

#### **The Rift**

The Centre has calculated that only ₹97,000 crore of the total shortfall (of ₹2.35 lakh crore) is due to GST implementation itself, while the rest (₹1.38 lakh crore) is due to the impact of COVID-19. The Finance Minister has termed this shortfall (₹1.38 lakh crore) due to the impact of Covid-19, as an “**extraordinary Act of God situation**”. Thus, the Centre has said that it is not the Centre's responsibility to compensate states for the shortfall in revenue due to Covid-19.

#### **Borrowing Options**

The Ministry of finance has given two borrowing options to states under which they can borrow money to cover the shortfall in GST (Goods and Services Tax) revenues expected in the current fiscal year. Both options will be available to the states only for the current fiscal year. In April 2021, the Council will review and decide action for the next year.

##### **A. Option 1**

- Under the first option, States can borrow Rs 97,000 crore (the shortfall arising out of GST implementation) under a Special Window coordinated by the Ministry Of Finance.
- Both principal and interest will be paid from the compensation cess, by extending the Cess beyond the transition period, which is supposed to expire on 30th June 2022. The states will not be required to repay the debt from any other source.
- Further, the borrowing under this option will not be treated as a debt of the state.
- Further, the Union government will try to keep the interest of the loan at or close to the interest on Government securities (G-secs).

##### **B. Option 2**

- Under the second option, states can collectively borrow the entire shortfall of Rs 2,35,000 crore from the market. This would also cover the revenue shortfall due to the coronavirus pandemic.

- The interest on this borrowing shall be paid by the States from their resources. However, the principal will be paid from the compensation cess fund, by extending the imposition of the compensation cess beyond June, 2022 (transition period).
- The GST shortfall amount (Rs 97,000 crore) will not be counted as states' debt, while the rest of the amount of Rs 1.38 lakh crore will be counted as states' debt.

### Criticisms

- States have termed the move to make a distinction in the revenue shortfall on account of GST implementation and the pandemic as unconstitutional.
- GST accounts for almost 42% of states' own tax revenues, and tax revenues account for around 60% of states' total revenues.
- Increasing the burden on states, will resulting in delays in salary payments and reductions in spending on healthcare and other developmental expenditure.
- Thus, various States have said that the Centre should borrow money to compensate the States, instead of forcing them to do so.

GST was an ambitious change in political economy, where States were persuaded to voluntarily give up their unilateral powers to tax some areas to create a common market. Legally, the Centre may be on safe ground, but in terms of political economy, it's a setback and the proposed solutions will reduce the trust between the Centre and states and may have an adverse impact in other areas of Centre-State relations.

### Compensation Cess

- A compensation cess — ranging from 1-200% — is imposed on sin and luxury goods like cigarettes, pan masala and certain categories of automobiles, over and above the topmost slab of 28%.
- For example, SUV vehicles (more than 4 metres) are charged 50 per cent GST, of which the GST tax rate is 28 per cent and the compensation cess is 22 per cent.
- The collected compensation cess goes to the Consolidated Fund of India, and is then transferred to the Public Account of India, where a GST compensation cess account has been created. States are compensated bi-monthly from the accumulated funds in this account.

## 7. There are a number of avenues in which India-Israel ties would be key to the emerging global order. Critically discuss.

### Answer

India and Israel can count on each other for a host of reasons. The **Indian market** is simply irresistible for Israeli businesses. **India's military**, the world's number one importer of arms, is a big admirer of Israeli hardware. Israel, on the other hand, has wowed the world with its technological prowess. Clearly, the convergence of mutual bilateral interests is more conspicuous than ever before and this can be seen in growing cooperation on multiple fronts.

### Defence Deals

- Israel is one of the chief exporter of arms and ammunitions to India with Barak missiles, surveillance drones and other big league defence deals.
- India imports critical defence technologies from Israel like UAV, anti tank Missile technology, stealth technology, AWACS, etc.

- In line with "Make in India" campaign, Israel has agreed to build a maintenance plant in India for the jointly-developed Barak 8 system.

### **National Security And Counter-Terrorism**

- India and Israel are boosting up the counter-terrorism cooperation and sharing real-time intel on issues crucial to national security.

### **Water And Agriculture**

- Given Israel's novel and efficient water technologies for waste water management, recycling waste water (75%), desalination, water security, and water conservation, there is ongoing cooperation between the two countries.
- **Several Desalination Plants** (Nemelli, Chennai, and Jamnagar) were built by Israeli companies in India. **Indo-Israel Bundelkhand water project** signed in August 2020 reflects the cooperation between these two countries in this field.
- **Israeli drip irrigation technologies** and products are now widely used in India. Israeli companies and experts are providing expertise to manage and improve dairy farming in India.

### **Faultline in Relations**

However, the potential fault-lines for the India-Israel relationship are many. These are:

- Israel's keenness to forge stronger ties with India's **regional rival, China**.
- India's heavy involvement with the **Middle Eastern countries including Iran**, Israel's arch enemy.
- India continues to have a **soft-spot for Palestine** which does not go well with Israel. India and Israel will continue to 'agree to disagree' as regards India's voting pattern in the UN on Palestine-related issues for the foreseeable future.
- The Indian government did not desist from sponsoring the resolution – 'Right of the Palestinian People to Self-Determination' – which India had been sponsoring since 1998.

### **Conclusion**

- In a major shift in foreign policy, **New Delhi is de-hyphenating Israel from Palestine** and is prepared to deal with the two separately and independently. As a result, the relationship between these two countries is gaining momentum day by day.
- Future prospects seemed so bright that the Prime Minister of Israel, during the visit of Indian PM to Israel in 2017, proclaimed that the **"sky is not the limit,"** while referring to the future of India-Israel relations.

#### **India and Israel Sign Cultural Agreement**

- India and Israel signed a cultural agreement with an aim to promote greater people-to-people exchanges.
- The agreement **outlines a three-year** (for the years 2020-23) **programme** of cooperation to further strengthen their strategic bilateral relations.
- The major areas of cooperation identified includes the exchange of culture and art experts, encouraging cooperation in the protection of cultural heritage and archaeology with the help of Israel Antiquities Authority (IIA) and Archaeological Survey of India (ASI) and organising literary fests and book fairs while promoting the translation of famous works in each other's languages.

**8. Despite having one of the most progressive disability policy frameworks in the world, bringing the differently abled population into mainstream remains elusive in India. Discuss.**

**Answer**

- From coining the term “**Divyang**” for attitude change to empowering differently abled people using a right based approach, the government has taken several initiatives.
- India is signatory of **UN Convention on Rights of Persons with Disability** and **Marrakesh Treaty**. It has launched **Accessible India Campaign** for achieving universal accessibility for Persons with Disabilities.
- However, poor implementation of policies along with different challenges have acted as deterrents in bringing them into mainstream.
- For example, despite the government’s plans to make at least 50% of government buildings and at least 25% of public transport disabled-friendly as part of the Accessible India Campaign, our buildings and transport continue to be oblivious to the needs of disabled people.

**Various Challenges**

- **Social Segregation and Stigma** attached to disability is a big issue, considering their integration into society.
- **Inconsistency in Disability definition across censuses:** Different definitions in different censuses have led to inclusion of someone in one census and exclusion of the same person in another census.
- **Narrow perspective:** India looks at disability from medical or pathological angle only. Most developing countries look from social angle, highlighting institutional and social arrangements preventing those with impairments from leading normal lives.
- **Lack of standard reporting:** Census depends on self-reporting of disability; this may leave out mental disability and even physical disability.
- **Lack of Institutional and Infrastructural Support** for the disabled in India.
- **Lack of coordination-** inter-sectoral, inter-ministerial coordination as well as between govt bodies and NGOs.
- **Limited competence and capacity** of decentralizing services.

**Way Forward**

- Kerala became first state to conduct a census of its own called **Kerala Disability Census** for 2014-15. Other states must follow example.
- **End Institutional Exclusion:** Not only the Ministry of Social Justice and Empowerment, but every other ministries along with different departments will have to take blame for poor disability environment in India.
- **Increase public awareness and understanding of disability** through social marketing and campaigns.
- Strengthen and support **research on disability**.

**Conclusion**

- India has a **growing disability rights movement** and one of the **more progressive policy frameworks** in the developing world. But, a lot more needs to be done in implementation and “**getting the basics right**”.

- Newer thinking and better coordination of programs is required. There is need for **deepened preventive health programs** and **all children screened at a young age**.
- The scale of disability in India needs to be better understood by improving the measurement of disability. Most importantly, persons with disabilities should themselves be made **active participants in the development process**.
- By providing them aids to overcome their disability and enabling them to earn a dignified livelihood, we can actually transform **them from being disabled to being differently-abled**.

**A Person With a Disability: UN Definition**

- UN defines persons with disabilities as those “who have long-term physical, mental, intellectual or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others”.
- This definition was given by the **UN Convention on the Rights of Persons with Disabilities** (adopted by UN in 2006). India ratified the Convention in October 2007.

*[For policy framework and other associated issues, please refer the topic **Empowering ‘Divyang’ and Senior Citizens** from Kurukshetra Summary of July 2020]*

**9. What are Social Networking Sites and what security implications do these sites present?****Answer**

A social networking site is an online platform that allows users to stay connected with friends, family, colleagues and other people based on shared interests. Currently, there are many Social Networking Sites such as Facebook, Twitter, LinkedIn, Instagram, TikTok etc. Social media makes it possible for individuals to share information with millions which can have harmful consequences too.

**Security Implications of Social Networking Sites**

- **Radicalization** - Recently busted ISIS module in Kerala highlights the role of Social Media in radicalization of youths.
- **Incitement of riots and Communal Violence** - Any rumours or hateful posts on social media have the potential to snowball into a full-fledged riot. Recent Bangalore riots is an example of this fact.
- **Inducement of mass panic:** Due to the viral nature of social media, any rumours spread like wildfire. The mass exodus of a number of northeast Indians from many parts of India was triggered by a cyber hate campaign in 2012.
- **Cyber-crime** - Many social media sites have been found to promote pornographic material including child pornography. In April 2019, Madras High Court imposed an interim ban on TikTok app over the allegations of inappropriate content, encouraging pornography.
- **Cyber Bullying/Stalking** – These sites are increasingly being used for repeatedly sending unwanted messages online, sending abusive texts and emails etc.
- **Divulgence of sensitive information** - In 2016, an MP Bhagwant Mann was suspended from attending Parliament after posting a video on social media of Parliament’s security pickets and internal security positions.
- **Data Privacy** - The disclosure of sensitive information through social media to potentially millions of users have led to concerns about privacy. Not only that, this personal information can also be used to conduct a social engineering attack.

**Conclusion**

Social media is developing in response to the appetite for new ways to communicate and to the increasingly flexible ways to go online. However, it also brings security threats at our doorsteps. A proper policy framework which is capable of empowering users through awareness generation is the need of the hour to tackle the associated risks.

**Involvement of Facebook in Thailand's Pro-democracy activities**

Facebook has blocked access to an online group that is critical of the Thai monarchy and its king, Maha Vajiralongkorn. However, it has announced that it is going to initiate a legal challenge against the government order.

**Background**

- The “Royalist Marketplace” group was created on FB in April 2020. It gained more than a million followers.
- The group was used as a platform for discussion on the monarchy, including political role and reform proposals.
- In Thailand, anyone who **defames the king can face up to 15 years in prison.**

**Note:**

Facebook has been under intense scrutiny lately for its policing of hate speech, misinformation and more – particularly with the US election on the horizon.

**PRELIMS MCQS**

1. Consider the following statements about the writ of Habeas Corpus
  1. The writ of habeas corpus can be issued only against public authorities.
  2. It is not issued when the proceeding is for contempt of a legislature.

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:**

Recently the Jammu & Kashmir High Court was confronted with an unprecedented situation — a staggering 250- plus **habeas corpus petitions** challenging detentions under the **Public Safety Act** post abrogation of the special status of the erstwhile state on August 5, 2019.

**About Habeas Corpus**

- The writ of habeas corpus literally means 'to have the body of'. It is an **order issued by the court to a person who has detained another person**, to produce the body of the latter before it.
- The court then examines the cause and legality of detention. It would set the detained person free, if the detention is found to be illegal. Thus, this writ is a **bulwark of individual liberty against arbitrary detention**.
- The writ of habeas corpus can be issued against both public authorities as well as private individuals. The writ, on the other hand, is not issued where the
  - a) detention is lawful
  - b) proceeding is for contempt of a legislature or a court
  - c) detention is by a competent court
  - d) detention is outside the jurisdiction of the court.

2. Consider the following statements about the Comptroller and Auditor General of India
  1. He is one of the bulwarks of the democratic system of government in India.
  2. He can be removed by the President on same grounds and in the same manner as a judge of the Supreme Court.

Which of the statements given above is/are correct?

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

**Answer: C**

**Explanation:**

G.C. Murmu has been appointed as Comptroller and Auditor General of India (CAG).

**About Comptroller and Auditor General of India**

- Article 148 of the Constitution provides for an independent office of the Comptroller and Auditor General of India (CAG).
- He is **one of the bulwarks of the democratic system of government in India**; the others being the Supreme Court, the Election Commission and the Union Public Service Commission.
- The CAG is appointed by the President of India by a warrant under his hand and seal.
- He holds office for a period of six years or up to the age of 65 years, whichever is earlier.
- He can be removed by the president on **same grounds and in the same manner as a judge of the Supreme Court**. In other words, he can be removed by the president on the basis of a resolution passed to that effect by both the Houses of Parliament with special majority, either on the ground of ***proven misbehaviour or incapacity***.
- Article 149 authorises the Parliament to prescribe the duties and powers of the CAG in relation to the accounts of the Union and of the states and of any other authority or body.
- The CAG submits three audit reports to the President– audit report on appropriation accounts, audit report on finance accounts, and audit report on public undertakings. The President lays these reports before both the Houses of Parliament.

**3. Consider the following statements about the office of ‘whip’**

1. **The office of ‘whip’ is mentioned in the Rules of the House and Parliamentary Statute.**
2. **He is charged with the responsibility of securing party member’s support in favour of or against a particular issue.**

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:**

Rajasthan Congress chief whip moved the Supreme Court against High Court order asking the assembly speaker to defer disqualification proceeding against sacked deputy Chief Minister and 18 MLAs.

**About The Office Of ‘Whip’**

- The office of ‘whip’ is **mentioned neither in the Constitution of India nor in the Rules of the House nor in a Parliamentary Statute**. It is based on the conventions of the parliamentary government.
- Every political party, whether ruling or Opposition, has its own whip in the Parliament. He is appointed by the political party to serve as an assistant floor leader.
- He is charged with the **responsibility of ensuring the attendance of his party members** in large numbers and **securing their support in favour of or against a particular issue**. He is responsible for the party's discipline and behaviour on the floor of the House.

- India inherited the concept of the whip from the **British parliamentary system**.
  - A legislator **may face disqualification proceedings if she/he disobeys the whip** of the party unless the number of lawmakers defying the whip is 2/3rds of the party's strength in the house.
  - **Limitations of whip:** There are some cases such as **Presidential elections** where whips cannot direct a Member of Parliament (MP) or Member of Legislative Assembly (MLA) to vote in a particular fashion.
  - **Types of whips:**
    - i) **One-line whip** is issued **to inform members of a party about a vote**. It allows a member to abstain in case they decide not to follow the party line.
    - ii) **Two-line whip** is issued to **direct the members to be present in the House** at the time of voting.
    - iii) **Three-line whip** is issued to members directing them **to vote as per the party line**.
4. Consider the following statements about the Election Commission
1. The Constitution has not prescribed the qualifications of the members of the Election Commission.
  2. The Constitution has debarred the retiring election commissioners from any further appointment by the government.

Which of the statements given above is/are correct?

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

**Answer: A**

**Explanation:**

Former Finance Secretary Rajiv Kumar was appointed as the Election Commissioner by the Centre.

**About Election Commission**

- The Election Commission is a permanent and an independent body established by the Constitution of India directly to ensure free and fair elections in the country.
- Article 324 of the Constitution provides that the power of superintendence, direction and control of elections to parliament, state legislatures, the **office of President of India and the office of Vice-president of India shall be vested in the election commission**.
- The Election Commission shall consist of the Chief Election Commissioner (CEC) and such number of other Election Commissioners, if any, as the President may from time to time fix.
- The appointment of the CEC and other Election Commissioners shall be made by the President. The conditions of service and tenure of office of the election commissioners and the regional commissioners shall be determined by the president.
- Article 324 of the Constitution has made the following provisions to safeguard and ensure the **independent and impartial functioning of the Election Commission:**
  - a) The chief election commissioner is provided with the security of tenure.

- b) He cannot be removed from his office except in same manner and on the same grounds as a judge of the Supreme Court.
- c) The service conditions of the chief election commissioner cannot be varied to his disadvantage after his appointment.
- d) Any other election commissioner or a regional commissioner cannot be removed from office except on the recommendation of the chief election commissioner.
- Though the constitution has sought to safeguard and ensure the independence and impartiality of the Election Commission, **some flaws can be noted, viz.,**
  - a) The Constitution has **not prescribed the qualifications** (legal, educational, administrative or judicial) of the members of the Election Commission.
  - b) The Constitution has **not specified the term of the members** of the Election Commission.
  - c) The Constitution has **not debarred the retiring election commissioners from any further appointment by the government.**

**5. Consider the following statements about eSanjeevani:**

- 1. eSanjeevani service is used to provide doctor-to-doctor consultations.**
- 2. eSanjeevani service is implemented under Ayushman Bharat Health and Wellness Centre (AB-HWCs) programme.**

**Which of the statements given above is/are correct?**

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

**Answer: C**

**Explanation:**

- 'eSanjeevani' is a **web-based comprehensive telemedicine solution**. It is developed by **Centre for Development of Advanced Computing** and launched on 16th June 2009.
- 'eSanjeevani' extends the reach of specialized healthcare services to masses in both rural areas and isolated communities and **aims to make healthcare services equitable** by bridging the digital divide that exists between the urban vs. rural, rich vs. poor etc.
- The national telemedicine service which is operational on two government platforms recently completed over 1.5 lakh tele-consultations.
- This eSanjeevani platform has enabled two types of telemedicine services viz. Doctor-to-Doctor (eSanjeevani) and Patient-to-Doctor (eSanjeevani OPD) Tele-consultations.
- In a short span of time since November 2019, teleconsultations by 'eSanjeevani' and 'eSanjeevaniOPD' have been implemented by 23 states covering 75 per cent of the population. Other states are in the process of rolling them out.

**eSanjeevani**

- The eSanjeevani service used for doctor-to-doctor consultations, is being implemented under the Ayushman Bharat Health and Wellness Centre (AB-HWCs) programme.
- It is planned to implement tele-consultation in all the 1.5 lakh Health and Wellness Centres (as spokes) in a 'Hub and Spoke' model, by December 2022.

- States have identified and set up dedicated Hubs in Medical Colleges and District hospitals to provide tele-consultation services to Spokes.
- Till now, 12,000 users comprising Community Health Officers and Doctors have been trained to make use of this national e-platform. Further, under eSanjeevani telemedicine service is being provided through more than 3,000 HWCs in 10 States.

#### **eSanjeevani OPD**

- Due to the ongoing COVID-19 pandemic, the Health Ministry had also launched the second tele-consultation service enabling patient-to-doctor telemedicine through 'eSanjeevani OPD'.
- Offered at no cost, this e-health service is rapidly gaining popularity as citizens in around 20 States are now consulting doctors without having to go to the hospital physically.
- It also ensures that the patient gets to see the doctor in around five minutes after logging in.
- Around 2800 doctors have been trained and on-boarded at eSanjeevani OPD and every day around 250 doctors and specialists across the country provide eHealth services despite the lockdown has been relaxed in phases.
- This service would eventually turn out to be a game changer for people in the rural areas who do not have easy access to medical specialists located in cities.

#### **Telemedicine and Telehealth Care**

- **Telemedicine** is the **practice of medicine using technology** to deliver care at a distance. A physician in one location uses a telecommunications infrastructure to **deliver care to a patient at a distant site**.
- **Telehealth** refers broadly to electronic and telecommunications technologies and services used to **provide care and services at-a-distance**.
- Telehealth is **different** from telemedicine in that it refers to a broader scope of remote health care services than telemedicine. **Telemedicine** refers specifically to remote **clinical services**, while **telehealth** can refer to remote **non-clinical services**, such as provider training, administrative meetings, and continuing medical education. According to the World Health Organization, telehealth includes, "Surveillance, health promotion and public health functions."

#### **Centre for Development of Advanced Computing (C-DAC)**

- It is an **autonomous Scientific Society** and premier R&D organization, headquarter at Pune (Maharashtra), of the **Ministry of Electronics and Information Technology (MeitY)** for carrying out R&D in IT, Electronics and associated areas.
- It was **established in 1988 to build Supercomputers** and to achieve self-sufficiency in the field, in the context of denial of import of Supercomputers by the USA.
- However the research of C-DAC now includes **High Performance Computing, Grid Computing, Cloud Computing, Big data analytics, Blockchain etc.**

6. NITI Aayog has launched Student Entrepreneurship Program (SEP) 2.0 in collaboration with:
- a) Google
  - b) Dell
  - c) Facebook
  - d) None of the above

**Answer: B**

**Explanation**

- NITI Aayog's Atal Innovation Mission (AIM), in collaboration with Dell Technologies, has launched the second edition of its student entrepreneurship programme for young innovators of Atal Tinkering Labs (ATLs).
- The programme SEP 2.0 will allow student innovators to work closely with Dell volunteers.
- They will receive mentor support; prototyping and testing support; end-user feedback; intellectual property registration and patenting of ideas, processes, and products; manufacturing support; as well as the launch support of the product in the market.
- The SEP 1.0 was launched in January 2019. Around 1500 innovations were submitted in the last season of ATL Marathon and 50 teams were selected for the Student Innovator Programme. The teams were then mentored by Atal Incubation Centres.
- Through a 10-month-long rigorous programme, the top 6 teams of ATL Marathon got a chance to transform their innovative prototypes into fully functioning products, which are now available in the market.
- The ATL Marathon is nationwide contest where students identify community challenges and create grassroots innovations and solutions within their ATLs.

**Atal Tinkering Labs**

- Atal Tinkering Laboratories (ATLs) are established in schools across India with a vision to 'Cultivate one Million children in India as new Innovators.'
- The objective of this scheme is to foster curiosity, creativity, and imagination in young minds; and inculcate skills such as design mindset, computational thinking, adaptive learning, physical computing.
- Students also get a chance to work with tools and equipment to understand the concepts of STEM (Science, Technology, Engineering, and Math).

**7. Consider the following statements about National Cadet Corps (NCC):**

- 1. NCC is the world's largest uniformed youth organisation.**
- 2. NCC is a Tri-Services organisation, comprising the Army, Navy and Air Wings.**

**Which of the statements given above is/are correct?**

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

**Answer: C**

**Explanation:**

- In his independence day speech, the PM spoke about the expansion of the National Cadet Corps (NCC) in 173 coastal and border districts of India.
- Under the new initiative, training will be given to around one lakh new NCC cadets and an attempt will be made that one-third of these new cadets, will be girl cadets.

**National Cadet Corps (NCC)**

- The NCC, which was formed in 1948, has its roots to British era uniformed youth entities like University Corps or University Officer Training Corps. It is a tri-services organisation, comprising the Army, Navy and Air wings.
- It is the world's largest voluntary uniformed youth organisation and currently has a strength of around 14 lakh cadets. It enrolls cadets at high school and college level and also awards certificates on completion of various phases.
- Headed by a Director General of three-star military rank, the NCC falls under the of Ministry of Defence and is led by serving officers from the Armed forces at various hierarchical positions.
- Each school and college units have Associate NCC Officers and cadets are also assigned various leadership roles in the form of cadet appointments.
- The NCC cadets receive basic military training at various levels and also have academic curriculum basics related to Armed forces and their functioning.
- NCC cadets have played an important role in relief efforts during various emergency situations. During the ongoing pandemic, over 60,000 NCC cadets have been deployed for voluntary relief work in coordination with district and state authorities across the country.

**Significance of expansion in border and coastal area**

- While the NCC does have units in several border and coastal districts, officials believe there is a lot of scope for expansion.
- Restructuring of the NCC was one of the key recommendations of the Committee of Experts (CoE) headed by Lt Gen DB Shekatkar (Retd), which was constituted in mid-2016.
- In the coastal regions, where youth are already familiar with the sea, the training will increase interest in careers in Navy, Coast Guard and also Merchant shipping avenues.
- In the border area, the trained cadets can play an important role in supporting the Armed forces.

**Way ahead for NCC**

- There is a need to modernise the NCC, to make it more relevant to the new and changed times. Further, there are plans to make the NCC activities compatible with the semester system of the colleges and universities.
- NCC has a dual funding model where both the centre and states or union territories provide budgetary support. However, many states have shown lack of seriousness towards this issue.
- Hence, the CoE has recommended that along with Defence Ministry, the Home Ministry and Education Ministry should also contribute towards the NCC.

**8. Consider the following statements about University Grants Commission (UGC):**

1. UGC is a statutory body.
2. UGC disburses funds to Universities.

Which of the statements given above is/are correct?

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

**Answer: C**

**Explanation:**

- The Supreme Court recently upheld the July 6 circular of the University Grants Commission (UGC) to conduct the University final year examination.
- Final year University examinations could not be conducted this year between March and June, due to the Covid-19 pandemic. Following which, Maharashtra and Delhi had already cancelled the final year examinations and a few other states were planning to do so.
- However, on 6th July, UGC had issued guidelines that college and universities will have to conduct final year and semester examinations by end September. UGC had also given the option to conduct the exam in offline (pen and paper), online or mixed (online + offline) mode.
- According to UGC, the decision of Maharashtra and Delhi to cancel the final year exams could directly affect the standards of higher education in the country. Hence, its decision to conduct the examination was in the interest of the students and to maintain the credibility of the education system.

**Opposition to the UGC guidelines**

- Challenging the July 6 guidelines, petitions were filed by various groups in the Supreme Court. States said that they were not consulted before finalizing the UGC guidelines.
- They argued that state governments have the power to take health related decisions in the interest of people and the UGC exam guidelines interfere with their rights.
- The petitioners also claimed that the revised guidelines violate Article 14 on two counts.
  - The guidelines have fixed a date for the completion of exams for the entire country irrespective of the situation in different parts.
  - The guidelines discriminate between final and first/second year students, as final year students are being required to take the final exam, while non-final year students do not have to do so.

**Supreme Court's Decision**

- The Supreme court held in its judgment that final year examination for college/university students have to be held as per the UGC's guidelines by 30 September.
- Although, States can postpone exams under the Disaster Management Act to protect human lives, they cannot promote final year students, on the basis of internal assessment without conducting final examination.
- If any State found it impossible to conduct the exams by September 30 and wanted to postpone them, it could apply to the UGC, which would consider the request and decide at the earliest.
- The Court rejected the claim that the guidelines endangered lives of lakhs of students, due to the rising trend of Covid-19 cases. The SC said **standard operating procedures** for conduct of examination were put in place to ensure safety, which makes clear the intent to protect students, teachers and non-teaching staff.
- The Court rejected the argument that the guidelines **violate Article 14 of the constitution**. It held that the UGC guidelines did not discriminate against final year students, while their juniors were promoted on their internal assessment marks.
  - The court said that there is an understandable difference between the student of final year/semester and other students. The final year students who look forward for admission in higher classes or take employment require final degree for their career prospect.

- Further, the court held that the date for completion of examination was fixed throughout the country to maintain uniformity in the academic calendar and does not violate Article 14.

**University Grants Commission**

- The University Grants Commission (UGC) is a statutory body responsible for coordination and maintenance of standards of higher education in India.
- It was first formed in 1945 to oversee the work of the three Central Universities of Aligarh, Banaras and Delhi. Its responsibility was extended in 1947 to cover all Indian universities.
- In 1956, the UGC became a statutory body, upon the passing of the University Grants Commission Act, 1956.

**Functions**

- Promoting and coordinating university education.
- Determining and maintaining standards of teaching, examination and research in universities.
- Framing regulations on minimum standards of education.
- Monitoring developments in the field of collegiate and university education.
- Providing recognition to universities in India and disbursing funds to such recognized universities and colleges.

**9. Which of the following Particularly Vulnerable Tribal Groups reside in Andaman archipelago?**

1. Onges
2. Reangs
3. Shorn Pens
4. Jarawas
5. Todas

Choose the correct option using the codes below:

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

**Answer: B**

**Explanation**

- Five members of the Great Andamanese tribe, a Particularly Vulnerable Tribal Group (PVTG), have tested positive for COVID-19. This is one of the first cases of COVID-19 infections among the endangered PVTGs of the region.
- The PVTGs are communities that are more vulnerable among tribal groups, and are put under a special category by the Government of India.
- **Great Andamanese** are one of five PVTGs that reside in Andaman archipelago. The other four PVTGs are **Jarawas, Onges, Sentinelese and Shorn Pens**.
- Anthropologists classify the Great Andamanese as part of the Negrito tribes that inhabit isolated parts of Southeast Asia and the Andaman Islands.

- Recent studies by geneticists indicate that the Andamanese are possibly related to the **Negritos of the Malay peninsula and in the Philippines**.
- Originally, the Great Andamanese were ten distinct tribes, including the **Jeru, Bea, Bo, Khora, and Pockiwar**, each with its own separate language.
- The language of the Great Andamanese, **Sare**, has largely been lost, with the last surviving speaker dying earlier this year. The tribe now speaks mostly Hindi.

#### **Dwindling Population**

- In 1788, when the British first tried to colonise the islands, the Great Andamanese numbered between 5,000 and 8,000.
- Several members of the tribe were killed in encounters with the British to protect their territories. Later, many were wiped out in epidemics brought in by the colonisers, such as measles, syphilis and influenza.
- By 1901, the population of the Great Andamanese was down to 625. At present, only about 59 members of the community survive — 34 live in the Strait Island, the rest are in Port Blair.
- Major factors contributing to the diminishing population of the Great Andamanes include environmental 'disturbances', contagious diseases as a result of contact with city dwellers, and a high mortality rate assisted by addictions to alcohol, tobacco and opium.

#### **10. Failure to report a notifiable disease is:**

- a) Criminal offence.**
- b) Civil offence.**
- c) Both a criminal offence and a civil offence.**
- d) Neither a criminal offence, nor a civil offence.**

**Answer: A**

#### **Explanation:**

- The National Cancer Registry Programme report, 2020 was recently released by The Indian Council of Medical Research (ICMR) and National Centre for Disease Informatics and Research (NCDIR).
- The report contains 5 years (2012-2016) data from the network of cancer registries working under the National Cancer Registry Programme (NCRP).
- The NCRP was initiated by the Indian Council of Medical Research in 1982 at select hospitals in the country. Since then it has continuously and systematically collected data on cancer incidence, mortality and clinical aspects of cancer, which helps in estimation of trends, survival and burden of disease.
- The report recommends to make cancer a notifiable disease in all the states of the country, which will help to improve tracking of the disease.

#### **Highlights Of The Report**

- The highest incidence of cancer in India was observed in the north eastern region.
- Sikkim was the only state in India to actually show a decrease in cancer prevalence for both genders, reflecting their good public health system.

- The report estimates that cancer cases in the country will rise by 10% from 2016 (12.6 lakh cases) to 13.9 lakhs cases in 2020.
- In 2020, tobacco-related cancers are estimated to contribute to 27.1% of the total cancer burden, and will be highest in the north-eastern region of the country.
- The incidence of other forms of cancers in 2020 will be: cancers of the gastrointestinal tract (19.7%), breast cancer (14.8%) and cervix cancer (5.4%).
- Further, cancer cases in the country are likely to increase to 15.6 lakhs by 2025 — a 12% increase from current estimated cases (2020).
- **Male-Female Distribution**
  - According to the report, cancer of lung, mouth, stomach and oesophagus were the most common cancers among men, while for women, cancer of breast and cervix uteri were the most common.
  - Going by the data from 2016, cancer impacts more women than men in terms of overall numbers and it is projected that this will continue in the years to come.
  - The **cancer incidence rate for men**, ranges from 269.4 per 1,00,000 population in Aizawl district (highest in India) to 39.5 per 1,00,000 population in Maharashtra's Osmanabad and Beed districts (lowest in the country).
  - The **cancer incidence rate for women**, ranges from 219.8 per 1,00,000 population in Arunachal Pradesh's Papumpare district to 49.4 per 1,00,000 population in Osmanabad and Beed.

#### **Cancer As A Notifiable Disease**

- Majority of states in India have not declared cancer as a notifiable disease. So far, **only nine States** in India have declared cancer as a notifiable disease.
- A notifiable disease is any disease that is required by law to be reported to government authorities. This means every government hospital, private hospital, laboratories, and clinics have to report cases of the disease to the government.
- Any failure to report a notifiable disease is a **criminal offence** and the state government can take necessary actions against defaulters.
- The process helps the government to keep track of the disease and formulate a plan for elimination and control. In less infectious diseases, it improves information about the burden and distribution of disease.

