

A world map is rendered in a stylized, hand-drawn manner using red, orange, and yellow brushstrokes. The map is set against a dark grey background. Overlaid on the map is a network of thin, light-colored lines connecting various circular nodes, some of which are colored in red, orange, and yellow. The overall aesthetic is modern and digital.

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**EDEN PREP**



# EDEN IAS - Educational Development & Enrichment Network

## ARTICLE 244(A) OF THE CONSTITUTION

### Syllabus Section: Polity and Governance

#### Why in News?

Congress leader Rahul Gandhi promised to implement Article 244 (A) of the Constitution to safeguard the interests of the people in Assam's tribal-majority districts.

#### About:

- Article 244(A) allows for creation of an 'autonomous state' within Assam in certain tribal areas.
- Inserted into the Constitution in 1969 by the then Congress government, it also has a provision for a Legislature and a Council of Ministers.

#### How different from the Sixth Schedule of the Constitution?

- The Sixth Schedule of the Constitution — Articles 244(2) and 275(1) — is a special provision that allows for greater political autonomy and decentralised governance in certain tribal areas of the Northeast through autonomous councils that are administered by elected representatives.
  - In Assam, the hill districts of Dima Hasao, KarbiAnglong and West Karbi and the Bodo Territorial Region are under this provision.
- Article 244(A) accounts for more autonomous powers to tribal areas.
  - In Autonomous Councils under the Sixth Schedule, they do not have jurisdiction of law and order.

Source: PIB

## AIM-PRIME

### Syllabus Section: Science and Technology

#### Why in News?

Atal Innovation Mission launches 'AIM-PRIME', in partnership with (Bill & Melinda Gates Foundation) BMGF & Venture Centre.

#### About:

- In a major push towards deep technology and driving the country to become a digitally transformed nation, Atal Innovation Mission (AIM), NITI Aayog launched AIM-PRIME (Program for Researchers on Innovations, Market-Readiness & Entrepreneurship), an initiative to promote and support science-based deep-tech start-ups & ventures across India.

- The first cohort of the program is open to technology developers (early-stage deep tech start-ups, and scientists/ engineers/ clinicians) with strong science-based deep tech business ideas.
- The program is also open to CEOs and Senior incubation managers of AIM Funded Atal Incubation Centres that are supporting deep tech entrepreneurs.
- The benefits of this program are aimed at addressing specific issues through training and guidance over a period of 12 months.

Deep technology is an outcome of very intense research and development (R&D) with high knowledge content.

Source: PIB

## PRIME MINISTER'S YOGA AWARDS (PMYA)

### Syllabus Section: Awards and Recognitions

#### Why in News?

AYUSH Ministry invites applications for Prime Minister's Yoga Awards

#### About:

- PM Narendra Modi, on the second International Day of Yoga (IDY) 2016, had announced two categories of Yoga awards – one being International and other being National – to be announced on the occasion of the International Day of Yoga (IDY).
- The purpose of the awards is to recognize and felicitate the individual(s)/ organization(s) who/which have made a significant impact on the society, for a sustained period, by the way of promotion and development of Yoga.
- The International Day of Yoga, key initiative of Ministry of Ayush, has gained international recognition.

Source: All India Radio

## INDIA-MAURITIUS CECPA

### Syllabus Section: International Relations

#### Why in News?

The India-Mauritius CECPA will enter into force on 01 April 2021.

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### About:

- India and Mauritius signed the Comprehensive Economic Cooperation and Partnership Agreement (CECPA) on 22 February 2021.
- The CECPA is the first trade Agreement signed by India with a country in Africa.
- The India-Mauritius CECPA provides for an institutional mechanism to encourage and improve trade between the two countries.
- The Agreement is a limited agreement, which will cover Trade in Goods, Rules of Origin, Trade in Services, Technical Barriers to Trade (TBT), Sanitary and Phytosanitary (SPS) measures, Dispute Settlement, Movement of Natural Persons, Telecom, Financial services, Customs Procedures and Cooperation in other Areas.
- The CECPA between India and Mauritius covers 310 export items for India. Mauritius will benefit from preferential market access into India for its 615 products.

**Source: Business Standard**

### JAL JEEVAN MISSION

#### Why in News?

The Ministry of Jal Shakti has decided to use sensor-based IoT devices to effectively monitor the implementation of Jal Jeevan Mission (JJM)

#### About:

- For this, National Jal Jeevan Mission in collaboration with Tata Community Initiatives Trust (TCIT) and Tata Trusts recently completed pilot projects in several remote villages of five States i.e., Uttarakhand, Rajasthan, Gujarat, Maharashtra, and Himachal Pradesh.
- The Internet of Things (IoT) based remote monitoring provides near real-time information without any manual intervention by using sensors.
- This would not only allow effective monitoring and management on-ground, but also enable real-time visibility to State water supply/ PHED officials, and citizens.
- Several types of sensors have been deployed including flow meters, ground water level sensors, chlorine analyzers, pressure sensors, pump controller etc. to measure all the relevant aspects of water service delivery.

### Background:

- Jal Jeevan Mission (JJM), Union Government's flagship programme, is implemented in partnership with States/ UTs to provide tap water connection to every rural household by 2024.
- It envisions creating a Digital Wall and Remote Command & Control Centre for monitoring and managing supply of prescribed quality water in adequate quantity (55 Liters Per Capita per Day - LPCD) every day through household tap connections across all rural villages.

**Source: PIB**

### WORLD'S BIGGEST UNDERWATER NEUTRINO TELESCOPES

**Syllabus Section: Science and Technology**

#### Why in News?

- Russian scientists launched one of the world's biggest underwater neutrino telescopes called the Baikal-GVD (Gigaton Volume Detector) in the waters of Lake Baikal.

#### About:

- Aimed to study in detail the elusive fundamental particles called neutrinos and to possibly determine their sources.
- The Baikal-GVD is one of the three largest neutrino detectors in the world along with the IceCube at the South Pole and ANTARES in the Mediterranean Sea.

#### Benefits:

- Studying this will aid scientists' understanding of the origins of the universe since some neutrinos were formed during the Big Bang, others continue to be formed as a result of supernova explosions or because of nuclear reactions in the Sun.

#### Fundamental Particles:

- Universe is made of some fundamental particles that are indivisible. Broadly, particles classified into quarks and leptons.
- This only applies to "normal matter" or the matter that scientists know that five per cent of the universe is made up of.

**Source: Indian Express**

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### MyNEP2020

#### Why in News?

Union Education Minister launched the “MyNEP2020” Platform of NCTE Web Portal.

#### About:

- The platform seeks to invite suggestions from the stakeholders for preparing draft for development of National Professional Standards for Teachers (NPST) and National Mission for Mentoring Program membership (NMM).
- The “MyNEP2020” platform will be operational from 1st April 2021 to 15th May 2021.
- For preparing the documents on above two major recommendations of NEP 2020, NCTE will work in close consultation with individuals/organizations.
- Expert committee will extensively review the inputs collected during the consultation period and will finally formulate the Drafts for public review. Comments by the reviewers from the stakeholders will then be used to prepare a final Draft for notification.

#### Important Info :

- National Council for Teacher Education (NCTE) is a statutory body of Indian government set up under the National Council for Teacher Education Act, 1993 in 1995 to formally oversee standards, procedures and processes in the Indian education system.

Source: PIB

### JOINT LOGISTICS NODE (JLN)

#### Syllabus Section: Defence

#### Why in News?

Chief of Defence Staff General Bipin Rawat operationalised and dedicated to the Armed forces the 3rd Joint Logistics Node (JLN) in Mumbai.

#### About:

- These JLN will provide integrated logistics cover to the Armed Forces for their small arms ammunition, rations, fuel, general stores, civil hired transport, aviation clothing, spares and also engineering support in an effort to synergise their operational efforts.

- Establishment and operationalisation of JLN is a very important first step in the direction of logistics integration of our three Services. The JLN would enhance joint inter-operability between the Services.
- The Joint Operations Division (JOD) under the aegis of Headquarters Integrated Defence Staff (Hq IDS) enabled establishment of the JLN
- Government Sanction Letter for establishment of JLN in Mumbai, Guwahati and Port Blair was signed on October 12, 2020.
- The JLN in Guwahati and Tri-Services, Andaman and Nicobar Command, Port Blair were operationalised on January 01, 2021.

Source: PIB

### INDIA'S BIGGEST FLOATING SOLAR POWER PLANT

#### Syllabus Section: Environment and Ecology

#### Why in News?

India's biggest floating solar power plant with a capacity of 100 MW will be set up at Ramagundam in Telangana.

#### About:

- The solar project is commissioned by the National Thermal Power Corporation (NTPC).
- The solar panels will cover 450-acre area of the reservoir and can be expanded in the future.
- NTPC's efforts to set up floating solar power projects is aimed at reducing its carbon footprints and accelerate its green energy production to 30 per cent of its capacity.
- The world's largest solar power plant with 600 MW capacity is being set up on Omkareshwar Dam on Narmada river in Madhya Pradesh.
- The project costing 3,000 crore rupees is expected to start power generation only by 2022-23.

Source: DD News

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## BIMSTEC

### Syllabus Section: International Relations

#### Why in News?

BIMSTEC finalises Connectivity master plan for the region.

#### About:



- The virtual meeting of the Foreign Ministers of Bay of Bengal Multi Sectoral Technical and Economic Cooperation (BIMSTEC) grouping finalised a major Connectivity master plan for the Bay of Bengal region.
- The meeting also endorsed three MoUs/ agreements relating to convention on Mutual Legal Assistance in Criminal matters, cooperation between diplomatic and training academies and establishment of BIMSTEC Technology Transfer Facility in Colombo.
- India expressed its commitment to take the BIMSTEC to new heights.
- The study conducted by the Asian Development Bank (ADB) in 2007 and 2014, identified 166 connectivity projects at an estimated cost of USD 50 billion out of which 65 projects were identified as priority projects.

Source: DD News

## CORONAL MASS EJECTIONS (CMES)

### Syllabus Section: Science and Technology

#### Why in News?

Novel technique for tracking solar eruptions that disrupt space weather to be used in India's first solar mission.

#### About:

- As the ejections from the Sun, technically called Coronal Mass Ejections (CMEs), cause various disturbances of the space environment, forecasting their arrival time is very important.

- However, forecasting accuracy is hindered by limited CME observations in interplanetary space.
- A software named Computer Aided CME Tracking Software (CACTus) based on a computer vision algorithm was so far used to detect and characterise such eruptions automatically in the outer corona.
- In outer corona these eruptions cease to show accelerations and propagate with a nearly constant speed.
- This algorithm could not be applied to the inner corona observations due to the vast acceleration experienced by these eruptions.
- This severely limited the capability to track the eruptions as CMEs accelerate in the lower corona.
- DST, Government of India, along with their collaborators from Royal Observatory of Belgium, have led to the development of an algorithm, CMEs Identification in Inner Solar Corona (CIISCO) to detect and track the accelerating solar eruption in the lower corona.
- CIISCO has been successfully tested on several eruptions observed by space observatories, including Solar Dynamics Observatory and Solar-Terrestrial Relations Observatory, PROBA2/SWAP launched by NASA and ESA, respectively.

Source: DD News

## MATERNAL DEATHS

#### Why in News?

The failure of the health system to cope with COVID-19 pandemic resulted in an increase in maternal deaths and stillbirths, according to a study published in The Lancet Global Health journal.

#### About:

Pregnancy outcomes for mothers and babies have worsened during the Covid-19 pandemic, according to a review of data from 40 studies representing 17 countries published in The Lancet Global Health

WHAT CHANGED		
	During pandemic	Before pandemic
Stillbirth rate	1099/168,295	1325/198,993
Maternal mortality rate	530/1,237,018	698/2,224,859

Denominator refers to total pregnancies in pooled data. (Source: lancet Global Health)

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- Overall, there was a 28% increase in the odds of stillbirth, and the risk of mothers dying during pregnancy or childbirth increased by about one-third.
- COVID-19 impact on pregnancy outcomes was disproportionately high on poorer countries.
- The report is an analysis of 40 studies across 17 countries including Brazil, Mexico, the U.S., Canada, the U.K., Denmark, Netherlands, Italy, India, China and Nepal.
- The study attributes the worsening trend to the failure of the “inefficiency of the healthcare system and their inability to cope with the pandemic” instead of strict lockdown measures. This resulted in reduced access to care.
- In India, during the months of national lockdown last year between April and June, compared to the same period in 2019, there was a 27% drop in pregnant women receiving four or more ante-natal check-ups, a 28% decline in institutional deliveries and 22% decline in prenatal services.

**Source: The Hindu**

### DRDO DEVELOPS ADVANCED CHAFF TECHNOLOGY

**Syllabus Section: Science and Technology**

#### Why in News?

Defence Research and Development Organisation (DRDO) has developed an Advanced Chaff Technology to safeguard naval ships against enemy missile attack.

#### About:

- A DRDO laboratory in Jodhpur, has indigenously developed three variants of this critical technology namely Short Range Chaff Rocket, Medium-Range Chaff Rocket and Long Range Chaff Rocket meeting Indian Navy's qualitative requirements.
- The technology is being given to the industry for production in large quantities.

#### What is Chaff?

- Chaff is a passive expendable electronic countermeasure technology used worldwide to protect naval ships from enemy's radar and Radio Frequency missile seekers.

#### Significance:

- The importance of this development lies in the fact that very less quantity of chaff material deployed in the air acts as decoy to deflect enemy's missiles for safety of the ships.

**Source: All India Radio**

### LA PEROUSE

**Syllabus Section: Defence**

#### Why in News?

- Indian Navy Ships INS Satpura (with an integral helicopter embarked) and INS Kiltan along with P8I Long Range Maritime Patrol Aircraft are participating,

#### About:

- The exercise La Pérouse, led by French Navy, has participation by FN Ships Tonnerre, an amphibious assault ship and frigate Surcouf. United States Navy is represented in the exercise by amphibious transport dock ship Somerset.
- Her Majesty's Australian Ships (HMAS) Anzac, a frigate and tanker Sirius have been deployed by RAN for participation in the exercise while Japan Maritime Self Defence Ship (JMSDF) is represented by the destroyer Akebono.
- Exercise La Pérouse will witness complex and advanced naval operations including surface warfare, anti-air warfare and air defence exercises, weapon firing exercises, cross deck flying operations, tactical manoeuvres and seamanship evolutions such as replenishment at sea.
- The exercise will showcase high levels of synergy, coordination and interoperability between the friendly navies.
- Participation by the Indian Navy in the exercise demonstrates the shared values with friendly navies ensuring freedom of seas and commitment to an open, inclusive Indo-Pacific and a rules-based international order.
- The multi-lateral maritime exercise La Pérouse, being conducted in the Eastern Indian Ocean Region from 05 to 07 Apr 2021.

**Source: All India Radio**

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## HSN CODE

### Syllabus Section: Economy

#### Why in News?

The ministry of finance has announced that businesses with turnover of Rs 5 crore and above will have to furnish six-digit HSN or tariff code on the invoices issued for supplies of taxable goods and services from April 1.

- Those with turnover of up to Rs 5 crore in the preceding financial year would also be required to furnish four-digit HSN code on B2B invoices.

#### About:

- HSN stands for Harmonised System of Nomenclature code. This is a 6-digit code that classifies various products.
- The HSN code contains 21 sections.
- It is mandatory for both B2B and B2C tax invoices on the supplies of Goods and Services.
  - India has been using HSN codes since 1986 to classify commodities for Customs and Central Excise.
- HSN codes remove the need to upload details about the goods which makes filing of GST returns easier.

#### Who needs it?

- Dealers with turnover of less than Rs 1.5 crore do not need to adopt HSN codes for their commodities.
- Businesses with turnover between Rs 1.5 crore and Rs 5 crore use two-digit HSN codes for their commodities.
  - Manufacturers, importers and exporters have been using HSN codes for a long time now.
  - Manufacturers were furnishing these codes even in the pre-GST regime.
  - Importers and exporters have been furnishing these codes in their import, export documents.

#### Significance:

This system helps in making GST simpler and globally accepted.

#### Source: Economics Times

## SANKALP SE SIDDHI

#### Why in News?

TRIFED under Ministry of Tribal Affairs has now launched "Sankalp se Siddhi" - Village and Digital Connect Drive.