#### **National Centre for Disease Informatics and Research (NCDIR)**

- The primary focus of NCDIR is to establish a nationwide data-base for cancer through the National Cancer Registry Programme.
- The broad objective of NCDIR is to sustain and develop a national research data-base on cancer, diabetes, cardiovascular diseases (CVD), and stroke through recent advances in electronic information technology.
- It also facilitates and coordinates research activities through clinical studies in diabetes, CVD and strokes.

#### **11. Consider the following statements about DigiLocker:**

1. DigiLocker is a service provided by the Ministry of Electronics and IT.
2. It is mandatory to have an Aadhar number to use DigiLocker.

Which of the statements given above is/are correct?

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

Answer: C

Explanation:

- The **Department of Pension & Pensioners' Welfare (DoPPW)** has decided to integrate the **electronic Pension Payment Order (e-PPO)** generated through **PFMS (Public Finance Management System)** application of **CGA (Controller General of Accounts)**, with **Digi Locker**, in order to enhance Ease of Living of Central Government Civil Pensioners.
- This system will enable any Pensioner to obtain an instant print-out of the latest copy of their PPO, from their **DigiLocker account**.
- This initiative will **create a permanent record** of their respective PPO in their **DigiLocker** and at the same time eliminate delays in reaching the PPO to new Pensioners, as well as the necessity of handing over a physical copy.
- This facility has been created with '**Bhavishya**' software, which is a single window platform for Pensioners, right from the start of their Pension processing, till the end of the process.

#### DigiLocker

- DigiLocker is an **online service** provided by the **Ministry of Electronics and IT (MeitY)**, Government of India under its Digital India initiative.
- DigiLocker provides **an account in the cloud** to every Aadhaar holder to access authentic documents/certificates such as driving license, vehicle registration, academic mark sheet in digital format from the original issuers of these certificates. It also **provides 1GB storage** space to each account to upload scanned copies of legacy documents.
- Users need to possess an Aadhaar number to use DigiLocker.

#### Benefits of DigiLocker

- **Reduces operating cycle time for various Financial Services:** Availing services like application for PAN card, driving license, or even making investments require submission of documents. With DigiLocker, the documents are submitted instantly, thus reducing the operating time to avail the financial services.
- **Safety:** Since the documents are stored online, the chance of theft or loss of the documents is negligible.
- **E-signature:** DigiLocker facilitates self-attestation of documents and thus helps in expediting applications and transactions.
- **Reduced Administrative Costs:** Carrying documents in hard form requires extra care and hassles. Handling and storage of documents in physical form are eliminated with DigiLocker.
- **Free of cost:** One need not pay any sum to open a locker to store the documents. Not just the account in the DigiLocker, but accessibility to the documents and sharing it with other agencies is also free.

**Public Financial Management System**

- PFMS (previously Central Plan Scheme Monitoring System, CPSMS) is a Government of India **public financial management reforms** initiative which monitors programs in the social sector and tracks funds disbursed.
- It was initially started as a Plan scheme named **CPSMS** of the Planning Commission in 2008-09 as a pilot in four States of Madhya Pradesh, Bihar, Punjab and Mizoram for four Flagship schemes e.g. MGNREGS, NRHM, SSA and PMGSY.
- In December, 2013 the Union Cabinet approved the national roll out of **PFMS for all States and schemes** for a period of four years till 2017 as follows:
- Given the large number of programs on which the money is spent, the CPSMS is an initiative by the Indian Central Government to ensure that the money is spent according to its intended purpose, and provide an accounting of the same
- The system uses a **web-enabled application** developed in the office of **Controller General of Accounts**, the apex accounting authority of the Government of India under the **Ministry of Finance**.

**12. Which of the following categories are eligible to get loans under Priority Sector Lending?**

1. Agriculture
2. MSMEs
3. Export Credit
4. Housing
5. Start-ups

Choose the correct option using the codes below:

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

**Answer: D**

**Explanation**

In order to increase the focus on inclusive development, the Reserve Bank of India (RBI) has revised the guidelines for Priority Sector Lending.

**Priority Sector Lending Norms**

- As per priority sector lending norms, all scheduled commercial banks have to give 40% of their loans (measured in terms of Adjusted Net Bank Credit), to certain specified sectors.
- These sectors include, agriculture, micro, small and medium enterprises (MSMEs), export credit, education, housing, social infrastructure, renewable energy etc.
- This is to ensure that certain vulnerable sectors of the economy, who generally find it difficult to borrow loans from banks, are able to do so.

**New Guidelines**

- As per the revised guidelines, start-ups will be able to borrow funds from banks under the priority sector lending category.
- Borrowing limits for the renewable energy sectors-- solar power and compressed bio-gas plants-- would also be increased.
- The central bank would also increase the targets for lending to 'small and marginal farmers' and 'weaker sections' under the PSL.
- The **M.K. Jain panel**, set up by RBI to study credit in rural areas, found that funds released by the government under the Rural Infrastructure Development Fund flowed more to states that had a higher share of rural bank credit.
- The panel also noted that few states like Kerala, Tamil Nadu, Telangana and Karnataka were getting agri-credit higher than their agri GDP, indicating the possibility of diversion of credit for non-agricultural purposes.
- Thus, in addition to continuing with the past practice of granting priority sector status for loans to underprivileged segments, weightage will be given to the region in which the loan is distributed.
- Higher weight will be given to priority sector loans in the identified districts where credit flow is comparatively lower. Further, a lower weight will be given in identified districts where the credit flow is comparatively higher.

**Rationale Behind The Revision**

- According to a FICCI survey, 70% of start-ups stated that their businesses have been impacted by covid-19, while 12% of the start-ups have shut operations and 60% are operating with disruptions. With uncertainty in the business environment, many start-ups are struggling to run their operations.
- Further, many early stage start-ups have to shut down their companies because of lack of funds.
- Banks generally do not give loans to start-ups because of their low creditworthiness. Thus, they have to depend on other expensive sources of funds like venture capital funding.
- The revised guidelines will help start-ups to borrow funds at easier norms and free up their equity. Now, even a pre-revenue stage start-up, without customers, may also be able to get loans from banks.
- This would help them to sustain their operations, increase their operational efficiency and grow their business.

**Venture Capital**

- Venture capital (VC) is a form of private equity financing that is provided by venture capital firms or funds to start-ups, early-stage, and emerging companies that have high growth potential.
- Venture capital firms or funds invest in these early-stage companies in exchange for equity, or an ownership stake.
- Venture capitalists take on the risk of financing risky start-ups in the hopes that some of the firms they support will become successful. As start-ups face high uncertainty, VC investments have high rates of failure.

**13. Consider the following statements about Petroleum and Natural Gas Regulatory Board (PNGRB):**

1. **PNGRB was established to protect the interests of consumers and entities involved in petroleum products.**

**2. PNGRB is a statutory body.**

Which of the statements given above is/are correct?

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

**Answer: C**

**Explanation**

- As a reform initiative in the oil and gas sector, the Petroleum and Natural Gas Regulatory Board (PNGRB) is planning to open city gas distribution (CGD) networks for competition. This will allow more than one operator to operate in areas operated by CGD companies.
- City gas distribution refers to transportation or distribution of natural gas to consumers through a network of pipelines.
- Indraprastha Gas Ltd. in Delhi, Mahanagar Gas Ltd. in Mumbai and Gujarat Gas Ltd. are three city gas distribution companies, that will be affected the most by the opening up of these markets.
- The CGD companies have opposed the opening up of CGD infrastructure for use by third parties and have challenged the proposal in the Delhi High Court.

**Current Scenario**

- Existing operators have exclusive right to lay, operate and expand gas distribution infrastructure in their areas. They also have the exclusive right to market both Compressed Natural Gas (CNG) and Piped Natural Gas (PNG) in these areas.
- The government had given exclusivity to gas distribution companies to incentivise them to invest in infrastructure to deliver PNG and CNG widely across cities. These companies supply PNG for household, industrial and commercial use.
- They also supply CNG for vehicles through retail sites of state-owned oil marketing companies (OMCs) Indian Oil Corporation Ltd, Bharat Petroleum Corporation Ltd and Hindustan Petroleum Corporate Ltd.

**Proposed Change**

- Under the proposal by PNGRB, the distribution companies will have to give at least **20%** of their infrastructure to third-party companies (new operators).
- The new operators will have to pay the existing operators for using their infrastructure. The tariff will be set by the existing operators, but it will be regulated by PNGRB in case of disputes.
- The PNGRB is in the process of seeking opinion from various stakeholders, on the method of deciding the tariff.

**Impact**

- Oil Marketing Companies (like HPCL etc) which currently receive a commission on the sale of CNG sold through their retail points, may start selling CNG directly to customers.
- There is also a possibility that the OMCs (who are getting risk-free commissions on the sale of CNG at their retail sites), may not become competitors, but increase the commissions they are taking from CDG companies.

- Thus, the profitability of the existing operators would be affected significantly. It may even reduce their ability to invest further in expanding gas distribution infrastructure to supply natural gas.
- For consumers, an increase in the competition will help them by reducing the gas prices. The consumers will also have multiple choices of gas suppliers and can choose the company that offers the best service and price.

**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.

**14. The Sutlej-Yamuna Link Canal is supposed to pass through which of the following States?**

1. Himachal Pradesh
2. Haryana
3. Uttarakhand
4. Punjab
5. Uttar Pradesh

Choose the correct option using the codes below:

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

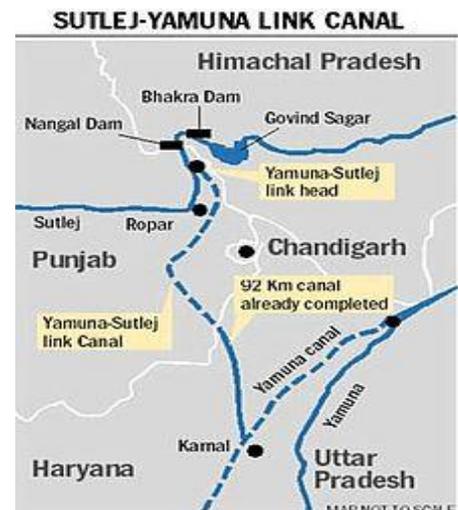
**Answer: B**

**Explanation**

- The Punjab Chief Minister recently warned that if the Centre pushed them to complete the Sutlej-Yamuna Link Canal, it might lead to a national security threat.
- The Sutlej Yamuna Link Canal (SYL), is an under-construction canal to connect the Sutlej and Yamuna rivers. The decades-old dispute over the canal, which is supposed to carry water from Punjab to Haryana, has its origin in a disagreement over sharing of Ravi-Beas water. The river Beas joins river Sutlej in Punjab.
- The dispute regarding sharing of river water emerged after Punjab was reorganised in 1966, and the state of Haryana was created (out of Punjab). After, which Punjab refused to share waters of Ravi and Beas with Haryana.

**Background**

- Before the reorganisation in 1955, out of 15.85 million acre feet (MAF) water of Ravi and Beas, the Centre had allocated 8 MAF



to Rajasthan, 7.20 MAF to undivided Punjab, 0.65MAF to Jammu and Kashmir.

- In March 1976, when Punjab Reorganisation Act was implemented, the Centre notified fresh allocations, providing 3.5 MAF to Haryana.
- Later, in 1981, the water flowing down Beas and Ravi was revised and estimated to be at 17.17 MAF. Out of this, 4.22 MAF was allocated to Punjab, 3.5 MAF to Haryana, and 8.6 MAF to Rajasthan.
- To enable Haryana to use its share of the waters of the Sutlej river and its tributary, Beas, a canal linking the Sutlej with the Western Yamuna Canal, was planned. The 212-km canal (SYL) was supposed to carry Haryana's share of water to its southern parts. 122 km of the canal was to pass through Punjab and the remaining 90 km was to pass through Haryana. Haryana has completed its side of the canal, however, Punjab has continued to delay the construction for over three decades.
- In 2002 and 2004, the Supreme Court ordered the completion of the canal in Punjab.
- In 2004, the Punjab assembly passed a law, which declared all inter-state agreements related to the sharing of Ravi and Beas waters, as invalid. However, in 2016 the Supreme Court invalidated (cancelled) this law.

### **Punjab's Stand**

#### **A. Depletion of Groundwater**

- Punjab is facing severe water crisis due to over-exploitation of its ground water. According to the Central Underground Water Authority's report, its underground water is over-exploited to meet the agriculture requirements in about 79 per cent area of the state.
- Out of 138 blocks, 109 are over-exploited, two are critical five are semi-critical and only 22 blocks are in safe category.
- Punjab believes that it has utilised its precious groundwater resources to grow crop for the entire country and hence should not be forced to share its waters as it faces desertification.

#### **B. Fears of discrimination**

- Punjab fears that once the construction of the canal restarts, the people of Punjab may feel that the state has been discriminated against.
- Various secessionist organisations and Pakistan could take advantage of this feeling and create trouble in the state.

#### **C. Set Up A New Tribunal**

- Punjab claims that till date there has been no scientific assessment of Punjab river waters. Further, according to the Bhakra Beas Management Board (BBMB) the availability of Ravi-Beas water has decreased from 17.17 MAF in 1981 to 13.38 MAF in 2013.
- Thus, Punjab has been demanding to set up a new tribunal for a fresh assessment of the water availability in Ravi-Beas.

### **15. Consider the following statements about Pokkali Rice:**

1. Pokkali rice has saltwater resistance qualities.
2. Pokkali rice has been given a GI tag.

Which of the statements given above is/are correct?

- a) 1 only
- b) 2 only
- c) Both 1 and 2

d) Neither 1 nor 2

**Answer: C**

**Explanation:**

- Recently farmers in West Bengal have started experimenting with the pokkali variety of rice from Kerala to deal with the crisis created by **severe seawater inflow into paddy fields** in Sundarbans after the cyclone Amphan hit West Bengal.
- The Pokkali is a **unique saline tolerant rice variety** flourishes in the rice paddies of coastal Alappuzha, Ernakulam and Thrissur districts of Kerala.
- **Characteristics:**
  - In order to survive in the water-logged field, the **rice plants grow up to 2 m**. Pokkali is famed for its peculiar taste, extra-large grains size and its high protein content.
  - The **single-season paddy** is raised in saltwater fields **between June and November** followed by a season of fish-farming.
  - **It is organically-grown and doesn't require other fertilizer or manure** as the tidal flows make the fields highly fertile and it draw nutrients from the prawns' excrement and other remnants.
  - Pokkali has medicinal properties and its higher value of antioxidants and low carbohydrate content makes it preferable to those on a low sugar diet.
- The uniqueness of the rice has **brought it the Geographical Indication (GI) tag** and is the subject of continuing research.
- **Vyttila-11 is the latest variety of the Pokkali Rice**. It promises better yield of about 5 tonnes per hectare than the previous varieties, and is crossed with the Jyoti variety of rice popular in Kerala. The crop duration is about 110 days.

**16. Consider the following statements about Participatory Notes (P Notes):**

1. **P Notes are also called offshore derivate investments.**
2. **FPIs have to disclose the identity of actual investors of P Notes to SEBI.**

**Which of the statements given above is/are correct?**

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

**Answer: A**

**Explanation:**

- Investments through participatory notes (P-notes) in the domestic capital market rose to Rs 63,288 crore till the end of July, making it the fourth consecutive monthly rise.
- The investment level had fallen to over a 15-year-low of Rs 48,006 crore at the end of March. The lower figure in March came amid significant volatility in broader markets on concerns over the coronavirus-triggered crisis.

**Participatory Notes**

- P-notes are issued by registered foreign portfolio investors (FPIs) to overseas investors who wish to be part of the Indian stock market without registering themselves directly. They, however, need to go through a due diligence process.
- These instruments are used for making investments in the stock markets. Since, they are used outside India for making investments in shares listed in the Indian stock market, they are also called offshore derivative instruments.
- Thus, P-Notes are Offshore Derivative Investments (ODIs) with equity shares or debt securities as underlying assets.
- Participatory notes are issued by brokers and FPIs registered with SEBI. They buy India-based securities and then issue participatory notes to foreign investors. Any dividends or capital gains collected from the underlying securities go back to the investors.
- While the FPIs have to report all such investments each quarter to SEBI, they need not disclose the identity of the actual investors.

**Advantages**

- **Time and cost saving:** P notes are popular investment channels as investors do not have to go through cumbersome regulatory approvals thus saving them time and cost.
- **Anonymity:** Also, since the end beneficiary of these notes is not disclosed. It enables large hedge funds to carry out their operations without disclosing their identity.
- **Tax saving:** Some of the entities route their investment through participatory notes to take advantage of the tax laws of certain preferred countries.

**Disadvantages**

- Indian regulators are concerned about participatory notes because they have no way to know who owns the underlying securities.
- It is alleged that a lot of illegal and unaccounted money made its way to the country through the participatory note route.
- There have also been reports that Indians were routing their black money and indulging in round-tripping and integrating it into the economy.

**17. Chunauti Contest has been launched by:**

- a) NITI Aayog
- b) Ministry of Education
- c) Ministry of Electronics and Information Technology
- d) None of the above

**Answer: C**

**Explanation:**

- The Ministry of Electronics and Information Technology (MeitY) has launched “Chunauti” - Next Generation Startup Challenge Contest - to further boost start-ups and software products with special focus on Tier-II towns of India.

- The government has earmarked Rs 95.03 crore over a period of three years for this programme. It aims to identify around 300 start-ups working in identified areas.
- Start-ups that are in the ideation stage may be selected under the pre-incubation programme and mentored for up to six months to evolve their business plan and solution around the proposed idea.
- Under this challenge, Ministry of Electronics and IT will invite startups in the areas of work including Edu Tech, Agri Tech and FinTech solutions for masses, Supply Chain and Logistic management, Infrastructure, Medical Healthcare as well as jobs and skilling.

**Benefits Provided**

- The start-ups selected through Chunauti will be provided various support from the government through Software Technology Parks of India centres across the country.
- They will get incubation facilities, mentorship, security testing facilities, access to venture capitalist funding, industry connect as well as advisories in legal, HR, IPR, and patent matters.
- Besides a seed fund of up to Rs 25 lakh, the startups will also be provided cloud credits from leading cloud service providers.

**18. Consider the following statements about BharatNet:**

1. BharatNet aims to provide optical fibre connectivity to all the Gram Panchayats in country.
2. BharatNet is financed by the Universal Service Obligation Fund.

Which of the statements given above is/are correct?

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

**Answer: C**

**Explanation:**

- Recently, the PM in his independence day speech has promised optical fibre connectivity to all six lakh villages in 1,000 days. Initiated in October 2011, the project known as, BharatNet was originally named **National Optical Fibre Network or NOFN**.
- BharatNet aims to lay down 8 lakh km of incremental optical fibre cable (OFC) to all the 2,50,000-plus Gram Panchayats (GP) in the country at an estimated cost of Rs 42,068 crore (\$6.2 billion).
- The objective is to extend fibre connectivity — available at the state capital, district headquarters and blocks — to every panchayat, and provide broadband internet services to 69 per cent of India's rural population.
- It aims to facilitate the delivery of e-governance, e-health, e-education, e-banking, and other services to the rural India.
- It is being financed by the Universal Service Obligation Fund of the Department of Telecommunications, through a 5 per cent levy on the revenues of private telecom service providers.

**Phases of BharatNet**

- Phase I of BharatNet was completed in December 2017 and over-achieved the 1 lakh target for this phase by covering 1,22,908 panchayats.

- In the second phase, the remaining 1,29,827 gram panchayats are to be covered through 5 km of new fibre per gram panchayats.
- This phase includes a mix of both underground and aerial fibre as well as radio and satellite connectivity to reach more inaccessible locations such as Jammu and Kashmir, Northeast, Himachal Pradesh and Uttarakhand.

**Issues in BharatNet**

- The project has been unable to meet its March 2020 deadline for the completion of the second phase, which has now been shifted to August 2021.
- States have said that they lack funds for the completion of the second phase. Further the lack of labour due to the migrant crisis, after the pandemic has also slowed down the work.
- The state-run Bharat Sanchar Nigam Limited (BSNL) does not have any bidders for maintenance of fibre that has already been laid. The decision to keep out Chinese equipment and vendors for 4G work and the bad financial situation of the telecom could be the reason bidders are not showing interest.
- Also, only a few private companies are utilising the already-laid fibre to provide services from the gram panchayats.

**19. Consider the following statements about Export Preparedness Index (EPI), 2020:**

1. EPI 2020 has been developed by the Ministry of Commerce and Industry.
2. Tamil Nadu has received the highest score in EPI 2020.

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: D**

**Explanation:**

- **NITI Aayog** in partnership with the Institute of Competitiveness recently released the first Export Preparedness Index (EPI) 2020.
- The Export Preparedness Index (EPI) aims to assess the readiness of the States, in terms of their export potential and their performance. It also provides strategic recommendations for improving export competitiveness.



- It classifies states based on their geography, placing them under few **major categories** – coastal, landlocked, Himalayan, and union territories/city states.
- The index ranked states on **four key pillars** – **policy, business ecosystem, export ecosystem and export performance**.
- The index also took into consideration **11 sub-pillars** -- export promotion policy; institutional framework; business environment; infrastructure; transport connectivity; access to finance; export infrastructure; trade support; R&D infrastructure; export diversification; and growth and orientation.

### Highlights of EPI 2020

- 70 per cent of India's export is dominated by five states – **Gujarat, Maharashtra, Tamil Nadu, Karnataka and Telangana**.
- Gujarat has emerged on top of the index of export preparedness, followed by Maharashtra and Tamil Nadu in the second and third place respectively.
- Six coastal states -- Gujarat, Maharashtra, Tamil Nadu, Odisha, Karnataka and Kerala -- feature in the top ten rankings, indicating the presence of strong enabling factors to promote exports.
- Among the landlocked states, Rajasthan has performed the best and among the Himalayan states, Uttarakhand topped the chart. Across Union Territories, Delhi has performed the best.
- The five States/UTs ranked at the bottom are Manipur (rank 32), Andaman and Nicobar (33), Daman and Diu (34), Lakshadweep (35) and J&K (36).

### Measures Taken by Maharashtra

- The report highlighted Maharashtra's success and said that it can be used as a best practice measure for other states. It has **18 sectoral export promotion councils** that focus on key exporting industries such as pharmaceuticals, gems and jewellery and processed food products.
- The state government also has a grievance redressal office for any information or resolution of problems.
- Further, Maharashtra is one of the few states to have an **export newsletter** which updates exporters about the latest policy changes within the state and the current export scenario.

### Issues Highlighted By EPI

- The index highlights **three key barriers in India's export preparedness** across states: regional differences in export infrastructure; poor trade support and growth orientation; and research and development infrastructure.
- It also highlighted India's inability to take advantage of China's falling export capacity during 2014-16, due to delayed action. India did bring in reforms in 2017 to ensure that the export sector remained competitive and attracts potential investors.
- However, Bangladesh and Vietnam took advantage of the situation before India increased its export competitiveness.

### Way Ahead

- India's per capita exports are USD 241, compared to South Korea's USD 11,900 and China's USD 18,000, so there is a huge potential for growth of India's exports.
- To realize this potential, it is crucial that India makes states and union territories as active participants in the country's export efforts. This would be achieved by creating an enabling framework, establishing the required institutions, removing bottlenecks (blocks), and incentivizing exports.

- States will not only have to focus on increasing and diversifying exports but also need to focus on ensuring forward and backward integration to global value chains, which would allow the states to export higher value-added goods and services.
- There is also a need to facilitate strong industry-academia-government linkages to build trade-support networks, along with a strong focus on designs and standards.
- These measures will help India to increase its share in global trade from the present 1.7% in 2018 to at least 5% in a decade.

**20. Lingaraj temple is located in:**

- a) Tamil Nadu
- b) Kerala
- c) Karnataka
- d) Odisha

**Answer: D**

**Explanation:**

The Odisha government has announced to give a facelift to the 11th century Lingaraj Temple, similar to its pre-350-year structural status. A high-level committee has approved the redevelopment plan of the peripheral area of the temple.

**Lingaraj Temple**

- Lingaraj Temple is dedicated to Shiva and is one of the oldest temples in Bhubaneswar. The central tower of the temple is 180 feet (55 metre) tall.
- The temple is a perfect example of the Kalinga architecture and marks the culmination of the temple architecture in Bhubaneswar, which was the cradle of the Kalinga school of temple architecture.
- It is believed to be built by the kings from the Somavamsi dynasty, with later additions from the Ganga rulers.
- It is built in the Deula style that has four components namely, vimana (structure containing the sanctum), jagamohana (assembly hall), natamandira (festival hall) and bhoga-mandapa (hall of offerings), each increasing in the height to its predecessor.
- In Lingaraj temple, Shiva is worshipped as Harihara, a combined form of Vishnu and Shiva. This signifies the syncretisation of Shaivism and Vaishnavism sects in Odisha.
- The temple has images of Vishnu, possibly because of the rising prominence of Jagannath sect emanating from the Ganga rulers who built the Jagannath Temple in Puri in the 12th century.
- The other attraction of the temple is the sacred Bindusagar Lake.
- Bhubaneswar is called the Ekamra Kshetra as the deity of Lingaraja was originally under a mango tree (Ekamra) as noted in Ekamra Purana, a 13th-century Sanskrit treatise.
- Lingaraja temple is maintained by the Temple Trust Board and the Archaeological Survey of India (ASI). The temple compound is not open to non-Hindus.

**21. Consider the following statements:**

- 1. Rabindranath Tagore created the Indian Society of Oriental Art.**
- 2. Abanindranath Tagore established the Bengal school of art.**

**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:**

The National Gallery of Modern Art (NGMA) recently organised a virtual tour titled “The Great Maestro Abanindranath Tagore” to commemorate the 150th Birth Anniversary of Abanindranath Tagore on 7th August 2020.

**Abanindranath Tagore**

- Abanindranath Tagore, the nephew of Rabindranath Tagore, was one of the most prominent artists of India.
- He was the first major supporter of swadeshi values in Indian art. Abanindranath first created the ‘Indian Society of Oriental Art’ and later went on to establish Bengal school of art.
- His idea of modernizing Mughal and Rajput paintings eventually gave rise to modern Indian painting, which took birth at his Bengal school of art. His sole aim for establishing the school was to counter the English influence on Indian artists.
- He did that by incorporating Indian elements in his works and achieved success when British art institutions accepted to teach and propagate his style of works in their organizations.
- He believed that Indian art and its art forms gave importance to spirituality as opposed to the West which stressed on materialism.
- In his later works, Abanindranath started integrating Chinese and Japanese calligraphic traditions into his style. The intention behind this move was to construct an amalgamation of the modern pan-Asian artistic tradition and the common elements of Eastern artistic and spiritual culture.
- Ganesh Janani, Bharat Mata, The Victory of Buddha are some of his notable paintings.
- He was also a noted writer, particularly for children. Popularly known as 'Aban Thakur', his books Rajkahini, Budo Angla, Nalak, and Khirer Putul were landmarks in Bengali language children's literature and art.

**22. Loya Jirga, recently seen in news, is related to**

- a) New Year Celebration of Afghanistan**
- b) A gathering of elders of Afghanistan to deliberate on important issues**
- c) Constitutional Assembly of Afghanistan**
- d) A religious gathering of Afghanistan**

**Answer: B**

**Explanation**

Afghan President Ashraf Ghani hosted Loya Jirga to discuss plans to release hundreds of Taliban prisoners. The three-day national gathering drew more than 3,000 delegates from all walks of Afghan life — tribal elders, politicians and other prominent figures.

**Background**

- In February 2020, a peace deal was signed between the U.S. and Taliban leadership.
- Since then only partial progress has been made on a key demand by the insurgent group for a prisoner swap. The exchange was meant to foster talks between the militants and the Kabul administration to wind down the war.
- However, Ghani has been accused of dragging his feet and has yet to release the final 400 inmates.

**About Loya Jirga**

- Also known as **grand assembly**, it is a mass national gathering which brings together representatives from the various ethnic, religious, and tribal communities in Afghanistan.
- It is a highly respected **centuries-old consultative body**, often convened at times of national crisis or to settle national issues.
- It is **not an official decision-making body**. Its decisions are **not legally binding**.

**23. After achieving criticality, Barakah nuclear power station has become the first nuclear power plant in the Arab world. The power plant is situated in which of the following Arab countries?**

- a) Saudi Arab
- b) Oman
- c) Jordan
- d) UAE

**Answer: D**

**Explanation**

- The United Arab Emirates (UAE) has started operations in the **first of four reactors at the Barakah nuclear power station** - the first nuclear power plant in the Arab world
- The nuclear power plant is built by Korea Electric Power Corporation (KEPCO). The **UAE–South Korea nuclear partnership began in 2009**, when KEPCO was awarded the prime contract to design, build, and help operate the Barakah plant

**24. Recently, the Kariye (Chora) Museum has been converted into a mosque. The Museum is situated in which of the following Countries?**

- a) Turkey
- b) Iran
- c) Saudi Arab
- d) None of the above

**Answer: A**

**Explanation**

Turkey has decided to transform the Kariye (Chora) Museum into a mosque. A similar conversion of the UNESCO World Heritage-recognized Hagia Sophia took place in July 2020.

**About Kariye (Chora) Museum**

- It was **mediaeval Byzantine Church**, built near the ancient city walls of Constantinople.
- Originally built in the 4th century, The Holy Saviour in Chora was comprehensively rebuilt around 1077-81 and again after a partial collapse following an earthquake.
- It was originally converted into the Kariye Mosque half a century after the 1453 conquest of Istanbul by the Ottoman Empire.
- It became the **Kariye Museum after World War II**.

**25. The first Indian-origin woman to be honoured with a memorial Blue Plaque is**

- a) **Tulsi Gabbard**
- b) **Anandi Eavis**
- c) **Noor Inayat Khan**
- d) **None of the above**

**Answer: C**

**Explanation**

- Britain's World War II spy, **Noor Inayat Khan**, became the first Indian-origin woman to be honoured with a memorial Blue Plaque.
- The Blue Plaque scheme, run by the English Heritage charity, honours notable people and organisations who were connected with particular buildings across London
- She went to Nazi-occupied France in 1943 as an undercover radio operator for Britain's Special Operations Executive. She was killed at Dachau concentration camp in 1944, having revealed nothing to her captors, not even her real name.

**26. Which of the following countries has launched “Eat Out to Help Out” scheme in order to help restaurants?**

- a) **United Kingdom**
- b) **Sweden**
- c) **Norway**
- d) **Russia**

**Answer: A**

**Explanation**

- It is an **economic recovery measure by the UK government** to support hospitality businesses as they reopen after the COVID-19 lockdown in the country.
- Under the scheme, the government would subsidise meals (food and non-alcoholic drinks only) at restaurants by 50 per cent, from Monday to Wednesday every week

- It has been launched to support the food service sector as **this sector is one of the worst affected by the pandemic.**

**27. Trypanosomiasis or sleeping sickness disease is caused by**

- a) **Viruses transmitted through infected tsetse flies**
- b) **Parasites transmitted through infected tsetse flies**
- c) **Bacteria transmitted through infected tsetse flies**
- d) **None of the above**

**Answer: B**

**Explanation**

- Togo has received validation from the WHO for having eliminated human African trypanosomiasis or “sleeping sickness” as a public health problem.
- It has become the first country in Africa to reach this milestone.
- Sleeping sickness is caused by **parasites which are transmitted by infected tsetse flies.**

**28. Consider the following statements regarding Teesta River:**

1. **It is a tributary of the Brahmaputra River which flows through India, Bhutan and Bangladesh.**
2. **It rises in the Himalayas near Chunthang in Sikkim.**

**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 – B**

**Explanation**

Bangladesh is discussing an almost **\$1 billion loan from China** for a comprehensive management and restoration project on the Teesta river. The project is aimed at managing the river basin efficiently, controlling floods, and tackling the water crisis in summers.

India and Bangladesh have been engaged in a long-standing dispute over water-sharing in the Teesta. Bangladesh’s discussions with China come at a time when India is particularly wary about China following the standoff in Ladakh.

**Teesta River**

- Tista River, a tributary of the **Jamuna River (Brahmaputra River)**, flowing through **India and Bangladesh.**
- It rises in the Himalayas near Chunthang in Sikkim (India), flows to the south, cutting a deep gorge through the Siwalik Hills east of Darjiling (in West Bengal, India), and turns southeast to run through the Sivok Khola pass onto the plains of West Bengal.