#### About:

- It is a 100 day drive which was started from April 1, 2021.
- The drive will entail 150 teams visiting ten villages each of which 10 in each region from TRIFED and State Implementation Agencies, visiting ten villages each.
- The main aim of this drive is to activate the Van Dhan Vikas Kendras in these villages.
- The visiting teams will also identify locations and shortlist potential Van Dhan Vikas Kendras for clustering as TRIFOOD, and Scheme of Fund for Regeneration of Traditional Industries- SFURTI units as larger enterprises.
- TRIFOOD aims to enhance the income of tribals through better utilization of and value addition to the Minor Forest Produce collected by the tribal forest gatherers.

#### Source: PIB

## E-COURTS PROJECT

### Syllabus Section: Polity and Governance

#### Why in News?

The eCommittee Supreme Court has prepared the draft vision document for Phase III of the eCourts Project under the auspices of the Supreme court of India.

#### About:

- E-Courts Project is a mission mode project undertaken by the Department of Justice, Government of India.
- The Chairperson of eCommittee is Dr Justice Dhananjaya Y Chandrachud, Judge, Supreme Court of India.
- The eCommittee of the Supreme Court has been overseeing the implementation of the eCourts Project, conceptualized under the "National Policy and Action Plan for Implementation of Information and Communication Technology (ICT) in the Indian Judiciary-2005".
- Phase III of the eCourts Project in India is rooted in two central facets—access and inclusion.
- Phase III of the eCourts Project envisions a judicial system that is more easily accessible irrespective of geographical distances, efficient and equitable for every individual who seeks justice, makes more efficient use of human and other resources, and absorbs the latest technology for a positive environmental impact.

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The vision for Phase III is sought to be built on the following four building blocks:

- Core Values: Phase III must strive for a modern judicial system, governed by core values of trust, empathy, sustainability and transparency which, while simplifying procedures, will maximise the positives of technology and minimise its risks and challenges.
- Whole-of-system approach: Phase III must aim to make processes more efficient across all three components of dispute management i.e. dispute avoidance, containment and resolution. Each of these components will require technological integration with different institutions.
- Adoption frameworks: Phase III must focus on building strong adoption frameworks. Such frameworks must include behavioural nudges, adequate training and skill set development, feedback loops, along with the requisite mandate of law.
- Governance framework: From a governance perspective, while numerous judicial decisions have validated the use of technology in judicial processes, Phase III must address the accompanying administrative structures. The key goals and strategy of Phase III prioritise the creation of a core digital infrastructure that can enable the development of services for dispute resolution by the judiciary and services of solutions for dispute containment and resolution by the ecosystem.

**Source: PIB**

### WORLD'S HIGHEST RAILWAY BRIDGE

**Syllabus Section: Infrastructure**

#### Why in News?

Railways complete the Arch closure of the iconic Chenab Bridge, World's highest Railway Bridge.

#### About:

- Chenab Bridge, the world's highest railway bridge, part of the Udhampur-Srinagar-Baramulla rail link project (USBRL), set an important construction milestone with completion of the steel arch of the iconic Chenab Bridge.
- Salient Features of the Arch of the iconic Chenab Bridge:
  - o This is the highest Railway Bridge in the world being 359m above the river bed level.

- o This bridge is 1315m long.
- o It will be 35 meters higher than the iconic Eiffel Tower in Paris (France).
- o Bridge designed to withstand high wind speed up to 266 Km/Hour.
- o Bridge designed for blast load in consultation with DRDO for the first time in India.
- o Bridge will remain operational at restricted speed of 30 Km/Hour even after removal of one pier/trestle.
- o Bridge designed to bear earthquake forces of highest intensity zone-V in India.
- o First time on Indian Railways, Phased Array Ultrasonic Testing machine used for testing of welds.
- o First time on Indian Railways, NABL accredited lab established at site for weld testing.
- o Approx. 584Km welding done to join the different parts of structure, which is to the tune of distance between Jammu Tawi to New Delhi.
- o Height of cable crane's pylon at Srinagar End is 127m, which is much taller than Qutub Minar of 72m.
- o Launching of curved viaduct portion done for first time on Indian Railways using End Launching Method.
- o Extensive health monitoring and warning systems planned through state of art instrumentation.



**Source: PIB**

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### NATIONAL POLICY FOR RARE DISEASES, 2021

#### Syllabus Section: Health

#### Why in News?

Union Health & Family Welfare Minister approved the “National Policy for Rare Diseases 2021” on 30th March 2021.

#### About:

#### Highlights of the Policy:

- Aim:
  - lower the cost of treatment of rare diseases
  - increase focus on indigenous research
  - increase focus on indigenous research and local production of medicines.
- Categorization of Rare Diseases:
  - The policy has categorised rare diseases in three groups:
    - **Group 1:** Disorders amenable to one-time curative treatment.
    - **Group 2:** Those requiring long term or lifelong treatment.
    - **Group 3:** Diseases for which definitive treatment is available but challenges are to make optimal patient selection for benefit, very high cost and lifelong therapy.
- Funding:
  - The policy will make use of a crowdfunding mechanism to cover the cost of treatment of rare diseases.
  - Corporates and individuals will be encouraged to extend financial support through a robust IT platform.
- Data and Definitions:
  - A national hospital-based registry of rare diseases will be created to ensure adequate data and comprehensive definitions of such diseases are available for those interested in research and development.
  - Through the help of Health and Wellness Centres, District Early Intervention Centres and counselling, the policy aims to screen and detect rare diseases early at early stages, which will in turn help in their prevention.

#### Significance of the Policy:

- The Supreme Court and various high courts expressed concern about the lack of a national policy for rare diseases, the statement said.

- Rare diseases are difficult to research upon and availability and accessibility to medicines are important in the process of treatment.
- The policy aims to help the nation overcome these fundamental challenges.

**Source: Hindustan Times:**

### TRIBUNALS REFORMS (RATIONALISATION AND CONDITIONS OF SERVICE) ORDINANCE, 2021

#### Syllabus Section: Polity & Governance

#### Why in News?

- The President of India has promulgated the Tribunals Reforms (Rationalisation and Conditions of Service) Ordinance, 2021.

#### About:

- The appellate authorities under nine Acts have been done away with this and the right to hear appeals under the statute has been conferred to High Courts.
- Section 184 of the Finance Act, 2017 has been amended by this ordinance, to empower the Central Government to make rules for qualifications, appointment, term of office, salaries and allowances, resignation, removal and other terms and conditions of service of Members of Tribunals.
- The Ordinance omits following Tribunals/ Appellate Authorities from the purview of Finance Act:
  - Airport Appellate Tribunal established under the Airport Authority of India Act, 1994
  - Appellate Board established under the Trade Marks Act, 1999
  - Authority for Advance Ruling established under the Income Tax Act, 1961
  - Film Certification Appellate Tribunal established under the Cinematograph Act, 1952
- It substitutes the National Consumer Disputes Redressal Commission established under the erstwhile Consumer Protection Act, 1986 with a National Consumer Disputes Redressal Commission established under the Consumer Protection Act, 2019.

**Source: The Hindu**

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## INTEGRATED HEALTH INFORMATION PLATFORM (IHIP)

### Syllabus Section: Health

#### Why in News?

The Union Minister of Health, Harsh Vardhan launched the Integrated Health Information Platform (IHIP).

#### About:

- The Integrated Health Information Platform (IHIP) is the next generation highly refined version of the presently used Integrated Disease Surveillance Programme (IDSP).
- According to the minister, India is the first country in the world to adopt such an advanced disease surveillance system.
- The new version of IHIP will house the data entry and management for India's disease surveillance program.
- In addition to tracking 33 diseases now as compared to the earlier 18 diseases, it shall ensure near-real-time data in digital mode, having done away with the paper-mode of working.
- Terming this as the world's biggest online disease surveillance platform, he stated that it is in sync with the National Digital Health Mission.

#### Source: PIB

## GLOBAL GENDER GAP REPORT

#### Why in News?

India has fallen 28 places in the World Economic Forum's Global Gender Gap Report 2021.

#### About:

- India is now ranked 140 among 156 countries.
- South Asia incidentally is one of the worst performing regions, followed only by the Middle East and northern Africa.
- many countries have fared worse in this year's rankings compared to last year's, on account of economic performance.
- On its current trajectory, it will now take 135.6 years to close the gender gap worldwide.
- The gender gap in political empowerment remains the largest: women represent only 26.1 per cent of some 35,500 parliament seats and just 22.6 per cent of over 3,400 ministers worldwide, according to the report.

- In 81 countries, there has never been a woman head of state, as of January 15, 2021.
- It is now one of the worst performers in South Asia, trailing behind neighbours Bangladesh, Nepal, Bhutan, Sri Lanka and Myanmar.

#### Source: Indian Express

## LAB ON WHEELS

### Syllabus Section: Science and Technology

#### Why in News?

- Delhi Education Minister Manish Sisodia has inaugurated Delhi Technological University's 'Lab on Wheels' programme

#### About:

#### Concept Behind:

- to impart education in the fields of Mathematics and Science to those students who come from marginalised and poor economic backgrounds, in order to pique their interests in these subjects while pursuing higher education

#### Details of the Programme:

- It will have students of the university travelling in a bus across Delhi to teach government school students and underprivileged children.
- The programme will initially target 12 schools. The bus will function in three shifts of three hours each from 8 am to 11 am, 11 am to 2 pm and 2 pm to 5 pm.
- One school will be visited once a week, and continuously for eight weeks.

#### Source: Indian Express

## NATIONAL SUPER COMPUTING MISSION (NSM)

### Syllabus Section: Science and Technology

#### Why in News?

India is fast emerging a leader in high power computing with the National Super Computing Mission (NSM).

#### About:

- In April 2015 the government approved the NSM with a total outlay of Rs.4500 crore for a period of 7 years.

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- The National Supercomputing Mission was launched to enhance the research capacities and capabilities in the country by connecting them to form a Supercomputing grid, with National Knowledge Network (NKN) as the backbone.
- The NSM is setting up a grid of supercomputing facilities in academic and research institutions across the country.
- The Mission is being jointly steered by the Department of Science and Technology (DST) and the Ministry of Electronics and Information Technology (MeitY) and implemented by the Centre for Development of Advanced Computing (C-DAC), Pune, and the Indian Institute of Science (IISc), Bengaluru.
- The 11 systems that are going to be installed in the next phase will have processors designed by the Centre for Development of Advanced Computing (C-DAC) and will have a cumulative capacity of 10 petaflops.
- These new systems are to be constructed more cost-effectively than the previous ones.
- One of the 11 proposed supercomputers will be installed
- at C-DAC exclusively for small and medium enterprises so that they can train employees as well as work on supercomputers at a very low cost.

### Aims and objectives

- The target of the mission was set to establish a network of supercomputers ranging from a few Tera Flops (TF) to Hundreds of Tera Flops (TF) and three systems with greater than or equal to 3 Peta Flops (PF) in academic and research institutions of National importance across the country by 2022.
- o Computing infrastructure has already been installed in four premier institutions and installation work is in rapid progress in 9 more.

### Phases of the National Supercomputing Mission

#### Phase I:

- In the first phase of the NSM, parts of the supercomputers are imported and assembled in India.
- A total of 6 supercomputers are to be installed in this phase.
- The first supercomputer that was assembled indigenously is called Param Shivay. It was installed in IIT (BHU) located in Varanasi.
- Similar systems, Param Shakti (IIT Kharagpur) and Param Brahma (IISER, Pune) were also later installed within the country.
- The rest will be installed at IIT Kanpur, IIT Hyderabad and Jawaharlal Nehru Institute of Advanced Studies (JNIAS).

#### Phase II:

- The supercomputers that are installed so far are about 60% indigenously.

#### Phase III:

- The third phase aims to build fully indigenous supercomputers.
- The government had also approved a project to develop a cryogenic cooling system that rapidly dispels the heat generated by a computing chip. This will be jointly built together by IIT-Bombay and C-DAC

#### Significance:

- o National Super Computing Mission (NSM) is increasing computational demands of academia, researchers, MSMEs, and start-ups in areas like oil exploration, flood prediction as well as genomics and drug discovery.
- o Powered by the NSM, India's network of research institutions, in collaboration with the industry, is scaling up the technology and manufacturing capability to make more and more parts in India.
- o The National Supercomputing Mission can ensure accessibility to supercomputers at an affordable rate to the scientific community and medium and small enterprises.

#### Source: PIB

### DIRECT PAYMENT OF MINIMUM SUPPORT PRICE

#### Syllabus Section: Government Policies and Intervention

#### Why in News?

After the recent orders from the Food Corporation of India (FCI), the farm unions warned that the Centre's insistence on direct payment of Minimum Support Price (MSP) could derail the crop procurement process.

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## About:

### Order:

- The Centre wants to make direct online MSP payment to farmers' bank accounts, to remove middlemen from the process.
- Currently, arhtiyas (commission agents) get the payments in their accounts, which they in turn pay to farmers through cheques.
- The Centre has to pay 2.5% commission to arhtiyas who facilitate procurement of the crop from farmers to government agencies and take commission for that from the government.

### Jamabandhi System:

- FCI order stipulates that tenant farmers and sharecroppers must produce a jamabandhi.
- Jamabandhi is a legal agreement proving that they have the right to till leased land, in order to get paid for procured crops.
- The FCI's also proposed to tighten quality requirements for wheat and paddy procurement.

### Significance:

- **Transparency and Accountability:** The FCI has insisted that direct payment to farmers' bank accounts, bypassing the powerful arhatiyas or commission agents, will lead to greater transparency and accountability.
- **Non-Discriminatory in Nature:** There is no selection bias in choosing the beneficiaries based on attributes like caste and land size.

### FCI

FCI is a statutory body set up in 1965 by the Food Corporations Act 1964 under Department of Food & Public Distribution, Ministry of Consumer Affairs, Food and Public Distribution.

### Objectives of FCI:

- o To provide remunerative prices to farmers.
- o Ensuring food security of the nation by maintaining satisfactory levels of operational buffer stocks of food grains.
- o Distribution of food grains throughout the country for the Public Distribution System.
- o Effective Price Support Operations for safeguarding the interest of farmers.

### Source: The Hindu

## VIGILANCE OFFICERS

### Syllabus Section: Polity and Governance

#### Why in News?

Central Vigilance Commission officers will be transferred every 3 years from now onwards.

#### About:

- The Central Vigilance Commission (CVC) has modified the guidelines pertaining to the transfer and posting of officials in the vigilance units of government organisations,
  - o It has restricted their tenure to three years at one place.
- The tenure may be extended to three more years, albeit at a different place of posting.
- According to the CVC, undue long stay of an official in a vigilance department had the potential of developing vested interests, apart from giving rise to unnecessary complaints or allegations.
- In order to emphasis on the importance of the issue and to ensure transparency, objectivity and uniformity in approach, the Commission has decided to modify its earlier guidelines.
- The order said after transfer from the vigilance unit, there would be a compulsory cooling off period of three years before anyone could be considered again for posting in the unit.

### Source: The Hindu

## TRIBAL HEALTH COLLABORATIVE- 'ANAMAYA'

### Syllabus Section: Health

#### Why in News?

Union Health Minister Dr Harsh Vardhan and Tribal Affairs Minister Arjun Munda launched 'Anamaya'- the Tribal Health Collaborative.

#### About:

- It is a multi-stakeholder initiative supported by Piramal Foundation and Bill and Melinda Gates Foundation (BMGF),
- Anameya' will converge efforts of various Government agencies and organisations to enhance the health and nutrition status of the tribal communities
- Recently, the Tribal TB Initiative was launched by both the Ministries to fulfil the Prime Minister's goal of TB Mukta Bharat by 2025, five years ahead of the global deadline.

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- As part of this Collaborative, the Ministry will undertake several activities such as setting up of the National Council on Tribal Health to drive policy initiatives in tribal health, establishment of a Health Cell to closely monitor healthcare delivery in the tribal areas and devising mechanisms to implement the Tribal Health Action Plan.

### Significance of the Initiative:

Equitable Access of Healthcare Services Across Its Diverse Geographies

- The tribal population despite improvement over the years, disproportionately share the burden of poverty, death and diseases compared to their non-tribal counterparts and face a myriad of obstacles when accessing public health systems.
  - These include the lack of health facilities in indigenous communities and cultural differences with the health care providers such as differences in languages, human resource shortages, and poor treatment seeking behaviour, difficult terrain and infrequent transport among others
- It will help in countering these problems

Source: All India Radio

## MADHUKRANTI PORTAL AND HONEY CORNERS OF NAFED

### Syllabus Section: Agriculture

#### Why in News?

Agriculture and Farmers' Welfare Minister Narendra Singh Tomar today launched Madhukranti portal and Honey Corners of National Agricultural Cooperative Marketing Federation.