- Originally, the river continued southward to empty directly into the **upper Padma River (Ganges [Ganga] River)**.
- However, later, the river changed its course to flow eastward, crossing the Rangpur region of Bangladesh to join the Jamuna River near Chilmari. The Teesta is one of the 54 rivers that enter Bangladesh from upstream India before flowing into the Bay of Bengal.

### Teesta Dispute

- In 1983, India and Bangladesh had agreed into an ad hoc sharing of the water during the dry season (October to April) with an allocation of **36 per cent for Bangladesh and 39 per cent** for India, leaving **25 per cent to be decided** later. But this has remained pending for several decades.
- Bangladesh wants a fair and equitable distribution of Teesta waters from India, on the lines of the Ganga Water Treaty 1996.
- In 2011, both sides had agreed to share the river's water 50:50. This agreement was not signed due to opposition from chief minister of West Bengal.

### Recent Strains In India – Bangladesh relation

- **Citizenship Amendment Act (CAA)** – Bangladesh PM said that while the CAA is an internal matter of India, the act was “not necessary”.
- **Tablighi Jamaat** - The continued custody of Tablighi Jamaat members is turning into another friction point.

### Bangladesh – China: Evolving Relationship

#### Economic

- China is the **biggest trading partner of Bangladesh** and is the foremost source of imports. In 2019, the trade between the two countries was \$18 billion. It is heavily favoured towards China.
- Recently, China declared zero duty on 97% of imports from Bangladesh. It has promised around \$30 billion worth of financial assistance to Bangladesh.

#### Defence

- China is the **biggest arms supplier to Bangladesh**. It has been a legacy issue — after the liberation, officers of Pakistan Army — who were well-versed with Chinese arms — joined Bangladesh Army and that's how they preferred Chinese weapons.
- Recently, Bangladesh purchased **two Ming class submarines from China**.

29. Recently Qutub Minar was illuminated in white and red to commemorate 40th anniversary of Solidarity movement of which of the following country?

- a) Poland
- b) Russia
- c) Sweden
- d) Venezuela

Answer: A

#### Explanation

- In order to commemorate the 40th anniversary of the **solidarity movement in Poland**, Qutub Minar was lit in the colours of the Polish Flag (white and red).

- Solidarity movement was an **anti-bureaucratic social movement** based on Gandhian principles of non-violence that fought for civil rights in Poland during the communist rule.
- **Solidarity** (in Polish language: Solidarność) originated in Poland on 31 August 1980, when the **totalitarian communist authorities allowed to establish independent trade unions**.
- Being the first mass civil rights organization in the Soviet Bloc, Solidarity in a short time gathered more than 10 million members.

**30. Consider the following statements regarding National Council for Promotion of Urdu Language (NCPUL):**

1. It comes under the Department of Secondary and Higher Education of MHRD.
2. It is the national Nodal Agency for the promotion of the Urdu language.
3. World Urdu Conference 2020 was organized by NCPUL.

**Which of the above statements is/are Correct?**

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

**Answer: D**

**Explanation**

- The World Urdu Conference 2020 was organised by the **National Council for Promotion of Urdu Language (NCPUL)** in New Delhi.
- Urdu is one of the languages mentioned in the 8th Schedule to the Constitution. It is one of the official languages in different states such as Kashmir, Telangana, UP, Bihar, New Delhi and West Bengal.

**About National Council for Promotion of Urdu Language:**

- It is an autonomous body under the **Department of Secondary and Higher Education (MHRD)**. It started functioning in 1996.
- In its capacity as the National Nodal Agency for the promotion of the Urdu language NCPUL is the principal coordinating and monitoring authority for promotion of Urdu language and Urdu education.

**31. Who among the following is ex-officio president of the Association of Renewable Energy Agencies of States (AREAS):**

- a) Union Minister for New & Renewable Energy
- b) Secretary of Ministry of New & Renewable Energy
- c) Cabinet Secretary of India
- d) Secretary of Ministry of Environment, Forest and Climate Change

**Answer: B**

**Explanation**

Recently, 6<sup>th</sup> *Foundation Day* (27th August 2020) of AREAS was observed.

**About AREAS:**

- It has been formed on Ministry of New & Renewable Energy (MNRE) initiative to interact and learn from each other's experiences and also share their best practices and knowledge regarding technologies and schemes/programmes.
- **Formation** - The AREAS got registered under Society Registration Act 1860 in August 2014.
- **Members - Union Minister for New & Renewable Energy is the Patron** of the Association and **Secretary, MNRE is the ex-officio President** of the Association. All SNAs (State Nodal Agencies) are the member of the Association.

**32. India's longest river crossing ropeway was opened to the public recently. It is located on the river**

- a) Brahmaputra
- b) Ganga
- c) Kosi
- d) None of the above

**Answer: A**

**Explanation**

- India's longest river crossing ropeway — **across river Brahmaputra** — has been opened to the public.
- The **1.8-kilometre-long ropeway** cuts travel time between the two banks to 8 minutes. The current travel options between the two banks are by ferry (30 minutes or more) or by road through a bridge that usually takes over an hour.
- Apart from substantially reducing travel time, the ropeway will provide a breathtaking view of the mighty Brahmaputra and promote tourism in the State.
- The ropeway is a convenient and non-polluting means of transport, as well as a source of environmentally friendly tourism. Further, it is ecologically sustainable as it is run by electric power protecting the beauty of the area.

**Ropeway system in India: Facts**

- **Mansa Devi ropeways service** - Busiest ropeway of India
- **Gulmarg Gondola** - Second-highest cable car in the world and the highest and longest cable car in Asia.

**33. Intergovernmental Oceanographic Commission (IOC) has been established by**

- a) World Meteorological Organization
- b) UNESCO
- c) International Council for the Exploration of the Sea
- d) International Institute of Ocean Technology

**Answer: B**

**Explanation**

- UNESCO's Intergovernmental Oceanographic Commission has granted "**Tsunami Ready**" **recognition** to the two coastal villages of Odisha.
- These villages are - **Venkatraipur** (Ganjam district) **and Noliasahi villages** (Jagatsinghpur district).
- With this, **Odisha became the first state** in the country to have such villages and **India the first in the Indian Ocean region** to achieve the honour from Commission.
- Odisha State Disaster Management Authority was set up in the state following the 1999 super cyclone that claimed 10,000 lives. It has implemented the Tsunami Ready programme in the State.

**Indian Ocean Tsunami Ready Programme of IOC-UNESCO**

- It is a community performance-based programme that facilitates tsunami preparedness as an active collaboration of the community, community leaders, and national and local emergency management agencies.
- The main objective of this programme is to **improve coastal community preparedness** for tsunami emergencies, to **minimize the loss of life and property** and to **ensure structural and systematic approach** in building community preparedness.

**About Intergovernmental Oceanographic Commission**

- The Intergovernmental Oceanographic Commission of UNESCO (IOC/UNESCO) was established by resolution adopted by the **General Conference of UNESCO**.
- The **Commission aims to improve** the governance, management, institutional capacity, and decision-making processes of its Member States with respect to marine resources and climate variability and to foster sustainable development of the marine environment, in particular in developing countries.
- The IOC is the **only UN body specialized in ocean science and services**.
- **UNESCO-IOC is co-convenor** with the World Meteorological Organization of the **World Climate Change Conference**.

**34. Nuakhai Juhar is**

- a) New Year Festival of Andhra Pradesh**
- b) Agricultural Festival of Telangana**
- c) Agricultural Festival of Odisha**
- d) New Year Festival of West Bengal**

**Answer: C**

**Explanation**

- It is an agricultural festival of Western Odisha, southern Chhattisgarh and adjoining areas of Simdega (Jharkhand).
- Celebrated to welcome the new crop of the season
- **Observed on *panchami tithi*** (the fifth day) of the lunar fortnight of the month of **Bhadrapada** (August–September), the day after the Ganesh Chaturthi festival.

- On this day, people **worship food grain** and prepare special meals. Farmers offer the first produce from their lands to **Goddess Samaleswari, the famous 'Mother Goddess' of Sambalpur district of Odisha.**

**35. Consider the following statements regarding Kavkaz-2020:**

1. **It is a multi-lateral strategic command-post exercise hosted by Russia.**
2. **India is participating in Kavakaz-2020.**
3. **China and Pakistan have boycotted the event due to participation of India.**

**Which of the above statements is/are Correct?**

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

**Answer: A**

**Explanation**

- India has decided **not to participate** in a **multi-lateral Kavkaz-2020 exercise**. India took this decision owing to the COVID-19 pandemic. However, analysts believe that the ongoing tension with China at LAC might be the reason to pull out.
- Along with several other countries, **troops of China and Pakistan** would also participate in the event.
- Russian KavKaz 2020 is a **multilateral strategic command-post exercise** or simply called war games. The exercise is being held in the Astrakhan province of Southern Russia.
- In this event, member countries of **Shanghai Cooperation Organisation and Central Asian countries** would be participating.
- Each year, **Russia hosts similar strategic exercise**. It was Zapad 2017, Vostok 2018, Tsentr 2019, and now Kavkaz 2020.

**36. Consider the following statements regarding Bru (Reang) community:**

1. **Ethnically, Brus are different from the Mizos.**
2. **This community does not have their own distinct language and dialect.**
3. **They form one of the different scheduled tribes of Tripura.**

**Which of the above statements is/are Correct?**

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

**Answer: B**

**Explanation**

Three organisations representing the Bru community have **rejected the sites proposed** for their resettlement. These sites were proposed by the Joint Movement Committee (JMC), an umbrella group of non-Brus in Tripura.

### **Key Highlights**

- The JMC comprising the Bengali, Mizo, Buddhist Barua and other communities had submitted a memorandum to the Tripura government.
- The memorandum specified six places in Kanchanpur and Panisagar subdivisions of North Tripura district for the resettlement of the Brus.

### **Why Bru Rejected The Sites**

- Bru representatives contended that the people involved in site selection were not a part of either the quadrilateral agreement or signatory.

### **Background**

- The quadrilateral agreement was signed among the Bru groups, the Centre and the State governments of Mizoram and Tripura in New Delhi in January 2020.
- According to the agreement, the **Bru tribes will be settled in Tripura**. Earlier, an agreement was signed in 2018 to send them back but it could not be implemented due to their protest.
- The government **announced a package** of Rs. 600 crore under this agreement.
- A **fixed deposit of Rs. 4 lakh** will be given to each family as an amount of government aid. They will be able to withdraw this amount after two years.
- According to the agreement, each of the displaced families will be given 40x30 sq ft residential plots.
- Apart from them, each family will be given Rs. 5,000 cash per month for two years.
- The agreement highlights that each displaced family will also be given free ration for two years and aid of Rs. 1.5 lakh to build their houses.

### **About Bru-Reang Refugee Crisis**

- In 1997, about 30,000 Bru-Reang tribals fled from Mizoram due to ethnic tension. They took shelter in Tripura's refugee camps.
- The government of India has been making several efforts for permanent rehabilitation of Bru-Reang since 2010.
- **In 2018**, the government **offered a package** to these refugees for their peaceful return to the Mizoram. However, only few families accepted the offer and went back to the Mizoram.

### **About BRU:**

- The Brus--spread across Tripura, Mizoram and parts of southern Assam--are the most populous tribe in Tripura.
- Also known as Reangs in the state, they are **ethnically different from the Mizos**, with their own distinct language and dialect and form one of the 21 scheduled tribes of Tripura.

**37. Recently, the Ministry of Defence launched the Naval Innovation and Indigenisation Organisation (NIIO). Consider the following statement regarding NIIO:**

- 1. Its aim is to foster innovation and indigenisation for self-reliance in defence.**
- 2. It will be a three-tiered organization enabling the end-users to interact with academia and industry.**

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**

- The Defence Minister of India launched the **Naval Innovation and Indigenisation Organisation (NIIO)**.
- It will put in place dedicated structures for the end users to **interact with academia and industry** towards fostering **innovation** and **indigenisation** for self-reliance in defence in keeping with the vision of **Atmanirbhar Bharat**.
- The NIIO is a three-tiered organisation.
  - **Naval Technology Acceleration Council (N-TAC)** will bring together the twin aspects of **innovation** and **indigenisation** and provide apex level directives.
  - **A working group** under the N-TAC will **implement** the projects.
  - A **Technology Development Acceleration Cell (TDAC)** has also been created for induction of emerging disruptive technology in an accelerated time frame.
- Indian Navy already has a functional **Directorate of Indigenisation (DoI)** and the new structures created will build upon the ongoing indigenisation initiatives, as well as focus on innovation.
- A compendium of Indian Navy's Indigenisation perspective plans titled '**SWAVLAMBAN**' was also released on the occasion.

**38. Consider the following forces of India:**

1. **Assam Rifles**
2. **Border Security Force**
3. **Indian Air Force**
4. **Indian Coast Guard**

Which of the above forces do not come under the jurisdiction of Armed Forces Tribunal (AFT)?

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

**Answer: D**

**Explanation**

- The principal bench of the Armed Forces Tribunal has **initiated hearing of matters pertaining to regional benches through video conferencing**.

- The AFT's principal bench is the **only court that has been conducting physical hearings** since June 8 amid the Covid-19 pandemic.
- As a result, hardships were faced by armed forces personnel, retired as well as serving, primarily due to their far-flung locations and various security related issues.

#### **About AFT**

- It is a **military tribunal** of India **established in 2009** under the Armed Forces Tribunal Act, 2007.
- **169<sup>th</sup> Law Commission Report** and various Supreme Court directives formed the basis of enactment of this act.
- **Benches** - The Principal Bench is located at New Delhi. There are ten regional benches.
- **Composition** - The tribunal is composed of a **Chairperson and two types of members viz. Judicial and Administrative**. The number of both types of members is decided by Central Government. Normally, each bench has one judicial member and one administrative member. Tenure of Chairpersons and members is four years.
- **Jurisdiction** - The territorial jurisdiction of AFT covers entire country and covers the three-armed forces of India viz. Army, Navy and Air Force. **Paramilitary forces don't come under its jurisdiction.**

#### **39. Consider the following statements about BeiDou:**

1. It is a **Navigation Satellite System developed by China.**
2. **China plans to complete it by 2024 and it can be a potential rival to the US Global Positioning System (GPS).**
3. It consists of a total **27 satellites, all inclined geosynchronous orbits.**
4. **After completion, it will be more accurate than GPS.**

Which of the above statements is/are correct?

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

**Answer: A**

**Explanation:**

- Initiated in 1994, **China** has recently **completed** its **BeiDou Navigation Satellite System constellation**, that can potentially rival the US Global Positioning System (GPS).
- The system was named "Beidou" after the Chinese term for the **Big Dipper constellation**.
- BeiDou offers services including **accurate positioning, navigation and timing as well as short message communication**.
- China's navigation system uses a network of satellites and can provide positional accuracies of under **ten metres** (GPS provides positioning accuracies of under 2.2 metres, GPS is the **most accurate navigation** system in the world.).
- It consists of a total 35 satellites, **27 satellites in medium Earth orbit, five in geostationary orbit and three more in inclined geosynchronous orbits.**

- **More than 100 countries** including Pakistan and countries part of the Belt and Road Initiative (BRI) are **already using** the system.
- **Other countries working on building their navigation systems:**
  - The **GPS is owned by the US government** and operated by the US Air Force. The US has provided GPS signals to users worldwide free of cost since the 1980s.
  - **Russia** has its navigation system called **GLONASS**.
  - **European Union (EU)** has developed **Galileo**.
  - India's navigation system is called **Navigation with Indian Constellation (NavIC)**.

**NAVigation with Indian Constellation (NavIC)**

- The **Indian Regional Navigation Satellite System (IRNSS)** is officially called NavIC. The regional geo-positioning system has been **designed in India by ISRO** to provide accurate positioning in India and around the Indian mainland.
- It is designed to **provide accurate position information service** to users in India as well as the region **extending up to 1500 km from its boundary**, which is its primary service area.
- IRNSS will provide two types of services, namely,
  - a) **Standard Positioning Service (SPS)** which is provided to **all the users**.
  - b) **Restricted Service (RS)** which is an encrypted service provided **only to the authorised users**.
- The IRNSS System is expected to provide a **position accuracy of better than 20 m** in the primary service area.
- **Some applications of IRNSS are:** terrestrial, aerial and marine navigation, disaster management, vehicle tracking and fleet management and integration with mobile phones.

**40. What is the name given to the Oxford-AstraZeneca Covid-19 vaccine candidate**

- a) Covaxin
- b) Covishield
- c) Coronil
- d) CorOx

**Answer: B**

**Explanation**

- The Drugs Controller General of India (DCGI) has approved the application of **Serum Institute of India (SII)** to conduct late-stage human trials in the country for the Covid-19 vaccine - **Covishield**.
- **Covishield** – the name given to the Oxford-AstraZeneca Covid-19 vaccine candidate and is technically referred to as AZD1222 or ChAdOx 1 nCoV-19.
- SII, the **world's largest maker of vaccines**, has a tie-up with AstraZeneca, the Swedish-British pharma giant, to manufacture the Covid-19 vaccine **for low- and middle-income countries**.
- The Institute can now start **larger phase II/III trials of the candidate in India**, ahead of Bharat Biotech's Covaxin and Zydus Cadila's ZyCoV-D, other candidates that are still in phase I/II trials.

- The trial sites will likely include those identified by the **National Biopharma Mission** and **Grand Challenges India Programme**.

**Drugs Controller General of India (DCGI)**

- DCGI, department of **Central Drugs Standard Control Organization (CDSCO)**, is **responsible for approval of licenses of specified categories of drugs** such as blood and blood products, vaccines, IV fluids and sera in India.
- DCGI lays down standards and quality of manufacturing, selling, import and distribution of drugs in India.
- It comes under the **Ministry of Health & Family Welfare** and acts as **appellate authority** in case of any dispute regarding quality of drugs.

**Grand Challenges India Programme**

Grand Challenges India is a partnership framework for the **Department of Biotechnology (DBT)** in India, **Biotechnology Industry Research Assistance Council (BIRAC)**, and the **Bill & Melinda Gates Foundation** to launch joint initiatives aimed at catalyzing innovative health and development research within India.

*To Read More about National Biopharma Mission, please refer The Recitals- July 2020.*

41. Consider the following statements about Starship.

1. Starship prototype of the Space X's uncrewed "Moon ship" successfully flew to an altitude of over 500 feet for a little less than 60 seconds.
2. It has been described as "the world's most powerful launch vehicle" with an ability to carry over 100 metric tonnes to the Earth's orbit.

Which of the above statements is/are correct

- a) 1 only
- b) 2 only
- c) Both 1 and 2
- d) None of the above

**Answer: B**

**Explanation:**

- **SN5 Starship prototype** of the Space X's **uncrewed "Mars ship"** successfully flew to an altitude of over 500 feet for a little less than 60 seconds. It is a **stainless steel test vehicle** and is a part of the **Starship spacecraft**.
- Starship, **designed by SpaceX**, is a **spacecraft and super-heavy booster rocket** meant to act as a **reusable transportation system** for crew and cargo to the **Earth's orbit, Moon and Mars**.
- SpaceX has described Starship as "the world's most powerful launch vehicle" with an ability to **carry over 100 metric tonnes to the Earth's orbit**.
- Starship has been under development since 2012 and is a part of Space X's central mission to make **interplanetary travel accessible and affordable** and to become the first private company to do so.
- Once functional, the Starship spacecraft will **enter Mars' atmosphere at a speed of 7.5 km per second** and will be designed to withstand multiple entries.

- Starship can **deliver satellites further and at lower marginal costs than SpaceX's Falcon vehicles** and it can ferry both cargo and crew to the **International Space Station (ISS)**.
- Once developed, Starship is also expected to help carry large amounts of cargo to the Moon, for human spaceflight development and research. Beyond the Moon, the spacecraft is being designed for carrying crew and cargo for interplanetary missions as well.

**42. Consider the following sentences**

1. **Ammonium Nitrate is a highly explosive chemical.**
2. **It is used in making fertilizer and many other products also, apart from explosive production.**
3. **In India, there is no specific law/rules regarding Ammonium Nitrate and it is regulated like other explosives under Explosives Act, 1884.**

**Which of the above sentences is/are correct**

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

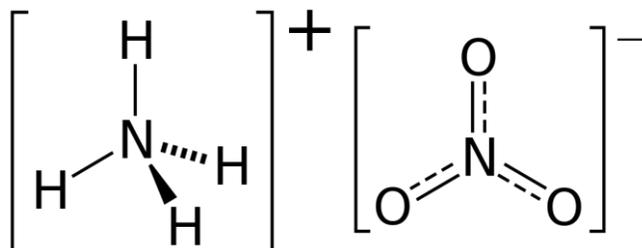
**Answer: C**

**Explanation:**

- A **huge blast** in port warehouses near central **Beirut, Lebanon** storing highly explosive material killed 78 people and injured nearly 4,000 and the likely cause appears to have been the highly reactive chemical **ammonium nitrate**.
- Experts point out serious **lack of maintaining safety norms** at the explosive storage. Large quantities of stored ammonium nitrate are regarded as a major fire hazard, with multiple reported cases across the world. Over 2,750 tonnes of ammonium nitrate were kept in a warehouse, seized six years ago.
- The smoke that came from the blast is of **blood red colour**. That's because of the nitrogen oxide air pollutants in it. While the chemicals in the air should dissipate fairly quickly, lingering pollutants can cause problems later, for example if they **acidify rain**.

**Ammonium Nitrate**

- Ammonium nitrate is a chemical compound with the chemical formula **NH<sub>4</sub>NO<sub>3</sub>**. It is a **white crystalline solid** and is **highly soluble in water**. It is predominantly used in agriculture as a **high-nitrogen fertilizer**.
- Its **other major use** is as a component of **explosive mixtures** used in mining, quarrying, and civil construction. It is **also** used in production of anaesthetic gases, cold packs and other products.
- It is the major constituent of **ANFO(ammonium nitrate/fuel oil)**, a popular industrial explosive which accounts



for 80% of explosives used in North America; similar formulations have been used in improvised explosive devices.

- Many **countries** are **phasing out** its use in consumer applications due to concerns over its potential for misuse.
- It is **not explosive on its own**, rather it is an **oxidiser**, drawing oxygen to a fire – and therefore making it much more intense.
- While ammonium nitrate can in fact put out a fire, if the chemical itself is contaminated, for example with oil, **it becomes highly explosive**.
- However, for combinations to explode, triggers like **detonators** are **required**. Many **Improvised Explosive Devices (IEDs)** used by terrorists around the world have ANFO as the main explosive, triggered by primary explosives like RDX or TNT.

#### **Occurrence**

- Ammonium nitrate is found as a **natural mineral (gwihabaite** – the ammonium analogue of saltpetre, which is correctly called niter, and other nitre minerals such as sodium nitrate known as **nitratine**) in the driest regions of the **Atacama Desert in Chile**, often as a crust on the ground and/or in conjunction with other nitrate, iodate, and halide minerals.
- Ammonium nitrate was mined there in the past, but **virtually 100% of the chemical now used is synthetic**.

#### **Regulations In India About Ammonium Nitrate**

- In India, **Ammonium Nitrate Rules, 2012**, under **Explosives Act, 1884**, define ammonium nitrate as the “compound with formula  $\text{NH}_4\text{NO}_3$  including any mixture or compound having more than 45% ammonium nitrate by weight.
- It includes emulsions, suspensions, melts or gels but **exclude emulsion or slurry explosives** and non-explosives emulsion matrix and fertilizers from which the ammonium nitrate cannot be separated.
- As it has a **strong possibility of misuse**, ammonium nitrate is **highly regulated** in India, at least in letter.
  - The manufacture, conversion, bagging, import, export, transport, possession for sale or use of ammonium nitrate is covered under The Ammonium Nitrate Rules, 2012. The rules also make storage of ammonium nitrate in large quantities in populated areas illegal in India.
  - For the manufacture of ammonium nitrate, an Industrial licence is required under the Industrial Development and Regulation Act, 1951. A license under the Ammonium Nitrate Rules, 2012 is also required for any activity related to ammonium nitrate.

#### **43. Consider the following sentences about Black Boxes in aircraft**

1. **Most aircraft are required to be equipped with two black boxes — the cockpit voice recorder (CVR) and the flight data recorder (FDR).**
2. **The FDR records radio transmissions and other sounds in the cockpit such as conversations between the pilots and engine noises.**
3. **The CVR records more than 80 different types of information such as altitude, airspeed, flight heading, vertical acceleration, pitch, roll, autopilot status etc.**
4. **They are actually two blue metallic boxes containing the recorders.**
5. **They are equipped towards the tail end of the aircraft – where usually the impact of a crash is the least.**

Which of the above sentences is/are correct.

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

**Answer: B**

**Explanation:**

- Most **aircraft** are required to be equipped with **two black boxes** — the **cockpit voice recorder (CVR)** and **the flight data recorder (FDR)** — that record the information about a flight and help reconstruct the events leading to an aircraft accident.
- The **CVR records** radio transmissions and other sounds in the cockpit such as conversations between the pilots and engine noises.
- The **flight data recorder records** more than 80 different types of information such as altitude, airspeed, flight heading, vertical acceleration, pitch, roll, autopilot status etc.
- The black boxes, which are actually **two orange metallic boxes** containing the recorders, date back to the early **1950s**, when, following plane crashes, investigators were unable to arrive a conclusive cause for the accidents and deemed it necessary to install the said recorders on aircraft. In the initial days of the black box, the information was recorded on to a metal strip, which was then upgraded to **magnetic drives** succeeded by solid state memory chips.
- It usually takes at least **10-15 days to analyse the data recovered** from the black boxes.

**How Do The Black Boxes Survive The Crash?**

- The recording devices are stored inside a unit that is generally **made out of strong substances such as steel or titanium** and are also insulated from factors such as extreme heat, cold or wetness.
- To protect these black boxes, they are **equipped towards the tail end of the aircraft – where usually the impact of a crash is the least.**
- There have been cases where planes have crashed into water bodies. To make black boxes **discoverable** in situations when they are under water, they are equipped with a **beacon that sends out ultrasound signals** for 30 days. However, in certain cases – like the Malaysian Airlines MH370 flight – the recorders aren't found despite all the redundancies.

**44. India's first Snow Leopard Conservation Centre will be opened in which among the following states?**

- a) Uttarakhand
- b) Arunachal Pradesh
- c) Jammu and Kashmir
- d) Himachal Pradesh

**Answer: A**

**Explanation:**

- Taking another step towards conservation of elusive snow leopards, India's first Snow Leopard Conservation Centre will be opened in **Uttarkashi forest division in Uttarakhand.**

- The conservation centre will be built by the Uttarakhand forest department along **United Nations Development Programme (UNDP)** as part of its six-year long project, **SECURE Himalayas**.



#### About Snow Leopard

- **Habitat and Distribution:** Snow leopards are **found in 12 countries**—including China, Bhutan, Nepal, India, Pakistan, Afghanistan, Russia, and Mongolia. In India, their geographical range encompasses the states of Jammu and Kashmir, Himachal Pradesh, Uttarakhand, Sikkim and Arunachal Pradesh.
- **Conservation Status:**
  - **IUCN:** Vulnerable.
  - **CITES- Appendix I Wildlife Protection Act:** Schedule I
- **Threats:**
  - **Retaliatory Killings:** Snow leopards are often killed by local farmers because they prey on livestock such as sheep, goats, horses, and yak calves.
  - **Habitat Fragmentation:** The snow leopard habitat range continues to decline from human settlement and increased use of grazing space.
  - **Climate change:** Impacts from climate change could result in a loss of up to 30 percent of the snow leopard habitat in the Himalayas alone.
- Snow leopards play a key role as both top predator and as an indicator of the health of their high-altitude habitat.

#### Additional Information

##### SECURE Himalayas

- Started in 2017, it is a six-year long project which aims at securing livelihoods, conservation, sustainable use and restoration of high range Himalayan ecosystems.
- The project also looks into conservation of snow leopards and other endangered species and their habitats, found in Himalayas.

##### Global Snow Leopard and Ecosystem Protection Program (GSLEP)

- In the **2013 Bishkek Declaration**, the 12 snow leopard range countries endorsed a comprehensive, long-term Global Snow Leopard Conservation Program – this was the birth of GSLEP.
- It seeks to address high-mountain development issues using the conservation of the snow leopard as a flagship.

45. Milne Ice Shelf, recently in news, is located in which among the following country?

- a) Canada
- b) Russia
- c) Greenland
- d) None of the above

**Answer: A**

**Explanation:**

- The collapse of **Canada's Milne ice shelf — the country's last one** — in a corner of the country's **Ellesmere Island**, has increased fears of the Arctic region being under severe stress due to global warming.
- The Milne ice shelf lost more than 40 per cent of its ice over two days end of July 2020. This has increased concerns over the rapid melting of ice and the breaking of old **ice shelves — large floating pieces of ice that form when a glacier or ice sheet flows into the sea surface**.
- This also meant the last known **epishelf lake — a water body dammed by the ice shelf and floating on the ocean surface** — in the northern hemisphere and on the Milne ice shelf, no longer exists. Ellesmere Island also lost two of its polar ice caps along with the Milne ice shelf.
- Ellesmere Island has **two other prominent ice shelves — Murray and Simmons** — that have also reduced in size and are likely to disappear in the next 10 years.

**46. Eravikulam National Park, recently in news, is located in which among the following states?**

- a) Arunachal Pradesh
- b) Kerala
- c) Mizoram
- d) None of the above

**Answer: B**

**Explanation:**

- A landslide has happened at Pettimudi, a hamlet in Rajamala ward in **Kerala's Idukki district**. Rajamala includes **Eravikulam National Park**, and the landslide was triggered from a shola forest region in the national park.
- The location where the landslide was triggered, according to the Kerala Geology Department, has a 40° slope, and any slope above 20° is **vulnerable to slipping during heavy rain**. The soil has a high content of sand, which absorbs more water, takes a loose form, and is at risk of slipping down.
- An analysis of landslides in Idukki by the State Disaster Management Authority has shown that high-intensity rainfall saturates the soil on the slopes. Soil with higher clay content has high water retention capacity and low drainage capacity, leading to high water pressure in the slope material.

**About Eravikulam National Park**

- Eravikulam National Park was managed as a **Game Reserve** by Kannan Devan Hill Produce Company till 1971. The imperatives of land reforms led to the enactment of **Kannan Devan Hills (Resumption of Lands) Act 1971** by which all lands that were not under cultivation by the company were vested with the Government of Kerala.
- The Government of Kerala declared the area as 'Eravikulam-Rajamalai' Wildlife Sanctuary in 1975 for the protection of the Nilgiri Tahr and subsequently, in 1978 it was upgraded to a National Park.

**Game Reserve**

A game reserve (also known as a wildlife preserve or a game park) is a large area of land where wild animals live safely or are hunted in a controlled way for sport.

**• Significance:**

- The park holds the largest viable population of the **endangered Nilgiri Tahr** and is a famous **habitat of Neelakurinji which blooms once in 12 years**.
- The park represents the largest and least disturbed stretch of unique **Montane Shola-Grassland vegetation** in the Western Ghats.
- The National Park is regionally important as a **catchment area for both east (tributaries of River Pambar) and west (tributaries of River Periyar and Chalakkudy) flowing Rivers**.
- The **highest peak in peninsular India, Anamudi (2695 m)**, is situated in this park.
- The park in continuity with the neighboring **Chinnar Wildlife Sanctuary, Anamudi Shola National Park, Pampadum Shola National Park, Kurinjimala Sanctuary and Anamalai Tiger Reserve** forms the largest conservation landscape in the Western Ghats.

**47. Consider the following statements with reference to Agatti Island**

1. **It is situated on a coral atoll in the Union Territory of Lakshadweep**
2. **It is located to the west of Kavaratti Island.**

**Which of the following statements given above is/are correct?**

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

**Answer: C**

**Explanation:**

- The southern bench of the National Green Tribunal has granted an **interim stay on felling of coconut trees on Agatti Island in Lakshadweep** for the purpose of forming a beach road.
- The Tribunal has constituted a committee to find out whether there has been any violation of the Integrated Island Management Plan (IIMP) approved by the Lakshadweep Administration.

**About Agatti Island**

- Agatti Island is a 7.6 km long island, situated on a **coral atoll called Agatti atoll** in the Union Territory of Lakshadweep, India.
- The Agatti Island is at a distance of 459 km (248 nautical miles) from Kochi and is **located the west of Kavaratti Island**. It has a north-east, south-west trend with a long tail on the south.
- Fishing is the most important industry of Agatti which is perhaps the only island besides Minicoy getting surplus fish.
- **Integrated Island Management Plan (IIMP), 2015:** It governs management activities on 10 islands of the Lakshadweep. IIMP for Lakshadweep was formulated on the basis of a report submitted by the Supreme Court-appointed Expert Committee, headed by Justice R.V. Raveendran.

**48. Consider the following statement about Association of Renewable Energy Agencies of the States (AREAS)**

1. AREAS has been formed on the initiative of Ministry of New and Renewable Energy.
2. Prime Minister is the ex-officio President of AREAS.