#### About:

- This portal is being developed for online registration to achieve a traceability source of Honey and other beehive products on a digital platform.
  - This will also help in checking the quality and source of adulteration of honey.
- Madhukranti portal is an initiative of National Bee Board under National Beekeeping and Honey Mission.
- An MoU between National Bee Board and Indian Bank was signed for this project.

#### Significance:

- Honey Mission will lead to increase in income of farmers, employment generation and increase in exports.

- The sweet revolution should spread all over the country and Indian honey should meet global standards.

### National Beekeeping & Honey Mission (NBHM)

- Keeping in view the importance of beekeeping as part of the Integrated Farming System in the country, government approved the allocation for Rs. 500 crore for National Beekeeping & Honey Mission (NBHM) for three years (2020-21 to 2022-23).
- The mission was announced as part of the AtmaNirbhar Bharat scheme.
- NBHM aims for the overall promotion & development of scientific beekeeping in the country to achieve the goal of 'Sweet Revolution' which is being implemented through National Bee Board (NBB).
- main objective of NBHM is to promote holistic growth of beekeeping industry for income & employment generation for farm and non-farm households, to enhance agriculture/ horticulture production, developing infrastructural facilities, including setting up of Integrated Beekeeping Development Centre (IBDC) s/CoE, honey testing labs, bee disease diagnostic labs, custom hiring centres, Api-therapy centres, nucleus stock, bee breeders, etc. and empowerment of women through beekeeping.

Source: All India Radio

## MOU BETWEEN INDIA AND JAPAN

#### Why in News?

MoU between India and Japan for Academic and Research Cooperation and Exchange.

#### About:

#### Objectives

- The MoU shall enable National Atmospheric Research Laboratory (NARL) and Research Institute for Sustainable Humanosphere (RISH) to continue their cooperation in areas of
  - atmospheric science and technology,
  - collaborative scientific experiments/campaigns and
  - related modelling studies utilising the research facilities of RISH and NARL, exchange of scientific materials, publications and information, joint research meetings and workshops, exchange of faculty members, students and researchers.

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- It would lead to mutual utilization of facilities such as the Middle and Upper atmosphere (MU) radar in Shigaraki, Japan, the Equatorial Atmosphere Radar (EAR) in Kototabang, Indonesia and complementary instruments available from RISH, and the Mesosphere-Stratosphere-Troposphere (MST) radar and complementary instruments available at NARL.

### Background:

- This arrangement was formalised in 2008 through an MoU. Since then NARL and RISH have been collaborating in the area of atmospheric science and technology as well as exchange of scientists.
  - The above MoU was renewed in the year 2013.
  - A fresh MOU to promote collaborative research, as per the new guidelines, was signed in November 2020 by both sides and exchanged.

Source: DD News

## MONETARY POLICY

### Syllabus Section:

#### Why in News?

The Reserve Bank of India's Monetary Policy Committee (MPC) has decided to keep its short-term lending rate or the repo rate unchanged at 4 per cent, in line with market expectations.

#### About:

#### Measures for liquidity announced

- RBI also announced a series of measures to inject liquidity in the government securities market and the financial system.
- RBI will ensure orderly conduct of government borrowing programme. In this respect, the central bank announced a secondary market government security (G-sec) acquisition plan worth Rs 1 lakh crore for April-June.
- Amid the government plans to support a new asset reconstruction company being set up by banks, the RBI has decided to set up a committee to review the working of ARCs to ensure how better these entities can support the financial sector.
- RBI decided to extend the RTGS and NEFT payments platforms to prepaid payment instruments, white label ATMs as well.

Source: Indian Express

## E9 PARTNERSHIP

### Syllabus Section: International Relations

#### Why in News?

Minister for Education (India) addressed the consultation meeting of Education Ministers of E9 countries on E9 initiative: Scaling up digital learning to accelerate progress towards Sustainable Development Goal 4 – Quality Education.

#### About:

- Spearheaded by the United Nations (UN), the E9 Partnership was first established in 1993.
- E9 Countries include Bangladesh, Brazil, China, Egypt, India, Indonesia, Mexico, Nigeria, and Pakistan.
- The initiative aims to advance the Sustainable Development Goal 4 agenda by driving rapid change in education systems in three of the 2020 Global Education Meeting priorities:
  - support to teachers;
  - investment in skills;
  - narrowing of the digital divide.

Source: PIB

## SARTHAQ INITIATIVE

#### Why in News?

Education Minister Nishank launches SARTHAQ initiative for implementation of NEP.

#### About:

- SARTHAQ has been initiated as a part of the Amrit Mahotsav celebrations.
- It will pave the way for the children and youths to meet the diverse national and global challenges.
- It will also help the students to imbibe 21st century skills, Indian tradition, culture and value system as envisioned in National Education Policy.
- the implementation of SARTHAQ would benefit all stakeholders including 25 crore students, 15 lakh schools, 94 lakh teachers.

Source: All India Radio

## SOLAR HOME SYSTEMS

### Syllabus Section: Environment and Ecology

#### Why in News?

Solar Home Systems provide clean energy for 20 million people in Bangladesh: World Bank

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## About:

- The programme was launched as a household pilot in 2003 for 50,000 families.
- The off-grid solar electrification programme has provided electricity to approximately 16 percent of the rural population of Bangladesh.
- Presently, Bangladesh has the largest off-grid solar power programme in the world enabling over 20 million Bangladeshis to access electricity.
- The World Bank supported the solar electrification programme in Bangladesh through the Infrastructure Development Company Ltd (IDCOL).

## Benefits of the Programme:

- Between 2003 to 2018, the project reduced greenhouse gas (GHG) emissions by approximately 9.6 million tonnes of CO<sub>2</sub> equivalent.
- The program helped reduce indoor air pollution by avoiding the consumption of 4.4 billion liters of kerosene,

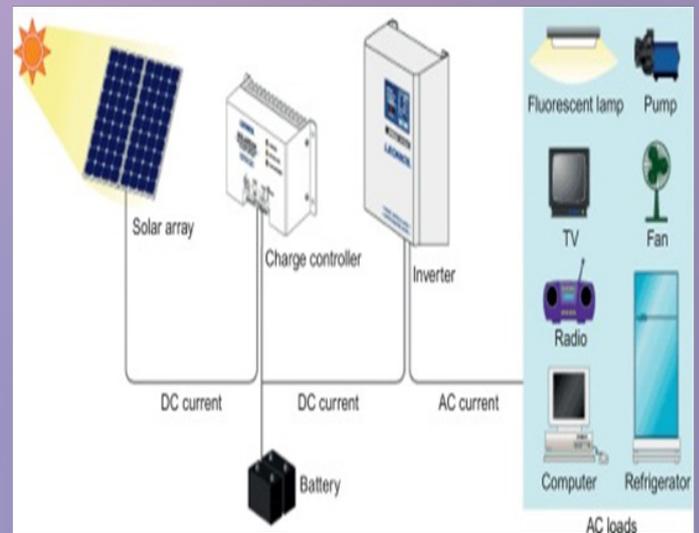
## Solar Home Systems (SHS):

- Solar home systems (SHS) are stand-alone photovoltaic systems that offer a cost-effective mode of supplying amenity power for lighting and appliances to remote off-grid households
- In rural areas, that are not connected to the grid, SHS can be used to meet a household's energy demand fulfilling basic electric needs
- SHS usually operate at a rated voltage of 12 V direct current (DC) and provide power for low power DC appliances such as lights, radios and small TVs for about three to five hours a day.
- A SHS typically includes one or more PV modules consisting of solar cells, a charge controller which distributes power and protects the batteries and appliances from damage and at least one battery to store energy for use when the sun is not shining.

They contribute to the improvement of the standard of living by:

- reducing indoor air pollution and therefore improving health as they replace kerosene lamps,

- providing lighting for home study,
- giving the possibility of working at night and
- facilitating the access to information and communication (radio, TV, mobile phone charging).



## e-SANTA

### Syllabus Section: Agriculture

#### Why in News:

- Union Commerce and Industry Minister virtually inaugurated e-SANTA, an electronic marketplace providing a platform to connect aqua farmers and the buyers.

#### About:

- It will enable the farmers to get a better price and the exporters to directly purchase quality products from the farmers enhancing traceability, a key factor in international trade.
- The term e-SANTA was coined for the web portal, meaning Electronic Solution for Augmenting NaCSA farmers' Trade in Aquaculture. National Centre for Sustainable Aquaculture (NaCSA) is an extension arm of Marine Products Export Development Authority (MPEDA), Govt. of India, Ministry of Commerce & Industry.
- The platform will change the traditional way of carrying out business from a word-of-mouth basis to become more formalised & legally binding.
- e-SANTA will raise income, lifestyle, self-reliance, quality levels, traceability, and provide new options for our aqua farmers.

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- e-SANTA will RAISE the lives & income of farmers by:
  - Reducing Risk
  - Awareness of Products & Markets
  - Increase in Income
  - Shielding Against Wrong Practice
  - Ease of Processes

### Significance:

- It is a Digital Bridge to end the market divide and will act as an alternative marketing tool between farmers & buyers by eliminating middlemen.
- It will revolutionize traditional aquafarming by providing cashless, contactless and paperless electronic trade platform between farmers and exporters.
- e-SANTA is a completely paperless and end-to-end electronic trade platform between Farmers and exporters.
- The farmers have the freedom to list their produce and quote their price while the exporters have the freedom to list their requirements and also to choose the products based on their requirements such as desired size, location, harvest dates etc. This enables the farmers and buyers to have greater control over the trade and enables them to make informed decisions.

Source: PIB

## TRADITIONAL NEW YEAR

### Syllabus Section: Society

#### Why in News?

- Various regions of the country are celebrating traditional new year in the form of Ugadi, GudiPadava, Chaitra Sukladi, Cheti Chand, Vishu, Puthandu and Bohag Bihu.
- People of Andhra Pradesh and Telangana call it 'Ugadi', and in Karnataka, it is 'Yugadi'. In Maharashtra, it is celebrated as 'GudiPadwa', and in Tamil Nadu, it is observed as 'Puthandu'. In Kerala, the day is celebrated as 'Vishu', In Punjab it is 'Vaisakhi' and in Odisha, it is called 'Pana Sankranti'. In West Bengal, it is called 'PoilaBoishakh' and in Assam, 'Bohag Bihu'.

### About:

#### GudiPadwa and Ugadi

- Ugadi and GudiPadwa are the festivals, to celebrate the New Year, in the month of Chaitra Shukla Pratipada as per the Hindu Lunar Calendar, and is celebrated by the people in the Deccan region including Karnataka, Andhra Pradesh and Maharashtra.
- The common practice in the celebrations of both the festivals is the festive food that is prepared with a mix of sweet and bitter.
- A famous concoction served is jaggery (sweet) and neem (bitter), called bevubella in South, signifying that life brings both happiness and sorrows.
- Gudi, which means a doll is prepared in Maharashtrian homes. A bamboo stick is adorned with green or red brocade to make the gudi. This gudi is placed prominently in the house or outside a window/ door for all to see.
- For Ugadi, doors in homes are adorned with mango leaf decorations called toranalu or Torana in Kannada.

#### Cheti Chand

- Sindhis celebrate the new year as Cheti Chand. Chaitra month is called 'Chet' in Sindhi.
- The day commemorates the birth anniversary of Ishta Deva Uderolal, Jhulelal, the patron saint of Sindhis and is celebrated with great pompous and gaiety.

#### Navreh

- It is the lunar New Year that is celebrated in Kashmir. It is the Sanskrit word 'Nav Varsha' from where the word 'Navreh' has been derived.
- It actually falls on the very first day of the Chaitra Navratras.
- On this day, Kashmiri Pandits deliberately, first of all, look at a bowl of rice, considered as a symbol of riches and fertility. A special 'Thali' is also prepared.

Source: All India Radio

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## AAHAAR KRANTI

### Syllabus Section: Health

#### Why in News?

Union Health Minister, Dr Harsh Vardhan will launch a new mission called 'Aahaar Kranti'.

#### About:

- The mission is aimed to spread the message of the need for a nutritionally balanced diet and to understand the importance of accessible to all local fruits and vegetables.
- Vijnana Bharati (Vibha) and Global Indian Scientists' and Technocrats' Forum (GIST) have come together to launch the mission with the motto of 'Good Diet-Good Cognition'.
- The 'Aahaar Kranti' movement is designed to address the problem of 'hunger and diseases in abundance'.
- Union Ministry of Science and Technology's Council of Scientific and Industrial Research (CSIR)'s PravasiBharatiya Academic and Scientific Sampark (Prabhaas) is collaborating, and various central and state government ministries and agencies are involved.
- The programme will focus on training teachers, who, in turn, will pass on the message to the multitudes of students, and through them to their families and finally the society at large. Such a strategy was adopted for the eradication of Polio and it turned out to be a grand success.
- Studies estimate that India produces as much as two times the number of calories that it consumes. However, many in the country are still malnourished. The root cause of this strange phenomenon is a lack of nutritional awareness in all sections of our society.
- The United Nations has also declared 2021 as the International Year of Fruits and Vegetables, which vibes very well with Aahaar Kranti. Fruits and vegetables make a large part of a balanced diet.
- Further, UN sustainable goal # 3 that emphasizes on human well-being reads, "Ensure healthy lives and promote well-being for all at all ages." This goal too makes Aahaar Kranti more meaningful. Diet and well-being are inseparable partners.

**Source: PIB**

## SPUTNIK V

### Syllabus Section: Health

#### Why in News?

Russia's COVID-19 vaccine — Sputnik V — has been recommended for emergency use authorisation in India following a meeting of the Subject Expert Committee (SEC).

#### About:

- After getting approval by Drug Controller General of India (DCGI), Sputnik V would be the third vaccine to be made available in India after the Serum Institute of India's Covishield and Bharat Biotech's Covaxin.
- Sputnik V, developed by Russia's Gamaleya Research Institute of Epidemiology and Microbiology, claims to be one of the three vaccines in the world with efficacy of over 90%.
- The vaccine supplies for the global market will be produced by the Russian Direct Investment Fund (RDIF) international partners in India, Brazil, China, South Korea and other countries.

Sputnik V, the third COVID-19 vaccine approved for emergency use in India, is similar to the AstraZeneca 'Covishield vaccine' in terms of design

<ul style="list-style-type: none"> <li>▪ Sputnik V was granted emergency approval in Russia without proper controlled trials. However, results of such trials were published later in <i>The Lancet</i>, showing a 91.6% efficacy</li> <li>▪ Before India, the vaccine was approved under</li> </ul>		<ul style="list-style-type: none"> <li>▪ emergency use authorisation in 59 countries</li> <li>▪ There are no definitive studies establishing the efficacy of the vaccine against the newer variants</li> <li>▪ The vaccine can be stored as a ready-to-use solution in water frozen to -18°C or as freeze-dried powder stored at 2-8 °C</li> </ul>
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**Source: The Hindu**

## NARROW-LINE SEYFERT 1 (NLS1) GALAXY

### Syllabus Section: Science and Technology

#### Why in News?

Astronomers have discovered a new active galaxy identified as the farthest gamma-ray emitting galaxy that has so far been stumbled upon.

#### About:

- This active galaxy called the Narrow-Line Seyfert 1 (NLS1) galaxy, which is about 31 billion light-years away, opens up avenues to explore more such gamma-ray emitting galaxies that wait to meet us.

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- Scientists from ARIES, an autonomous institute of the Department of Science & Technology (DST) studied around 25,000 luminous Active galactic nuclei (AGN) from the Sloan Digital Sky Survey (SDSS), a major optical imaging and spectroscopic survey of astronomical objects in operation for the last 20 years.
- They found a unique object that emits high-energy gamma rays located at a high redshift. They identified it as a gamma-ray emitting NLS1 galaxy, which is a rare entity in space.
- The new gamma-ray emitting NLS1 was formed when the Universe was only about 4.7 billion years old as compared to its current age of about 13.8 billion years.