Which of the statements given above is/are correct?

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

**Answer: A**

**Explanation:**

Union Minister of Power and New & Renewable Energy graced the ceremony of **6th Foundation Day of AREAS** on 27th August 2020 and launched AREAS website and also Telephone Directory of AREAS.

**About Association of Renewable Energy Agencies of the States (AREAS)**

- AREAS has been formed on the **initiative of Ministry of New and Renewable Energy**.
- It aims to interact and learn from each other's experiences and also share their best practices and knowledge regarding technologies and schemes/programmes.
- The AREAS got registered under **Society Registration Act 1860 on 27 August 2014**.
- Union Minister for New & Renewable Energy is the Patron of the Association and **Secretary, MNRE is the ex-officio President of the Association**. All SNAs (State Nodal Agencies) are the member of the Association.

**Report on Clause 6 of Assam Accord**

- The All Assam Students Union (AASU) made public a **confidential report prepared by a central panel asked to look into the implementation of Clause 6 of Assam Accord**.
- The panel had submitted the report on 25 February, 2020 to Chief Minister of Assam and it was to be presented to Union Home Minister after that. However, there is no clarity on the status of the report.

**What Is Clause 6 Of Assam Accord?**

- A Six year agitation demanding **identification and deportation of illegal immigrants**, launched by All Assam Students' Union (AASU) in **1979**, concluded with the signing of Assam Accord in 1985 between Government of India and the leaders of the Assam Movement.
- During the Assam agitation, the demand was for **detection and deportation of migrants who had illegally entered Assam after 1951**. The Assam Accord, however, set the cut-off at March 24, 1971 for recognition as citizens. The National Register of Citizens (NRC) was updated based on this cutoff. Therefore, Clause 6 was inserted to *safeguard the socio-political rights and culture of the "indigenous people of Assam"*.
- **Clause 6 reads:** "Constitutional, legislative and administrative safeguards, as may be appropriate, shall be provided to protect, preserve and promote the cultural, social, linguistic identity and heritage of the Assamese people." So, Clause 6 is meant to give the Assamese people certain safeguards, which would **not be available to migrants between 1951 and 1971**.
- Several committees have been set up over the years to make recommendations on implementation of Clause 6. None of them made headway on the provision's contentious issues, however, until the latest one that was set up by the Home Ministry in 2019 under the chairmanship of retired High Court judge Biplab Kumar Sharma.

**Key Highlights Of The Recommendation****A. Defined the "Assamese people" for the purpose of Clause 6**

The report proposes January 1, 1951 as the cut-off date for any Indian citizen residing in Assam to be defined as an Assamese people.

**B. Reservation for Assamese**

- It seeks reservation for Assamese in Parliament, state assembly, local bodies.
- It recommended creating an Upper House (Legislative Council of Assam) whose seats will be reserved for the 'Assamese people'.

**C. Other Safeguards**

- The report also dealt with language, and cultural and social rights. According to it, Assamese language shall continue to be official language throughout the state with provisions for use of local languages in Barak Valley, Hill Districts and the Bodoland Territorial Area Districts.
- Mandatory provision of an Assamese language paper for recruitment in state government services with alternatives for Barak Valley districts, BTAD and Hills Districts.
- It also proposed to set up Academies for all-round development of each of the indigenous tribal languages including, Bodo, Mishing, Karbi, Dimasa, Koch-Rajbongshi, Rabha, Deuri, Tiwa, Tai and other indigenous languages.

#### **D. Regulation of Outsiders**

It recommended regulation of entry of people from other states into Assam, which include the implementation of an Inner Line Permit (ILP) regime in the state (Currently, ILP is applicable in **Manipur, Arunachal Pradesh, Nagaland and Mizoram**).

#### **What Will Happen If The Recommendation Is Accepted?**

- If the recommendation is accepted, those who migrated between 1951 and 1971 would be Indian citizens under the Assam Accord and NRC.
- However, **they would not be eligible for safeguards meant for “Assamese people”**.

#### **Hindu Women’s Inheritance Rights**

Recently Supreme Court (SC) expanded on a Hindu woman’s right to be a joint legal heir and inherit ancestral property on terms equal to male heirs.

#### **Supreme Court Ruling**

- The SC ruled that a **Hindu woman’s right to be a joint heir to the ancestral property is by birth and does not depend on whether her father was alive or not** when the law was enacted in 2005.
- **The Hindu Succession (Amendment) Act, 2005** gave Hindu women the right to be coparceners or joint legal heirs in the same way a male heir does. “Since the coparcenary is by birth, it is not necessary that the father coparcener should be living as on 9.9.2005,”

#### **Hindu Succession Act, 1956**

- The Mitakshara school of Hindu law codified as the **Hindu Succession Act, 1956** governed succession and inheritance of property but **only recognised males as legal heirs**.
- The law applied to everyone who is **not a Muslim, Christian, Parsi or Jew by religion**. Buddhists, Sikhs, Jains and followers of Arya Samaj, Brahma Samaj are also considered Hindus for the purposes of this law.
- In a Hindu Undivided Family, several legal heirs through generations can exist jointly. Traditionally, only male descendants of a common ancestor along with their mothers, wives and unmarried daughters are considered a joint Hindu family. The legal heirs hold the family property jointly.

#### **The Hindu Succession (Amendment) Act, 2005**

- **Section 6 of the 1956 Act was amended in 2005** to make daughter also a coparcener by birth “in her own right in the same manner as the son”.
- The law also gave the daughter the same rights and liabilities “in the coparcenary property as she would have had if she had been a son”.
- The law applies to ancestral property and to intestate succession in personal property — where succession happens as per law and not through a will.
- The 174th Law Commission Report had also recommended this reform in Hindu succession law. Even before the 2005 amendment, Andhra Pradesh, Karnataka, Maharashtra and Tamil Nadu had made this change in the law, and Kerala had abolished the Hindu Joint Family System in 1975.

#### **Current Case**

- While the 2005 law granted equal rights to women, questions were raised in multiple cases on whether the law applied retrospectively, and if the rights of women depended on the living status of the father through whom they would inherit.

- Different benches of the Supreme Court and High court had taken conflicting views on the issue.
  - **In Prakash v Phulwati (2015)**, a two-judge Bench held that the benefit of the 2005 amendment could be granted only to “living daughters of living coparceners” as on September 9, 2005 (the date when the amendment came into force).
  - However, in February 2018, contrary to the 2015 ruling, a two-judge Bench held that the share of a father who died in 2001 will also pass to his daughters as coparceners during the partition of the property as per the 2005 law.
- These conflicting views by Benches of equal strength led to a reference to a three-judge Bench in the current case.
- The latest ruling by the SC now overrules the verdicts from 2015 and April 2018. It settles the law and expands on the intention of the 2005 legislation “to remove the discrimination as contained in section 6 of the Hindu Succession Act, 1956 by giving equal rights to daughters in the Hindu Mitakshara coparcenary property as the sons have”.

### **Blockchain Technology In Voting**

- Election Commission (EC) officials explored the potential of using **blockchain technology to enable remote voting**.
- Blockchain is a system in which the database of recordings (a ‘chain’) appears on multiple computers at the same time even as it is updated with any new digital information (‘a block’). This distributed collection of the information has led some to claim that this **system can overcome issues of over-centralisation**.

#### **Advantages**

- This will **facilitate easy participation** for those categories of voters who are not able to come to the polling station.
- A blockchain-based voting application does not concern itself with the security of its internet connection, because **any hacker with access to the terminal will not be able to affect other nodes**.
- Voters can effectively submit their **vote without revealing their identity or political preferences to the public**. Officials can count votes with absolute certainty, knowing that each ID can be attributed to one vote, **no fakes can be created, and that tampering is impossible**.
- Blockchain’s **database of transactions is incorruptible, and each record is easily verifiable**. The network cannot be taken down or influenced by a single party because it doesn’t exist in one place.
- Blockchain systems promise a **cheaper cost in the long run**.
- **It provides instant results**. By employing e-voting with blockchain, the election results can be safely disclosed in minutes rather than hours.

#### **Challenges**

- It requires extensive support from human personnel and other technology. The **expertise for managing instances of blockchain technology remains scarce**.
- The issues around online voting include **server penetration attacks, client-device malware, denial-of-service attacks and other disruptions**, all associated with **infecting voters' computers with malware** or infecting the computers in the elections office that handle and count ballots.

- If someone tries to force a voter to vote for a particular candidate, it's difficult to establish a mechanism to avoid it.
- **Lack of voters' digital literacy**, technical knowledge of voters and scalability of the system etc. may be a problem.
- Delayed transactions on the blockchain could occur, if there is an increasing workload on the main node when transactions are simultaneously executed.

### **Way Forward**

- Alternative systems must be “transparent, live, auditable, and develop a perception of being very clear in the minds of the voters”
- EC could try this out as a mock exercise in some locations on a small scale and keep having stress tests to ensure it is durable.
- There needs to be a bridge between security concerns and technological innovation.

### **Digital India Land Records Modernization Programme (DILRMP)**

Union Minister of Rural Development and Panchayati Raj released a booklet on “Best Practices in Digital India Land Records Modernization Programme (DILRMP)”.

#### **About DILRMP**

- The Digital India Land Record Modernization Programme (DILRMP), previously known as the National Land Record Modernization Programme (NLRMP), was launched in 2008 by the Government of India with the purpose to **digitize and modernize land records and develop a centralised land record management system.**
- **Components:** The DILRMP has 3 major components.
  - Computerization of land record.
  - Survey/re-survey.
  - Computerization of Registration.
- **Programme Implementation:** The State Governments/UT Administrations will implement the programme with financial and technical supports from the Dept. of Land Resources, Government of India. The **district will be taken as the unit of implementation**, where all activities under the programme will converge.
- **Benefits to Citizens:**
  - Since the records will be placed on the websites with proper security IDs, property owners will have free access to their records without any compromise in regard to confidentiality of the information.
  - Free accessibility to the records will reduce interface between the citizen and the Government functionaries, thereby reducing rent seeking and harassment.
  - Public-private partnership (PPP) mode of service delivery will further reduce citizen interface with Govt. machinery, while adding to the convenience.
  - Abolition of stamp papers and payment of stamp duty and registration fees through banks, etc. will also reduce interface with the Registration machinery.
  - Automatic and automated mutations will significantly reduce the scope of fraudulent property deals.

### **Domicile-Based Job Quota**

- The **Madhya Pradesh government's** recent decision to **reserve all government jobs for “children of the state”** raises questions relating to the fundamental right to equality.
- While domicile-based reservations have been implemented in education, courts have been reluctant to expand this to employment.

### **What Does The Constitution Say?**

- **Article 16** of the Constitution, which guarantees equal treatment under law in matters of public employment, prohibits the state from discriminating on grounds of place of birth or residence.
- **Article 16(2)** states that “no citizen shall, on grounds only of religion, race, caste, sex, descent, place of birth, residence or any of them, be ineligible for, or discriminated against in respect or, any employment or office under the State.
- **Article 16(3)** of the Constitution provides an **exception** by saying that Parliament may make a law “prescribing” a requirement of residence for jobs in a particular state. This power vests solely in the Parliament, not state legislatures.

### **Reasons For Prohibiting Reservation Based On Domicile**

- **Universality of Indian citizenship:** When the Constitution came into force, India turned itself into one nation from a geographical unit of individual principalities and the idea of the universality of Indian citizenship took root.
- **Liberty to move:** As India has common citizenship, which gives citizens the liberty to move around freely in any part of the country, the requirement of a place of birth or residence cannot be qualifications for granting public employment in any state.

### **Supreme Court Ruling On Reserving Jobs For Locals**

The Supreme Court has ruled against reservation based on place of birth or residence.

- In **Dr Pradeep Jain v Union of India, 1984**, the issue of legislation for “**sons of the soil**” was discussed and the court expressed an opinion that such policies would be unconstitutional but did not expressly rule on it as the case was on different aspects of the right to equality.
- In **Sunanda Reddy v State of Andhra Pradesh (1995)**, the Supreme Court affirmed the observation in Pradeep Jain to strike down a state government policy that gave 5% extra weightage to candidates who had studied with Telugu as the medium of instruction.
- In 2002, the Supreme Court **invalidated appointment of government teachers in Rajasthan** in which the state selection board gave preference to “applicants belonging to the district or the rural areas of the district concerned”.
- In 2019, the **Allahabad High Court struck down a recruitment notification by the UP Subordinate Service Selection Commission** which prescribed preference for women who are “original residents” of the UP alone.

### **How Do Some States Then Have Laws That Reserve Jobs For Locals?**

- Exercising the power it has under **Article 16(3)**, Parliament enacted the Public Employment (Requirement as to Residence) Act, aimed at abolishing all existing residence requirements in the states and enacting **exceptions only in the case of the special instances of Andhra Pradesh, Manipur, Tripura and Himachal Pradesh.**
- Constitutionally, some states also have **special protections under Article 371.** Andhra Pradesh under **Section 371(d)** has powers to have “**direct recruitment of local cadre**” in specified areas.

- In Uttarakhand, class III and class IV jobs are reserved for locals.
- Some states have gone around the **mandate of Article 16(2) by using language. States that conduct official business in their regional languages prescribe knowledge of the language as a criterion.** This ensures that local citizens are preferred for jobs.

#### **Other Recent Moves On Domicile-Based Job Reservation**

- In April, the Centre issued a **notification reserving jobs for J&K domiciles** expanding the definition to central government employees who had served in the erstwhile state for over 10 years. Before the abrogation of the special status of J&K in August last year, state government jobs were reserved exclusively for state subjects as per Article 370 of the Constitution.
- **In Assam**, a committee has submitted its report for implementation of a key provision of the 1985 Assam Accord, recommending **reservation in jobs for those who can trace their ancestry in the state before 1951.**

#### **New Rules for J&K Administration**

The Ministry of Home Affairs (MHA) notified new rules for administration in the Union Territory of Jammu and Kashmir that specify the functions of the Lieutenant Governor (LG) and the Council of Ministers.

#### **Functions of Lieutenant Governor**

- The “*police, public order, All India Services and anti-corruption,*” will fall under the executive functions of the LG, implying that the **Chief Minister or the Council of Ministers will have no say in their functioning.**
- Proposals or matters which affect or are likely to **affect the peace and tranquility of the UT or the interest of any minority community, the Scheduled Castes, the Scheduled Tribes and the Backward Classes** “shall essentially be submitted to the Lieutenant Governor through the Chief Secretary, under intimation to the Chief Minister, before issuing any orders.
- **Difference of opinion:**
  - In case of difference of opinion between the LG and a Minister when no agreement could be reached even after a month, the “decision of the Lieutenant Governor shall be deemed to have been accepted by the Council of Ministers.
  - In case of a difference of opinion between the LG and the council with regard to any matter, the former shall refer it to the Centre for the decision of the President and shall act according to that decision.

#### **Functions Of The Council Of Ministers**

- The Council of Ministers, led by the Chief Minister, will decide **service matters of non-All India Services officers, proposal to impose new tax, land revenue,** sale grant or lease of government property, reconstituting departments or offices and draft legislations.
- The council (of ministers) shall be **collectively responsible for all the executive orders issued by any department in the name of LG and contracts made in the name of President** in connection with the administration of the Union Territory.

#### **Central Government**

- All communications received from the Centre, including those from the Prime Minister and other Ministers, other than those of a routine or unimportant character, shall, as soon as possible after their

receipt, be submitted by the secretary to the Chief Secretary, the Minister in charge, the Chief Minister and the LG for information.

- Any matter, which is likely to bring the government of the Union Territory into a controversy with the Centre or a State government, shall, as soon as possible, be brought to the notice of the LG and the Chief Minister by the secretary concerned through the Chief Secretary.

### **Departments**

As per the rules, there will be **39 departments in the UT** such as school education, agriculture, higher education, horticulture, election, general administration, home, mining, power, Public Works Department, tribal affairs and transport.

### **Demand for 6th Schedule Status for Arunachal Pradesh**

The revival of the demand for two autonomous councils has made political parties and community-based groups call for bringing the entire Arunachal Pradesh under the ambit of the **Sixth Schedule or Article 371 (A) of the Constitution**.

#### **What Is The Sixth Schedule?**

- The Sixth Schedule consists of provisions for the **administration of tribal areas in Assam, Meghalaya, Tripura and Mizoram**, according to Article 244 of the Indian Constitution.
- Passed by the Constituent Assembly in 1949, it seeks to **safeguard the rights of tribal population through the formation of Autonomous District Councils (ADC)**. ADCs are bodies representing a district to which the Constitution has given varying degrees of autonomy within the state legislature.
- The governors of these states are empowered to reorganize boundaries of the tribal areas.

#### **Case of Arunachal Pradesh**

- Currently, **Arunachal Pradesh is under the Fifth Schedule** that does not provide special rights for the indigenous communities unlike the Sixth Schedule.
- The Fifth Schedule of the Constitution deals with the administration and control of scheduled areas and scheduled tribes in any state except the four states of Assam, Meghalaya, Tripura and Mizoram.
- Nagaland, on the other hand, is governed by **Article 371 (A)**, which says that no Act of Parliament shall apply in the State in several areas unless the Nagaland Assembly so decides by a resolution. These include administration of civil and criminal justice involving decisions according to Naga customary law and ownership and transfer of land and its resources.

### **Identification Of Minorities At State Level**

- The Supreme Court directed the Centre to respond to a public interest litigation challenging the validity of the **National Commission for Minority Education Institution Act (NCMEI), 2004**, for not recognising minorities at the state level.
- The PIL demanded the **Centre lay down guidelines for the identification of minority communities at the state-level** “to ensure that only those religious and linguistic groups which are socially, economically, politically non-dominant and numerically inferior, can establish and administer educational institutions of their choice.

#### **Petitioner’s Arguments**

- **Section 2(f) of the NCMEI Act 2004**, which the petition stated, gives unbridled powers to the Centre to restrict minority benefits to five religious communities—**Muslims, Christians, Sikhs, Buddhists**

**and Parsees.** The Act identifies minorities at the national level and not at the state level, thereby depriving **deserving minorities in the states of their Constitutional rights.**

- The petitioner cited a **2002 ruling of the top court in the TMA Pai case**, which states that **for indentifying linguistic minorities, a state must be treated as the basic unit.** According to the petition, the classification of minorities under the NCMEI Act violates this judgment given by an 11-judge bench.
- **Hindus, Bahais and Jews, who were the “real minorities”** in places such as Arunachal Pradesh, Lakshadweep, Jammu and Kashmir, Ladakh, Mizoram, Nagaland, Meghalaya, Punjab and Manipur, were not being able to establish their own educational institutions because they were not identified as minorities at the state level. Their right under **Articles 29-30** is being siphoned off illegally to the majority community in the State because Centre has not notified them as minority under **NCMEI Act 2004.**
- **Muslims are in majority in Lakshadweep (96.58%) & Kashmir (96), Christians are majority in Nagaland (88.10%), Mizoram (87.16%) and Meghalaya (74.59%),** Sikhs are majority in Punjab; can establish & administer educational institutions of their choice.

### **Rashtriya Swachhata Kendra**

- The Prime Minister recently inaugurated the Rashtriya Swachhata Kendra, (RSK). It is an interactive experience centre on the Swachh Bharat Mission, which was first announced by the Prime Minister on the occasion of the centenary celebrations of Gandhi's Champaran Satyagraha in 2017.
- Installations at the centre will introduce future generations to the successful journey of the world's largest behaviour change campaign - the Swachh Bharat Mission.
- The Swachh Bharat Mission has transformed rural sanitation in India and has changed the behaviour of over 55 crore people from open defecation to using a toilet.
- The mission is now in its second phase, aiming to take India's villages from Open Defecation Free (ODF) to ODF Plus, which will ensure that there is no more open defecation and solid and liquid human waste is managed properly.
- A balanced mix of digital and outdoor installations at the RSK will impart information, awareness and education on Swachhata and related aspects.
- The complex interplay of processes and activities will be presented through assimilative learning, best practices, global benchmarks, success stories and thematic messages in an interactive format.

### **Muslim Women's Rights Day**

- Recently, August 1, was celebrated as the first “Muslim Women's Rights Day” in the country, to commemorate the passage of Muslim Women (Protection of Rights on Marriage) Act, 2019.
- The passage of the bill abolished the practice of triple talaq or Talaq-a-Biddat. By doing so, it ensured gender equality and strengthened constitutional, fundamental and democratic rights of Muslim women. The practice is banned in most Muslim countries including Pakistan.
- The Supreme Court had in August 2017 declared the practice of talaq-e-biddat or a form of divorce based on a husband pronouncing divorce thrice in quick succession as unconstitutional.
- The verdict came on a petition of Muslim women, including lead petitioner Shayara Bano, who were abandoned after their husbands pronounced instant divorce.

- The Centre initially issued an ordinance after the verdict to criminalise the practice of triple talaq, before bringing the law.
- According to the law, the practice of instant triple talaq is a cognizable offence or one in which the police may carry out an arrest without a warrant, and is used for serious crimes such as theft, rape and murder.
- The act punishes a guilty Muslim man with three years of imprisonment and also makes him liable to pay a fine.

### **Swasthya Portal**

- The Ministry of Tribal Affairs recently inaugurated the e-portal on tribal health and nutrition named 'Swasthya'.
- It is a first of a kind e-portal, providing all health and nutrition related information of the tribal population of India in a single platform
- Swasthya will also curate innovative practices, research briefs, case studies, and best practices collected from different parts of India to facilitate the exchange of evidence, expertise and experiences.
- The portal will bridge the existing knowledge, drive evidence-based policy making and catalyze a series of actions which will ultimately lead to overall improvements in the health and nutrition status of the tribal population in India.
- The Portal will be managed by the Centre of Excellence (CoE) for Knowledge Management in Health and Nutrition, established by the Ministry of Tribal Affairs in collaboration with Piramal Swasthya Management and Research Institute.

### **Dhanwantari Rath**

- A MoU was recently signed between All India Institute of Ayurveda (AIIA) and Delhi Police for extending the ayurvedic mode of preventive and promotive health services in the residential colonies of Delhi Police.
- These services are to be provided through a mobile unit named 'Dhanwantari Rath' and Police Wellness Centres, and are to be catered by AIIA, supported by Ministry of AYUSH.
- Until now, AYURAKSHA a joint venture of AIIA and Delhi Police has been maintaining the health of frontline COVID warriors like Delhi police personnel through ayurveda immunity boosting measures.
- These services will now be extended to the families of Delhi Police personnel, through Dhanwantari Rath.
- Dhanwantari Rath and Police wellness centres would be outreach OPD services of AIIA, that would consist of a team of doctors, who would visit Delhi Police colonies regularly.

### **All India Institute of Ayurveda**

- AIIA is an autonomous institute under Ministry of AYUSH and was conceived as an apex institute for Ayurveda.
- It aims at bringing a synergy between traditional wisdom of ayurveda and modern tools and technology.

### **Namath Basai**

- The Kerala government has been conducting a unique programme, called ‘Namath Basai’ of teaching tribal children in their mother tongue. The programme is implemented by the Samagra Shiksha Kerala (SSK).
- The SSK has distributed around 50 laptops exclusively for Namath Basai and pre-recorded classes are offered through a YouTube channel.
- Classes are being offered in three tribal languages viz. Irula, Mudka and Kurumba. These languages are spoken by Irula, Muduka and Kurumba tribes, respectively. Namath Basai in Irula means ‘our language’.
- The programme has succeeded in retaining hundreds of tribal children in their online classes by making them feel at home with the language of instruction.
- The programme also helps in preserving the ethnic culture and language of the tribes.
- The Namath Basai programme will soon be introduced in the tribal belts of Wayanad and Idukki as well, where classes will be offered in the Oorali, Mutuvan and Paniya languages.

### **Samagra Shiksha**

- Samagra Shiksha, is an overarching programme for the school education sector extending from pre-school to class 12.
- It has been prepared with the broader goal of improving school effectiveness measured in terms of equal opportunities for schooling and equitable learning outcomes.
- It subsumes the three Schemes of Sarva Shiksha Abhiyan(SSA), Rashtriya Madhyamik Shiksha Abhiyan (RMSA) and Teacher Education(TE).

### **ARIIA 2020**

- The Atal Rankings of Institutions on Innovation Achievements (ARIIA) 2020 was recently released.
- ARIIA is an initiative of the **Ministry of Education**, implemented by AICTE and Ministry’s Innovation Cell, to systematically **rank higher education institutions and universities** in India on indicators related to **Innovation and Entrepreneurship Development** amongst **students and faculty**.
- More than quantity, ARIIA focuses on quality of innovations and tries to measure the real impact created by these innovations nationally and internationally.
- All recognized Higher Educational Institutions of India are eligible to participate in the ARIIA ranking. Total 674 HEIs under different categories have participated in ARIIA 2020.
- Assessment is based on seven parameters with certain weights allocated as below:
  - i) Budget, expenses to support & revenue generated (20 Marks).
  - ii) Infrastructure & facilities to support innovations and start-ups (10 Marks).
  - iii) Awareness activities for promoting idea generation and innovation (20 Marks).
  - iv) Promotion and supporting entrepreneurship development (20 Marks).
  - v) Intellectual property (IP) generation, technology transfer, and commercialization (14 Marks).
  - vi) Innovative learning methods & courses (10 Marks).
  - vii) Innovations in governance of the institution (6 Marks).

## **Top Rankings Under Various Categories**

### **Publicly Funded Institutions**

- IIT Madras under the Institutes of National Importance, Central Universities and Centrally Funded Technical Institutes (CFTIS).
- Institute of Chemical Technology, Mumbai under Government and Government Aided Universities.
- College of Engineering, Pune under Government and Government Aided Colleges.

### **Private or Self-Financed Institutions**

- Kalinga Institute of Industrial Technology, Bhubaneswar under Private or Self-Financed Universities.
- S R Engineering College, Telangana under Private or Self-Financed Colleges.

### **Swachh Survekshan 2020**

- The Ministry of Housing and Urban Affairs recently released the Swachh Survekshan 2020 report. Swachh Survekshan, in its fifth edition, has become the world's largest sanitation survey, with 1.8 crore citizens giving their feedback.
- Swachh Survekshan, which began with a survey of 73 cities in 2016, has grown to cover 4,242 cities, 62 cantonment boards and 97 Ganga towns in 2020.
- Since its launch in 2014, Swachh Bharat Mission-Urban (SBM-U) has made significant progress in the area of both **sanitation and solid waste management**.
- 4,324 Urban Local Bodies (ULBs) have been declared ODF, 1,319 cities certified ODF+ and 489 cities certified ODF++ as per MoHUA's sanitation protocols.
- This has been made possible through construction of more than 66 lakhs individual household toilets and over 6 lakhs community/ public toilets.
- In the area of solid waste management, 96% of wards have complete door-to door collection while 66% of the total waste generated is being processed.

### **Rankings**

- Among the cities with over 1 lakh population, **Indore** was ranked number one, followed by Surat and Navi Mumbai.
- Among smaller cities, with population under 1 lakh, the top three cities – **Karad, Sasvad and Lonavala** – were all from Maharashtra.
- **Chhattisgarh** was ranked the cleanest State out of those with over 100 Urban Local Bodies (ULBs), while Jharkhand was the cleanest among those with less than 100 ULBs or cities.
- In the category of "Ganga towns", **Varanasi**, was ranked the cleanest. Jalandhar got the top rank among cantonments and New Delhi was the cleanest capital city.

### **Remote Learning Reachability report**

- The United Nations Children's Fund (UNICEF) has released the Remote Learning Reachability report.
- The report measured remote learning capacities among pre-primary, primary, lower-secondary and upper-secondary schoolchildren. It is based on data gathered from 100 countries, measuring public access to the internet, television and radio.

### **Highlights Of The Report**

- The coronavirus pandemic has caused the largest disruption to education in history, with schools closed in some 160 countries in mid-July, affecting an estimated 1.5 billion students.
- The current situation is a global education emergency and the impact of this can be felt in economies and societies for decades in the future.
- To prevent the spread of the virus, many countries switched to online learning. However, at least 463 million – or 31 per cent – of schoolchildren worldwide have been unable to access remote learning.
- Even children with adequate access face other obstacles. These include lack of a good workspace at home, pressure to do other work for the family, or a lack of technical support when computer problems arise.

### **Impact On Rural And Poor Communities**

- Irrespective of the country's level of economic development, students in rural areas represent the vast majority of those who cannot be reached by any of the three remote learning modes.
- In addition, students from the poorest 40 per cent of families account for a disproportionately high percentage of those who cannot be reached.
- Globally, 3 out of 4 students who cannot be reached by remote learning opportunities come from rural areas and/or poor households. Thus, the switch to online learning modes has only widened the learning gap between children from rich and poor families.

### **Geographical Gap**

- Further, the report highlights wide geographical differences in children's access to remote learning.
- The number of children affected in Europe are far less than the number of children affected in Africa and Asia.

### **Highlights From India**

- In India, over 15 lakh schools have been closed due to the pandemic affecting 28.6 crore children from pre-primary to secondary levels. This adds to the 60 lakh children who were already out of school prior to the COVID-19.
- As per the report, only a quarter of households (24 per cent) in India have access to the internet and there is a large rural-urban and gender divide.
- Students, especially girls, from most marginalised communities do not have easy access to smartphones, and even if they do, internet connectivity is poor.
- The learning gap is likely to widen across high, middle and low-income families, as children from economically disadvantaged families cannot access remote learning.

### **Way Ahead**

- Blended approaches are needed involving communities, parents, volunteers to reach children and support their learning in these times.
- The UNICEF urged governments to prioritise the safe re-opening of schools when they begin easing lockdown restrictions.
- School opening policies and practices must include expanding access to education, including remote learning, especially for marginalised groups.
- Education systems must also be adapted and built to deal with future crises.

**UNICEF**

- The United Nations Children's Fund (UNICEF), originally known as the United Nations International Children's Emergency Fund is a United Nations agency responsible for providing humanitarian and developmental aid to children worldwide.
- It was created by the United Nations General Assembly in 1946, to provide emergency food and healthcare to children and mothers in countries that had been devastated by World War II.
- In 1950, UNICEF's mandate was extended to address the long-term needs of children and women in developing countries everywhere. In 1953 it became a permanent part of the United Nations System.
- Headquartered in New York City, it is among the most widespread and recognizable social welfare organizations in the world, with a presence in 192 countries and territories.
- It is governed by a 36-member executive board that establishes policies, approves programs, and oversees administrative and financial plans.

**Women in Research and Development**

- The Science and Technology Indicators (STI), 2018, a periodic compendium of the state of scientific research in India, was recently released.
- The STI is prepared by a division of the Department of Science Technology, the National Science and Technology Management Information System, and is based on data provided by a range of scientific establishments across the country.

**Highlights**

- India's private sector research companies appear to employ a larger proportion of women in core research and development activities than government-funded major scientific agencies.
- Of the 20,351 women employed in private R&D companies, 15,011 — or about three in four — were involved in R&D activities and the rest in auxiliary or administrative activities.
- The 2018 indicators reiterate the historic trend of India's scientists being overwhelmingly men. For every one of the 15,011 women counted earlier, there are six male scientists in private sector R&D establishments.
- However, that proportion improves to about one in four in major scientific agencies where there are 43,753 male scientists in 'R&D' for the 10,138 women equivalent.
- On the whole, private sector companies had a greater commitment to ensuring that women scientists were fairly represented in recruitment, promotions and appraisal processes than in many scientific organisations.

**Global Data**

- According to a 2018 fact sheet prepared by UNESCO on women in science, just 28.8% of researchers are women. In India, this drops to 13.9%.
- UNESCO data from 2014-16 show that only around 30% of female students select STEM (science, technology, engineering and mathematics)-related fields in higher education.
- Female enrolment is particularly low in information technology (3%), natural science, mathematics and statistics (5%) and engineering and allied streams (8%).

- Between 1901 and 2019, 334 Nobel Prizes have been awarded to 616 Laureates in Physics, Chemistry and Medicine, of which just 20 have been won by 19 women.

### **Reasons For Low Representation**

- Various inquiries have been launched by independent commissions as well as the NITI Aayog to find causes for the inadequate representation of women scientists.
- One of the reasons for the large drop in the number of women between the doctoral and professional stages is the social pressure on women to have a family which is seen as incompatible with a professional career.
- There are also patriarchal attitudes in hiring practices. Thus, many women are discriminated against at this stage as well, with administrators deciding that women should be opting for family over a career.
- According to NITI Aayog, interventions to popularise subjects such as Engineering or the Physical sciences or Chemistry among female students at the school level in both urban and rural areas might be helpful in changing the mind-set.