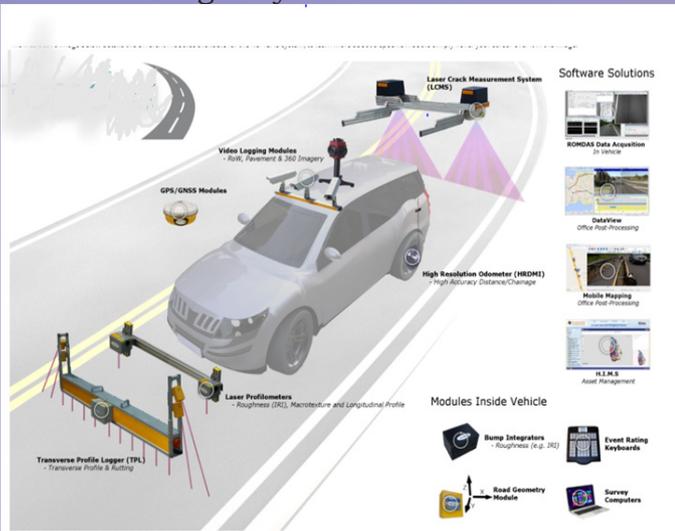
**Source: PIB**

### NSV TO ENHANCE QUALITY OF NATIONAL HIGHWAYS

**Syllabus Section: Infrastructure**

**Why in News?**

NHAI decides to deploy NSV to enhance quality of National Highways.



**About:**

- NSV will help in enhancing the quality of the National Highways in the country as NSV uses the latest survey techniques including high-resolution digital camera and Laser Road Profilometer for measurement of distresses in road surface.
- Carrying out road condition survey using NSV on the National Highways has been made mandatory at the time of certifying completion of the project and every six months thereafter.

- The provision has also been included as a part of the standard bidding document of consultancy services.
- NSV will also help collate data to analyse the road condition including measurement of the road surface, surface cracking, potholes and patches.
- It will also provide data insights relating to side drains and road furniture etc.
- The data collected through NSV survey will be uploaded on NHAI's based portal Data Lake, where it will be analysed by Road Asset Management Cell to assess the condition and roughness of road to prioritise for the maintenance.

**Source: PIB**

### POSHAN GYAN

**Syllabus Section: Health and Nutrition**

**Why in News?**

NITI Aayog launches 'Poshan Gyan', a digital repository on health, nutrition.

**About:**

- NITI Aayog, in partnership with Bill and Melinda Gates Foundation and Centre for Social and Behaviour Change, Ashoka University today launched Poshan Gyan, a national digital repository on health and nutrition.

**Key Features:**

- It has crowdsourcing feature that allows anyone to submit communication feature that allows anyone to submit communication material for inclusion on the website, followed by a review by a designated committee.
- Poshan Gyan repository enables search of communication materials on 14 thematic areas of health and nutrition across diverse languages, media types, targets audiences and sources.
- The website provides an intuitive interface that means multi-parametric search, multiple downloads at a point in time, easy sharing of materials via social media and easy viewing on the type of smartphone.
- The portal will have a dedicated thematic "Theme of the Month" in the line with MoHFW and MoWCD guidelines to promote key topics.

**Source: PIB**

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### PLI SCHEME FOR PROMOTION OF DOMESTIC MANUFACTURING OF CRITICAL KSMS/ DRUG INTERMEDIATES AND APIs

#### Syllabus Section: Health

##### Why in News?

Approvals have been accorded to 16 applicants under Production Linked Incentive (PLI) Scheme for Promotion of Domestic Manufacturing of critical Key Starting Materials (KSMs)/ Drug Intermediates and Active Pharmaceutical Ingredients (APIs) in the country.

##### About:

- The Indian pharmaceutical industry is the 3rd largest in the world by volume.
- o However, the country is significantly dependent on the import of basic raw materials, viz., Bulk Drugs that are used to produce medicines. In some specific bulk drugs, the import dependence is 80 to 100%.
- To attain self-reliance and reduce import dependence in these critical Bulk Drugs - Key Starting Materials (KSMs)/ Drug Intermediates and Active Pharmaceutical Ingredients (APIs) in the country, the Department of Pharmaceuticals had launched a Production Linked Incentive (PLI) Scheme.
- Production Linked Incentive (PLI) Scheme is for promotion of their domestic manufacturing by setting up greenfield plants with minimum domestic value addition in four different Target Segments (In Two Fermentation based - at least 90% and in the Two Chemical Synthesis based - at least 70% ) for 41 products. for the period 2020-21 to 2029-30.
- The setting up of these 16 plants will lead to total committed investment of Rs.348.70 crore and employment generation of about 3,042 by the companies.
- The commercial production of these plants is projected to commence from 1st April, 2023 onward.

Source: PIB

### NATIONAL INSTITUTE OF ONE HEALTH

#### Syllabus Section: Health

##### Why in News?

Union Minister for Health and Family Welfare chaired ICMR's International Symposium titled 'One Health in India: Research informing biosafety, preparedness and response'.

##### About:

- On the occasion he launched a special issue of ICMR's Indian Journal of Medical Research which discusses the One Health approach, corroborating multisectoral research informing regarding biosafety, preparedness and response and has original articles, viewpoints, perspectives and reviews from the eminent experts in the field.
- The commencement of the constitution of a high-level steering committee for Eco Health Initiatives in India was also announced.
- This committee will have its secretariat hosted at the ICMR, and will also be supported by the upcoming National Institute of One Health which is planned to be set-up in Nagpur.

Source: PIB

### REGISTER OF INDIGENOUS INHABITANTS OF NAGALAND

##### Why in News?

- Naga Hoho, an apex body of Naga tribes, has asked the Nagaland government not to be hasty with the exercise to prepare the Register of Indigenous Inhabitants of Nagaland (RIIN).

##### About:

- The RIIN is seen as a variant of Assam's National Register of Citizens.
- RIIN Committee - Nagaland government had earlier set a Committee on Inner Line Permit (ILP) which has recommended coming up with a master list which will be known as RIIN.
- A three-member Committee with Banuo Z. Jamir as its head was set up for studying, examining, and recommending and advising on the implementation of RIIN. The committee had been tasked to determine,
  1. Eligibility criteria to be an indigenous inhabitant,

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2. Authority to authenticate claims of being indigenous,
  3. Place of registration as indigenous inhabitant,
  4. Basis of claims of being indigenous, and
  5. Documents that will be acceptable as proof of being indigenous.
- However, the exercise was suspended following protests from community-based and extremist organisations.
  - Objectives - Launched in 2019, the RIIN exercise has a stated objective of preventing outsiders from obtaining fake indigenous certificates for seeking jobs and benefits of government schemes.
  - The RIIN will be the master list of all indigenous inhabitants of the state based on an extensive survey of the village-wise and ward-wise data.
  - It would be prepared under the supervision of the district administration. It will be monitored by the Commissioner of Nagaland.
  - Concern - The Naga Hoho was worried about the consequences if the RIIN implement the identification process with December 1, 1963 as the cut-off date for determining the “permanent residents” of the State.
  - [Nagaland attained statehood on December 1, 1963]
  - This date is likely to exclude Nagas who have come from beyond the boundaries of Nagaland.
  - There is a fear that the non-indigenous Nagas could be treated as “illegal immigrants” and their lands and property confiscated.
- The Hydrogen Roundtable, the first of its kind, will comprise a High-level Ministerial Session, followed by five Panel Discussions by eminent policy makers, experts and industry leaders from different geographical regions of the world, with focus on policy roadmaps and mapping demand and supply of Hydrogen.
  - The objective of the Roundtable is to understand the progress of Hydrogen ecosystem across continents and contribute to creating synchrony among the thinktanks, Governments and the industry to join forces for developing innovative and sustainable technologies at attractive costs.
  - Hydrogen is gaining increasing importance as a source to bridge energy gaps and as a standalone source to conventional fuels.
  - Government of India recently announced the National Hydrogen Mission in the Union Budget 2021 for making a hydrogen roadmap for the country.

**Source: PIB**

### MANAS App

#### Why in News?

- The Principal Scientific Adviser to the Government of India launched the “MANAS” App to promote wellbeing across age groups.

#### About:

- The initial version of MANAS focuses on promoting positive mental health in the age group of 15-35 years.
- It is a comprehensive national digital wellbeing platform and an app developed to augment mental well-being of Indian citizens. It was jointly executed by,
  1. National Institute of Mental Health and Neuro-Sciences (NIMHANS), Bengaluru,
  2. Armed Forces Medical College (AFMC), Pune and
  3. Centre for Development of Advanced Computing (C-DAC), Bengaluru.
- MANAS app was endorsed as a national program by the Prime Minister’s Science, Technology, and Innovation Advisory Council (PM-STIAC).
- Motto - Uttam Mann, Saksham Jan

**Source: Indian Express**

### HYDROGEN ECONOMY- NEW DELHI DIALOGUE

#### Syllabus Section: Environment and Ecology

#### Why in News?

Petroleum Minister addresses the Hydrogen Economy- New Delhi Dialogue.

#### About:

- New Delhi Dialogue 2021 being organized virtually by The Energy Forum (TEF), an independent think tank in India, in collaboration with Federation of Indian Petroleum Industry (FIPI), under the patronage of Ministry of Petroleum and Natural Gas, Government of India.

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- It integrates the health and wellness efforts of various government ministries, scientifically validated indigenous tools with gamified interfaces developed by many national bodies and research institutions.
- This multi-lingual app is based on life skills and core psychological process, with universal accessibility, delivering age-appropriate methods and promoting positive attitude focusing on wellness.

Source: PIB

## INTERNATIONAL DAY FOR MONUMENTS AND SITES

### Syllabus Section: Culture

#### Why in News?

United Nations marks April 18 as the International Day for Monuments and Sites.

#### About:

- The theme for this year is “Complex Pasts: Diverse Futures”.
- The day, promotes cultural importance,
- India is home to 38 UNESCO WORLD

HERITAGE SITES, out of the 1121 such spots identified around the world.

- So far, only China, Italy, Spain, Germany, and France have more locations on the list than India.
- Of these:
  - 30 are ‘cultural’, such as the Ajanta Caves, Fatehpur Sikri, Hampi monuments and the Mountain Railways of India,
  - 7 are ‘Natural’, including Kaziranga, Manas and Nanda Devi National Parks.
  - One is classified as ‘Mixed’, the Khangchendzonga National Park.

#### Background

- ICOMOS in 1982 had decided to celebrate April 18 as the International Day for Monuments and Sites or World Heritage Day.
- UNESCO in 1983 during its 22nd General Conference, approved it.
- Since then, the day is dedicated to recognising sites of historical importance, raising awareness regarding them, and stressing the need to restore and preserve them.



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## ADITYA-L1 SUPPORT CENTRE (ASC)

### Syllabus Section: Science & Technology

#### Why in News?

The Indian programme to study the Sun and the region between the Sun and the Earth from space – Aditya-L1 – is due to be launched next year.

#### Concept:

- It will carry seven payloads which have been developed by various institutions across the country. Once the mission is launched, there will be a need for a ground support centre to monitor and coordinate the work on its various payloads.
- This role will be played by the ARIES facility (short for Aryabhata Research Institute for observational Sciences) which is situated near Nainital.
- In January 2021, an agreement was signed to this effect based on the proposal submitted by the ARIES team. With about four to five personnel, this centre will come up at Haldawani, where ARIES is setting up a data centre also.
- The Aditya-L1 Support Centre (ASC) will provide training through regular workshops for the guest users. Apart from this, it will provide ready-to-use Python and Java apps for the satellite data and demos and handouts to facilitate the guest users.

#### Aditya L1 Mission

- Aditya L1 will be launched using the Polar Satellite Launch Vehicle (PSLV) XL with 7 payloads (instruments) on board.
- Aditya-L1 would be placed into a point in space known as the L1 Lagrange point.
- Aditya L1 will study the Sun's corona (Visible and Near infrared rays), Sun's photosphere (soft and hard X-ray), chromosphere (Ultra Violet), solar emissions, solar winds and flares, and Coronal Mass Ejections (CMEs), and will carry out round-the-clock imaging of the Sun.

#### Source: PIB

## NATIONAL CLIMATE VULNERABILITY ASSESSMENT REPORT

### Syllabus Section: Environment and Ecology

#### Why in News?

National climate vulnerability assessment identifies eight eastern states as highly vulnerable.

#### About:

- The report is titled 'Climate Vulnerability Assessment for Adaptation Planning in India Using a Common Framework'.
- It identifies the most vulnerable states and districts in India with respect to current climate risk and key drivers of vulnerability.
- The report has been submitted by the Indian Institute of Technology Mandi and the Indian Institute of Technology Guwahati in collaboration with the Indian Institute of Science, Bengaluru.

#### Key findings of the vulnerability assessment:

- Based on an all-India assessment, this report identifies the most vulnerable states and districts in India with respect to current climate risk and the main drivers of vulnerability.
- The states with a relatively high vulnerability, Jharkhand, Mizoram, Odisha, Chhattisgarh, Assam, Bihar, Arunachal Pradesh, and West Bengal, are mostly in the eastern part of the country, requiring prioritisation of adaptation interventions.
- Assam, Bihar, and Jharkhand have over 60% of districts in the category of highly vulnerable districts.

#### Source: Economics Times

## COVID-19 VACCINES AND BLOOD CLOTS

### Syllabus Section: Health

#### Why in News?

Reports of rare blood clots occurring after COVID-19 vaccination have led some countries to limit the usage of AstraZeneca's vaccine for certain categories of people, while other countries have paused the administration.

#### About:

- An adverse effect following immunisation with the AstraZeneca jab is not merely blood clots in large vessels, but also a low platelet count.
- The effect is similar to heparin-induced thrombocytopenia (HIT), where heparin, which is used to clear clots, actually causes blood clots and a fall in the platelet count.
- The heparin combines with platelet factor 4 to form a complex. This immune complex induces an abnormal immune response, in which antibodies are generated against the complex.

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- This antibody-platelet factor 4-heparin immune complex binds to platelets and activates them. The platelets form clots everywhere. The low platelet count is because the platelets are used up.
- A similar process seems to follow vaccination, except there is no heparin trigger. Scientists are still trying to establish a clinical definition for this adverse effect.

**Source: The Hindu**

### OCCULTATION

**Syllabus Section: Science and Technology**

#### Why in News?

Moon-Mars occultation: Rare encounter of celestial bodies has been seen.

#### About:

- An occultation is an event that occurs when one object is hidden by another object that passes between it and the observer. The term is often used in astronomy.

### ABHIJIT SINHA COMMITTEE

**Syllabus Section: Polity and Governance**

#### Why in News?

Nagaland forms panel on listing indigenous inhabitants.

#### About:

- The Nagaland government has decided to form a joint consultative committee (JCC) involving all traditional tribal bodies and, civil society organisations for taking an exercise to register the State's indigenous inhabitants.
- The JCC will be headed by Home Commissioner Abhijit Sinha and include members from the Central Nagaland Tribes' Council, Eastern Nagaland People's Organisation and the Tenyemie People's Organisation.
- Abhijit Sinha Committee is made responsible for preparing the Register of Indigenous Inhabitants of Nagaland (RIIN).

#### What is the issue?

- In July 2019, the Nagaland government launched the RIIN, seen as a variant of Assam's National Register of Citizens that excluded 19.06 lakh people out of about 3.3 crore applicants.

- The exercise was put on hold after some civil society and extremist groups opposed its stated objective of preventing outsiders from obtaining fake indigenous certificates for seeking jobs and benefits of government schemes.
- December 1, 1963 — the day Nagaland attained Statehood — was the cut-off date for determining the "permanent residents" of the State.
- Apart from non-Nagas, the "outsiders" implied Nagas living in areas beyond the boundaries of Nagaland could be left out of the RIIN.

**Source: The Hindu**

### INDIA AND GERMANY SIGN AGREEMENT

**Syllabus Section: Bilateral Relations**

#### Why in News?

- India and Germany sign agreement on 'Cities combating plastic entering the marine environment'

#### About:

- 2021 marks 63 years of fruitful development cooperation between India and Germany.
- The new project is envisaged to be another successful collaborative effort under the Indo-German Bilateral Development Corporation working on sustainable urban transformation.