### **Universal Ratification Of Convention On Child Labour**

- Recently, the Kingdom of Tonga has ratified **International Labour Organization's Convention on the Worst Forms of Child Labour** (also known as **Convention 182**), following which the Convention has achieved universal ratification.
- This landmark achievement comes just months before the start of the International Year for the Elimination of Child Labour in 2021, to be led by the ILO.

### **Conventions on Child Labour**

- Convention 182, which was adopted in the 1999 annual international labour conference, prohibits the sexual exploitation of children, trafficking, deployment in armed conflict and other conditions that compromise their overall well-being.
- The Convention complements the ILO's efforts under the **1973 Minimum Age Convention** to prevent the employment of children below a lower age threshold.
- The two instruments on child labour are among the eight core ILO Conventions regarded as embodying the spirit of the 1998 declaration on fundamental principles and rights at work.
- Instruments relating to the freedom of association, the right to collective bargaining and the elimination of discrimination in employment and occupation are among the others.
- The incidence of child labour and its worst forms dropped by almost 40 per cent between 2000 and 2016, as ratification rates of Convention No. 182 and Convention No. 138 (on minimum age to work) increased, and countries adopted effective laws and policies.

### **Way Ahead**

- However, progress has slowed in recent years, particularly amongst the youngest age group (5-11 years) and in some geographical areas and a lot still needs to be done.
- An estimated 152 million are trapped in child labour and 72 million of them are engaged in hazardous work.
- Thus, the current efforts would have to be stepped up significantly to achieve the ambitious goal of total abolition of child labour by 2025 (under Target 8.7 of the Sustainable Development Goals).

**Kisan Rail**

- The Indian Railways has introduced the first “Kisan Rail” train service from Devlali in Maharashtra to Danapur in Bihar. The Finance Minister had announced in this year’s Budget to set up the 'Kisan Rail' through the public-private-partnership (PPP) mode.
- This is the first-ever multi-commodity train service, which is a step towards realizing the goal of doubling farmers’ incomes by the year 2022.
- The train has been equipped with frozen containers and apart from fruits and vegetables, it is expected to build a seamless national cold supply chain of milk, meat and fish.
- The train will cater to the requirements of small farmers and traders for carrying their perishable supplies to distant places. Any farmer or any other interested party can directly book their consignments in this train, without any lower limit on the size of consignment.
- It is expected to reduce transportation costs by Rs 1000 per tonne compared with roadways and reduce travel time by around 15 hours.
- Regarding loss/damage of products for any reason, Railways already have a well-established claim/compensation system – through which the party can get compensation for its losses.

**Gramodyog Vikas Yojana**

- Ministry of Micro Small and Medium Enterprises (MSME), has launched a programme for the benefit of artisans involved in manufacturing of Agarbatti (incense sticks) under the ‘Gramodyog Vikas Yojana’(as a pilot project).
- As per the programme, initially four Pilot Projects will be started, including one in North Eastern part of the country. Each targeted cluster of artisans will be supported with about 50 Automatic Agarbatti making machines and 10 Mixing.
- Khadi and Village Industries Commission (KVIC), which is a statutory organization working under the Ministry of MSME, will provide training, and assist artisans working in this area.
- The programme aims to enhance the production of ‘Agarbatti’ in the country and create sustainable employment for the traditional Artisans, by providing them regular employment and increase in their wages.
- It will also start the process of reducing the gap between the indigenous ‘production and demand’ and will reduce import of ‘Agarbatti’ in the country.
- The Centre had earlier taken two major decisions by placing the agarbatti item from “free” trade to ‘restricted’ trade in the import policy and enhancing the import duty from 10 per cent to 25 per cent on ‘round bamboo sticks’ used for manufacturing of agarbatti for the benefit of the domestic industry.

**Business Responsibility Reporting**

- In an effort to have a single source for all non-financial disclosures by corporates, a committee appointed by the Ministry of Corporate Affairs (MCA), has released the ‘Report of the Committee on Business Responsibility Reporting (BRR)’.
- As Indian companies are aspiring to have a global presence, they cannot ignore the emerging trend of Corporate Governance, i.e. Responsible Business. Thus, the committee on Business Responsibility was constituted for finalising business responsibility reporting formats for listed and unlisted companies under the National Guidelines on Responsible Business Conduct (NGRBC).

## Recommendations

- The committee has proposed that the Business Responsibility Report should be called as the **Business Responsibility and Sustainability Report (BRSR)**. This would help in better reflecting the intent and scope of reporting requirement.
- Reporting may be done by top 1,000 listed companies in terms of their market capitalisation or as prescribed by markets regulator SEBI.
- BRSR could be integrated with MCA 21 portal as that would ensure that all information already filed on the portal by companies would be automatically filled while filing the BRSR.
- As a long-term measure, the information captured through BRSR filings should be used to develop a **Business Responsibility-Sustainability Index** for companies.

## Earlier Measures on Business Responsibility Reporting

- The Ministry of Corporate Affairs has been taking various initiatives for ensuring responsible business conduct by companies.
- As a first step towards mainstreaming the concept of business responsibility, the '**Voluntary Guidelines on Corporate Social Responsibility**' were issued in 2009.
- These guidelines were subsequently revised as '**National Voluntary Guidelines on Social, Environmental and Economic Responsibilities of Business, 2011 (NVGS)**'.
- Further, in 2012, SEBI mandated the top 100 listed companies to file **Business Responsibility Reports (BRRs)** from an environmental, social and governance perspective. This was extended to top 500 companies in FY 2015-16 and further extended to top 1000 companies in December, 2019.
- These BRRs enable business to demonstrate the adoption of the NVG principles with the intent of engaging businesses more meaningfully with their stakeholders going beyond regulatory financial compliance.
- Further, the NVGs were updated and released as **NGRBC** (National Guidelines on Responsible Business Conduct) in March 2019 to align them with the Sustainable Development Goals (SDGs), United Nations Guiding Principles on Business & Human Rights (UNGPs), Paris Agreement on Climate change etc.

## MCA 21

- MCA21 is an e-Governance initiative of Ministry of Company Affairs (MCA), that enables an easy and secure access of the MCA services to the corporate entities, professionals and citizens of India.
- The MCA21 application is designed to fully automate all processes related to the enforcement and compliance of the legal requirements under the Companies Act, 1956, New Companies Act, 2013 and Limited Liability Partnership Act, 2008.
- **Benefits of MCA 21**
  - Enables the business community to register a company and file statutory documents quickly and easily.
  - Provides easy access of public documents
  - Helps faster and effective resolution of public grievances
  - Helps registration and verification of charges easily
  - Ensures proactive and effective compliance with relevant laws and corporate governance

### **Bhadbhut Project**

- The Gujarat government's recently awarded Bhadbhut project faced protests from local fishermen for its likely impact on fishing patterns.
- It is planned to be a **1.7-km causeway-cum-weir barrage with 90 gates, across the river Narmada**, 5 km from Bhadbhut village, and 25 km from the mouth of the river, where it flows into the Gulf of Khambhat.
- The main purpose of the project is to **prevent salinity ingress**. Due to the reduced flow of fresh water, saline seawater gushes into the Narmada estuary during high tide, thus increasing salinity along the banks.
- The project also aims to **prevent flooding in years when rainfall is higher than normal**. Embankments 22 km long will be made and will extend upstream towards Bharuch, from either side of the river.
- The project is **part of the larger Kalpasar Project**, which entails construction of a 30-km dam across the Gulf of Khambhat. The reservoir is meant to tap the waters of the Narmada, Mahisagar and Sabarmat.
- The barrage will **stop most of the excess water flowing out of the Sardar Sarovar Dam** from reaching the sea and thus create a "sweet water lake" of 600 mcm (million cubic metres) on the river.
- The sweet water from the reservoir will aim to meet the residential and industrial water requirements of Bharuch and neighbouring districts.
- The barrage will also have a **six-lane road that will connect the left and right banks of the river** and provide shorten the land distance between two large industrial estates in Surat and Bharuch.



### **Impact Of The Project**

- The barrage is expected to **interfere with the migration and breeding cycle of hilsa**. A marine fish, hilsa migrate upstream and arrives in the brackish water of the Narmada estuary for spawning usually during the monsoon months of July and August, and continue doing so till November. Once the barrage is built, it is expected to block their natural entry.
- Fish production from the Narmada estuary has already fallen from 15,889 tonnes in 2006-07 to just 1,618 tonnes in 2014-15. The reduced outflow of water from the dam, industrial effluents flowing into the river and salinity ingress are believed to be the major causes of this decline.
- Part of **Aliya Bet**, an island in the delta of the Narmada and known for shrimp farming, is likely to get submerged.
- A portion of the **forest in Aliya Bet too will get affected** by the project. Most of the Aliya Bet is downstream from the barrage.

### **RBI's Contingency Fund**

- The Central Board of the RBI recently approved the transfer of Rs 57,128 crore as surplus – or dividend — to the Central government, which is 67.5 per cent lower from Rs 1.76 lakh crore last year.
- This comes after the RBI has retained an amount of Rs 73,615 crore within the RBI by transferring it to the Contingency Fund (CF) of the central bank, which led to the sharp fall in the transfer of surplus to the government in the current year.

- RBI's transfer this year is as per the economic capital framework (ECF) adopted by the RBI board last year.
- As per Section 47 of the RBI Act, profits or surplus of the RBI are to be transferred to the government, after making various contingency provisions, public policy mandate of the RBI, including financial stability considerations.
- The central bank's main risk provision accounts – Contingency Fund, Currency and Gold Revaluation Account (CGRA), Investment Revaluation Account Foreign Securities (IRA-FS) and Investment Revaluation Account-Rupee Securities (IRA-RS) — together now amount to Rs 13.88 lakh crore.

### **Contingency Fund of the RBI**

- This is a specific provision meant for meeting unexpected and unforeseen contingencies.
- These include depreciation in the value of securities, risks arising out of monetary/exchange rate policy operations, systemic risks and any risk arising on account of the special responsibilities of the RBI. This amount is retained within the RBI.
- Last year, the RBI withdrew Rs 52,637 crore from CF to pay a higher surplus to the government.

### **CGRA Account**

- The Currency and Gold Revaluation Account (CGRA) is maintained by the RBI to take care of currency risk, interest rate risk and movement in gold prices.
- Unrealised gains or losses on valuation of foreign currency assets (FCA) and gold are not taken to the income account but instead accounted for in the CGRA.
- Net balance in CGRA, therefore, varies with the size of the asset base, its valuation and movement in the exchange rate and price of gold.
- Thus, it can come under pressure if there is an appreciation of the rupee vis-à-vis major currencies or a fall in the price of gold.
- CGRA provides a buffer against exchange rate/ gold price fluctuations. When CGRA is not sufficient to fully meet exchange losses, it is replenished from the CF.

### **IRA-FS and IRA-RS accounts**

- The unrealised gains or losses on revaluation in foreign dated securities are recorded in the Investment Revaluation Account Foreign Securities (IRA-FS).
- Similarly, the unrealised gains or losses on revaluation is accounted for in Investment Revaluation Account-Rupee Securities (IRA-RS).

### **Krishi Megh**

- To protect the precious data of the government's premier research body Indian Council of Agricultural Research, the Agriculture Ministry has launched a **data recovery centre** 'Krishi Megh'.
- Currently, the main data centre of the ICAR is at Indian Agricultural Statistics Research Institute (IASRI) in the national capital. The data recovery centre at National Academy of Agricultural Research Management (NAARM) is synchronised with the data centre at IASRI.
- Krishi Megh has been set up under the **National Agricultural Higher Education Project (NAHEP)**, and has been set up at NAARM, Hyderabad.
- Hyderabad has been chosen as the location as it lies in a different seismic zone with regard to the data centre at ICAR-IASRI in New Delhi. Hyderabad is also suitable as skilled IT manpower is

available along with other suitable climatic conditions such as low humidity level which is controllable in the data centre environment.

### **Features**

- It has been built to mitigate the risk, enhance the quality, availability and accessibility of e-governance, research, extension and education in the field of agriculture in India.
- It is equipped with the latest artificial intelligence and deep learning software for building and deploying of deep learning-based applications through image analysis, disease identification in livestock, etc.
- It will enable farmers, researchers, students and policymakers to be more equipped with updated and latest information regarding agriculture and research.

### **NAHEP**

- NAHEP has been formulated by ICAR for strengthening the national agricultural education system in India. The overall objective is to provide more relevant and high-quality education to the agricultural university students.
- The project is funded by World Bank and the Government of India on a 50:50 basis.

### **HLEG On Agricultural Exports**

- The High Level Group (HLEG) on Agricultural Exports set up by the Fifteenth Finance Commission has submitted its report to the Commission.
- The HLEG was set up to recommend measurable performance incentives for states to encourage agricultural exports and to promote crops for enabling high import substitution.
- The recommendations will form part of the finance commission report which is being readied.

### **Recommendations**

The HLEG recommended a greater focus on 22 crop value chains and the setting up of value chain clusters.

### **Potential Of Agricultural Exports**

- The HLEG is of the view that India's agricultural export has the potential to grow from \$40 billion to \$70 billion in a few years. The estimated investment in agricultural export could be at \$8-10 billion across inputs, infrastructure, processing and demand enablers.
- Additional exports are likely to create an estimated 7-10 million jobs and will lead to higher farm productivity and farmer income.

### **State-led Export Plan**

- It recommended a state-led export plan, a business plan for a crop value chain cluster that will lay out the opportunity, initiatives and investment required to meet the desired value chain export aspiration.
- These plans will be action-oriented, time-bound and outcome-focused. In these plans, the private sector will play the role of an anchor and the Centre will act as an enabler.
- The group also suggested robust institutional mechanism to fund and support implementation.
- Funding should be done through convergence of existing schemes, finance commission allocation and private sector investment.

### **Umbrella Entity For Retail Payments Systems**

- The Reserve Bank of India (RBI) has released a framework for setting up of a new umbrella entity for retail payments systems. The formation of the umbrella entity has been authorised under the Payment and Settlement Systems Act, 2007.
- The entity formed shall be a company incorporated in India under the Companies Act, 2013, and may be a 'for-profit' or a non-profit Company as may be decided by it.

#### **Reasons for setting up a new entity**

- The objective is to reduce the dominance of the National Payments Corporation of India (NPCI) — which offers and manages various platforms such as Unified Payment Interface (UPI), Bharat Bill Payment Systems (BBPS), Aadhaar-Enabled Payment Systems (AePS).
- In a 2019 policy paper, the RBI had said it was concerned with a few entities in the payments space having become too big, which had led to higher concentration risk.
- The RBI noted that the NPCI had become pivotal to operations of many retail payment systems and there is concentration of many complicated systems and tasks under its ambit.
- This creates conditions for monopolistic behaviour in terms of quality of service, or access to and charges on services.
- Although the volume of digital transactions might have gone up about five times in the last five years, the number of customers has grown only two times.
- It is expected that the umbrella entity shall offer innovative payment systems to include various cross-sections of the society that have been excluded till now.

#### **Tasks**

- The entity will be tasked with setting up, managing, and operating new payment systems in the retail space.
- It will set up and operate new payment systems such as ATMs, white label PoS, Aadhaar based payments and remittance services among others.
- Further, it will manage clearing and settlement systems for participating banks and non-banks, identify and manage relevant risks, monitor retail payments system developments and related issues in the country and internationally.
- It will be the responsibility of the entity to frame necessary rules and the related processes to ensure that the system is safe and sound, and that payments are exchanged efficiently.

#### **Eligibility and Conditions**

- Entities eligible to apply shall be owned and controlled by **resident Indian citizens**.
- They should have **experience of three years** in the payments ecosystem as a payment system operator, payment service provider or technology service provider.
- The entity will have **minimum paid-up capital of Rs 500 crore**, with no single promoter group holding over 40 per cent investment in the capital. Initially, the promoter should have a minimum of Rs 50 crore at the time of submitting the application.
- The promoter/promoter group shareholding may be diluted to a minimum of 25 per cent after 5 years of commencement of business of the umbrella entity. A minimum net worth of Rs 300 crore must be maintained at all times.
- The RBI may nominate a member to the board too, and has the right to approve of the appointment of directors.

### **Transparent Taxation**

- The Prime Minister recently launched the “Transparent Taxation — Honouring the Honest” platform, which includes various measures that aim to ease the compliance burden and reward honest taxpayers.
- The platform includes **faceless assessment** and **faceless appeal**, to eliminate the physical interface between the tax department and the taxpayer.
- The assessment system seeks to eliminate corrupt practices by doing away with the territorial jurisdiction of income-tax offices.
- With the help of technology, the cases of scrutiny will now be allocated randomly to any official in any part of the country. The document identification numbers will be issued from the central database.
- The platform also includes a **Taxpayers’ Charter** that delineates the rights as well as duties of the taxpayer, and also fixes the government’s responsibilities.
- In a country with a high degree of complexity of the tax system, which often comes in the way of compliance, the platform attempts to make it seamless, painless and faceless.

### **Background**

- The PM noted that although the taxpayer base had expanded by 2.5 crore in the past six-seven years, it was a matter of huge concern that only about 1.5 crore people were paying income-tax in a country of over 130-crore population.
- The income tax department is often accused of being overactive in its pursuit of meeting the budgeted tax collection targets. This often translates to assessing officers raising unreasonable demands which leads to tax disputes and long drawn out litigation.
- The Comptroller and Auditor General of India (CAG) noted in 2019 that assessing officers (AOs) committed errors in the assessments ignoring clear provisions in the Act and that the existing scrutiny assessment procedure is opaque.
- The extent of the problem is quite severe. According to the Union budget 2020-21, Rs 8.02 lakh crore of “amounts under dispute” relate to direct taxes. Of these, around 40 per cent have been pending for more than two years.
- Moreover, the success rate of the tax department in these cases is very low. According to the Economic Survey 2017-18, the success rate of the tax department in tax cases at all levels of appeal — the appellate tribunals, the high court and the Supreme Court — is less than 30 per cent.
- Thus, shifting to a framework of faceless assessment and appeal is a step in the right direction.

### **Impact**

- In the new system, the department would escape unnecessary litigation and end taxpayer harassment.
- The platform would also instil a sense of fairness and fearlessness in the taxpayers.

### **Way Ahead**

- However, there will be challenges with enforceability. The rights of taxpayers will have to be clearly defined, and be binding on the tax department.
- At a broader level, there is a need to reassess and reconfigure the working of the tax department by building capabilities to check tax evasion, and widen the tax base, while at the same time discouraging unreasonable tax demands, and curbing litigation.

### **National Strategy For Financial Inclusion**

- The RBI recently released the National Strategy for Financial Education document for spreading of financial education in the country.
- This NSFE for the period 2020-2025, the second one after the 2013-18 NSFE, has been prepared by the National Centre for Financial Education (NCFE) in consultation with all the Financial Sector Regulators (RBI, SEBI, IRDAI and PFRDA) and other stakeholders.
- The NSFE intends to empower various sections of the population to develop adequate knowledge, skills, attitudes and behaviour which are needed to manage their money better and to plan for the future.
- The Technical Group on Financial Inclusion and Financial Literacy (TGFIFL) would be responsible for periodic monitoring and implementation of National Strategy for Financial Education.

### **Highlights**

#### **5 Cs approach**

- The document proposes a **five Cs approach** for promoting financial education which are: Content, Capacity, Community, Communication and Collaboration.
- These include emphasis on development of relevant **Content** in curriculum in schools, colleges and training establishments.
- Develop the **Capacity** of various intermediaries who can be involved in providing financial literacy, and develop a code of conduct for financial education providers.
- Leverage the positive effect of **Community-led model** for financial literacy through appropriate **Communication strategy**, and, enhancing **Collaboration** among various stakeholders

#### **National Centre for Financial Education**

- NCFE is a not for profit company promoted by RBI, Securities and Exchange Board of India (SEBI), Insurance Regulatory and Development Authority of India (IRDAI) and Pension Fund Regulatory and Development Authority (PFRDA).
- Its objective is to promote financial education across India for all sections of the population.

### **Mahatma Ayyankali**

- The Prime Minister recently paid tribute to social reformer Mahatma Ayyankali on his 157th birth anniversary.
- Ayyankali was a social reformer who worked for the advancement of Dalits, who were considered as untouchables, in the princely state of Travancore (now within the south of the modern-day nation of Kerala).
- Ayyankali was a stated protestor for Pulayar rights. The Pulayar were an untouchable caste in Hinduism, forming one of the main social groups in modern-day Kerala and Karnataka.
- With his efforts, Dalits got the freedom to walk on public roads, and Dalit children were allowed to join schools. Mahatma Gandhi called Ayyankali as 'Pulaya king'.

### **Pulikkali**

- Recently, Pulikkali was held online in Kerala due to the Covid-19 pandemic.

- Pulikkali is a recreational folk art from the state of Kerala. It is performed by trained artists to entertain people on the occasion of Onam, an annual harvest festival, celebrated mainly in the Indian state of Kerala.
- Literal meaning of Pulikkali is the 'play of the tigers' hence the performance revolves around the theme of tiger hunting.
- On the fourth day of Onam celebrations (Nalaam Onam), performers painted like tigers and hunters in bright yellow, red, and black dance to the beats of instruments like Udukku and Thakil.

### **Israel-UAE Peace Deal**

The United Arab Emirates (UAE) has agreed to normalize relations with Israel. The UAE and Israel have signed an agreement in this regard. The deal, known as **Abraham Accord**, was brokered by the United States of America.

#### **Key Highlights Of The Deal**

- The deal promises to establish normal relations between the two countries. These include business relations, tourism, direct flights, scientific cooperation, and, in time, **full diplomatic ties at the ambassadorial level**.
- An important component of the deal is **enhanced security cooperation** against regional threats, especially from Iran and its proxies.
- Israel, on its part, has agreed to **suspend declaring sovereignty over territories** it occupies in the West Bank, as highlighted in the Joint Statement released after the signing of peace deal.

#### **Why This Deal Took Place?**

##### **A. Iran Factor**

- While Israel insists that concerns emanating from the Iranian nuclear programme are an existential threat, the UAE has long accused Iran of playing the sectarian card to destabilise the Gulf Arab states.
- The UAE and Iran also have a long-standing territorial dispute, with Iran's occupation of the islands of Greater Tunb, Lesser Tunb and Abu Musa a sore issue.
- These islands were occupied by the Shah of Iran in November 1971, just two days prior to the UAE gaining independence from Britain.

##### **B. "Islamism" or "political Islam"**

- It is a transnational concept often embodied by the Muslim Brotherhood. Certain Gulf Arab rulers view Islamism as an existential threat to their dynastic monarchies.
- This has led to the formation of an unofficial partnership of conservative Middle Eastern governments, to which Israel, with its formidable intelligence capabilities, is now being admitted as an associate member.

##### **C. Ambitions of UAE**

- UAE has ambitions globally, and beyond. It has just become the first Arab country to send a mission to Mars. Israel is by far the most technologically advanced country in the Middle East, with cutting-edge inventions.
- If this alliance works out it could propel the UAE to a new level of prosperity and international prestige

#### **Significance Of This Deal**

##### **A. Gulf-Israel relations-**

- The deal will create a **positive impact** on the Gulf-Israel relationship. After Egypt's peace treaty with Israel in 1979, followed by Jordan's in 1994, this makes the UAE **only the third Arab country** to normalise relations.
- It is the **first of the six Arab Gulf states** to do so. Oman, Bahrain and possibly Morocco are widely expected to follow.
- **Saudi Arabia has remained silent**, though there is significant speculation among analysts that this nonreaction is a sign that Crown Prince Mohammed bin Salman supports the agreement.

#### **B. Israeli-Palestinian conflict**

- The normalisation of the UAE-Israeli ties is unlikely to dramatically alter the course of the Israeli-Palestinian conflict. This became evident with the differing interpretation of both the countries over the issue of sovereignty in West Bank.
- According to UAE, the **accord “immediately stops” Israeli plans to annex** parts of the West Bank. Israel, on the other hand, emphasised on the word “Suspend” used in the accord. Israel has clarified that it has only **agreed to ‘delay’ the annexation decision**.
- The Palestinian leadership rejected the accord and **recalled its ambassador** from Abu Dhabi.

#### **Palestine – US distrust**

Trump administration has moved the U.S. embassy from Tel Aviv to Jerusalem, ended or significantly curtailed aid to Palestinians.

Now, US has brokered a peace plan that Palestinians regard as grossly unfair to their national aspirations

#### **C. Turkey - Iran Axis**

- Recently, Turkey and Iran have emerged as the strongest supporters of the Palestinians in the Muslim world. On the other hand, the support for the Saudi bloc (consisting of Egypt, the UAE, Bahrain and others) is dwindling.
- Against this backdrop, UAE-Israel accord might provide some momentum to the Saudi bloc in countering Turkey-Iran axis.

#### **D. Israel**

- Israel gets a diplomatic and economic opening with the big power in the Gulf, that could open other doors, give its security interests legitimacy and, perhaps, open the door to Middle East peace.

#### **E. India**

- This deal provides India an unexpected opportunity to play a bigger role in a region which is its strategic backyard. India already enjoys a very good relationship with UAE and Israel.

#### **How Should India Respond?**

- India should **ramp up defence and security relations** with UAE. Israel is already a very close defence partner. India should restart joint exercises with UAE, and even Saudi Arabia.
- India can use its good relationship to ensure that any **future deal on a regional security framework gives adequate space to Iran**.
- Recently, **China has indicated its willingness to play a larger role** in this region, and is close to both UAE and Israel and, increasingly, Saudi Arabia.
- India should make its moves before this market and this extended neighbourhood come under the Chinese sphere of influence.

**Executive Order Against Hiring H-1B Visa Holders for Federal Contracts**

President Donald Trump has signed an executive order asking federal agencies to hire Americans. The order prevents them from contracting or subcontracting foreign workers, mainly those with H-1B visas.

**Key Highlights**

- The order requires all federal agencies to complete an internal audit and assess whether they are in compliance with the requirement that only US citizens and nationals are appointed to the competitive service.
- The Department of Labour will also finalise guidelines to prevent H-1B employers from moving H-1B workers to other employers' job sites to displace Americans workers.

[For detailed discussion on issues related H-1B visa, please refer the Mains sections from June 2020 edition of CA magazine]

**Mediterranean Drilling by Turkey**

- The European Union has urged Turkey to halt its drilling activities in contested waters in the Mediterranean. It ordered EU officials to speed up work aimed at **blacklisting some Turkish officials linked to the energy exploration.**
- Tensions have simmered between NATO allies **Greece and Turkey** over overlapping claims to hydrocarbon resources in Mediterranean waters.

**What Is The Issue**

- The main reason behind the escalation has been the **increased discoveries of significant oil and hydrocarbon fields in the East Mediterranean Basin.**
- These discoveries have revived the **historical ‘Cyprus problem’**, namely the lack of a mutually recognized final status of the island of Cyprus by Turkey and Greece.
- Turkey doesn't recognize the divided island of Cyprus as a state and claims 44 per cent of Cyprus' exclusive economic zone as its own.
- The **divergent views** on the recognition of Cyprus's status have repercussions on the claims for the maritime zones.
- Tensions between the two countries further increased when Turkey decided to start drilling work near the Mediterranean island of Cyprus.

Cyprus was **split along ethnic lines** in 1974 when Turkey invaded in the wake of a coup by supporters of union with Greece.

A Turkish Cypriot declaration of independence is recognised only by Turkey, which keeps more than 35,000 troops in the breakaway north.

**Position Of Other Countries In The Region**

- **France has decided to boost its military presence** in the eastern Mediterranean amid an escalating standoff. France has expressed its commitment to free movement, to the security of maritime navigation in the Mediterranean and respect for international law.
- France, Italy, and the UAE have joined recent military exercises and training missions held by Greece and ally Cyprus. USA has also held separate exercises with Greece.

**Sri Lanka To Abolish 19<sup>th</sup> Amendment To Constitution**

Sri Lankan President Gotabaya Rajapaksa has expressed his intention to abolish the 19th Amendment to the Constitution. He made this announcement while making the ceremonial address outlining his policies at the inaugural session of the new Parliament.

### Reasons

- The Rajapaksa family had alleged that the amendment was brought specifically to target the family.
- Mahinda Rajapaksa could not contest the **November 2019 Presidential elections** because of term limit and his younger brother Gotabaya became the candidate.

### What Is 19<sup>th</sup> Constitutional Amendment

- It was introduced in 2015 which curtailed the powers of the President and strengthened the role of Parliament. The amendment made following changes:
  - Reduced the terms of President and Parliament from six years to five years
  - Re-introduced a two-term limit for a person as President
  - Ensured revival of Constitutional Council and the establishment of independent commissions
  - Power of President to dissolve Parliament only after four and a half years
  - Prevented dual citizens from contesting elections
- 19<sup>th</sup> Amendment was brought by the previous government to prevent centralisation of power introduced by 18<sup>th</sup> amendment.
- 18<sup>th</sup> amendment brought changes such as:
  - re-election of President for any number of times;
  - President to attend Parliament once in three months;
  - Entitled him to all the privileges, immunities, and powers of a Member of Parliament other than the entitlement to vote
  - Ten-member Constitutional Council replaced with a five-member Parliamentary Council
  - Independent commissions brought under the authority of the President

### Africa Declared Free of Wild Polio

- WHO has declared the entirety of Africa polio-free. However, the vaccine-derived polio virus remains in Africa.
- Nigeria was the last African country to be declared free from wild polio.
- No new cases of wild poliovirus have been recorded on the continent since 2016, but other types of the virus persist.
- A country is certified as free of wild polio after **three consecutive years have passed without the virus being detected** in any part of the country/region.
- Pakistan and Afghanistan are two remaining countries which are yet to be declared as polio-free.

### Mauritius Oil Spill

- Mauritius had declared a national emergency over an oil spill near its coast which had now been cleaned up.
- A Japanese ship had struck a coral reef resulting in an oil spill of over 1,000 tonnes into the Indian Ocean. The ship was carrying an estimated 4,000 tonnes of oil.

#### Some of the world's largest oil spills

- the Persian Gulf War oil spill of 1991
- 2010 Deepwater Horizon oil spill in the Gulf of Mexico

### **Cause for Concern**

- The amount of oil spilled in this case is relatively low compared to the big oil spills the world has seen in the past. However, **it is the location rather than the size of the spill** which is causing greatest concern.
- The accident had taken place near **two environmentally protected marine ecosystems** and the **Blue Bay Marine Park Reserve**, which is a wetland of international importance.
- Mauritius is a biodiversity hotspot with a high concentration of plants and animals unique to the region.
- According to the UN Convention on Biological Diversity, the Mauritian marine environment is home to 1,700 species including around 800 types of fish, 17 kinds of marine mammals and two species of turtles.

### **India's Assistance to Mauritius in Dealing with Oil Spill**

- India sent a **technical response team** and more than **30 tonnes of equipment** to Mauritius to help in efforts to contain a massive oil spill.
- Technical response team consisted of Coast Guard personnel specially trained in oil spill containment measures.
- In addition, India also gave 10,000 **high capacity oil absorbent pads**. The pads, manufactured in India are **specially designed using graphene (an allotrope of carbon)** which are extremely useful in salvage operations in and around beaches where oil has spread.
- As an immediate step, just after the spill, Indian Oil (Mauritius) Limited (IOML) was asked to extend all possible assistance to the Government of Mauritius.

### **1947 Pact on Gurkha Soldiers**

Nepal has termed the 1947 tripartite agreement on Gurkha soldiers as redundant. It has called on Britain and India – the two other signatories of the agreement on Gurkhas to start discussions.

#### **Reasons**

- **Legacy of Past** – According to Nepal, Gorkha recruitment is a legacy of past. It created a lot of jobs in the past, however, in the present scenario, it should be re-discussed.
- **Alleged discrimination** – The agreement assures equality in all perks, remuneration, facilities and pension schemes for Nepalis serving in British and Indian Armies. However, Gorkha veterans have alleged the agreement to be discriminatory against them.
- **Indo-Nepal Tension** – The objection of Nepal regarding Gurkhas serving in the Indian Army can be seen against the backdrop of Indo-Nepal territorial dispute over the Kalapani region. Nepal has published a map that included the disputed territories of Kalapani region.
- **Role of China** – Many analysts believe Chinese hand behind the current protest shown by Nepal.

#### **1947 Tripartite Agreement**

- After the independence of India, the recruitment of Gurkha soldiers was organised by way of the **1947 tripartite agreement among Nepal, India and Britain**.
- In the agreement, it was decided to split Gurkha regiments between the British and Indian armies. Thus, the 2nd, 6th, 7th and 10th Gurkha Rifles became part of the British Army after India gained Independence while the rest were retained by Independent India.

## **Background**

- Gurkhas had served under the British since the first quarter of 19<sup>th</sup> century.
- East India Company first recruited Gurkhas. They did so after suffering heavy casualties during the Anglo-Nepalese War. The war ended with the signing of the **Treaty of Sugauli in 1816**.