#### Project Aim:

- The project, aimed at enhancing practices to prevent plastic entering the marine environment, will be undertaken at the national level (at MoHUA), selected states (Uttar Pradesh, Kerala and Andaman & Nicobar Islands) and in the cities of Kanpur, Kochi and Port Blair for a period of three and a half years.
- This project is envisaged under the contours of the Joint Declaration of Intent regarding cooperation in the field of 'Prevention of Marine Litter' signed between Republic of India and Federal Republic of Germany in 2019.
- The project's outcomes are completely in line with the objectives of Swachh Bharat Mission-Urban focusing on sustainable solid waste management and Hon'ble Prime Minister's vision to phase out single use plastic by 2022".

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## Significance of the Agreement:

- Marine litter threatens ecosystems and adversely affects fishery and tourism industries around the globe. It also affects public health with increased concerns about micro-plastic and risk of particles entering the food chain.
- In recent times, the level of plastic waste that has accumulated in our oceans and marine ecosystems through the increasing production and use of durable synthetic materials has alarmed the public and policy makers alike.
- It is estimated that 15-20% of all plastics are entering oceans via riverine ecosystems of which 90% are contributed by 10 of the world's most polluting rivers.
  - Two of these river systems are located in India, namely Ganga and Brahmaputra.
- This project will be combined with data management and reporting systems, civil society involvement and increased cooperation with recyclers and the recycling industry through a digital platform.
- This will foster improvements in segregation, collection, transportation, treatment and disposal of waste in municipalities, thereby establishing an efficient system, that ensures no waste finds its way into rivers or oceans.

Source: PIB

## INGENUITY, THE FIRST HELICOPTER ON MARS

Syllabus Section: Science & Technology

### Why in News?

NASA announced that Ingenuity had performed its first flight. "...the first flight of a powered aircraft on another planet!"

### About:

- Ingenuity, the Mars Helicopter is a solar-powered helicopter placed on Mars to test powered controlled flight on another planet.
- It is also called Perseverance that was launched in July last year and will help collect samples from the surface from locations where the rover cannot reach.
- The rover is designed to study signs of ancient life, collect samples that might be sent back to Earth during future missions and test new technology that might benefit future robotic and human missions to the planet.

- Ingenuity is able to fly using counter-rotating blades that spin at about 2,400 rpm. It has a wireless communication system, and is equipped with computers, navigation sensors, and two cameras. It is solar-powered, able to charge on its own
- Taking to the air would give scientists a new perspective on a region's geology and even allow them to peer into areas that are too steep or slippery to send a rover. In the distant future, they might even help astronauts explore Mars.
- NASA will try and demonstrate rotorcraft flight in the extremely thin atmosphere of Mars with this helicopter, which is why the mission is so crucial.

Source: The Indian Express

## WORLD PRESS FREEDOM INDEX 2021

Syllabus Section: International Institutions

### Why in News?

- India has ranked 142nd yet again out of 180 nations in the recently unveiled World Press Freedom Index.

### About:

- It has been published every year since 2002 by Reporters Sans Frontieres (RSF) or Reporters Without Borders.
- Based in Paris, RSF is an independent NGO with consultative status with the United Nations, UNESCO, the Council of Europe and the International Organization of the Francophonie (OIF).
- The Index ranks countries and regions according to the level of freedom available to journalists. However it is not an indicator on the quality of journalism.
- parameters include pluralism, media independence, media environment and self-censorship, legislative framework, transparency, and the quality of the infrastructure that supports the production of news and information.

### India's Performance:

- India was ranked 142 in the year 2020 as well, thus showing no improvement in the environment it provides to its journalists.
- India has fared poorly amongst its neighbours with Nepal at 106, Sri Lanka at 127 and Bhutan at 65. Pakistan is a close follower at 145th spot.

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- India is among the countries classified “bad” for journalism and is termed as one of the most dangerous countries for journalists trying to do their jobs properly.

**Source: Indian Express**

### STARTUP INDIA SEED FUND SCHEME

**Syllabus Section: Government Policies and Initiatives**

#### Why in News?

The scheme was announced in the ‘Prarambh: StartupIndia International Summit’ that marks the five-year anniversary of the Startup India initiative.

#### About:

- The Startup India Seed Fund Scheme (SISFS) was launched to provide financial assistance to startups for proof of concept, prototype development, product trials, market entry, and commercialization.
- Rs. 945 Crore corpus will be divided over the next 4 years for providing seed funding to eligible startups through eligible incubators across India.
- The SISFS will Secure seed funding, Inspire innovation, Support transformative ideas, Facilitate implementation, and Start startup revolution.
- It will create a robust startup ecosystem, particularly in Tier 2 and Tier 3 towns of India, which are often deprived of adequate funding.
- Online portal created for the scheme by Department for Promotion of Industry and Internal Trade (DPIIT) will allow incubators to apply it.
- Grants of up to Rs 5 Crores shall be provided to the eligible incubators selected by the Experts Advisory Committee (EAC), which has been created by DPIIT to execute and monitor the Fund.
- The selected incubators shall provide grants of up to Rs 20 lakhs for validation of Proof of Concept, or prototype development, or product trials to startups.
- Investments of up to Rs 50 lakhs shall be provided to the startups for market entry, commercialization, or scaling up through convertible debentures or debt-linked instruments.

**Source: PIB**

### DEMOGRAPHIC ADVANTAGE

**Syllabus Section: Social Issues**

#### Why in News?

India’s demographic advantage to overtake China’s by 2035, says China’s central bank report.

#### About:

- China’s demographic transition owing particularly to its stricter birth policies has grappled it with the problem of ageing population and dwindling work-force.
- A report released by the People’s Bank of China (PBOC), China’s central bank, said that China should immediately liberalise its birth policies to tackle the problems of an ageing population and plan to compete economically with a demographically young India and an immigration-friendly US.
- The report said the gap between the two countries is narrowing. As two big countries in Asia, China’s economic growth has been faster than India’s for a long time but in recent years, China’s demographic dividend fading, India’s economic growth has tended to approach China’s, the report said.
- It added that China’s ageing population and the declining birth rate will become more serious in 10 years while India’s demographic structure will be further optimised.
- The report pointed out that India’s labour force will exceed China’s by hundreds of millions in the years ahead.
- By 2050, this advantage will continue to grow. Not only will India have a much narrower elderly population at the top and a much wider workforce in the middle, but it will also have a wider workforce at the bottom, indicating a more abundant workforce and greater growth potential beyond 2050.

**Source: All India Radio**

### CABINET APPROVES MOU BETWEEN CCI AND CADE

**Syllabus Section: International Relations**

#### Why in News?

Union Cabinet approved the MoU between Competition Commission of India (CCI) and Administrative Council for Economic Defence of Brazil, (CADE).

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### About:

- CCI has entered into the MoUs with the Federal Trade Commission and Department of Justice of USA, Director General Competition of European Union, Federal Antimonopoly Service of Russia, Australian Competition and Consumer Commission, Competition Bureau of Canada and BRICS Competition Authorities
- Section 18 of the Competition Act, 2002 permits CCI to enter into any Memorandum or arrangement with any agency of any foreign country for the purpose of discharging its duties or performing its functions under the Act.

### SUDARSHAN SEN COMMITTEE

#### Syllabus Section: Economy

#### Why in News?

Recently, the Reserve Bank of India (RBI) has set up a committee to undertake a comprehensive review of the working of asset reconstruction companies (ARCs).

#### About:

- It is a six-member committee which will be headed by Sudarshan Sen, former Executive Director of RBI.
- The other members are ICICI Bank ED Vishaka Mulye, SBI deputy MD R N Prasad, EY partner Abizer Diwanji, MDI economics professor Rohit Prasad and CA R Anand.
- The panel will submit their report within three months of their first meeting.
- The Department of Regulation (RBI) will provide the necessary secretarial support to the Committee.

#### What are Asset Reconstruction Companies (ARCs)?

- The ARCs are entities that purchase bad loans from banks and salvage value from them by finding buyers for the security or selling the business.
- The ARCs are registered under the RBI and regulated under the Securitisation and Reconstruction of Financial Assets and Enforcement of Securities Interest Act, 2002 (SARFAESI Act, 2002).
- The ARCs take over a portion of the debts of the bank that qualify to be recognised as Non-Performing Assets.
- It implies that the ARCs are engaged in the business of asset reconstruction or securitisation or both.

- All the rights that were held by the lender (the bank) in respect of the debt would be transferred to the ARC.
- In February 2021, the government had said that public sector banks will set up a national ARC which will buy bad loans from banks and help clean their books.

### VANDE BHARAT MISSION (VBM)

#### Syllabus Section: International Relations

#### Why in News?

The Vande Bharat Mission (VBM), which started repatriating Indians stranded abroad due to COVID-19 and the resultant lockdowns since May 7, 2020, has turned out to be one of the largest evacuations of civilians by a country.

#### About:

- Into the middle of Phase 10, the VBM has surpassed the large-scale airlift of 1,10,000 people in 1990 at the onset of the Gulf War.
- Till now, the Air India (AI) Group has operated 11,523 inbound flights to carry 18,19,734 passengers and 11,528 outbound flights with 13,68,457 passengers.
- The national carrier, which carried out the bulk of air transfers under the mission, was supported by its budget carrier Air India Express.
- The current VBM Phase 10 has international and domestic schedules operating till October 31.
- Air India Express (AIE) used its B-737-800 fleet to lift agricultural produce, mainly fruits and vegetables, to West Asian countries, Singapore and Kuala Lumpur.
- "Transport bubbles" or "air travel arrangements", temporary arrangements between two countries aimed at restarting commercial passenger services when regular international flights are suspended as a result of the pandemic, are in place.

#### Source: PIB

### INTERNATIONAL SPACE STATION (ISS) PROGRAMME

#### Syllabus Section: Science and Technology

#### Why in News?

Russia says to launch its own space station in 2025.

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## About:

### Background:

- ISS was launched in 1998 and involving Russia, the United States, Canada, Japan, and the European Space Agency.
- The ISS is one of the most ambitious international collaborations in human history.
- It was seen as a major step to rebuild ties between the cold war adversaries US and Russia that had spent more than four decades competing with each other for extra-terrestrial supremacy.

### Why Russia Wants to Opt-out?

- Heightened tensions between Moscow and western capitals are major reason for this decision.
- Recently US imposed a raft of new sanctions against Russia for alleged election meddling and cyber-attacks, while European powers have condemned Moscow for the jailing of opposition activist Alexei Navalny and Russia's large military build-up close to the border with Ukraine.

## EFFECTS OF THE DECISION:

### 1) Imperil co-operation.

It may also imperil co-operation between Russia and the European Space Agency.

### 2) Strengthen Russia-China Relation:

- As Russia turns to China for co-operation, it will help in making the stronger relation between both countries.
  - Intended withdrawal from the ISS comes after Russia signed a memorandum with China to jointly build a base on or orbiting the moon.
- 3) Further deterioration of US-Russia Relation.  
Russia lost its monopoly for manned flights to the ISS last year after the first successful mission of U.S. company Space X.
- 4) Negative effect over future Space Programmes.

**Source: Financial Times**

## AD-HOC JUDGES IN HCs

### Syllabus Section: Polity

#### Why in News?

- In setting a fixed timeline for the government for the process of appointment of judges, the Supreme Court, in its ruling, has essentially altered the Memorandum of Procedure (MoP) through a judicial order, and said the government must act on the names recommended for appointment within four months.
  - o The MoP does not prescribe a timeline for the Centre to forward the recommendations.

#### About:

Methodology proposed by Supreme Court for appointment of Ad-hoc Judges in HCs

- The court ruled that the Chief Justice of a High Court may initiate the process of recommending a name if:
  - o The number of judges' vacancies is more than 20 per cent of the sanctioned strength; or
  - o Cases in a particular category are pending for over five years; or
  - o More than 10 per cent of pending cases are over five years old; or
  - o Percentage of the rate of disposal is lower than the institution of the cases either in a particular subject matter or generally in the court.
- The apex court said that the Chief Justice should prepare a panel of judges after personal interaction with the concerned judge to take their consent.
- The court said the appointments can follow the procedure laid down in the Memorandum of Procedure for appointment of judges.
- The number of ad-hoc judges in the court should be in the range of two to five for the time being depending on the strength of the High Court and the problem faced by it.
- The court ruled that in case there is a need to constitute a Division Bench to hear a matter, it would comprise of only ad-hoc judges and not a mix of ad-hoc and sitting judges.
- It also barred ad-hoc appointees from performing any other legal work i.e. advisory, arbitration or appearing in court for clients.

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- Their emoluments and allowances should be on a par with a permanent judge of that court minus the pension and they will be entitled to allowance/ perks/ perquisites as are available to permanent/ additional judge(s).

### About Ad-Hoc Judges & Acting Judges in High Court

- The President can appoint duly qualified persons as additional judges of a high court for a temporary period not exceeding two years when:
  - o There is a temporary increase in the business of the high court; or
  - o There are arrears of work in the high court.
- The President can also appoint a duly qualified person as an acting judge of a high court when a judge of that high court (other than the chief justice) is:
  - o Unable to perform the duties of his office due to absence or any other reason; or
  - o Appointed to act temporarily as chief justice of that high court
  - o An acting judge holds office until the permanent judge resumes his office.
- The Constitution provides that both the additional or acting judge cannot hold office after attaining the age of 62 years.

Source: Indian Express

### INDIA SHOULD BE A 'COUNTRY OF PARTICULAR CONCERN': U.S. PANEL

#### Syllabus Section: Social Issues

#### Why in News?

The U.S. Commission on International Religious Freedom (USCIRF), has recommended for the second year in a row that the State Department put India on a list ('Countries of Particular Concern' or CPCs) for the worst violations of religious freedoms in 2020.

#### About:

- U.S. Commission on International Religious Freedom (USCIRF), is an independent bi-partisan commission.
- USCIRF recommendations are non-binding.
- The key concerns of the 2021 report include the Citizenship Amendment Act

#### Key Findings:

- The USCIRF recommended that the impose targeted sanctions on Indian individuals and entities for 'severe violations of religious freedom'.

- A second recommendation was, to promote inter-faith dialogue and the rights of all communities at bilateral and multilateral forums "such as the ministerial of the Quadrilateral [the Quad].
- Another recommendation – to the U.S. Congress – was to raise issues in the U.S. – India bilateral space, such as by hosting hearings, writing letters and constituting Congressional delegations.
- Other new recommendations for the CPC list in the Commission's 2021 were Russia, Syria and Vietnam.
- Countries already on the CPCs list and recommended by USCIRF for re-designation were Burma, China, Eritrea, Iran, Nigeria, North Korea, Pakistan, Saudi Arabia, Tajikistan and Turkmenistan
- Afghanistan, Algeria, Azerbaijan, Egypt, Indonesia, Iraq, Kazakhstan, Malaysia, Turkey and Uzbekistan were recommended for a 'Special Watch List', along with Cuba and Nicaragua, both of which were already on the list for 2019.

Source: The Hindu

### EARTH DAY 2021

#### Syllabus Section: Environment & Ecology

#### Why in News?

- April 22 is Earth Day, an international event celebrated around the world to pledge support for environmental protection.
  - o The year 2021 marks the 51st anniversary of the annual celebrations.
  - o Theme: Restore Our Earth

#### Importance of Earth Day

- Earth Day was first observed in 1970, when 20 million took to the streets to protest against environmental degradation.
  - o The event was triggered by the 1969 Santa Barbara oil spill, as well as other issues such as smog and polluted rivers.
- Paris Agreement, which brings almost 200 countries together in setting a common target to reduce global greenhouse emissions, was signed on Earth Day 2016.
- Earth Day aims to "build the world's largest environmental movement to drive transformative change for people and the planet."

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- This Day also recognizes a collective responsibility, as called for in the 1992 Rio Declaration, to promote harmony with nature and the Earth to achieve a just balance among the economic, social and environmental needs of present and future generations of humanity.

### Significance:

- This day provides an opportunity to raise public awareness around the world to the challenges regarding the well-being of the planet and all the life it supports.

**Source: Indian Express**

### FIFTH SESSION OF CODEX COMMITTEE

**Syllabus Section: Agriculture**

#### Why in News?

Fifth session of Codex Committee on Spices and Culinary Herbs begins virtually - India is the Host and Spices Board India serves as the secretariat of Committee.

#### About:

#### Key Highlights of the Session:

- For ensuring food safety and quality, regulatory bodies need to be more vigilant.
- Economically motivated adulteration is a major malpractice and it needs extremely vigilant, regulatory space.
- Harmonized Codex standards for spices products in global trade is needed and it needs the highest priority to ensure the safety and quality of the spices and culinary herbs that are being traded across the world.
- Agenda of the Meeting:
  - o The committee will be considering the quality Standards for dried or dehydrated forms of Ginger, Cloves, Saffron and two culinary herbs, Oregano & Basil at step seven, besides Nutmeg and Chilli peppers & Paprika at step four in the Codex procedure of elaboration of food standards.

### ABOUT CODEX COMMITTEE ON SPICES AND CULINARY HERBS (CCSCH)&CODEX ALIMENTARIUS COMMISSION (CAC):

#### Codex Alimentarius Commission (CAC)

- Set up in 1963, headquarters in Rome.
- It is an intergovernmental body.
- It was established jointly by the UN's Food and Agriculture Organisation (FAO) and the World Health Organisation (WHO), within the framework of the Joint Food Standards Programme to protect the health of consumers and ensure fair practices in the food trade.

### CODEX COMMITTEE ON SPICES AND CULINARY HERBS (CCSCH)

- CCSCH was formed in 2013 with support of more than a hundred countries with India as the host country and Spices Board India as the Secretariat for organising the sessions of the committee.
- Aim: To develop and expand worldwide standards for spices and culinary herbs, and to consult with other international organisations in the standards development process.
- Since its inception, the Codex Committee on Spices and Culinary Herbs has been successful in developing harmonised global Codex standards for spices and herbs.
- In its past four sessions, the committee developed and finalized standards for four spices, viz. dried or dehydrated forms of black/white/green pepper, cumin, thyme, and garlic.

### U.S.-INDIA CLIMATE AND CLEAN ENERGY AGENDA 2030 PARTNERSHIP

**Syllabus Section: Environment and Ecology**

#### WHY IN NEWS?

At the Leader's Summit on Climate, the United States and India launched a new high-level, "U.S.-India Climate and Clean Energy Agenda 2030 Partnership," to create stronger bilateral cooperation on actions in the current decade to meet the goals of the Paris Agreement.

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## About:

### Importance of the Partnership:

- Through the Partnership, the United States and India are firmly committed to working together in achieving their ambitious climate and clean energy targets and to strengthening bilateral collaboration across climate and clean energy.
- The Partnership will aim to mobilize finance and speed clean energy deployment; demonstrate and scale innovative clean technologies needed to decarbonize sectors including industry, transportation, power, and buildings; and build capacity to measure, manage, and adapt to the risks of climate-related impacts.
- The Partnership will proceed along two main tracks:
  - The Strategic Clean Energy Partnership and
  - The Climate Action and Finance Mobilization Dialogue,
- Both the United States and India have set ambitious 2030 targets for climate action and clean energy.

### U.S Target:

In its new nationally determined contribution, the United States has set an economy-wide target of reducing its net greenhouse gas emissions by 50–52 percent below 2005 levels in 2030

### India's Target

As part of its climate mitigation efforts, India has set a target of installing 450 GW of renewable energy by 2030.

### Significance of the Collaboration:

- Through this collaboration, the United States and India aim to demonstrate how the world can align swift climate action with inclusive and resilient economic development, taking into account national circumstances and sustainable development priorities.

### Source: PIB

## COVIRAP DIAGNOSTIC TECHNOLOGY

### Syllabus Section: Science and Technology

#### WHY IN NEWS?

IIT Kharagpur launches COVIRAP diagnostic technology.

#### ABOUT:

- COVIRAP is a diagnostic technology to detect COVID-19 virus.
- This technology is also capable of testing influenza, dengue, malaria. Tuberculosis and Japanese Encephalitis

#### BENEFITS:

- The device will minimise the need for real time PCR machines and also for thermal cyclers.
- The Covid-19 diagnostic test can be conducted directly from human swab samples in the portable device developed by the team, without requiring any separate facility for RNA extraction.
- It will help in overcoming several potential bottlenecks faced by similar other tests in the past such as poor performance outside highly controlled laboratory and lack of simple, affordable, yet generic and universal instrument that may be used for home-based testing and community healthcare for a wide variety of infectious and non-infectious diseases.
- COVIRAP promises its reach to the grassroots level in catering to the needs of the last person of the society
- Higher Accuracy: It correctly detected 108 out of the 115 positive samples identified by an RT-PCR machine, and 83 out of 85 negative samples, meaning that it has a 94% sensitivity and 98% specificity in comparison to RT-PCR (i.e lower than RT-PCR).

#### WORKING OF COVIRAP:

- COVIRAP has an automated pre-programmable temperature control unit, a special detection unit on genomic analysis, and a customised smartphone app for results.
- The machine has an isothermal nucleic acid amplification method, which did away with the need for a thermocycler.

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- o Isothermal amplification of nucleic acids is a process that rapidly and efficiently accumulates nucleic acid sequences at constant temperature. The Isothermal Amplification Techniques have been developed as alternatives to Polymerase Chain Reaction (PCR).
- o Thermocyclers are instruments used to amplify DNA (deoxyribonucleic acid) and RNA (ribonucleic acid) samples by the polymerase chain reaction.
- The samples collected through swabs react with these mixes.
- The paper strips coded with required chemicals are then dipped into the reaction products from the samples and mixes.
- The coloured lines indicate the presence of the COVID-19 virus.

**Source: Hindustan Times**

### DISASTER MANAGEMENT ACT, 2005

**Syllabus Section: Disaster Management**

#### WHY IN NEWS?

- The Ministry of Home Affairs invoked Disaster Management Act, 2005 (DM Act) and ordered free inter-state movement of oxygen carrying vehicles.

#### ABOUT:

- The DM Act was passed by the government of India in 2005 for the 'efficient management of disasters and other matters connected to it. However, it came into force in January 2006.
- AIM: To manage disasters, including preparation of mitigation strategies, capacity-building and more.
  - o Definition of a "disaster" in Section 2 (d) of the DM Act states that a disaster means a "catastrophe, mishap, calamity or grave occurrence in any area, arising from natural or manmade causes.

#### FEATURES OF THE ACT:

- The Act provides for "the effective management of disasters and for matters connected therewith or incidental thereto."
- The Act calls for the establishment of National Disaster Management Authority (NDMA), with the Prime Minister of India as chairperson.

- The Act enjoins the Central Government to constitute a National Executive Committee (NEC) to assist the National Authority.
- All State Governments are mandated to establish a State Disaster Management Authority (SDMA).

#### POWERS GIVEN TO THE CENTRE:

- Power bestowed by DM Act on Central Government and NDMA are extensive.
- The Central Government, irrespective of any law in force (including over-riding powers) can issue any directions to any authority anywhere in India to facilitate or assist in the disaster management.
- Importantly, any such directions issued by Central Government and NDMA must necessarily be followed the Union Ministries, State Governments and State Disaster Management Authorities.
- In order to achieve all these, the prime minister can exercise all powers of NDMA (S 6(3)). This ensures that there is adequate political and constitutional left behind the decisions made.

**Source: Indian Express**

### SPECIAL TASK FORCE TO MONITOR J&K GOVERNMENT EMPLOYEES

**Syllabus Section: Polity and Governance**

#### WHY IN NEWS?

The J&K government constituted a Special Task Force (STF) for identifying and scrutinising the government employees who are involved in any cases related to posing threat to the security or anti-national activities.

#### ABOUT:

- The STF will have the ADGP, (CID), J&K, as its chairman and the IGP, representatives of the Home Department; Department of Law, Justice Member and Parliamentary Affairs and the concerned department as its members.
- The STF will scrutinise cases of employees suspected of activities requiring action under Article 311(2)(C) of the Constitution.
- The STF has been tasked to compile records of such employees and engage with other members of the Terror Monitoring Group (TMG) for identifying such other employees.

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- The move comes as a number of government employees in the past were found expressing their political opinion in public space on the Kashmir conflict.

### Article 311 (2)(C):

- Where the President is satisfied that the retention of a person in public service is prejudicial to the security of the State, his services can be terminated without recourse to the normal procedure prescribed in Article 311 (2).
- The satisfaction referred to in the proviso is the subjective satisfaction of the President about the expediency of not giving an opportunity to the employee concerned in the interest of the security of the State.
- This clause does not require that reasons for the satisfaction should be recorded in writing. That indicates that the power given to the President is unfettered and cannot be made a justifiable issue, as that would amount to substituting the satisfaction of the court in place of the satisfaction of the President.

**Source: The Hindu**

### UP GOVT TO INVOKE NATIONAL SECURITY ACT

**Syllabus Section: Polity and Governance**

#### WHY IN NEWS?

Uttar Pradesh government has said that it will invoke National Security Act and Gangster Act on those persons who are involved in black marketing and holding of necessary medicines, oxygen and injections required for covid treatment.

#### ABOUT:

- The NSA is a preventive detention law
  - o Preventive Detention involves the detainment (containment) of a person in order to keep him/her from committing future crimes and/or from escaping future prosecution.
- Article 22 (3) (b) of the Constitution allows for preventive detention and restriction on personal liberty for reasons of state security and public order.
- Article 22 (1) of the Indian Constitution says an arrested person cannot be denied the right to consult, and to be defended by, a legal practitioner of his choice. According to Section 50 of the Criminal Procedure Code (CRPC), any person arrested has to be informed of the grounds of arrest and has the right to bail.

- o However, under National Security Act, none of these rights are available to the person detained. The government holds the right to conceal information which it considers to be against public interest to disclose.
- o The detained person is not entitled to any legal aid.

**Source: All India Radio**

### SHIELDS MISSION

**Syllabus Section: Science and Technology**

#### Why in News?

NASA recently launched the SHIELDS Mission from the White Sands Missile Range, New Mexico. The Mission is to study light from interstellar particles in the heliosphere.

#### About:

- SHIELDS is a telescope that will launch aboard a sounding rocket, a small vehicle that flies to space for a few minutes of observing time before falling back to Earth.
- SHIELDS will measure light from a special population of hydrogen atoms originally from interstellar space.
- The mission will study the trajectories of the hydrogen atoms as they pass by the heliosphere.
- SHIELDS will seek out light from the hydrogen atoms. It will measure how far the wavelength of these atoms stretches or contracts.

**Source: Economics Times**

### SWAMITVA SCHEME

**SYLLABUS SECTION: Polity and Governance**

#### WHY IN NEWS?

- Prime Minister Narendra Modi launched the distribution of e-property cards under the SWAMITVA scheme on National Panchayati Raj Day.

#### ABOUT:

4.09 lakh property owners were given their e-property cards on this occasion, which also marked the rolling out of the SVAMITVA scheme for implementation across the country.

#### ABOUT SWAMITVA SCHEME:

- SVAMITVA (Survey of Villages and Mapping with Improved Technology in Village Areas) was launched by Prime Minister on 24th April 2020 as a Central Sector Scheme to promote a socio-economically empowered and self-reliant rural India.

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- The Scheme has the potential to transform rural India using modern technical tools of mapping and surveying.
- It paves the way for using the property as a financial asset by villagers for availing loans and other financial benefits.
- The Scheme will cover around 6.62 Lakh villages of the entire country during 2021-2025.
- The pilot phase of the Scheme was implemented during 2020–2021 in the States of Maharashtra, Karnataka, Haryana, Uttar Pradesh, Uttarakhand, Madhya Pradesh and select villages of Punjab and Rajasthan.
- Under the scheme, the entire village properties are surveyed by drone and property card are distributed to the owners.

### Benefits of the Scheme:

- The Scheme has infused a new confidence in the villages as property documents remove uncertainty and reduce the chances of property disputes while protecting the poor from exploitation and corruption.
- Eases Credit Possibility: This scheme will ensure security of the poor section and planned development of villages and their economy

Source: PIB

## KOWLOON PENINSULA

### WHY IN NEWS?

Hong Kong is set to grant a site on the western Kowloon peninsula, to China's national security office for its permanent base in the city.

### About:

- The Kowloon Peninsula is a peninsula that forms the southern part of the main landmass in the territory of Hong Kong, alongside Victoria Harbour and facing toward Hong Kong island.
- The Kowloon Peninsula and the area of New Kowloon are collectively known as Kowloon.
- Geographically, the term "Kowloon Peninsula" may also refer to the area south of the mountain ranges of Beacon Hill, Lion Rock, Tate's Cairn, Kowloon Peak, etc.
- The peninsula covers five of the eighteen districts of Hong Kong.

- Kowloon Bay is located at the northeast of the peninsula.

Source: The Hindu



## CREW-2 MISSION

Syllabus Section: Science and Technology

### WHY IN NEWS?

Four astronauts were launched to the International Space Station (ISS) from Florida as part of a collaboration between NASA and SpaceX under the Commercial Crew Program.

### About:

- The mission is called Crew-2 and is the second crew rotation of the SpaceX Crew Dragon and the first with international partners.
- Out of the four astronauts, two are from NASA and two are from the Japan Aerospace Exploration Agency (JAXA) and the European Space Agency (ESA).

### Background

- In May 2020, NASA's SpaceX Demo-2 test flight lifted off for the ISS carrying astronauts Robert Behnken and Douglas Hurley. The aim of this test flight was to see if SpaceX capsules could be used on a regular basis to ferry astronauts to and from the ISS.
- Demo-2 was followed by the Crew-1 mission in November, which was the first of six crewed missions between NASA and SpaceX marking the beginning of a new era for space travel.

### Objective of Crew-2 mission

- Now, Crew-2 astronauts will join the members of Expedition 65. They will stay aboard the ISS for six months during which time they will conduct science experiments in low-Earth orbit.

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- Their central focus during this time will be to continue a series of Tissue Chips in Space studies.
- Tissue Chips are small models of human organs that contain multiple cell types that behave similarly to the human body. According to NASA, these chips can potentially speed up the process of identifying safe and effective drugs and vaccines.

**Source: Indian Express**

### WAYS AND MEANS ADVANCES SCHEME OF STATE GOVERNMENTS/ UTs

**Syllabus Section: Economy**

#### Why in News?

The Reserve Bank of India (RBI) decided to continue with the existing interim Ways and Means Advances (WMA) scheme limit of 51,560 crore for all States/ UTs shall for six months i.e., up to September 30, given the prevalence of COVID-19.

#### About:

- Ways and means advances (WMA) is a mechanism used by Reserve Bank of India (RBI) under its credit policy to provide to States, banking with it, to help them tide over temporary mismatches in the cash flow of their receipts and payments.
- o This is guided under Section 17(5) of RBI Act, 1934.
- Based on the recommendations of the Advisory Committee on WMA to State Governments, 2021 (chaired by Sudhir Shrivastava) the RBI had revised the WMA Scheme of States and Union Territories (UTs).
- The Special Drawing Facility availed by State Governments/ UTs shall continue to be linked to the quantum of their investments in marketable securities issued by the Government of India, including the Auction Treasury Bills.

**Source: The Hindu**

### LEGAL STATUS OF CRYPTOCURRENCY

**Syllabus Section: Governance**

#### WHY IN NEWS?

Recently, the uncertainty over the legal status of cryptocurrencies is unnerving Indian investors who hold around \$1.5 billion (Rs 10,000 crore) in digital currencies.

#### RBI and Cryptocurrency Law

- The Cryptocurrency and Regulation of Official Digital Currency Bill, 2021 will prohibit all private cryptocurrencies.
- It will lay down the regulatory framework for the launch of an “official digital currency”.
- the proposed law will be prospective, even though declarations of holdings and transactions may be sought retrospectively.
- The high-power inter-ministerial committee has previously recommended a ban on all private cryptocurrencies.

#### Digital Currency of RBI

- The RBI had said central banks are exploring DLT (Distributed Ledger Technology) for application in improving financial market infrastructure.
- The RBI is considering DLT as a potential technological solution in implementing central bank digital currency (CBDC).
- A recent survey of central banks conducted by the Bank for International Settlements found that some 80 per cent of the 66 responding central banks have started projects to explore the use of CBDC in some form.
- The RBI had expressed concern over other cryptocurrencies, saying they can be used for illegal activities, and poses a threat to financial stability.

#### What is Central Bank Digital Currency (CBDC)?

- The central banks are keen on designing their own network of digital payments by officially issuing what is called a Central Bank Digital Currency (CBDC) in order to prevent extreme decoupling.
- It is a legal tender and liability of a nation's central bank in the digital form.
- It is denominated in a sovereign currency and appears on the balance sheet of a nation's central bank.
- It is a digital currency which can be converted/exchanged at par with similarly denominated cash and traditional central bank deposits of a nation.
- The novelty of such general-purpose CBDCs lies in its character of being legal tender.