### **Citizenship of Buddha: War of Words Between India and Nepal**

- Recently, India and Nepal were engaged in a war of words over the origin of Gautama Buddha.
- India's External Affairs Minister S. Jaishankar described the **founder of Buddhism as one of the greatest Indians ever**.
- It was strongly objected by Nepal's Foreign Ministry, saying Buddha was a Nepali national. Nepal's body politic has increasingly complained that India has cornered the credit for Buddha, who it claims was a Nepali citizen.
- In July 2020, it was Nepal's PM Oli, who declared **Lord Ram to be a Nepali national**. The rebuttal from a section of Indians was strong.

## **Mandarin Dropped from the List of Foreign Language**

- Mandarin or 'Chinese' has been dropped from the list of foreign languages that can be taught in schools, according to the New Education Policy (NEP) 2020.
- This language was a part of the draft version of the policy, released in May 2019. The draft policy, then, had named French, German, Spanish, Chinese and Japanese as foreign languages which could be offered as electives.

As part of an **Education Exchange Programme** signed by India and China in 2006, Mandarin was to be introduced in Indian schools and Hindi in Chinese schools.

In 2014, CBSE introduced Mandarin in some schools. However, it failed due to unavailability of Chinese language teachers.

## **Reasons for Omission**

- Many analysts view this omission against the backdrop of India banning over 100 Chinese apps following a **face-off with China in eastern Ladakh**.
- Foreign-language teachers say Chinese as a language was gaining popularity in Bengaluru since 2017, and was set to surpass many Asian languages, including Japanese. However, no one signed up for March 2020 programme for the Chinese language.
- There has been reports that the government has security concerns over Mandarin being used as a language of instruction in Indian educational institutes.

## **Government Position on the Issue**

- MHRD had stated that it neither prescribes nor prohibits study of any foreign language.
- NEP 2020 has given names of certain foreign languages only as an example. The study of foreign language will be as per the choice of students.
- The new policy allows the state, region, and **child to choose three languages**. However, at least two of the three languages have to be native Indian languages.

## **Pakistan Unveils New Map**

- On the eve of the first anniversary of the withdrawal of Jammu and Kashmir's special status under Article 370 and its bifurcation into Union territories, Pakistan has released a new political map.

- The map depicts the **UT of J&K as part of Pakistan**. It also claims the **regions of Sir Creek and the erstwhile state of Junagadh in Gujarat** as part of its territory.

#### **India's Reaction**

- India has termed this exercise as political absurdity. According to India, these ridiculous assertions have neither legal validity nor international credibility.
- This new effort only confirms the reality of **Pakistan's obsession with territorial aggrandisement supported by cross-border terrorism**.

#### **Previous Such Attempts by Pakistan:**

- This is not the first time Pakistan has tried to portray Junagadh as part of its territory.
- The **2012 Atlas of Pakistan** also portrayed Junagadh as a separate territory.

#### **UK Plans Coin In Mahatma Gandhi's Honour**

- Britain is considering minting a **coin to commemorate Mahatma Gandhi**. This decision has been taken amid growing interest in recognizing the contributions of people from the **Black, Asian and other minority ethnic communities**.
- Royal Mint Advisory Committee (RMAC) is currently considering a coin to commemorate Gandhi.
- The RMAC is an independent committee made up of experts who recommend themes and designs for coins to Britain's finance minister, the Chancellor of the Exchequer.

#### **India's Assistance for Major Connectivity Project in Maldives**

India has announced its assistance for Major Connectivity Projects in Maldives. It will fund the implementation of a major connectivity project in Maldives through a **USD 400 million line of credit** and **USD 100 million grant**.

#### **Major connectivity Projects Announced Are:**

- **The Greater Male Connectivity project (GMCP)**
  - The 6.7 km Project will be the largest civilian infrastructure project in Maldives.
  - It will connect Male with three neighbouring islands - Villingili, Gulhifahu and Thilafushi.
  - The project connecting Male with Gulhifalhu Port & Thilafushi industrial zone will help **revitalise and transform Maldivian economy**.
- **A Direct Ferry Service**
  - The start of regular cargo ferry service between India and Maldives will further boost trade and commerce between the two countries.
  - The cargo ferry service will enhance sea connectivity and provide predictability in supplies for importers in Maldives and exporters in India.
  - It will also reduce logistics costs and times for traders
- **Air Travel Bubble**
  - India is also starting an air travel bubble with Maldives to sustain and promote the dynamic people-to-people ties between the two countries.
  - **Maldives is the first neighboring country** with which an air bubble is being operationalized. It symbolizes India's support to shore up tourism arrivals and revenues in the Maldives.

### **India-Singapore Defence Policy Dialogue**

- 14<sup>th</sup> India-Singapore defence policy dialogue was held via video conferencing.
- Co-chaired by - Defence Secretary Dr Ajay Kumar and Permanent Secretary (Defence), Singapore Mr Chan Heng Kee.
- Humanitarian Assistance and Disaster Relief (HADR) agreement was signed between the countries during the dialogue.

#### **India – Singapore Defence Cooperation: Timeline**

- 1994 – Started annual naval combat **exercise SIMBEX**
- 2003 - Signed an agreement that allowed the Singapore army to conduct training on Indian soil.
- 2015 - Agreement for strategic relationship in security, military, intelligence cooperation, political exchanges, cooperation in multilateral forums, and to improve air connectivity.
- 2017 - Signed a **naval cooperation** to boost maritime security, mutual logistics and joint exercises.
- 2018 - Signed a bilateral agreement that gave Indian Navy ships **access to Changi Naval Base of Singapore**.

### **India-Canada IC-IMPACTS Annual Research Conference**

- The India-Canada IC-IMPACTS Annual Research Conference was held virtually.
- **Organized by** - India-Canada Centre for Innovative Multidisciplinary Partnership to Accelerate Community Transformation and Sustainability (IC-IMPACTS)
- **Aim** - To discuss the ways for taking cooperation between the two countries to a new level.
- The Department of Science and Technology has been working with IC-IMPACTS for research partnerships since 2013.
- The major focus areas of research cooperation under the IC-IMPACT are *green buildings and smart cities; occupants' survivability in buildings during fires; integrated water management & safe and sustainable infrastructure; and health problems arising from water-borne and infectious diseases.*

### **Indian Tricolour Hoisted at Times Square**

- For the first time, the Indian flag was hoisted alongside the US flag at Times Square. This was done during the celebration of 74<sup>th</sup> Independence Day of India.
- India's Consul General in New York, Randhir Jaiswal hoisted the Indian flag during a special commemoration of the Independence Day at Times Square.
- It was **organised by the Federation of Indian Associations (FIA)**, the leading umbrella diaspora organisation in the US.
- Established in 1970, the FIA is among the largest umbrella diaspora organisations. The FIA annually organises its flagship event - the **India Day Parade** to mark India's Independence Day in August.

### **Air Bubbles Agreement**

- Indian flyers **holding any kind of valid visa** under the 'Air Bubbles' agreement **can travel to the UK, the US, Canada and UAE**.

- So far, India has not allowed entry of all visa holders into the country except for those holding essential visa that is approved by the Ministry of Home Affairs.

#### **What is Air Bubble**

- It is a **bilateral agreement** between two countries in which **airlines from both countries can operate international flights with a set of rule and restrictions.**
- Air bubbles **do not mean the re-commencement of international passenger flight operations.** These are still repatriation flights, where nations have decided to allow each other's flights to fly in and out of their respective nations with certain condition.

#### **Who Can Arrive In India From 'Air Bubble' Countries?**

- **Overseas Citizen of India (OCI)** cardholders have been permitted to enter India.
- **Other foreigners from these countries** have also been allowed to avail Indian visa facility for business, medical & employment purposes.

#### **How 'Air Bubble' Is Different From Vande Bharat Flights?**

- Although both are repatriation flights, there is a difference between the two. 'Air bubbles' have primarily given passengers a choice beyond Indian carriers to undertake their journey.
- For instance, if one is flying to Canada, one can pick either an Air India or an Air Canada flight. No such options are given in Vande Bharat flights.

#### **Supply Chain Resilience Initiative**

- India, Japan and Australia have proposed an initiative to build **resilient supply chains in the Indo-Pacific region.**
- Originally proposed by Japan, the **Supply Chain Resilience Initiative (SCRI)** will be a trilateral approach to trade, with India and Australia as the key-partners.
- SCRI will work with regional partners, including members of ASEAN, to build stronger supply and manufacturing chains that are protected from external shocks and influences

#### **What is Supply Chain Resilience**

- Supply Chain Resilience is an approach in an international trade which helps a country to **diversify its supply risk.**
- Too much dependency on supply from one country can always **have crippling effect if that source stops production intentionally** (economic sanction) **or unintentionally (natural disaster).**
- For example, Japan imported \$169 billion worth from China, accounting for 24% of its total imports. Japan's imports from China fell by half in February 2020 that impacted Japan's economic activity.
- Also, in 2012, due to the Senkaku island dispute, China had stopped exporting rare earth metal to Japan.

#### **Objectives of The Initiative**

- To attract **foreign direct investment** to turn the **Indo-Pacific into an 'economic powerhouse'**
- To build a **mutually complementary relationship** between the partner countries.

#### **Rationale Behind This Initiative**

- The aim is to create a **free and transparent trade and investment** environment.

- In light of the **Covid-19 crisis** and the recent **changes in the economic landscape**, the necessity was felt to enhance the resiliency of supply chains in the Indo-Pacific region.
- **USA-China Trade Tensions** has potential to disrupt Indo-Pacific trade and supply chain networks.
- The necessity was also felt to **reduce dependency on China**. Beijing's aggressive political and military behaviour is increasingly being viewed as a threat to the sustainability of trade and commerce in the region.
- Many analysts believe that the supply chain initiative **was a natural follow on to the security cooperation** between the three countries, both bilaterally and through platforms such as the Quadrilateral Dialogue Mechanism or Quad (which also includes the US).

### **Significance For India**

- India, **having pulled out of the RCEP**, will get a chance to **integrate itself to the supply chain networks of Indo-Pacific**.
- In 2019, the cumulative **GDP of the three countries was \$9.3 trillion**, and their merchandise goods and services trade was \$2.7 trillion and \$0.9 trillion, respectively.
- It will also help India in **countering the aggressive China** in the region.

### **What Steps Should India Take?**

- In order to reap the benefit of this initiative, **India needs to identify the manufacturing and services sectors** which contributed the most to the domestic value addition in the region.
- It will need to focus on following aspects as well:
  - Accelerate progress in **ease of doing business** and in skill building
  - **Provide Tax incentives** to compete from China and other attractive locations like Vietnam and the Philippines
  - Boost Domestic Manufacturing
  - Infrastructural Push

### **ASEAN-India Network of Think Tanks**

- The 6th Round Table of ASEAN-India Network of Think Tanks (AINTT) was organized through video conference.
- **Organized by** - Ministry of External Affairs in partnership with the Ministry of Foreign Affairs of Thailand
- **Theme** - ASEAN-India: Strengthening Partnership in the Post COVID Era
- The ASEAN-India Round Table was established at the **7th ASEAN-India Summit in Thailand in 2009** to provide policy inputs to Governments on future direction of cooperation.
- The forum serves as a **high-quality research platform** and provides long-term perspectives to **further strengthen ASEAN-India Strategic Partnership**.

### **India, Uzbekistan Held Meeting of National Coordination Committee**

- India and Uzbekistan held the **first meeting of their National Coordination Committee**.
- The committee has been set up **to monitor the implementation** of the mutually agreed projects between India and Uzbekistan.

- The meeting discussed their bilateral interests such as trade and investment and Line of Credit projects.
- The two countries have **bilateral trade of over 300 million USD**. Pharmaceuticals is the major area of trade between the countries.
- A **Joint Centre of Information Technology** was set up in 2006 and was upgraded in 2014. In July 2019, an **IT park was established** in Tashkent, with Indian assistance.
- Uzbekistan is an important Uranium supplier for India.

### **17<sup>th</sup> Meeting of India-Vietnam Joint Commission**

The 17th meeting of the India-Vietnam **Joint Commission on Trade, Economic, Scientific and Technological Cooperation** was held via video-conference.

#### **Key Highlights:**

- During the meeting, the recent developments in India-Vietnam Comprehensive Strategic Partnership were reviewed.
- MoU Signed:
  - MoU for "Cooperation between Sushma Swaraj Institute of Foreign Service (SSIFS), New Delhi and Diplomatic Academy of Vietnam, Hanoi"
  - MoU between National Maritime Foundation, New Delhi and Scientific Research Institute of Sea and Islands, Hanoi"
- India and Vietnam also agreed to enhance their bilateral cooperation in line with India's **Indo-Pacific Oceans Initiative (IPOI)** and the **ASEAN's Outlook on Indo-Pacific** to achieve shared security, prosperity and growth for all in the region.

### **BRICS Innovation Base**

- China has proposed to establish a BRICS innovation base to strengthen practical cooperation with the five-member bloc. This was proposed during a video meeting of the BRICS industry ministers.
- **Aim of the proposed base** - To take forward cooperation among the five countries in the field of **5G and Artificial Intelligence (AI) digital economy, industry, and information technology**.

#### **Rationale Behind This Proposal**

- China is vigorously promoting the resumption of work across the entire industry chain, and is keen to see more development in new industries such as 5G, AI and the industrial Internet during the COVID-19 pandemic.
- However, analysts believe other reasons behind this proposal. **China wants to push tech giant Huawei for 5G network development**. Recently, it faced opposition from developed countries like USA, UK.
- In the aftermath of clash between India and China at the LAC, India is gradually choosing a course which would make it less China dependent economically. It has also banned 59 Chinese app over the security concern.
- Hence, this proposal is being seen as a Chinese effort to win back India.

**5G Cooperation and Member of BRICS**

- **Russia** has signalled that it would work with China on 5G development.
- **In South Africa**, Huawei is providing services to three of its telecom operators in the roll-out of their 5G networks.
- **Brazil** has allowed Chinese participation in trials but is yet to take a final call.
- **India** is leaning towards excluding Chinese participation in the roll-out of its national 5G network.

[Also refer the topic "**Britain Bans China's Huawei**" from July 2020 edition of CA magazine]

**Meeting of The BRICS Anti-Drug Working Group**

The **4th Session of the BRICS Anti-Drug Working Group** comprising of Brazil, Russia, China, South Africa and India was held. The session was chaired by Russia.

**Key Highlights**

- Member countries agreed that there is need for real time information sharing among the member states and need to curb increased **drug trafficking through maritime routes**.
- The issues related to **misuse of darknet** and other advanced technologies for drug trafficking was raised by India.
- India also called for **nodal points to enable real-time information sharing** among BRICS nations.

**Anti-Drug Action Plan 2020-21**

- Ministry of Social Justice and Empowerment had launched Anti-Drug Action Plan for 2020-21 on the occasion of International Day against Drug Abuse and Illicit Trafficking (June 26).
- The action plan includes:
  - Setting up of De-addiction Facilities,
  - Setting up of Drop-in-Centres for Addicts,
  - Integrated Rehabilitation Centre for Addicts (IRCA),
  - Drug-Free India Campaign.

**About Darknet**

- The "dark net," also known as the "dark web," is part of the greater "deep web," a network of secret websites that exist on an encrypted network.
- The darknet refers to networks that are **not indexed by search engines** such as Google, Yahoo or Bing.
- These are networks that **are only available to a select group of people** and not to the general internet public, and only accessible via authorization, specific software and configurations.
- This includes **harmless places such as academic databases and corporate sites**, as well as those with shadier subjects such as black markets, fetish communities, and hacking and piracy.

**Fifth World Conference Of Speakers Of Parliament**

- Om Birla, the Lok Sabha Speaker, attended the inauguration ceremony of the Fifth World Conference of Speakers of Parliament.
- Organized by Inter-Parliamentary Union (IPU) and the Parliament of Austria with the support of the United Nations (UN).

- **Theme** - Parliamentary leadership for more effective multilateralism that delivers peace and sustainable development for the people and planet

### **Background**

- The **first Conference** of Presiding Officers of National Parliaments took place in August 2000. The conference concluded with a Declaration entitled **The Parliamentary Vision For International Cooperation at the Dawn of the Third Millennium**.
- Also known as **Millennium Declaration**, it calls for the United Nations to work with national parliaments, through the IPU, in the pursuit of peace and security, economic and social development, international law and human rights, democracy, and gender issues.
- Subsequent World Conferences were held every five years in conjunction with the United Nations.

### **About IPU**

- Established in 1889 as a global organization of national Parliaments.
- HQ - Geneva, Switzerland
- It aims to promote parliamentary dialogue world-wide and works for peace and cooperation among the people.
- It has permanent observer status at the United Nations General Assembly.

### **Loan Agreement for Mumbai Urban Transport Project-III**

- The Indian Government, Maharashtra government and Mumbai Railway Vikas Corporation has signed a loan agreement of USD 500 million dollars with the **Asian Infrastructure Investment bank (AIIB)** for Mumbai Urban Transport Project-III.
- The project aims at improving the service quality, network capacity, and safety of the suburban railway system in Mumbai.
- It is also expected to increase the network capacity with the reduction in fatal accidents and the journey time of commuters.

#### **About AIIB**

- The **Asian Infrastructure Investment Bank (AIIB)** is a multilateral development bank with a mission to improve social and economic outcomes in Asia.
- **Headquartered in Beijing**, it began **operations in January 2016** and have now grown to 102 approved members worldwide.
- **Fourteen of the G-20 nations** are AIIB members including France, Germany, Italy and the United Kingdom.
- India is the **second-largest shareholder** in AIIB, contributing USD 8.4 billion.
- China is the largest shareholder with **voting shares of 26.61 % followed by India (7.6%)**.

#### **Some of the Infrastructural Projects of India financed by AIIB:**

- Andhra Pradesh 24x7 – Power For All project
- Andhra Pradesh Rural Roads Project
- Transmission System Strengthening Project
- Bangalore Metro Rail Project

- AIB has also approved lending of \$200 million to National Investment and Infrastructure Fund (NIIF).

### **Draft Defence Production and Export Promotion Policy 2020**

Defence Ministry has formulated a draft Defence Production and Export Promotion Policy 2020 (**DPEPP-2020**). The policy aims to provide impetus to **self-reliance in defence manufacturing** under the Aatmanirbhar Bharat Scheme.

The estimated size of the existing Indian defence industry is around Rs 80,000 crore, with the public sector's contribution of around 80%. Thus, it is important for India to improve its defence industrial base by increasing private sector participation in the defence sector.

#### **Key Highlights**

##### **Goals and Objectives Laid Out By Policy:**

- To achieve a **turnover of Rs 1,75,000 Crores** (US\$ 25Bn) including export of Rs 35,000 Crore (US\$ 5 Billion) in Aerospace and Defence goods and services **by 2025**.
- To develop a dynamic, robust and competitive Defence industry, including Aerospace and Naval Shipbuilding industry to cater to the needs of Armed forces with quality products.
- To **reduce dependence on imports** and take forward "Make in India" initiatives through domestic design and development.
- To promote export of defence products and become part of the global defence value chains.
- To create an environment that encourages R&D, rewards innovation, creates Indian Intellectual Property (IP) ownership and promotes a robust and self-reliant defence industry.

##### **Focus Areas And Multiple Strategies Brought Out By The Policy**

###### **A. Procurement Reforms**

- A **Project Management Unit (PMU)** - for the acquisition and facilitation process of the contracts, building military capabilities - would be set up.
- It aims at moving away from licensed production to Design, Develop and produce. Under the new system, the Nation would own the Design Rights and IP of the systems.
- A **Technology Assessment Cell (TAC)** would be created which would assess the industrial capability for design, development and production.
- A **negative list of weapons** will be updated periodically and notified year-wise for placing an embargo on the import of such items from those dates.

###### **B. Indigenization & Support to MSMEs/Startups**

- It aims to create an industry ecosystem to **indigenize the imported components and sub-assemblies for defence equipment** and platform manufactured in India.
- 5,000 such items are proposed to be indigenized by 2025.
- An **indigenization portal (SRIJAN portal has been launched)** will be developed to provide development support to MSMEs/Startups/Industry for import substitution.
- A **Public Procurement Order** will be released for those items for which the domestic production capability exists.
- **Defence Investor Cell** in Department of Defence Production will **provide handholding to MSMEs**, in defence production for resolving issues with Central, State and other authorities.

**C. Optimize Resource Allocation**

- The **share of domestic procurement** in overall Defence procurement is **about 60 per cent**. In order to achieve the goals and objectives laid by the policy, enhance procurement from domestic industry will be needed.
- It is, therefore, incumbent that procurement is doubled from the current Rs 70,000 crore to Rs 1,40,000 crore by 2025.
- The policy aims for the allocation for domestic capital procurement at the rate of a minimum of 15% per annum for the next five years.
- Also, efforts would be made to scrutinize, evaluate and optimize various items of expenditure in the Defence budget.

**D. Investment Promotion, FDI & Ease of Doing Business**

- Investments in the aviation sector will be encouraged in association with the Ministry of Civil Aviation.
- The Defence Corridors set up in Tamil Nadu and Uttar Pradesh will act as additional support.
- As per the **current FDI policy** for the Defence sector, the investments will be made via **automatic route up to 49%** and via government route above 49%.

**E. Innovation and R&D**

- **Innovations for Defence Excellence (iDEX)** has been implemented to provide necessary incubation and infrastructure support to the startups in the defence area.
- More than 50 startups are developing 'fit-for-military-use' technologies. **iDEX will further scale 300 more startups** and will develop 60 more technologies within the next 5 years.
- **Mission Raksha Gyan Shakti** was launched to promote innovation and technology development and to file patents in Defence PSUs and OFB.

**F. DPSUs and OFB**

- Department of Defence Production has set up production facilities over the years for defence equipment through the **15 Ordnance Factories** and Defence Public Sector Undertakings (DPSUs).
- In order to reform these organisations, Ordnance factories will be corporatized to make them competitive and to improve their productivity.
- Efforts will also be made to create a multi-tier domestic supply chain.

**G. Quality Assurance & Testing Infrastructure**

- To streamline the quality assurance process and to cut down the hold points and reduce the cycle time, an **IT platform will be developed**.
- For MSMEs, '**Zero Defect Zero Effect**' policy is encouraged to improve the quality.
- Efforts would be made to create a **testing infrastructure through Defence Testing Infrastructure Scheme (DTIS)** by providing assistance to industry to set up common testing facilities.

**H. Export Promotion**

In order to achieve the target of Rs. 35,000 crore of Defence Exports by 2025, various strategies have been proposed. Some of them are –

- i) **Defence Attachés** have been mandated and are supported to promote export of indigenous defence equipment abroad.
- ii) Export Promotion Cell has been set up to promote Defence exports
- iii) DPSUs and OFB would be mandated to have at least 25% of their revenue from exports.
- iv) Defence Expo and Aero India will be positioned as major global events to showcase India's capabilities in defence manufacturing, and also to encourage exports.

**Negative Import List for Defence Announced**

- In pursuant to the Draft Defence Production and Export Promotion Policy 2020, Defence Ministry has announced a list of 101 items that the Defence Ministry will stop importing.
- It means that the Armed Forces—Army, Navy and Air Force—will only procure all of these 101 items from domestic manufacturers.
- Government has also decided that in any government contract over ₹200 crore, no foreign company can participate in the tendering process.
- The items mentioned in the negative imports list comprises not just simple parts but also some **high technology weapon systems**. It includes water jet fast attack craft to survey vessels, pollution control vessels, GSAT-6 terminals, radars, unmanned aerial vehicles etc.
- The embargo on imports is planned to be progressively **implemented between 2020 to 2024**.
- The Defence Ministry has **bifurcated the capital procurement budget for 2020-21** between domestic and foreign capital procurement routes. A separate budget head has been created with an **outlay of nearly ₹52,000 crore for domestic capital procurement** in the current financial year.
- **Other initiatives taken earlier for the defence sector:**
  - Raising the Foreign Direct Investment (FDI) in defence manufacturing from 49% to 74% under the automatic route.
  - Improving the autonomy and accountability of the Ordnance Factory Board by their corporatization.
  - Building a time-bound defence procurement process and faster decision-making, including setting realistic general qualitative requirements of the weapons and equipment.
- **Importance Of This Step**
  - As per Stockholm International Peace Research Institute, India has been the **second largest importer between 2014 and 2019** with US\$ 16.75 billion worth of imports during this period. It will help the government to reduce its dependence on imports in the defence sector and reduce its large defence import expenditure.
  - By denying the possibility of importing the items on the negative list, the domestic **industry is given the opportunity** to step up and manufacture them for the needs of the forces. The government intends to reach a turnover of **\$25 billion** through indigenously manufactured defence products and also expects to export products worth **\$5 billion**.
  - An estimated Rs 4 lakh crore worth of orders for the armed forces are likely to be given to domestic manufacturers over the next seven years.

### **Pinaka Missile System Test-fired**

- The Pinaka rockets were tested at a firing range in Pokharan. The rockets have been **manufactured by the private sector** after a technology transfer agreement with the DRDO.
- The rockets have been **manufactured by Economic Explosives Ltd (EEL)** and are the **first munition of its kind made by the private sector in India**.
- It is significant as it gives a **major boost to “Make in India”**. It also indicates that **single source dependency on Ordnance Factory Board (OFB)** will soon be a thing of the past.
- The Pinaka is a home developed **multi barrel rocket launcher system** that is already in service with the Indian Army.

### **NSCN(I-M) Released the Confidential Nagaland Framework Agreement**

Naga rebel group, the National Socialist Council of Nagalim (NSCN-IM), released a copy of the "sensitive" Framework Agreement it signed with the Centre in 2015. It also accused Nagaland Governor R.N. Ravi, an interlocutor in the peace talks, of deleting a keyword.

#### **What Is The Issue**

- NSCN (IM) claimed that the Nagaland Governor removed the word **“new”** from a line in the agreement.
- According to the rebel group, the removal of word makes it appear like the framework agreement signed between the central government and the group **falls within the ambit of the Indian Constitution**.
- They, however, claim that framework agreement is outside the purview of Indian federation/Constitution.

#### **Reasons Why the Rebel Group has Released the Document?**

- By making the FA public, the NSCN **highlighted the trust deficit on Ravi**, the Governor of Nagaland.
- The Naga leaders are divided around the demand for a separate flag and a constitution separate from the Indian constitution.
- While the working committee of the Naga National Political Groups (NNPGs) is ready to go ahead without these conditions, the NSCN (I-M) is not.
- By making the document public, NSCN is attempting to **rebuild a consensus among the divided Naga groups** over the notion that certain factors were non-negotiable and will continue to remain so.
- The intention is also to **highlight the “shared sovereignty”** part of the Framework Agreement. NSCN has throughout used the term “shared sovereignty” in its dealings with Centre’s interlocutor.
- The idea was to let people know that the Framework Agreement also says, **“Inclusive peaceful co-existence of the two entities sharing sovereign power”**.

#### **Background:**

- One of the largest Naga groups, the NSCN (I-M) had in August 2015 signed the framework agreement with the Central government. However, certain points remained unresolved and peace talks were held at regular interval to sort out the issues.
- The group had been refusing to talk over its **contentious demand for a separate flag and constitution**.

### **Sputnik V**

- Russia has **approved** a novel coronavirus vaccine, **Sputnik V**, for public use without the final phase of human trials. It has been named Sputnik V, after the **first artificial Earth satellite, Sputnik-I** launched by the Soviet Union.
- It is the **first coronavirus vaccine to be approved**, though a Chinese vaccine has been cleared for 'limited use' much earlier, to be administered only on soldiers of the People's Liberation Army.
- The Russian vaccine, **developed by Moscow-based Gamaleya Institute**, has cleared regulatory approvals in record time, less than two months after it got into human trials, raising **concerns over its safety and effectiveness**.
- There are two ways in which the Russian vaccine can be made available in India.
  - i) The **Central Drugs Standard Control Organisation (CDSCO)** can ask Russia to conduct late-phase human trials, usually both phase-2 and phase-3, on an Indian population. This is the **usual requirement for all vaccines developed outside of India**. Late-phase human trials are important because the vaccine's efficacy can differ on different population groups.
  - ii) CDSCO is also **empowered to give emergency authorisation without late-phase trials** in case of extraordinary situations. The drug **Remdesivir was recently granted similar emergency approval** to be used as a therapeutic on novel coronavirus patients. But this option is unlikely to be exercised with the Russian vaccine. Unlike a drug that is administered only to patients, vaccines are inoculated to a large number of people. The **risks involved are much higher**.

### **Vaccine Development Process**

- The candidate vaccines are tested for their 'immunogenicity' and 'protective efficacy'.
  - **Immunogenicity** means whether the vaccine candidate raises immune responses. Immune responses are mainly seen in terms of antibodies responses.
  - **Protective efficacy** means, does it protect from infection or disease. And all vaccines do not protect against infection but they do protect against disease. For example, The influenza vaccine does not prevent infection from the virus but it prevents the disease that develops.
- Everything that raises an immune response, does not necessarily have to be protective. Working on AIDS vaccine has been going for decades. And so far all the AIDS vaccine candidates have raised very robust immune responses but these responses are not protective.
- According to the **Centres for Disease Control and Prevention (CDC)**, the general stages of the development cycle of a vaccine are:
  - Exploratory stage
  - Pre-clinical stage
  - Clinical development
  - Regulatory review and approval
  - Manufacturing
  - Quality control
- **Clinical development is a three-phase process:**
  - a) During **Phase I**, small groups of people receive the trial vaccine.

- b) In **Phase II**, the clinical study is expanded and vaccines are given to people who have characteristics (such as age and physical health) similar to those for whom the new vaccine is intended.
- c) In **Phase III**, the vaccine is given to thousands of people and tested for efficacy and safety.

Many vaccines undergo **Phase IV** formal, ongoing studies after the vaccine is approved and licensed.

- The **Central Drugs Standard Control Organisation (CDSCO)** under Directorate General of Health Services, **Ministry of Health & Family Welfare**, Government of India is the **National Regulatory Authority (NRA) of India**.
- Under the Drugs and Cosmetics Act, CDSCO is responsible for approval of Drugs, Conduct of Clinical Trials, laying down the standards for Drugs, control over the quality of imported Drugs in the country and coordination of the activities of State Drug Control Organizations.

### **Electronic Vaccine Intelligence Network**

- To support the Government of India's efforts to combat COVID-19, **Electronic Vaccine Intelligence Network (eVIN) India** is helping State/UT governments monitor the supply chain of COVID response material.
- eVIN, an innovative technological solution aimed at **strengthening immunization supply chain systems** across the country, is being implemented under **National Health Mission (NHM)** by Ministry of Health and Family Welfare.
- It combines **state-of-the-art technology, a strong IT infrastructure** and **trained human resources** to enable **real time monitoring of stock and storage temperature of the vaccines** kept in multiple locations across the country.
- The network has helped **create a big data architecture** that generates actionable analytics **encouraging data-driven decision-making** and consumption-based planning. This helps in maintaining optimum stocks of vaccines leading to cost savings. Vaccine availability at all times has increased to 99% in most health centers.

### **National Health Mission**

- The National Health Mission was launched by the Government of India in **2013** with the objective of **addressing India's malnutrition crisis**.
- The National Health Mission (NHM) encompasses its two Sub-Missions - **National Rural Health Mission (NRHM)** and **National Urban Health Mission (NUHM)**.
- The main components include Health System Strengthening, **Reproductive-Maternal-Neonatal-Child and Adolescent Health (RMNCH+A)**, and Communicable and Non-Communicable Diseases.
- The NHM envisages achievement of universal access to **equitable, affordable & quality health care services** that are accountable and responsive to people's needs.
- This mission is implemented by the **Ministry of Health and Family Welfare**.

### **Sarbecovirus**

- A study published in the Nature Microbiology says that the **novel coronavirus (SARS-CoV-2)** has been **circulating unnoticed in bats for decades**. Bats have been the "**primary reservoirs**" for novel coronavirus.

- The SARS-CoV-2 virus is likely to have diverged from closely related bat viruses called the **RaTG13 sarbecovirus**, 40-70 years ago.
- In early February, Chinese researchers had found that SARS-CoV-2 is most closely related to RaTG13 sarbecovirus, which was isolated from a horseshoe bat in Yunnan province in 2013.
- The authors analysed the evolutionary history of SARS-CoV-2 using genomic data on sarbecoviruses. The results suggest that **RaTG13 and SARS-CoV-2 share a single ancestral lineage**.
- The **novel coronavirus itself has not arisen from recombination** of any sarbecoviruses. The ability of the spike protein in the virus to bind to ACE2 human receptors had emerged within bats and is an ancestral trait shared with bat viruses and “not one acquired recently via recombination”. This was also the case with the bat sarbecoviruses related to the **2002 SARS lineage**.
- The researchers also caution that the **long divergence period raises the possibility of other undocumented virus lineages** circulating in horseshoe bats that have the potential to jump from bats to humans.