**Source: The Hindu**

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## CSIR-CMERI Oxygen Enrichment Unit

### Syllabus Section: Science and Technology

#### WHY IN NEWS?

- CSIR-CMERI has invited Expression of Interest (EoI) for manufacturing CSIR-CMERI Oxygen Enrichment Units through Technology Transfer.

#### ABOUT:

- As oxygen therapy is suggested for severe illness caused by Coronavirus, the optimised oxygen administering device, CSIR-CMERI Oxygen Enrichment Unit, will help meet the Medical grade oxygen demand.
- It can be developed both as standalone Oxygen Enrichment Unit as well as with integrated version with 'Swasth Vayu' technology of CSIR-NAL.

#### Features:

- The unit concentrates the Oxygen from the air around us by removing nitrogen to supply an oxygen-enriched air.
- The unit works on the principle of Pressure Swing Adsorption (PSA).
- It requires easily available oil free reciprocating compressor, Oxygen grade Zeolite Columns for selective removal of nitrogen from air under certain pressure, thereby increasing the Oxygen Concentration.

#### Capacity -

- It is capable of delivering medical air in the range of up to 15 LPM with oxygen purity of more than 90%.
- If required, this unit can even deliver up to 70 LPM at a purity of around 30% and can safely be placed in the isolation ward of the hospital.

#### Uses

- The device may be used in Homes or Hospital type facilities for patients with chronic obstructive pulmonary diseases (COPD), chronic hypoxemia and pulmonary edema to improve Oxygenation in the blood.
- It may be used as an adjunct treatment for severe sleep apnea (in conjunction with a continuous positive airway pressure unit).
- It would minimize the supply chain problem of transportation and storage risks related to oxygen cylinders.

- The Outreach Factor of Oxygen will be multiplied through the adoption of this in-situ and decentralised generation of Oxygen.

**Source: Indian Express**

## WAYS AND MEANS ADVANCES (WMA)

- The Reserve Bank of India gives temporary loan facilities to the centre and state governments as a banker to government.
- The scheme was designed to meet temporary mismatches in the receipts and payments of the government. This facility can be availed by the government if it needs immediate cash from the WMA is to be vacated after 90 days. Interest rate for WMA is currently Difict

### WMA Scheme for State Governments:

There are two types of WMA for the State Governments,

- 1) Special WMA: is extended against the collateral (mortgaging) of the government securities held by the State Government.
  - 2) Normal WMA: After the exhaustion of the special WMA limit, the State Government is provided a normal WMA.
- The normal WMA limits are based on three-year average of actual revenue and capital expenditure of the state.
  - The withdrawal above the WMA limit is considered an overdraft.
  - A State Government account can be in overdraft for a maximum 14 consecutive working days with a limit of 36 days in a quarter. The rate of interest on WMA is linked to the Repo Rate

## VIRAFIN

### Syllabus Section: Science and Technology

#### Why in News?

- Drug Controller General of India (DCGI) gave a restricted emergency use approval to the Zydus Cadila's 'Virafin' for treating the patients showing moderate COVID-19 symptoms.

#### About:

- Virafin is a pegylated interferon alpha-2b (PegIFN), which when subcutaneously injected to the patient in the early stages of infection, resulted in their faster recovery.
- The studies confirmed the safety, tolerability and efficacy of Virafin.

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- The studies also reported that Viarfin reduces viral load and aid in managing the disease in a better way, such as reduction in the need for supplemental oxygen, thereby reducing the respiratory tension caused due to low oxygen levels.
- About Zydus Cadila: Also known as Cadila Healthcare Limited is an Indian multinational pharmaceutical company headquartered in Ahmedabad, Gujarat.

**Source: PIB**

### OXYGEN CONCENTRATORS

**Syllabus Section:**

**Why in News?**

With oxygen cylinders in short supply across several states, the Oxygen concentrator is among the most sought-after devices for oxygen therapy, especially among patients in home isolation and for hospitals running out of oxygen.

**About:**

- Oxygen concentrator is a medical device that concentrates oxygen from ambient air
  - Atmospheric air has about 78 per cent nitrogen and 21 per cent oxygen, with other gases making up the remaining 1 per cent.
  - The oxygen concentrator takes in this air, filters it through a sieve, releases the nitrogen back into the air, and works on the remaining oxygen.
- This oxygen, compressed and dispensed through a cannula, is 90-95 per cent pure. A pressure valve in concentrators helps regulate supply, ranging from 1-10 litres per minute.

### Difference Between Concentrators and Oxygen Cylinders and LMO

- Concentrators are portable and unlike LMO that needs to be stored and transported in cryogenic tankers, need no special temperature
- Unlike cylinders that require refilling, concentrators only need a power source to draw in ambient air.
- Apart from electricity and routine maintenance, there's little by way of operational cost, unlike cylinders that involve refilling costs and transportation.

**Source: Indian Express**

### MARS OXYGEN IN-SITU RESOURCE UTILIZATION EXPERIMENT(Moxie)

**Syllabus Section: Science and Technology**

**Why in News?**

- NASA's Perseverance rover on Mars makes oxygen from planet's carbon dioxide atmosphere.

**About:**

- It is the second successful technology demonstration on the mission, which flew a mini-helicopter recently.
- The generation of oxygen was performed by a toaster-sized unit in the rover called Moxie - the Mars Oxygen In-Situ Resource Utilization Experiment.
- It produced about 5 grams of oxygen, equivalent to roughly 10 minutes' worth of breathing for an astronaut.
- NASA is planning that future human missions would take scaled-up versions of Moxie with them to the Red Planet rather than try to carry all the oxygen needed to sustain them.
- Mars' atmosphere is dominated by carbon dioxide (CO<sub>2</sub>) at a concentration of 96 per cent. The expectation is that it can produce up to 10 grams of O<sub>2</sub> per hour.
- This is the first extraction of a natural resource from the environment of another planet.

**Source: All India Radio**

### BREAKTHROUGH INFECTION

**Syllabus Section: Science and Technology**

**Why in News?**

Infections after the Covid-19 vaccination.

**About:**

- The Indian Council of Medical Research (ICMR) has reported that around two to four of 10,000 people given two doses of the COVID-19 vaccine have tested positive for the disease
- Such cases are referred to as "breakthrough" infections, indicating that the virus has been able to break through the defences created by the vaccine.
- Experts said it is possible that mutated variants of coronavirus infection may be finding ways of escaping the vaccine.
- Phase 3 clinical trials conducted before vaccines were approved showed a fairly constant proportion of infections among those vaccinated.

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- In the AstraZeneca trial, for instance, 30 out of 5,807 vaccinated — about 0.5% — were symptomatic and tested positive 14 days after the second shot.

**Source: Indian Express**

### EXERCISE VARUNA 2021

**Syllabus Section: Defence**

#### Why in News?

The 19th edition of the Indian and French Navy bilateral exercise 'VARUNA-2021' is being conducted in the Arabian Sea.

#### About:

- The annually held Varuna naval exercise is an integral part of France–India strategic relationship in the 21st century .
- o It was first started in 1983, though given its present name in 2001.
- These interactions further underscore the shared values as partner navies, in ensuring freedom of seas and commitment to an open, inclusive Indo-Pacific and a rules-based international order.
- o This is the first time that the United Arab Emirates (UAE) is participating in the Varuna maritime exercise.
- The 'Varuna' joint exercise is part of the French carrier strike group's 'CLEMENCEAU 21' deployment, which the French Navy is conducting in the eastern Mediterranean, the Gulf and the Indian Ocean (Arabian Sea).
- o Its goal is to contribute to the stabilization of these strategic zones and strengthening cooperation with the navies of partner countries, in particular India for the Indian Ocean component.
- o As part of this deployment, the Carrier Strike Group is also taking part in anti-ISIS (the Islamic State of Iraq and Syria) operations.
- The exercise will see high tempo-naval operations at sea, including advanced air defence and anti-submarine exercises, intense fixed and rotary wing flying operations, tactical manoeuvres, surface and anti-air weapon firings, underway replenishment and other maritime security operations.

**Source: PIB**

### INDIAN SARS-CoV-2 GENOMIC CONSORTIUM (INSACOG)

**Syllabus Section: Science and Technology**

#### Why in News?

- Department of Biotechnology organizes Public Webinar on the "Genome Sequencing of SARS-CoV-19."
  - o For improving the understanding of the nuances of SARS-CoV-2 genome sequencing and its public health relevance in the context of the current pandemic, webinar was conducted.

#### About:

- The Government of India had established a national multi-agency consortium, Indian SARS-CoV-2 Genomic Consortium (INSACOG) in December 2020, in the backdrop of reports of emergence of variants of the SARS-CoV-2, in the UK and some other parts of the world.
- Aim: Monitoring the genomic variations in the SARS-CoV-2 on a regular basis.
- The responsibility to correlate the clinical aspects and coordinate the collection of samples from states, for this purpose, was provided to National Centre for Disease Control (NCDC), MoHFW.
- INSACOG has a data repository at IGIB, New Delhi and NIBMG, Kalyani.
- Current data does not suggest that the surge is solely due to any one variant or any one factor.
  - o The reasons for surge are primarily due to:
    1. Non-adherence to COVID Appropriate Behaviours
    2. Rising immune escape mutations and some that also increase infectivity.
    3. Declining immunity

**Source: PIB**

### PROJECT DANTAK

**Syllabus Section: International Relations**

#### Why in News?

- Project DANTAK is commemorating its Diamond Jubilee in Bhutan.

#### About:

- Project Dantak is Border Roads Organisation's one of the oldest project.
- Project DANTAK was established on April 24, 1961,

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- It was result of visionary leadership of His Majesty the Third King and then Prime Minister Jawahar Lal Nehru.
- Dantak was tasked to construct the pioneering motorable roads in the Kingdom

## Importance of the Project:

- Project has helped in spurring the socio-economic development and growth of Bhutan,
- the Project has completed approximately 1600 km of blacktopped roads and 120 km of tracks in Bhutan with 5000 meters of bridges over them.
- Some other notable projects executed under the project include the construction of Paro Airport, Yonphula Airfield, Thimphu – Trashigang Highway, Telecommunication & Hydro Power Infrastructure, Sherubtse College, Kanglung and India House Estate.
- The medical and education facilities established by DANTAK in far flung areas were often the first in those locations.

## About Border Road Organisation:

- BRO was conceived and raised in 1960 by Pandit Jawaharlal Nehru for coordinating the speedy development of a network of roads in the North and the North Eastern border regions of the country.
- It works under the administrative control of the Ministry of Defence.
- It has diversified into a large spectrum of construction and development works comprising airfields, building projects, defence works and tunneling and has endeared itself to the people.



Source: PIB

## SIPRI REPORT

### Syllabus Section: International Reports and Organisation

#### Why in News?

The Stockholm International Peace Research Institute (SIPRI) report on trends in global military expenditure in 2020.

#### About:

- The report said that, in total, the global military expenditure rose to \$1981 billion last year, an increase of 2.6 per cent in real terms from 2019.
- The report has found that the world's top military spenders – the US, China and India – saw their military spending go up compared to 2019.
  - Last year, the US spent a total of \$778 billion, China spent \$252 billion and India's military expenditure was \$72.9 billion.
  - While India's spending since 2019 grew by 2.1 per cent, the increase for China was more moderate, at 1.9 per cent. The US saw a 4.4 per cent growth over its 2019 expenditure.
- The other top spenders included Russia with \$61.7 billion, the UK at \$59.2 billion, Saudi Arabia at \$57.5 billion, followed by Germany and France at just under \$53 billion each.
- Spending in terms of GDP: In 2020, the United States' military spending was 3.7 per cent of its GDP while the corresponding numbers for China and India were 1.7 per cent and 2.9 per cent.
- Trend since 2011: From 2011 to 2020, American military expenditure dropped by 10 per cent, but China saw a 76 per cent growth while India's military spending grew by 34 per cent.
- SIPRI said that military spending in Asia and Oceania "was 2.5 per cent higher in 2020 than in 2019 and 47 per cent higher than in 2011"
  - It is continuing an uninterrupted upward trend since at least 1989.
- Primarily the rise "attributed to increases in spending by China and India, which together accounted for 62 per cent of total military expenditure in the region in 2020.
- Biggest year-on-year increase: It is said that "military spending as a share of GDP—the military burden—reached a global average of 2.4 per cent in 2020, up from 2.2 per cent in 2019.

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- o It was the biggest year-on-year rise in the military burden since the global financial and economic crisis in 2009”.
- International transfers of major arms stayed at the same level between 2011–15 and 2016–20” as the “substantial increases in transfers by three of the top five arms exporters — the USA, France and Germany — were largely offset by declining Russian and Chinese arms exports”.
- Middle eastern arms imports grew by 25 per cent during this period, and was driven by Saudi Arabia, with a 61 per cent increase, and Egypt and Qatar, which saw a jump of 136 per cent and 361 per cent, respectively.

### SIPRI and India:

- SIPRI report found that India’s arms imports came down by a third between 2011-2015 and 2016-2020.
- India remained the second highest importer, only behind Saudi Arabia. The top five global arms exporters were the US, Russia, France, Germany and China

in 2016-2020.

- Arms imports by India decreased by 33 per cent between 2011–15 and 2016–20. Russia was the most affected supplier, although India’s imports of US arms also fell, by 46 per cent.”
- The drop in Indian arms imports seems to have been mainly due to its complex procurement processes, combined with an attempt to reduce its dependence on Russian arms.

**Source: Indian Express**

### HERD IMMUNITY

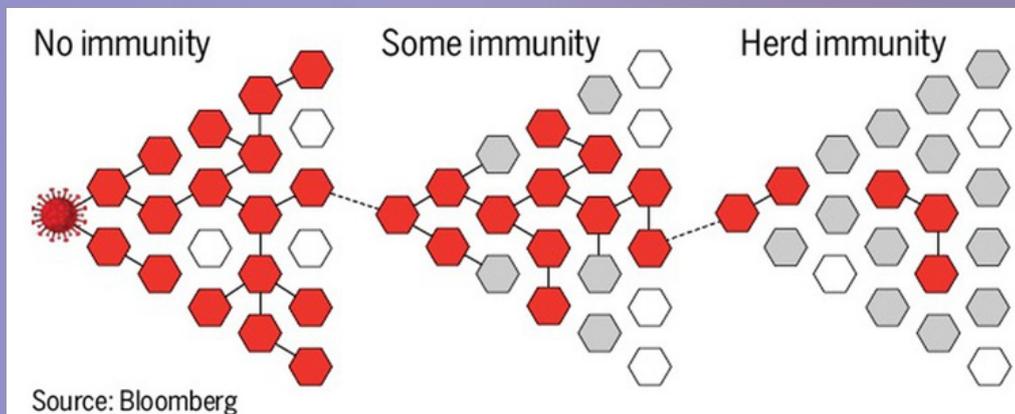
**Syllabus Section: Health Issues**

#### Why in News?

In several metros where serosurveys showed high immunity levels, Covid cases are still surging.

#### About:

Herd immunity’, also known as ‘population immunity’, is the indirect protection from an infectious disease that happens when immunity develops in a population either through vaccination or through previous infection.



- In India, Infection Fatality Rate (IFR). estimate is 0.08%
- Herd immunity does not mean unvaccinated or individuals who have not previously been infected are themselves immune.
- Instead, herd immunity exists when individuals who are not immune, but live in a community with a high proportion of immunity, have a reduced risk of disease as compared to non-immune individuals living in a community with a small proportion of immunity.
- In communities with high immunity, the non-immune people have a lower risk of disease than they otherwise would, but their reduced risk results from the immunity of people in the community in which they are living (i.e., herd immunity) not because they are personally immune.

**Source: The Indian Express**

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### LADAKH IGNITED MINDS PROJECT

#### Syllabus Section: Education

##### Why in News?

To provide better educational opportunities for Ladakhi students, the Indian Army has initiated the project Ladakh Ignited Minds: A Centre of Excellence and Wellness.