### Use Of Aspirin To Prevent Cataract

- A team of scientists from the **Institute of Nano Science & Technology (INST)**, an autonomous institute under the Department of Science & Technology, has developed **nanorods from the nonsteroidal anti-inflammatory drug (NSAID) Aspirin**.
- Aspirin is a popular medication **used to reduce pain, fever, or inflammation** and is found to be an effective non-invasive small molecule-based nanotherapeutics against cataract.
- The scientists have used the anti-aggregation ability of self-build aspirin nanorods as an effective non-invasive small molecule-based nanotherapeutics against cataract.
- These were **found to prevent cataract formation by inhibiting aggregation of crystallin**, and crystallin derived peptide aggregates.
- The aspirin nanorods are produced using the process of molecular self-assembly, which is a low cost and high –yield technique to generate the aspirin nanorods as compared to the high cost and laborious physical methods generally used for the synthesis of nanoparticles.

### Next Generation Sequencing Machines (NGS): Mega Labs

- The **Council of Scientific and Industrial Research (CSIR)** is working on developing “**mega labs**” where large machines, called **Next Generation Sequencing machines (NGS)**, which are **also used for sequencing human genomes**, will be repurposed to sequence 1,500-3,000 viral genomes at a go for detecting the SARS-CoV-2 novel coronavirus.
- It will help to scale up **testing** to at least **a million per day** and can also be used to develop new **diagnostic tests** for COVID-19.
- It can **also trace the evolutionary history** of the virus and track mutations more reliably.
- The NGS also found **two lineages of coronaviruses** which were unknown in Indian populations so far.
- Used optimally and with appropriate modifications, these genome sequencing machines can substantially **detect the possible presence of the virus even in several instances** where the traditional RT-PCR tests miss out on them. This is primarily because the **RT-PCR test identifies the SARS-CoV-2 virus by exploring only specific sections of the virus** whereas the genome method

can read a bigger chunk of virus genome and thereby provide more certainty that the virus in question is indeed the particular coronavirus of interest.

- Unlike the **RT-PCR (Reverse transcription polymerase chain reaction)** that needs **primers and probes** — a key hurdle in operationalising such tests on a mass scale early on in the pandemic — the **NGS does not need** primers and probes, and only needs custom reagents.

### COVAX Facility

- The **World Health Organisation** has renewed its invite to countries to join its COVAX facility, an **international alliance** aimed at accelerating the **development and manufacture** of novel Coronavirus vaccines, and ensuring **equitable access to all**.
- The COVAX facility, **launched in April 2020**, is stitching together agreements with developers and manufacturers of vaccine candidates it thinks are most likely to succeed.
- It is trying to **raise funds to support the rapid development** of promising candidates, and the quick expansion of manufacturing capacities, so that the vaccines once approved, could be produced on mass scale.
- It aims to **procure at least two billion doses** of a novel Coronavirus vaccine by the end of next year, for deployment and distribution mainly in the **low- and middle-income countries**.
- The countries who join the initiative are also **assured supply of vaccines** whenever they become successful. The countries will get assured supplies to protect at least 20 percent of their populations.

### Converting PPE Into Biofuels

- According to a new study by University of Petroleum and Energy Studies, Plastic from used **personal protective equipment (PPE) can be transformed into renewable liquid fuels**.
- The transformation into **biocrude, a type of synthetic fuel**, will not just prevent the severe after-effects to humankind and the environment but also produce a source of energy.
- The researchers call for PPE waste to be converted into fuel using a chemical process called **pyrolysis**. This breaks down **plastic at high temperature – between 300-400°C for an hour – without oxygen**.

### Tick-Borne Virus

- A disease called **Severe Fever with Thrombocytopenia Syndrome**, caused by the **tick-borne virus**, has killed seven and infected at least 60, setting off alarm bells among health officials in **China**.
- Severe fever with thrombocytopenia syndrome virus (SFTSV) belongs to the **Bunyavirus family** and is transmitted to **humans through tick bites**. Chinese virologists have warned that **human-to-human transmission of the virus cannot be ruled out**.
- Unlike SARS-CoV-2, however, this is **not the first time** the SFTS virus has infected people. The virus was **first identified** by a team of researchers in China over a decade ago. The first few cases were reported in rural areas of **Hubei and Henan provinces in 2009**.
- The current case fatality rate rests between approximately 16 and 30 per cent and due to the rate at which it spreads and its high fatality rate, SFTS has been listed **among the top 10 priority diseases blueprint** by the World Health Organisation (WHO).

- In epidemiology, a **case fatality rate** — sometimes called case fatality risk or case-fatality ratio — is the *proportion of deaths from a certain disease compared to the total number of people diagnosed* with the disease for a particular period.
- **Asian tick** called **Haemaphysalis longicornis** is the **primary vector**, or carrier, of the virus but the virus is also transmitted to humans from animals like goats, cattle, deer and sheep. Despite being infected by the virus, animals generally do not show any symptoms associated with SFTSV.
- While a vaccine to treat the disease is yet to be successfully developed, the antiviral drug **Ribavirin** is known to be effective in treating the illness.

### Post-Germination Growth in Plants

- A team of researchers at the **Indian Institute of Science Education and Research (IISER), Bhopal**, has conducted a **study on seed germination** that could have a major impact on agriculture in the long run by helping determine the optimum timing of seed germination and thus ensure high plant yields.
- Study focused on the interplay between **plant hormones like abscisic acid (ABA)** which inhibit the sprouting of the seed and **environmental cues** like light (which promotes the sprouting process) and **darkness**.
- Although ABA, a **ubiquitous plant hormone**, was discovered almost 80 years ago and the mechanisms **underlying germination inhibition by this protein** have been the subject of intensive research, there is scant knowledge about the mechanisms controlled by ABA for arresting the **post-germination** growth in response to environmental cues.
- This is the gap that the IISER team has attempted to bridge with its experiments.

### Abscisic Acid (ABA)

- It is a **plant hormone**.
- ABA **functions** in many **plant developmental** processes, including seed and bud dormancy, the control of organ size and stomatal closure.
- It is especially **important** for plants in the response to **environmental stresses**, including drought, soil salinity, cold tolerance, freezing tolerance, heat stress and heavy metal ion tolerance.
- ABA was **originally believed** to be involved in **abscission**, which is how it received its name. This is now known to be the case only in a small number of plants. **Abscission** is the **shedding of** various parts of an organism, such as a plant dropping a leaf, fruit, flower, or seed.

### Tanystropheus

- A recent study has unveiled fresh details surrounding the **Tanystropheus**, that lived on Earth some 242 million years ago and had a remarkably elongated neck – longer than its body and tail combined.
- Tanystropheus, a **reptile**, are believed to have lived around the **Monte San Giorgio basin on the Swiss-Italian border during the middle Triassic period (247-237 million years ago)**, and were originally mistaken to be a kind of **Pterosaur – a flying reptile**.
- Researchers concluded that Tanystropheus was a “**ram-feeder**”, its **long neck** allowing it



to approach unknowing prey and then use its fang-like teeth to directly snap a bit off its prey.

- However, **other crucial aspects regarding the reptile were unknown**. Questions such as whether it lived on land or water or both, or what its diet consisted of, had puzzled scientists ever since its fossil was first discovered some 150 years ago.

### **Submarine Optical Fibre Cable (OFC)**

- Prime Minister of India launched a **submarine optical fibre cable (OFC) connecting Andaman & Nicobar Islands** to the mainland, which will allow access to cheap and better telecom connectivity in the Union Territory.
- The Prime Minister had earlier laid the foundation for connecting **Chennai-Andaman and Nicobar Islands (CANI) with optical fibre on December 30, 2018**.
- As part of the project, a **2,300-km submarine cable was laid**. Services began on a major chunk of the islands from Chennai to Port Blair, Port Blair to Little Andaman and Port Blair to Swaraj Island. It will also connect Port Blair to Swaraj Dweep (Havelock), Little Andaman, Car Nicobar, Kamorta, Great Nicobar, Long Island, and Rangat.
- The submarine cable will **help A&N in getting cheaper and better connectivity** and all the benefits of Digital India, especially in improving online education, tele-medicine, banking system, online trading and in boosting tourism.
- Indian Ocean has been the centre of India's **trade and strategic prowess** for thousands of years and that Andaman & Nicobar is an important centre for India's **Economic-Strategic Cooperation**.
- The project is **funded** by the Government of India through the **Universal Service Obligation Fund (USOF)** under the Department of Telecommunications, Ministry of Communications.
- **Bharat Sanchar Nigam Limited (BSNL) executed** this project while Telecommunications Consultants India Limited (TCIL) are the Technical Consultants.

### **Andaman and Nicobar Islands as Maritime and Startup Hub**

- The Prime Minister also said that the Andaman and Nicobar Islands will be developed as a "**maritime and startup hub**".
- A **transshipment hub** has also been proposed in the Andamans that will help the group of islands become an important centre of the blue economy and a maritime and startup hub.
  - Plan is to **develop a container transshipment terminal** with the **Free Trade Warehousing Zone** in South Bay, Great Nicobar Island, to provide Indian shippers an alternative to the Colombo, Singapore and Port Klang (Malaysia) transshipment ports.
  - Transshipment can be defined as the process of transferring containers from one cargo ship to another in order for containers to reach their final destination.
- Earlier in 2015, India had drawn up an ambitious Rs 10,000 crore plan to transform the **Andaman and Nicobar Islands into the country's first maritime hub**, taking advantage of its strategic location and making it the base for infrastructure that will include an expanded **dry dock and ship repair industry in the capital Port Blair**.
- On 1st June 2017, the Union Government constituted the **Island Development Agency**, under Union Home Ministry, for holistic development of 10 islands including Andaman and Nicobar.

**Sarthak: Offshore Patrol Vessel**

- An **Offshore Patrol Vessel (OPV)** for the Indian Coast Guard was launched and re-christened as **Indian Coast Guard Ship 'Sarthak'**.
- OPV Sarthak is the 4th in the series of five OPVs.
- It has been designed & built **indigenously** by Goa Shipyard Limited (GSL). The Ship is fitted with state-of-the-art Navigation and Communication equipment, sensor and machinery.
- The ship will be deployed **extensively for EEZ surveillance**, Coastal Security and other duties as enshrined in the Coast Guard charter of duties, to safeguard the maritime interests of the Nation.

**Hindustan Urvarak & Rasayan Limited (HURL)**

- Hindustan Urvarak & Rasayan Limited (HURL) was **incorporated on 15th June, 2016**
- It is a **joint venture** company by **Coal India Limited (CIL)**, **NTPC Limited (NTPC)** and **Indian Oil Corporation Limited (IOCL)** as the lead promoters with Fertilizer Corporation of India Limited (FCIL) and Hindustan Fertilizer Corporation Limited (HFCL) as other two partners.
- Through HURL, initially Government of India was **reviving three closed urea plants** of FCIL and HFCL at Gorakhpur, Sindri and Barauni, each having an annual capacity of 12.7 Lakh MT, later **add two more** fertiliser plants, Talcher and Ramgundam, having a production capacity of 65 lakh metric tonnes, to turn India from being an importer to an exporter in the field of urea and fertilisers,
- It works under the Department of Fertilizers under the ambit of **Ministry of Chemicals & Fertilizers**.

**Project Cheetah of Indian Arm Forces**

- Amid border tensions with China, Indian armed forces have reportedly decided to revive '**Project Cheetah**'.
- Project Cheetah aims to **upgrade the drones** for carrying out offensive operations against the enemy. Under the project, **tri-services** want to equip their fleet of around 90 **Heron drones** with **laser-guided bombs** and **anti-tank missiles**.
- It has been revived by the armed forces after being pending for a long time and is **expected to cost the government over Rs 3,500 crore**.

**Heron**

- The Heron is an **unmanned aerial vehicle (UAV)** developed by **Israel Aerospace Industries**.
- It is capable of **Medium Altitude Long Endurance (MALE)** operations of up to 52 hours' duration at up to 10.5 km (35,000 ft). An advanced version is also known as the **Eitan**.

**Bharat Air Fibre**

- **Bharat Air Fibre Services** has been inaugurated at Akola in Maharashtra to provide residents of Akola & Washim district **Wireless Internet Connections on demand**.
- The Bharat Air Fibre services are **introduced by BSNL as part of digital India initiatives** by the Government of India.
- It aims to **provide Wireless Connectivity in the range of 20 km** from the BSNL locations and thus customers at remote places also will be benefitted as BSNL comes with cheapest services with support of **Telecom Infrastructure Partners (TIPs)**.

- These Bharat Air Fibre services open new ways of fastest Wireless internet connectivity as well Voice services at a reasonable cost.
- BSNL provides Bharat Air Fibre connectivity up to 100 Mbps speed.

### Student Entrepreneurship Award

- **Atal Innovation Mission (AIM), NITI Aayog**, in collaboration with **Dell Technologies** has launched **Student Entrepreneurship Programme 2.0 (SEP 2.0)** for young innovators of **Atal Tinkering Labs (ATLs)**.
- SEP 2.0 will allow student innovators to work closely with Dell volunteers. They will receive mentor support; prototyping and testing support; end-user feedback; intellectual property registration and patenting of ideas, processes, and products; manufacturing support; as well as the launch support of the product in the market.
- **SEP 1.0 began in January 2019**. Through a 10-month-long rigorous programme, the top 6 teams of ATL Marathon—a nationwide contest where students identify community challenges and create grassroots innovations and solutions within their ATLs—got a chance to transform their innovative prototypes into fully functioning products, which are now available in the market.

### Time Capsules

- A Time Capsule is a container of any size or shape, which **accommodates documents, photos and artefacts typical of the current era** and is buried underground **for future generations** to unearth.
- The time capsule **requires special engineering** so that the contents don't decay, even if pulled out after a century. Material such as **aluminium and stainless steel are used** for the encasing, and documents are often reproduced on acid-free paper.
- The term "time capsule" was **coined in the 20<sup>th</sup> century**. The earliest examples of one dates back to 1777, found by historians inside the statue of Jesus Christ in a church in Spain during restoration work in December 2017.
- The **International Time Capsule Society (ITCS)**, based in the US and **formed in 1990, is now defunct** but continues estimating the number of time capsules in the world. As per its database, there are 10,000-15,000 times capsules worldwide.
- **Time Capsules in India:** One-time capsule, outside the **Red Fort** and placed underground in 1972 by Prime Minister Indira Gandhi, was dug out by the subsequent government. Other time capsules are at **The Alexandra Girls' English Institution in Mumbai, IIT-Kanpur, Lovely Professional University** in Jalandhar, and **Mahatma Mandir** in Gandhinagar.

### Dwarf Planet Ceres

- According to the data collected by **NASA's Dawn spacecraft**, **dwarf planet Ceres is said to have salty water underground**.
- The scientists have given Ceres **the status of an "ocean world"** as it has a big reservoir of salty water underneath its frigid surface. This has led to an increased interest of scientists that the dwarf planet was maybe habitable or has the potential to be.
- Dwarf planet Ceres is the **largest celestial object in the asteroid belt between Mars and Jupiter** and the only dwarf planet located in the inner solar system. It was the first member of the asteroid belt to be discovered when **Giuseppe Piazzi spotted it in 1801**.

- Ceres has a diameter of about 950 km, which is more than one-fourth of Earth's moon. The main focus of the scientists was the **92 km wide crater named Occator** located in Ceres' northern hemisphere. This crater is said to have formed by an impact approximately 22 million years ago.
- Ceres is **not the only celestial body** in our solar system where subsurface oceans are known to exist. **Jupiter's moon Europa, Saturn's moon Enceladus, Neptune's moon Triton, and the dwarf planet Pluto** are also on the list.

#### **Dwarf Planet**

- The **International Astronomical Union (IAU)** has set four criteria for a celestial body to be called a dwarf planet.
- These **four criteria are** – that the **body orbits around the Sun**, it is **not a moon**, has **not cleared the neighbourhood around its orbit** (which means it is not the dominant body in its orbit around the Sun and this is what differentiates a planet from a dwarf planet) and has **enough mass for its gravity** to pull it into a roughly spherical shape.
- There are **officially five dwarf planets** in our Solar System. The most famous is **Pluto**, downgraded from the status of a planet in 2006. The other four, in order of size, are **Eris, Makemake, Haumea and Ceres**. The sixth claimant for a dwarf planet is **Hygiea, which so far has been taken to be an asteroid**.

#### **Dawn Spacecraft**

- NASA's Dawn mission, which **launched in 2007**, sought to characterize the processes that dominated early solar system evolution.
- Dawn visited two-time capsules of the solar system- **Vesta and Ceres**, the largest bodies of the main asteroid belt.
- In **2015**, it went into the orbit around Ceres and the information it collected reinforced the idea that dwarf planets could have hosted oceans over a significant part of their history. The **mission concluded in 2018**.

#### **Sunspot Group: AR2770**

- A massive **Sunspot group, AR2770**, was observed by using images of the Sun's surface from **NASA's Solar Dynamics Observatory (SDO)**.
- A few minor **space flares** have been emitted by this particular Sunspot group already, which has not caused anything major other than "**minor waves of ionization to ripple through Earth's upper atmosphere**".
- Solar flares, when powerful enough, **can disrupt satellite and radio transmission**, and more severe ones can cause 'geomagnetic storms' that can damage transformers in power grids.
- A **Sunspot** is an **area on the Sun that appears dark** on the surface and is relatively **cooler than surrounding parts**. These spots, some as large as 50,000 km in diameter, are the visible markers of the **Sun's magnetic field**, which forms a blanket that protects the solar system from harmful cosmic radiation.
- On the **photosphere (the outer surface of the Sun which radiates heat and light)**, sunspots are the areas where the star's magnetic field is the strongest; around 2,500 times more than the Earth's magnetic field.

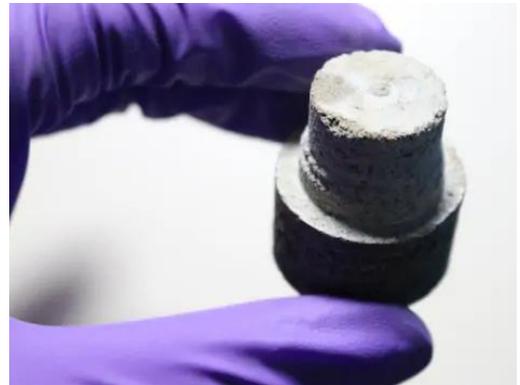
- Most Sunspots appear in groups that have their own **magnetic field**, whose **polarity reverses** during every **solar cycle**, which takes around 11 years. In every such cycle, the number of Sunspots increases and decreases.
- The current solar cycle, which began in 2008, is in its '**solar minimum**' phase, when the number of Sunspots and solar flares is at a routine low.

### **Why Sunspots Appear Dark**

- Because Sunspots have **high magnetic pressures**, the atmospheric pressure in the surrounding photosphere reduces, inhibiting the **flow of hot gases from inside the Sun to the surface**.
- Due to this, the **temperatures of Sunspots are thousands of degrees lower** than the surrounding photosphere, which has a temperature of 5,800 degrees Kelvin. Sunspots temperatures are around 3,800 degrees Kelvin.
- Because they stop the **convective flow of heat and light**, **Sunspots appear dark**. They typically consist of a dark region called the '**umbra**', which is surrounded by a lighter region called the '**penumbra**'.

### **Space Bricks**

- Research scientists from Indian Institute of Science (IISc) and **Indian Space Research Organisation (ISRO)** have developed a process to **make bricks on the moon for habitation**.
- The process involves **extracting lunar soil and using bacteria and guar beans** to harden it (soil) into **brick-like structures** for habitation on the moon in the future
- The making of space bricks brings biology and mechanical engineering together and using them to assemble structures for **habitation on the moon's surface**.
- As guar gum is used instead of cement for structures, space bricks will also lower **carbon footprint** in the lunar atmosphere.
- Since **micro-organisms** produce minerals through metabolism, one bacterium called '**sporosarcina pasteurii**' can be used to form calcium carbonate crystals through a metabolic pathway called the ureolytic cycle.
- As the cost of **sending 1 pound** of material to outer space is currently **Rs 7.5 lakh**, the process our scientists developed reduced it (cost) as urea, sourced from human urine and lunar soil will be used as raw materials for the construction on the moon's surface



### **SalivaDirect**

- A new rapid diagnostic test, **SalivaDirect**, for **novel coronavirus infection** was granted an emergency use authorisation by the **U.S. Food and Drug Administration (FDA)**.
- The test uses a new method of **processing saliva samples** for testing coronavirus infection, **instead of relying on nasopharyngeal swab (NP swabs)**.
- A nasopharyngeal swab (or nasopharyngeal culture) is a method for collecting a clinical test sample of nasal secretions from the back of the nose and throat.

- The SalivaDirect test **has a high sensitivity** of about 93%. In contrast, testing nasopharyngeal swabs leads to false negative test results due to errors at the time of sample collection.
- It is an **easy and inexpensive method** of SARS-CoV-2 testing. The new test uses saliva, which **makes the sample collection non-invasive**.
- It also **reduces the need for trained healthcare workers** to collect the samples and **reduces the risk of virus spread to healthcare workers** at the time of sample collection.
- This is because collecting the sample from the nasopharyngeal region requires a swab to be inserted into the back of the nostrils, which very often causes irritation leading to sneezing and coughing, thus exposing healthcare workers from getting exposed to the virus.
- Collecting nasopharyngeal samples can be uncomfortable to people, discouraging them from getting tested. The saliva test is **likely to increase testing compliance**.

### **Flavonoids**

- Scientists from **Agharkar Research Institute (ARI)**, Pune, an **autonomous institute of the Department of Science and Technology (DST)**, have come up with the **first synthetic route for producing flavonoids molecules** related to the treatment of tuberculosis and chikungunya.
- Flavonoid molecules, like *rugosa flavonoids*, *podocarflavone*, and *isoflavone* found to inhibit tuberculosis and chikungunya, **are normally isolated from plants**. However, **inconsistency in natural products** can occur in different seasons, places, and species. Along with these hurdles, **over-exploitation of medicinal plants** puts an extra burden on the environment.
- To overcome these problems, such products can be developed by synthetic protocols in the laboratory by simple and cost-effective methods. The synthetic natural products possess a structure and medicinal properties similar to the natural product.
- This will pave the path for **ensuring their availability at all seasons without overexploiting the medicinal plants** that contain them.
- The chemical structure of flavonoids is similar to the female hormone 17-beta-estradiol (estrogen). Therefore, flavonoids can also ease the life of women who face problems in the premenopausal stage.

### **Magnetic Hyperthermia-Mediated Cancer Therapy (MHCT)**

- Scientists from **Institute of Nano Science & Technology**, an autonomous institute of Department of Science and Technology (DST), are making efforts to make magnetic hyperthermia-mediated cancer therapy as **desired therapy for inoperable tumours**.
- They have synthesised different **magnetic nano-transducers like Stevioside-coated magnetite nanoparticles; Citric acid-coated Magnetic nanoclusters and Manganese and Zinc doped magnetite nanoparticles** for successful application as magnetic hyperthermia agents for cancer therapy.
- MHCT, a **non-invasive cancer treatment technique**, involves the delivery and localisation of magnetic materials within the targeted tumour site followed by subsequent application of an alternating magnetic field (AMF), thereby **generating heat at tumour site**.
- It can efficiently **act against deep-seated inaccessible solid tumours** like glioblastoma and is highly thermo-sensitive towards normal cells with minimal toxicity against healthy counterparts.
- They have also developed **water-stable nanomaterial** with a biomolecule as the surfactant to fight against inoperable tumours.

- The example from INST Mohali illustrates some of the **compelling aspects of how Nanotechnology** is providing solutions for the diagnostics and therapy of tumours in several ways from targeted and controlled drug release in chemotherapy and hyperthermia to gene therapy and photodynamic therapy and combinations of them for optimal outcomes.

### Ulcerative Colitis

- **Japanese PM Shinzo ABe** demitted office citing his recent recurrence or flare-up of **Ulcerative Colitis** health issue.
- Ulcerative colitis, or UC as it is commonly known, is a chronic, lifelong condition and is classified as an **autoimmune disorder**.
- UC is part of a group of conditions known as **inflammatory bowel disease (IBD)**. It causes inflammation of the **gastrointestinal tract** (gut).
- This inflammation occurs in the **colon (large intestine) and rectum**. The colon's lining develops small ulcers which produce pus and mucus, leading to abdominal pain, discomfort and urge to frequently empty the colon.
- The **exact cause** of ulcerative colitis is **unknown**. Researchers believe the following factors may play a role in causing ulcerative colitis:
  - One cause of ulcerative colitis may be an **abnormal immune reaction** in the intestine. Researchers believe bacteria or viruses can mistakenly trigger the immune system to attack the inner lining of the large intestine.
  - Ulcerative colitis sometimes **runs in families**.
  - Nonsteroidal **anti-inflammatory** drugs, **antibiotics**, and oral **contraceptives** may slightly increase the chance of developing ulcerative colitis. A **high-fat diet** may also slightly increase the chance of getting ulcerative colitis.

### Tattoo Sensor for Monitoring Health Parameters

- Scientists from the **Indian Institute of Science, Bangalore**, have fabricated a **skin conformal tattoo sensor** for monitoring vital health parameters.
- The tattoo sensor is about 20  $\mu\text{m}$  thick and **can retract information from** the human body using its largest organ, **the skin**.
- The sensor promises **inconspicuous and continuous monitoring of vital health parameters of an individual**, like pulse rate, respiration rate, and surface electromyography.
- The **fast response and highly repeatable sensor** follows easy fabrication steps and can be patterned into any shape and size using a laser.
- The skin conformal sensor has the ability to **perform non-invasive and continuous monitoring** of health parameters. Further, it has the **potential to replace rigid and bulky health monitoring devices**.
- These sensors do not interfere with the daily activities of the user, thus enabling continuous monitoring of vital signs like pulse rate, respiration rate, UV rays exposure, skin hydration level, glucose monitoring, and so on.

**DNA Technology Regulation Bill, 2018**

- A draft report of the **Parliamentary Standing Committee on Science and Technology** has flagged concerns over the **DNA Technology (Use and Application) Regulation Bill, 2018**.
- The Bill proposes DNA sampling and profiling of citizens accused of crime or reported missing and storing their unique genetic information for administrative purposes.

**About The Bill**

- The Bill regulates the use of DNA technology for establishing the identity of persons in respect of matters listed in a Schedule. These include **criminal matters** (such as offences under the Indian Penal Code, 1860), **and civil matters** such as parentage disputes, emigration or immigration, and transplantation of human organs.
- The Bill establishes a **National DNA Data Bank and Regional DNA Data Banks**. Every Data Bank will maintain the following indices:
  - i. Crime scene index
  - ii. Suspects' or undertrials' index
  - iii. Offenders' index
  - iv. Missing persons' index
  - v. Unknown deceased persons' index
- The Bill establishes a **DNA Regulatory Board**. Every DNA laboratory that analyses a DNA sample to establish the identity of an individual, has to be accredited by the Board.
- **Written consent** by individuals is required to collect DNA samples from them. Consent is not required for offences with punishment of more than seven years of imprisonment or death.
- The Bill provides for the removal of DNA profiles of suspects on filing of a police report or court order, and of undertrials on the basis of a court order. Profiles in the crime scene and missing persons' index will be removed on a written request.

**Concerns of the Committee:**

- The committee pointed out that the DNA profiles *can reveal extremely sensitive information* of an individual such as pedigree, skin colour, behaviour, illness, health status and susceptibility to diseases. **Access to such intrusive information can be misused** to specifically target individuals and their families with their own genetic data. This is particularly worrying as it **could even be used to incorrectly link a particular caste/community to criminal activities**.
- The Bill proposes to store DNA profiles of suspects, undertrials, victims and their relatives **for future investigations**. The committee has **questioned the necessity for storage of DNA profiles for civil matters**, pointing out that this **violates the fundamental right to privacy** and does not serve any public purpose.
- The Bill refers to consent in several provisions, but in each of those, **a magistrate can easily override consent**, thereby in effect, making consent perfunctory. There is also no guidance in the Bill on the grounds and reasons of when the magistrate can override consent, which could become a fatal flaw.
- The Bill permits retention of DNA found at a crime scene in perpetuity, even if conviction of the offender has been overturned. The committee has urged the government to ensure that **if the person has been found innocent his DNA profile has to be removed immediately from the data bank**.
- The committee has recommended that **independent scrutiny must be done** of the proposals to destroy biological samples and remove DNA profiles from the database.

- The committee has also expressed that in the **absence of robust data protection legislation**, the security of a huge number of DNA profiles that will be placed with the National DNA Data bank and its regional centres is questionable.

### **Digital Quality of Life Index, 2020**

- According to a global research released by **online privacy solutions provider SurfShark**, India ranks among the lowest in the world **in terms of Internet quality**.
- “**Digital Quality of Life Index 2020**” researches on the **quality of digital wellbeing in 85 countries** (81% of the global population), in terms of e-infrastructure.
- It offers a unique insight into the overall digital quality of life **based on five core pillars: *Internet affordability, Internet quality, Electronic infrastructure, Electronic government, and Electronic security***.
- India occupies **79<sup>th</sup> place**, ranking below countries including Guatemala and Sri Lanka. However, India makes it into the **top 10 in terms of Internet affordability**. With a ranking of nine, it outperforms countries such as the U.K., the U.S. and China.
- Additionally, when it comes to e-government, India occupies the 15<sup>th</sup> place globally, just below countries like New Zealand and Italy.
- This year’s Digital Quality of Life Index found that **7 of the 10 countries** with the highest digital quality of life are in **Europe**, with **Denmark** leading among 85 countries.
- **Canada** stands out as a country with the highest digital quality of life *in the Americas*, while **Japan** takes the leading position in *Asia*.
- Among the countries in *Africa*, people in **South Africa** enjoy the highest quality of digital lives whereas **New Zealand** leads in Oceania, outperforming Australia in various digital areas.

### **Swadeshi Microprocessor Challenge**

- The **Ministry of Electronics and Information Technology** has launched a “*Swadeshi Microprocessor Challenge- Innovate Solutions for #Atmanirbhar Bharat*” as part of the self-reliance vision and give **impetus to the start-up ecosystem, innovation and research** in the country.
- **IIT Madras** and **Centre for Development of Advance Computing (CDAC)** have developed two microprocessors named **SHAKTI (32 bit)** and **VEGA (64 bit)** respectively using Open Source Architecture under the aegis of **Microprocessor Development Programme** of Ministry of Electronics and IT.
- The challenge seeks to invite innovators, startups and students to use these microprocessors to develop various technology products.
- This initiative is aimed at not only meeting **India’s future requirements of strategic and industrial sectors** but also has the **potential to mitigate the issues of security, licensing, technology obsolescence** and most crucially cutting dependency on imports.
- The Challenge demands contestants to not only **tinker with these Swadeshi Processor IPs & facilitate them with innovating the frugal solutions for societal needs** but also **make available the entire home-grown ecosystem around Swadeshi Processors** to develop the complex designs for catering to both global and domestic requirements in near future.
- The government will **offer financial support of ₹4.30 crore** at various stages of the challenge **for developing the hardware prototype and incubating a start-up** will be offered.

**Bureau of Police Research and Development (BPR&D)**

- The BPR&D celebrated its **Golden Jubilee Anniversary** on 28th August, 2020.
- The Bureau of Police Research and Development was raised on 28th August, 1970, through a resolution of the **Ministry of Home Affairs**, Government of India, with a mandate **to promote excellence in policing, promote speedy and systematic study of police problems, apply science and technology** in the method and techniques by the Police.
- The Bureau was initially started with two Divisions - **Research, Publication & Statistics Division** and **Development Division**.
- In 1973, the **Training Division** was added, on the recommendation of the Gore Committee on Police training.
- In 1995, the **Correctional Division** was started to study the issues of Prisons and Prison Reforms.
- In 2008, the **National Police Mission** was added and the Development Division was restructured as **Modernization Division**.
- Over the years, the BPR&D has transformed through several additions of responsibilities into the present role. Now, with the raising of a new unit, **Central Academy for Police Training** at Bhopal, specialized as Centre of Excellence for Police & Correctional Administration, BPR&D has **6 outlying units**.
- Headquarters is at New Delhi, India

**Expert Committee To Review Charter Of DRDO Labs**

- With a focus on **indigenous development** of futuristic defence technologies, a **five-member expert committee** has been constituted to review the charter of duties for all laboratories of the Defence Research and Development Organisation (DRDO) and to minimise the overlap of technologies amongst the labs.
- The committee is headed by **Professor V. Ramagopal Rao**, Director, Indian Institute of Technology (IIT), Delhi.
- The **last major review of DRDO was the P. Rama Rao committee of 2008**, which had suggested that the DRDO be **decentralised into seven technology clusters** and focus only on core technologies of strategic importance.
- The DRDO has a **network of 52 laboratories** working on a range of disciplines from aeronautics, armaments, electronics, combat vehicles, missiles, naval systems, life sciences and agriculture, among others.
- Earlier, as part of the **Atmanirbhar Bharat initiative** of the government, the DRDO announced a list of **108 military sub-systems and components** for development by the Indian industry only and the DRDO would provide support to industries for design, development and testing of these systems on a requirement basis.

**Defence Research and Development Organisation**

- DRDO is an agency under the **Department of Defence Research and Development** in the **Ministry of Defence** of the Government of India, charged with the military's research and development.
- **Headquarter:** Delhi
- It was **formed in 1958** by the merger of the Technical Development Establishment and the Directorate of Technical Development and Production of the Indian Ordnance Factories with the Defence Science Organisation.

### Super App

- Tata Group is planning to launch an **all-in-one super app** by the end of this year or early next year.
- A super app is a platform developed by a company **offering various services under one umbrella**. For example, China's WeChat, which started out as a messaging app, expanded into payments, cabs, shopping, food ordering, cab services to become a super app.
- A **physical world comparison of a super app would be a mall**, which allows retail space to various brands and shops across businesses and verticals.
- The **concept first emerged in China and southeast Asia** where internet companies leveraged the opportunity of customer traffic on their platforms that originally came for social media and communication needs by offering these customers additional services leading to increased revenue realisations.
- A country or a region becomes super app-ready when its **large base of the population is smartphone first** instead of desktop and the ecosystem of apps customised to local needs is not evolved. India has already become a market where a majority of those experiencing the internet for the first time are doing so on their mobile phones. This is one of the main reasons why Indian companies are looking at building super apps.
- Consolidation of services at one place leads to **increased revenue realisation**. It also provides companies with **large swaths of consumer data** which can then be harnessed to learn more about user behaviour.
- **Concerns:**
  - a) The very concept of a conglomerate trying to keep a customer within its own ecosystem for most services they might require **increases the possibility of a monopoly**.
  - b) There are **concerns of privacy** in cases where a super app has on boarded third-party service providers.
  - c) Experts also pointed out that data collected by the master app could then be **used to train machines in artificial intelligence** and predict consumer behaviour even more accurately. It is one of the main reasons why super apps have not picked pace in countries such as the US and the UK.

### Fly Ash

- The **National Thermal Power Corporation (NTPC) Ltd.**, a central Public Sector Unit (PSU) under the **Ministry of Power** and country's largest power generation company, has developed an infrastructure at **Rihand project** in Uttar Pradesh **to transport fly ash in bulk to cement plants, located** at distance, at a cheaper cost.
- The development is in line with NTPC's commitment towards **100% utilization of fly ash from power plants**.
- Fly Ash, the after-burnt tiny coal dust, is a **by-product from thermal power plants** and is an aluminosilicate **non-reactive inert particle** which may remain suspended in the air from a few seconds to several months.
- It acts as a **resource material** for many applications of **construction industries** like in Manufacture of Portland Pozzolana Cement (PPC), or in bricks/blocks/tiles manufacturing, road embankment construction & low-lying area development, in agriculture as soil conditioner etc.

### **INS Viraat**

- **Aircraft carrier Viraat** is set to be scrapped at a ship breaking yard at Alang in Gujarat soon.
- Viraat, a Centaur class aircraft carrier weighing 27,800 tonnes, served in the British Navy as **HMS Hermes** for 25 years from November 1959 to April 1984.
- It was **commissioned into Indian Navy in May 1987** after refurbishment and had operated Harrier fighter jets.
- INS Viraat **holds the world record** as mentioned in the Guinness Book of records **for being the longest serving warship of the world.**
- Viraat played a major role in **Operation Jupiter in 1989** during the Sri Lankan Peacekeeping operation. It also saw action during **Op Parakram in 2001-2002**, post the terrorist attack on Parliament.
- It was **decommissioned from the Navy in March 2017.**

### **Mission Based Deployments (MBD)**

- The **Navy** has effectively carried out **Mission Based Deployments (MBD)** to protect maritime interests by **deploying ships and aircraft** at major and sensitive locations.
- Since the commencement of MBD in June 2017, these deployments have facilitated enhanced **Maritime Domain Awareness (MDA)**, provided swift **Humanitarian Aid and Disaster Relief (HADR)** to the Indian Ocean Region (IOR) littorals and security to the international maritime community.
- In addition to the anti-piracy deployment, IN ships were also Mission Deployed for
  - **Operation 'GULFDEP'** (Gulf of Oman/ Persian Gulf Deployment) in the Persian Gulf,
  - **Operation 'CENTDEP'** in the central Indian Ocean Region,
  - **Operation 'NORDEP'** in the northern Bay of Bengal and
  - **Operation 'MALDEP'** in the Andaman Sea and approaches to the Malacca Strait.

### **Chandrayaan-2**

- India's second moon spacecraft **Chandrayaan-2 has completed one year in Lunar Orbit.**
- Chandrayaan-2 spacecraft/orbiter was launched by **Indian Space Research Organisation on 22<sup>nd</sup> July 2019** and inserted into lunar orbit on 20 August 2019. The 3,840-kg Chandrayaan-2 spacecraft was launched into the earth's orbit by the **GSLV MkIII-M1.**
- Chandrayaan-2 is an Indian lunar mission to **explore the uncharted south pole** of the celestial body by landing a rover.
- There are **three components of the mission: an orbiter, a lander and a rover** with the goal of exploring the south pole of the Moon. This is a unique mission which aims at studying all the areas of the Moon combining the exosphere, the surface as well as the sub-surface of the moon in a single mission.
- The **orbiter** completed more than 4,400 orbits around the moon and all the instruments are currently performing well.
- The **rover is named Pragyan** and the **mission's lander is named Vikram** after Dr Vikram A Sarabhai, the Father of the Indian Space Programme.

- The lander, rover and orbiter will **perform mineralogical and elemental studies of the lunar surface**. The Orbiter will observe the lunar surface and relay communication between Earth and Chandrayaan 2's Lander — Vikram.
- The Lunar South pole is especially interesting because the lunar surface area that remains in shadow is much larger than that at the North Pole. There could be a **possibility of presence of water in permanently shadowed areas** around it. In addition, the **South Pole region has craters that are cold traps and contain a fossil record of the early Solar System**.

### Omega Centauri

- Scientists at **Indian Institute of Astrophysics (IIA)**, an autonomous institute of Department of Science & Technology (DST), have studied stars of **Omega Centauri** globular cluster and found some **Helium (He)-enhanced cool bright stars** that are present among the metal-rich sample of the cluster.
- This is the **first time He abundance** has been found in Omega Centauri.
- Omega Centauri is a **globular cluster** in the **constellation of Centaurus** that was first identified as a **non-stellar object** by Edmond Halley in 1677.
- Located at a distance of **15,800 light-years**, it is the **largest globular cluster** in the **Milky Way** at a diameter of roughly 150 light-years.
- It is estimated to contain approximately **10 million stars** and a total mass equivalent to 4 million solar masses, making it the **most massive globular cluster** of the Milky Way.
- Omega Centauri is so different from the other galactic globular clusters that it is thought to have an **alternative origin as the core remnant of a disrupted dwarf galaxy**.

#### **Globular clusters**

- Globular clusters are the stellar systems with millions of stars formed from the same gaseous cloud.
- A globular cluster is a **spherical collection** of stars that orbits a **galactic core**. They are very **tightly bound by gravity**, which gives them their spherical shapes, and relatively **high stellar densities** toward their centers.

#### **Galactic Centre**

- The Galactic Center (or Galactic Centre) is the **rotational center of the Milky Way** galaxy.
- It is a supermassive **black hole**

*To Read more about Helium Star, please refer to The Recitals – June 2020.*

### Asteroid 2018VP1

- A day before the **US will vote in its presidential elections**, an asteroid that is on a **collision course with Earth** could come very close to the planet, according to the Center for **Near Objects Studies at NASA's Jet Propulsion Laboratory**. It is also dubbed as '**Election Day Asteroid**'.
- It is very **small, approx. 6.5 feet**, and poses no threat to Earth! It currently has a **0.41% chance** of entering our planet's atmosphere, but if it did, it would disintegrate due to its extremely small size.
- The asteroid was first discovered at the Palomar Observatory in California's San Diego County **two years ago**. A 13-day observational arc followed, after which the asteroid was not detected again.

- When it was discovered, the asteroid — which has a two year orbital period — was around 2,80,000 miles away from the Earth. This year, however, the asteroid could be as **close as 4,700 miles** according to NASA’s close approach database.

#### **Near-Earth object**

- It is **any small Solar System** body whose orbit brings it to proximity with Earth.
- By convention, a Solar System body is a NEO if its **closest approach to the Sun (perihelion) is less than 1.3 astronomical units (AU)**.
- If a NEO's orbit crosses the Earth's, and the object is **larger than 140 meters (460 ft)** across, it is considered a **potentially hazardous object (PHO)**.
- Most known PHOs and NEOs are **asteroids**, but a small fraction are **comets**.

#### **Seed Ball/Bomb Technique**

- Odisha’s Athagarh Forest Division has begun **casting seed balls inside different reserve forest areas** to enrich food stock for wild elephants.
- Forest officials hope bamboo seed balls will germinate and ensure food for elephants, **preventing conflict with villagers**.



#### **What Is Seed Bombing**

- ‘Seed bombing’, which usually implies **aerial reforestation**, is a technique meant to introduce vegetation by throwing or dropping seed balls on barren land.
- In this technique, seeds are filled inside balls of fertile soil. Once these balls dry up, they are thrown in places with less vegetation.
- The best time to execute this process is raining season. **Seeds planted through this procedure have a success rate of 50%.**

#### **Sea Level Rise (SLR)**

- In a study published, researchers predict that **by 2100, the global population potentially exposed to episodic coastal flooding will increase from 128-171 million to 176-287 million.**
- The value of global assets exposed to these episodes is projected to be between \$6,000-\$9,000 billion, or 12-20 per cent of the global GDP.

#### **Findings Of The Study**

- The sea-level rise (SLR) is a “well accepted” consequence of climate change. **Globally, of the 68 % area that is prone to coastal flooding, over 32 % can be attributed to regional Sea Level Rise (SLR).** This, they say, will significantly increase coastal flooding by 2100.
- Their results indicate, by the year 2100, for most of the world, flooding incidents that are typically associated with a 1 in a 100-year event could occur as frequently as 1 in 10 years, “primarily as a result of sea level rise.
- As per this assessment, 0.5-0.7 per cent of the world’s land area is at a risk of episodic coastal flooding by 2100, impacting 2.5-4.1 per cent of the population, assuming there are no coastal defenses or adaptation measures in place.

### **What Is Regional SLR?**

- Because sea level rise is not uniform across the world, there is a need to differentiate regional SLR from the global rates.
- For instance, **the gravitational pull of the polar ice sheets has different effects on sea levels in different parts of the world, which means regional SLR can be higher or lower than the global SLR.**
- Relatively too, regional SLR can be higher or lower. For instance, SLR in places such as Scotland, Iceland and Alaska could be significantly less than the regional SLR for eastern US.

### **Some Ways Of Protecting Against Sea Level Rise**

- Indonesia's government launched a coastal development project called a **Giant Sea Wall** or "Giant Garuda" (Garuda is the name of a bird from Hindu mythology and is Indonesia's national symbol) in 2014 meant to protect the city from floods.
- A Special Report on the Ocean and Cryosphere in a Changing Climate, published by the IPCC, noted that "**well-designed coastal protection**" could both "reduce expected damages" and "be cost efficient for urban and densely populated areas."
- Researchers proposed construction of a **Northern European Enclosure Dam (NEED), enclosing all of the North Sea** to protect 25 million people, and important economic regions of 15 Northern European countries from rising seas.
- They also identified other regions such as the Persian Gulf, the Mediterranean Sea, the Baltic Sea, the Irish Sea, and the Red Sea that could benefit from similar mega enclosures.

### **National Transit Pass System (NTPS)**

- The Ministry of Environment launched National Transit Pass System (NTPS), an **online system for issuing transit permits for timber, bamboo and other forest produce.**
- NTPS will bring ease of business and expedite issuance of transit permits for timber, bamboo and other minor forest produce without physically going to forest offices.
- It will replace manual paper-based transit system by online transit system and will bring in **one permit for whole India for transit of timber, bamboo and other minor forest produce** for ease of doing business.

### **Significance**

- Currently Transit of timber, bamboo and other forest produce is **governed by various state specific acts and rules.** Moreover, a **species exempted in one state, may not be exempted in other states** and transit of such species in another state requires transit pass.
- Further, **transit passes issued by one state are not honoured in other states** and lieu transit passes are issued at inter-state forest check posts for transit in another state.
- National Transit Pass System generates **Pan India Transit Passes** facilitating seamless movement of forest produce across India.
- The system provides a generic tool using which T.P. (transit pass) generation process can be automated without changing state specific rules and regulation.

### **World Biofuel Day 2020**

- World Biofuel Day is being celebrated by Ministry of Petroleum and Natural Gas every year on 10th August since 2015 to create awareness about the importance of non-fossil fuels and to highlight the various efforts made by the Government in Biofuel sector.
- **Theme:** Biofuels Towards Atmanirbhar Bharat.
- This day also honors the research experiments by **Sir Rudolf Diesel who ran an engine with peanut oil in the year 1893**. His research experiment had predicted that vegetable oil is going to replace fossil fuels in the next century to fuel different mechanical engines.

### **Biofuels**

- Biofuels are derived from renewable bio-mass resources and, therefore, provide a strategic advantage to promote sustainable development and to supplement conventional energy sources.
- Biofuels have the benefits of **reducing import dependency on crude oil, cleaner environment, additional income to farmers** and employment generation in rural areas. The biofuels programme is also in synergy with the Government of India initiatives for Make in India, Swachh Bharat and enhancing farmers' income.

### **Important Biofuel Categories In India**

- **Bioethanol:** Ethanol produced from biomass such as sugar containing materials, like sugarcane, sweet sorghum etc.; starch containing materials such as corn, cassava, rotten potatoes, algae etc.; and, cellulosic materials such as bagasse, wood waste, agricultural and forestry residues or other renewable resources like industrial waste;
- **Biodiesel:** A methyl or ethyl ester of fatty acids produced from non-edible vegetable oils, acid oil, used cooking oil or animal fat and bio-oil;
- **Advanced Biofuels:** Fuels which are
  - produced from lignocellulosic feedstocks (i.e. agricultural and forestry residues), non-food crops (i.e. grasses, algae), or industrial waste and residue streams .
  - having low CO<sub>2</sub> emission or high GHG reduction and do not compete with food crops for land use. Fuels such as Second Generation (2G) Ethanol, Drop-in fuels, algae based 3G biofuels, bio-CNG, etc will qualify as "Advanced Biofuels".
- **Drop-in fuels:** Any liquid fuel produced from Biomass, agri-residues, wastes such as Municipal Solid Wastes (MSW), Plastic wastes, Industrial wastes etc which meets the Indian standards for MS, High Speed Diesel (HSD) and Jet fuel, in pure or blended form, for its subsequent utilization in vehicles without any modifications in the engine systems and can utilize existing petroleum distribution system.
- **Bio-CNG:** Purified form of bio-Gas whose composition & energy potential is similar to that of fossil based natural gas and is produced from agricultural residues, animal dung, food waste, MSW and Sewage water.

### **Initiatives Taken By Government For Biofuel Promotion**

- The Government approved the **National Policy on Biofuels-2018** in June 2018. The policy has the **objective of reaching 20% ethanol-blending and 5% biodiesel-blending by the year 2030**. Among other things, the policy expands the scope of feedstock for ethanol production and has provided for incentives for production of advanced biofuels.
- The Government has **reduced GST on ethanol for blending in fuel from 18% to 5%**.

- In 2019, the Government has **increased the price of C-heavy molasses-based ethanol** to Rs. 43.75 from Rs. 43.46 to give a boost to Ethanol Blended Petrol (EBP) Programme.
- **Other interventions** include administrative price mechanism for ethanol, simplifying the procurement procedures of Oil Marketing Companies, amending the provisions of Industries (Development & Regulation) Act, 1951 and enabling lignocellulosic route for ethanol procurement.

### 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.
- It was co-founded on August 12, 2012, by Canadian Patricia Sims and the Elephant Reintroduction Foundation of Thailand.

### **About Elephants**

- There are **three subspecies of Asian elephant** – the **Indian, Sumatran and Sri Lankan**. The Indian has the widest range and accounts for the majority of the remaining elephants on the continent.
- The **Sri Lankan is physically the largest** of the subspecies, and also the darkest in colour. The **Sumatran is the smallest**.
- The current population estimates indicate that there are about 50,000 - 60000 Asian elephants in the world. **More than 60 % of the population is held in India.**
- **Threats:** Habitat loss, degradation, and fragmentation, Human-elephant conflict, Poaching, Trafficking of live animals.
- **Conservation Status:**
  - Asian elephants are listed as **“Endangered”** on the IUCN Red List of threatened species.
  - Indian Elephant is listed in the Appendix I of the Convention of the Migratory species, schedule-1 of Indian Wildlife (Protection) Act 1972 and Appendix I of the Convention on International Trade in Endangered Species of Flora and Fauna (CITES).

### **Additional Information**

#### **Project Elephant**

- Project Elephant was launched by the Government of India in the **year 1992 as a Centrally Sponsored Scheme** with the following objectives:-
  - To protect elephants, their habitat & corridors
  - To address issues of man-animal conflict
  - Welfare of captive elephants
- Under Project Elephant, the country has nearly 32 elephant reserves.
- The Ministry of Environment, Forest and Climate Change provides the financial and technical support to major elephant range states in the country through Project Elephant.

#### **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.
- At present the beta version of the portal is being launched for data testing before the pan India roll out for adoption by the states.

### **Forest Cover Loss Threatens Hornbills In Arunachal**

- A study based on satellite data has flagged a high rate of deforestation in a major hornbill habitat in Arunachal Pradesh.
- The satellite data pointed to alarming deforestation rates in Papum Reserve Forest (RF) with **annual loss rates as high as 8.2 sq.km.** as per estimates from 2013-2017 where forest cover declined to 76% of the total RF area.
- According to the Global Forest Watch 2020 report, Arunachal Pradesh lost 1,110 sq.km. of primary forest from 2002-2019.



#### **About Great Hornbill**

There are 9 hornbill species in India of which Great Hornbill is the most famous.

- **Common name:** Great Indian hornbill or Great pied hornbill.
- **Range:** It is found in the Indian subcontinent and Southeast Asia. The bulk of the population is found in India, where it is restricted to the Himalayan foothills, hill forests in northeast India and, disjunctly, the wet evergreen forests of west India.
- **Conservation Status:**
  - **IUCN:** Near Threatened.
  - **CITES-** Appendix I.
- **Threats:**
  - Hornbills used to be hunted for their casques — upper beak — and feathers for adorning headgear despite being cultural symbols of some ethnic communities in the northeast, specifically the Nyishi of Arunachal Pradesh.
  - Illegal logging led to fewer tall trees where the birds nest. Also, forests are often under pressure due to agricultural expansion, conversion to plantations or logging.
- Its impressive size and colour have made it important in many tribal cultures and rituals.
- The great hornbill is the **state bird of Kerala and Arunachal** in India. It is not a state bird of Nagaland, although the **hornbill festival is celebrated in Nagaland**. Nagaland's state bird is Blyth's tragopan.

### **Dhole or Asiatic Wild Dog**

- Karnataka, Maharashtra and Madhya Pradesh rank high in the conservation of the endangered dhole in India, according to a new study.
- The study found that these three States were adequately equipped to maintain their high ranks in consolidating forest habitats and recover dhole populations by **increasing prey density and reducing the pressure on forests.**
- Improving habitat conditions and prey densities in the Eastern Ghats of Andhra Pradesh, Telangana and Odisha would “strengthen the link” between dhole populations in the Western Ghats and central India.

#### **About Dhole**

- **Common Names:** Dhole, Asiatic wild dog, Indian wild dog, red dog.



- **Ecology & Habitat:** The dhole is found in a wide variety of habitat types, including deciduous and evergreen forests and alpine steppe.
- **Conservation Status:**
  - IUCN: **Endangered.**
  - CITES: **Appendix II.**
- **Threats:** Main threats to the species include ongoing habitat loss, depletion of prey base, persecution and possibly disease transfer from domestic and feral dogs. The main prey for the dhole are ungulates, which have also suffered high depletion of their population across the dhole's range.
- **Significance:** Dholes play an important role as apex predators in forest ecosystems. Besides the tiger, the dhole is the only large carnivore in India that is under the International Union for Conservation of Nature's (IUCN) 'endangered' category.

### **Plastic Pollution In The Atlantic Ocean**

- A new study published in Nature Communications has estimated the amount of microplastic pollution in the Atlantic Ocean and put it at **11.6-21.1 million tonnes.**
- To date, a key uncertainty has been the magnitude of contamination of the ocean and the findings demonstrate that this is much higher in terms of mass than has been estimated previously.

#### **What Are Microplastics?**

- Microplastics, small pieces of plastic, **less than 5 mm (0.2 inch) in length**, that occur in the environment as a consequence of plastic pollution. There are multiple pathways through which it **reach the oceans.** For instance, riverine and atmospheric transport from coastal and inland areas, illegal dumping activities and direct-at-sea littering from shipping, fishing and aquaculture activities.
- According to the International Union for Conservation of Nature (IUCN), at least 8 million tonnes of plastic end up in the oceans every year and makes up about **80 per cent of all marine debris from surface waters to deep-sea sediments.**

#### **Why Is Plastic Pollution Especially Harmful?**

- The durability of plastic, makes the material suitable for widespread use from packaging to storing food is also a bane because **it can take hundreds to thousands of years to decompose** depending on the type of plastic and where it has been dumped.
- In the oceans, plastic pollution **impacts marine life, ocean health, coastal tourism** and even human health. Over the past few years, **marine animals such as whales, seabirds and turtles unknowingly ingest plastic and often suffocate.**
- For humans, too, marine plastic pollution is harmful if it reaches the food chain. For instance, microplastics have been found in tap water, salt etc. Studies shown that an average person eats at least 50,000 particles of microplastic each year. Consumption of plastic by humans is harmful since several **chemicals that are used to produce plastics can be carcinogenic.**

#### **Findings Of The Study**

- In the study, scientists studied pollution of the Atlantic Ocean caused by three types of plastics: **polyethylene, polypropylene, and polystyrene**, which were suspended in the top 200 metres of the ocean. These three types of plastic are most commonly used for packaging.

- Smaller plastic particles are a hazard, as it is easier for them to sink to greater ocean depths and some marine species such as **zooplanktons show preferential ingestion of smaller particles, making them easier to enter the food chain** and their conversion to fast-sinking faecal pellets.
- Scientists say that pollution caused by microplastics has been “severely” underestimated in previous assessments and that a **considerable amount of small microplastics are lost from the surface and are stored in ocean interiors.**
- Based on plastic waste generation trends from 1950-2015 and considering that the Atlantic Ocean has received 0.3-0.8 per cent of the global plastic waste for 65 years, the **Atlantic waters could hold 17-47 million tonnes of plastic waste.**

### **Bioethanol Blending Of Petrol**

The government has set targets of 10 % bioethanol blending of petrol by 2022 and to raise it to 20 % by 2030 under the ethanol blending programme to curb carbon emissions and reduce India’s dependence on imported crude oil.

#### **The Ethanol Blending Programme (EBP)**

- Ethanol is an agro-based product, mainly produced from a by-product of the sugar industry, namely molasses.
- Launched in 2003, the EBP seeks to achieve blending of Ethanol with motor spirit with a view to **reducing pollution, conserve foreign exchange and increase value addition in the sugar industry** enabling them to clear cane price arrears of farmers.
- In EBP Programme, Oil Marketing Companies (OMCs) sell petrol blended with ethanol up to 10% to whole of India except Union Territories of Andaman Nicobar and Lakshadweep.
- During 2018-19, OMCs achieved 5% blending target and in 2019-20, efforts are being made to achieve 5.6% blending. The Government has 10% blending target for mixing ethanol with petrol by 2022 & 20% blending target by 2030.

#### **1G And 2G Biofuel Plants**

- 1G bioethanol plants utilise sugarcane juice and molasses, byproducts in the production of sugar, as raw material, while 2G plants utilise surplus biomass and agricultural waste to produce bioethanol.
- 2G bioethanol not only provides a clean source of energy, but also helps to provide greater income to farmers and prevent them from having to burn agricultural waste which can be a major source of air pollution.

#### **Key Challenges To Raising The Ethanol Blending Level For Petrol**

- Currently, **domestic production of bioethanol is not sufficient** to meet the demand for bio-ethanol for blending with petrol. Sugar mills, which are the key domestic suppliers of bio-ethanol to OMCs, were only able to supply only 57.6 per cent of the total demand.
- Many sugar mills which are best placed to produce bioethanol **do not have the financial stability to invest in biofuel plants** and there are also concerns among investors on the uncertainty of the price of bio-ethanol in the future.
- Sugar sector has its own balance sheet issues. **Sugar mills have had to pay high prices for sugarcane** set by the government even when there have been supply gluts. The prices of both sugarcane and bio-ethanol are set by the central government.

- **Price of obtaining agricultural waste required for the production of bio-ethanol at 2G plants was currently too high** for it to be viable for private investors in the country.

#### **Way Forward**

- State governments needed to **set up depots where farmers could drop their agricultural waste** and that the central government should fix a price for agricultural waste to make investments in 2G bioethanol production an attractive proposition.
- Government could provide **greater visibility on the price of bioethanol** that sugar mills can expect by announcing a mechanism by which the price of bio-ethanol would be decided.
- The impetus for bioethanol uptake was driven by government worldwide, and a target that a **certain percentage of ethanol blending be done using ethanol generated from 2G plants would help boost investment in the area.**

#### **Harit Path Mobile App**

- National Highways Authority of India (NHAI) has launched a mobile app 'Harit Path' to **monitor the plantation along the national highways.**
- It aims to **monitor location, growth, species details, maintenance activities, targets and achievements of each of its field units** for each and every plant under all plantation projects.
- **Data Lake Platform:** In order to track the growth and health of the plants, photographs along with data of the plants captured using Harit Path shall be uploaded every 3 months on **NHAI's AI powered Big Data Analytics platform – Data Lake.**
- Highway contractors shall be accountable for proper upkeep and maintenance of the plantation and liable to replace the missing/dead plants.
- Performance and growth of the plants shall be linked to the payment to the contractors for this work.

#### **Additional Information**

##### **'Harit Bharat Sankalp' Initiative:**

- To commemorate 25 years of its service to the nation, the NHAI has also recently undertaken 'Harit Bharat Sankalp', a **nation-wide plantation drive** which is in line with NHAI's commitment to promote environment protection and sustainability.
- Under this initiative, the NHAI **planted over 25 lakh plants in 25 days along the stretches of the national highways** between July 21 and August 15, 2020.

##### **National Highways Authority of India (NHAI)**

- NHAI was established as a statutory body under the National Highways Authority of India (NHAI) Act, 1988.
- It works under the administrative control of the **Ministry of Road Transport and Highways.**

#### **NDC–Transport Initiative for Asia (TIA)**

NITI Aayog has launched the India Component of the Nationally Determined Contributions (NDC)–Transport Initiative for Asia (TIA).

#### **About NDC-TIA**

- NDC–TIA is a joint programme, supported by the **International Climate Initiative (IKI)** of the German Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU).

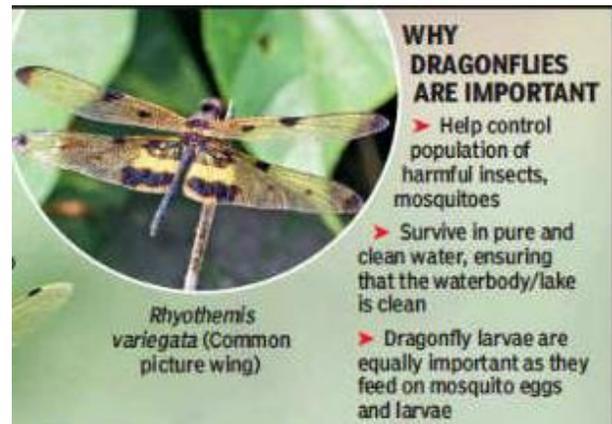
- **Aim:** It aims to promote a comprehensive approach to **decarbonize transport in India, Vietnam, and China.**
- **Implementation:** It is implemented by a **consortium of seven organizations.**
- On behalf of the Government of India, **NITI Aayog, will be the implementing partner.**
- **Duration:** The NDC-TIA programme has a duration of 4 years and will allow India and other partner countries to achieve accountable long-term targets by making a sectoral contribution through various interventions.

### **Significance Of The Initiative**

- India has the world's second-largest road network, which **contributes to maximum greenhouse gas (GHG) emissions** through all means of transportation. With increasing urbanisation, the fleet size i.e. the number of sales of vehicles is increasing rapidly. It is projected that the **total number of vehicles will be doubled by 2030.**
- It provides a platform for **decarbonizing transport in India, strengthening GHG and transport modelling capacities, providing technical support on GHG emission reduction** measures, financing climate actions in transport etc.
- A significant focus will be given on **electric mobility**, which would require coupling of transport and energy sectors and receiving cross-sectoral expertise from ministries, international development agencies, think tanks, public and private organisations.

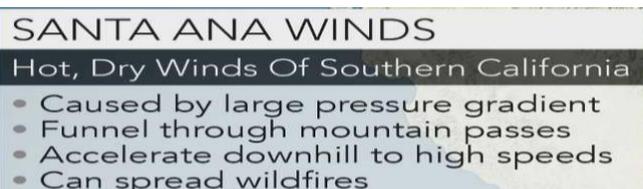
### **Dragonfly Festival**

- WWF-India State unit has joined hands with the Society for Odonate Studies (SOS) and Thumbipuram for the **first-ever State Dragonfly Festival in Kerala, named Thumbimahotsavam 2020.**
- **'Pantalu'** is the official mascot of the festival.
- This is part of a **National Dragonfly Festival** being organised by the **WWF India, Bombay Natural History Society & Indian Dragonfly Society** in association with the **National Biodiversity Board, UNEP, UNDP and IUCN - Centre for Environment Conservation.**
- The pan-India festival, dedicated to dragonflies, aims to create awareness for the conservation of these insects.
- The **Dragonfly Festival started in 2018** to educate and inform the public about the integral role that dragonflies, and their lesser known siblings damselflies, play in our environment.



### **Wildfires in California**

California wildfire made a major comeback this August, creating two of the three largest fires in California history, burning more than 750,000 acres and forced hundreds of thousands of evacuations.



### **Why Does California Have So Many Wildfires**

- **The (Changing) Climate:** The temperatures are about **2 to 3 degrees Fahrenheit warmer** now than they would've been without global warming. This dries out vegetation even more, making it more likely to burn.
- **The Santa Ana Winds:** California has **two fire seasons**. One, from June to September, is driven by warmer, **drier weather in Western California**. The other, from October to April, is driven by strong gusts called the **Santa Ana winds in Southern California**; these fires spread three times faster and burn closer to urban areas.
- **People:** Many of these large fires in Southern California are human-caused. Many deadly fires have been started by downed power lines. Also People are increasingly moving into areas near forests, known as the **urban-wildland interface, that are inclined to burn**.

### **World Solar Technology Summit**

- First World Solar Technology Summit was organized by International Solar Alliance (ISA) on a virtual platform on September 08, 2020.
- **Objective:** To bring the spotlight on state-of-the-art technologies as well as next-generation technologies which will provide impetus to the efforts towards harnessing the solar energy more efficiently.

### **About International Solar Alliance (ISA)**

- The launch of ISA was announced by Hon'ble Prime Minister of India and Mr. Francois Hollande, former Hon'ble President of France on November 2015, at the 21st session of United Nations Climate Change Conference of the Parties (COP-21) in Paris, France.
- ISA was conceived as a coalition of solar-resource-rich countries (which lie either completely or partly between the Tropic of Cancer and the Tropic of Capricorn) to address their special energy needs.
- The ISA has 122 sun-belt countries that lie between the two tropics as its prospective member countries and currently boasts a membership of 86 countries globally.
- **Objectives of the ISA are as follows:**
  - To collectively address key common challenges to scale up solar energy applications in line with their needs;
  - To mobilize investments of more than **USD 1000 billion by 2030**;
  - Reduce the cost of finance to increase investments in solar energy in member countries by promoting innovative financial mechanisms and mobilizing finance from Institutions;
  - Scale up applications of solar technologies in member countries, and Facilitate collaborative research and development (R&D) activities in solar energy technologies.
  - Promote a common cyber platform for networking, cooperation and exchange of ideas among member countries;