##### About:

- The project is aimed at providing better training facilities to disadvantaged Ladakhi students to give them opportunity to study in niche educational institutes.
- On behalf of Indian Army, Fire and Fury Corps has signed a couple of MoUs with partner Hindustan Petroleum Corporation Limited (HPCL) and executing agency, a Kanpur based NGO, National Integrity and Educational Development Organization (NIEDO), in Leh.
- Fire and Fury Corps of Indian Army with the support of HPCL and execution agency NIEDO will provide a holistic training for Ladakhi youth.
- The first batch, comprising 20 girls, 45 students from Leh and Kargil districts, would get training for JEE and NEET entrance examinations.

Source: All India Radio

### PRADHAN MANTRI GARIB KALYAN ANNA YOJANA

#### Syllabus Section: Government Policies and Interventions

##### Why in News?

- Pradhan Mantri Garib Kalyan Anna Yojana (PMGKAY) is announced by the Union Government for the month of May and June 2021.

##### About:

- PMGKAY is a part of Pradhan Mantri Garib Kalyan Package (PMGKP) to ameliorate the hardships faced by the poor due to Covid-19 situation.
- Under this scheme, it has been decided to allocate an additional quota of free-of-cost food grains at 5 Kg per person per month to nearly 80 Crore beneficiaries covered under National Food Security Act, 2013 (NFSA).

- The additional quota to the already subsidised 5 kg of food grains that is provided through the Public Distribution System (PDS) will be provided to beneficiaries covered under both categories of NFSA,
  1. Antyodaya Anna Yojana (AAY) and
  2. Priority Householders (PHH).
- The Food Corporation of India will provide additional 80 LMT food grains in May and June 2021, under the scheme to respective State/UT Governments, in addition to their regular NFSA allocation.
- This allocation for May and June 2021 would be on the same pattern as the earlier PM-GKAY. The government had announced PMGKAY-I (April-June 2020) and PMGKAY-II (July-November 2020).

Source: PIB

### GROUNDWATER DEPLETION MAY REDUCE WINTER CROPPING INTENSITY

#### Syllabus Section: Agriculture

##### Why in News?

- A new paper noted that with severe groundwater depletion, the cropping intensity or the amount of land planted in the winter season may decrease by up to 20% by 2025.

##### About:

- The team studied India's three main irrigation types on winter cropped areas: dug wells, tube wells, canals, and also analysed the groundwater data from the Central Ground Water Board.
- They found that 13% of the villages in which farmers plant a winter crop are located in critically water-depleted regions.
- These villages may lose 68% of their cropped area in future if access to all groundwater irrigation is lost. The results suggest that these losses will largely occur in northwest and central India.
- Problems:
  - Wheat farmers in our country faces first-generation (productivity) and second-generation (sustainability) problems.
  - In green revolution era, policy-supported intensive agriculture led to an increase in rice cultivation in north-western India mainly in Punjab and Haryana which are ecologically less suitable for rice cultivation.

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- o This led to unsustainable groundwater use for irrigation and in turn groundwater scarcity.
- o There was also post-harvest residue burning to make way for the timely sowing of wheat.
- o Due to lack of enough irrigation infrastructure in eastern states like Bihar, farmers are not able to make use of the enough groundwater resources that are available there supported with monsoon rainfall.
- Solutions:
  - o Alternative irrigation sources like Canal irrigation, adoption of water-saving technologies like drip irrigation and, switching to less water-intensive crops could be solutions to falling groundwater tables.
  - o To release some pressure from north-western states, better policies in eastern India are needed to expand the irrigation and thus increase agriculture productivity.

- ii. supporting trade and investment diversification.

### Directions Given:

- The Ministers instructed their officials to implement the following as initial projects of SCRI and further develop the Initiative:
  - o sharing of best practices on supply chain resilience; and
  - o holding investment promotion events and buyer-seller matching events to provide opportunities for stakeholders to explore the possibility of diversification of their supply chains.
- The Ministers decided to convene at least once a year to provide guidance to the implementation of the SCRI as well as to consult on how to develop the Initiative.
- The Ministers noted the important role of business and academia for the Initiative.

**Source: PIB**

## LARGE AREA CERTIFICATION

**Syllabus Section: Agriculture**

### Why in News?

Department of Agriculture, Cooperation and Farmers Welfare (DAC&FW) is working to identify Traditional Organic Areas to transform them into certified organic production hubs.

### About:

- The Government of India has certified 14,491 ha Car Nicobar and Nancowry group of islands in UT of A&N Islands for transforming them into certified organic production hubs.
- This area becomes the first large contiguous territory to be conferred with organic certification under the 'Large Area Certification' (LAC) scheme of the PGS-India (Participatory Guarantee System) certification programme.

### Large Area Certification' (LAC) Scheme:

- Department of Agriculture and Farmers Welfare under its flagship scheme of Paramparagat Krishi Vikas Yojna (PKVY) has launched a unique quick certification programme "Large Area Certification" (LAC) to harness potential of these areas.
- LAC is a Quick certification process that is cost-effective and farmers do not have to wait for 2-3 years for marketing PGS organic certified products.

**Source: The Hindu**

## SUPPLY CHAIN RESILIENCE INITIATIVE

**Syllabus Section: Economy**

### Why in News?

The Trade Ministers of India, Japan and Australia formally launched the Supply Chain Resilience initiative in a Trilateral Ministerial Meeting held virtually on 27.04.2021.

### About:

**Aim:**The SCRI aims to create a virtuous cycle of enhancing supply chain resilience with a view to eventually attaining strong, sustainable, balanced and inclusive growth in the region.

### Reason Behind this Initiative:

- COVID-19 pandemic was having an unprecedented impact in terms of lives lost, livelihoods and economies affected, and that the pandemic had revealed supply chain vulnerabilities globally and in the region.
- o Supply chains have been left vulnerable due to a range of factors.
- The Ministers noted the importance of risk management and continuity plans in order to avoid supply chain disruptions
- The ministers affirmed their commitment to strengthen resilient supply chains, by:
  - i. supporting the enhanced utilization of digital technology

## EDEN IAS - Educational Development & Enrichment Network

- Under LAC, each village in the area is considered as one cluster/group. Documentations are simple and maintained village-wise.
- All farmers with their farmland and livestock need to adhere to the standard requirements and on being verified get certified en-mass without the need to go under conversion period.
- Certification is renewed on annual basis through annual verification by a process of peer appraisals as per the process of PGS-India.

### Extra Facts:

- Organic farming has been identified as a viable option promising safe and chemical residue-free food and long-term sustainability of food production systems.
- Ministry of Agriculture and Farmers' Welfare has been promoting organic/natural farming through various schemes of Paramparagat Krishi Vikas Yojana, Organic Mission in North East etc. since 2014.
- India now has more than 30 lakh ha area registered under organic certification and slowly more and more farmers are joining the movement.
- As per the international survey report (2021) India ranks at 5th place in terms of area and is at the top in terms of total number of producers (base year 2019).

Source: PIB

### Ct VALUE IN A COVID-19 TEST

Syllabus Section: Health Issues

#### Why in News?

- Maharashtra government sent request to the Indian Council of Medical Research (ICMR) and sought clarity whether it was advisable to treat a person as Covid-negative if the Ct value is more than 24 and the person is asymptomatic.

#### About:

- Short for cycle threshold, Ct is a value that emerges during RT-PCR tests, the gold standard for detection of the SARS-CoV-2 coronavirus.
- Simply put, Ct value refers to the number of cycles after which the virus can be detected.

- Ct value does not have any bearing on the severity of the disease.
- In an RT-PCR test, RNA is extracted from the swab collected from the patient. It is then converted into DNA, which is then amplified.
- Amplification refers to the process of creating multiple copies of the genetic material — in this case, DNA.
- This improves the ability of the test to detect the presence of virus.
- Amplification takes place through a series of cycles — one copy becomes two, two becomes four, and so on — and it is after multiple cycles that a detectable amount of virus is produced.
- If a higher number of cycles is required, it implies that the virus went undetected when the number of cycles was lower.
- The lower the Ct value, the higher the viral load — because the virus has been spotted after fewer cycles.
- Globally, the accepted cut-off for Ct value for Covid-19 ranges between 35 and 40, depending on instructions from the respective manufacturers of testing equipment

### ICMR Response:

- ICMR informed the Maharashtra government that it was not advisable to use a lower cycle threshold parameter as it would lead to missing several infectious persons and increase disease transmission

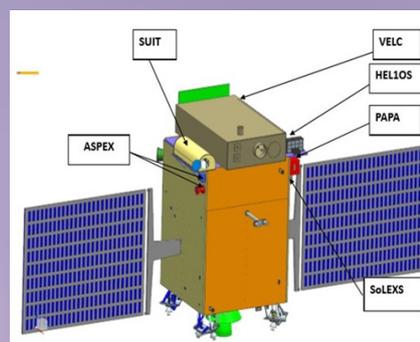
Source: Indian Express

### ARIES TO TRAIN NEXT-GENERATION SOLAR SCIENTISTS

Syllabus Section: Science and Technology

#### Why in News?

One year before the proposed launch of India's maiden solar mission — the Aditya L1 — Indian researchers plan to create a skilled community of solar scientists ready to use the scientific data which will emerge from the mission.



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## ABOUT:

- Aditya-L1 Support Cell (AL1SC) has been established at the Aryabhata Research Institute of Observational Sciences (ARIES), which will primarily produce this required trained manpower.
- The Support Cell will be a one-stop online platform for students, faculty and researchers from colleges, universities and institutions in India to get free access to a sample of processed scientific data pertaining to the Sun
- The centre will act as conduit between the users (student and faculty members from research Institutes/ Universities/ Colleges etc.) and payload teams of Aditya-L1 and solar astronomy research community at large
- Along with ARIES, the space agency has joined hands with other national institutes, such as Indian Institute of Astrophysics (IIA), Inter University Centre for Astronomy and Astrophysics (IUCAA), Indian Institute of Science Education and Research, Kolkata, and others.
- The Cell will also be responsible for development of software and tools required to perform research using this data.

## The Aditya L1 Mission:

- This mission led by ISRO, aims to set up a space-based observatory to track the Sun and it is expected to be launched sometime in mid-2022.
- There will be seven payloads.
- The seven payloads (instruments) will study solar corona, solar emissions, solar winds and flares, Coronal Mass Ejections (CMEs), as well as capture images of the Sun.

**Source: Indian Express**

## HUMAN RIGHTS WATCH (HRW)

### Syllabus Section: International Issues

#### Why in News?

Human Rights Watch said that Israel is committing the crime of “apartheid” by seeking to maintain Jewish “domination” over Palestinians and its own Arab population.

## About:



## Human Rights Watch:

- Human Rights Watch (HRW) is an international non-governmental organization.
- It was co-founded by Robert L. Bernstein and Aryeh Neier as a private American NGO in 1978.
- It is headquartered in New York City
- It conducts research and advocacy on human rights.
- The group pressures governments, policy makers, companies, and individual human rights abusers to denounce abuse and respect human rights, and the group often works on behalf of refugees, children, migrants, and political prisoners.
- Human Rights Watch in 1997 shared, Nobel Peace Prize as a founding member of the International Campaign to Ban Landmines and it played a leading role in the 2008 treaty banning cluster munitions.

**Source: The Hindu**

## CRYSTAL BLADE TECHNOLOGY

### Syllabus Section: Defence Technology

#### Why in News?

DRDO develops crystal blades for aero engines.

#### About:

- This is part of a programme taken up by Defence Metallurgical Research Laboratory (DMRL) to develop five sets of single crystal high-pressure turbine (HPT) blades using a nickel-based superalloy.

#### Single Crystal Blades Technology

- The Single Crystal blades are made of nickel based super alloys. These alloys are capable of withstanding high temperatures.

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- To offset the limitations imposed by grain boundaries in polycrystalline materials, metallurgists have sought to eliminate grain boundaries from turbine airfoils altogether, by inventing techniques to cast single-crystal turbine blades and vanes, and design alloys to be used exclusively in single-crystal form.

### Significance:

- This development marks a major technological breakthrough. Very few countries such as the U.S., the U.K., France and Russia have the capability to design and manufacture such single crystal components.
- The helicopters need powerful and compact aero engines to operate in extreme conditions. In order to achieve this, Single Crystal Blades are essential.

### Grain Boundaries:

- A grain boundary is the interface between two grains, or crystallites, in a polycrystalline material.
- The grain boundaries are characterized by increased chemical activity, slippage under stress loading, and the formation of voids.
- These conditions can lead to creep, the tendency of blade material to deform at a temperature-dependent rate under stresses.
- Corrosion and cracks also start at grain boundaries. Thus, grain boundaries greatly shorten turbine vane and blade life

Source: All India News

### NavIC — OPPORTUNITIES FOR THE TELECOM INDUSTRY”

Syllabus Section: Science and Technology

#### Why in News?

- NTIPRIT conducts webinar on “NavIC — Opportunities for the Telecom Industry” in collaboration with ISRO and telecom industry.

#### About:

- The importance of integration of technology with applications to reap the benefits of technology to the fullest has been discussed.
- Use of NavIC in the present Covid pandemic in tracking the oxygen tankers and other essentials were discussed.

- Efforts of telecom industry, including that of chipset and handset manufacturers in their efforts to adopt the NaviC service were appreciated.

#### About NaviC:

- NavIC (Navigation with Indian Constellation) is an autonomous regional satellite navigation system established and maintained by ISRO.
- It covers India and a region extending up to 1,500 km beyond Indian mainland (primary coverage area).
- It provides position accuracy better than 20 m (20) and timing accuracy better than 50 ns (20).
- The actual measurements demonstrate accuracy better than 5 m and 20 ns respectively.
- NavIC based applications are being used in various civilian sectors, including, transport, map applications, and timekeeping.
- NavIC is an indigenous positioning system that is under Indian control. There is no risk of the service being withdrawn or denied in a given situation.

#### About NTIPRIT:

- National Telecommunications Institute for Policy Research Innovation and Training (NTIPRIT) is the apex training institute of Department of Telecommunications involved in conduction of induction Training for probationary officers of Indian Telecommunication Service Group — A.

Source: PIB

### INTEGRATED SOLAR DRYER AND PYROLYSIS PILOT PLANT

Syllabus Section: Waste Management

#### Why in News?

- The foundation stone of the Integrated Solar Dryer and Pyrolysis pilot was laid by Dr. K J Sreeram, Director, CSIR- Central Leather Research Institute (CLRI), Chennai on the occasion of 74th foundation day of CLRI on 23rd April 2021.

#### About:

- The pilot is part of the Indo-German project ‘Pyrasol’ launched to transform urban organic waste into biochar and energy in smart cities.

## EDEN IAS - Educational Development & Enrichment Network

- It was awarded to CSIR-CLRI by the Indo-German Science & Technology Centre(IGSTC).
- The project will lead to technology development for the joint processing of Fibrous Organic Waste (FOW) and Sewage Sludge (SS) of Indian smart cities into hygienic and highly valuable biochar associated with energy recovery, carbon sequestration and environmental improvement.

### Indo-German Science & Technology Centre (IGSTC):

- It was established by the Department of Science & Technology (DST), Govt. of India & Federal Ministry of Education and Research (BMBF), Govt. of Germany.
- The aim of this establishment was to facilitate Indo-German R&D networking with emphasis on industry participation, applied research and technology development.
- IGSTC through its flagship program '2+2 Projects', catalyses innovation centric R&D projects by synergising the strength of research and academic institutions and public/private industries from India and Germany
- Under this program, the project titled 'Pyrasol: Smart Cities integrated energy supply, carbon sequestration and urban organic waste treatment through combined solar sludge drying and pyrolysis' was awarded by IGSTC to:
  - o CSIR-CLRI, Chennai;
  - o RamkyEnviro Engineers, Chennai;
  - o LeibnizUniversität, Hannover
  - o BiomaconGmbH ,Rehburg.

### Significance of the Indo-German project 'Pyrasol':

- The project focuses on managing and organising collection, treatment, and disposal systems of urban wastes in Indian Smart Cities as well as in other urban centres with an integrated and interactive approach.
- Through this Pyrasol project, simple and robust processing technologies for urban organic waste will be combined in a synergetic manner, to improve sanitation and welfare and for supplying regenerative energy.

- It will help in converting waste into products and reduce the carbon footprint of smart cities by an innovative organic waste drying system using the solar natural chimney effect followed by a highly efficient single-chamber pyrolysis.

**Source: DD News**

## RBI REPORT ON ASSET RECONSTRUCTION COMPANIES

### Syllabus Section: Economy

#### Why in News?

- According to a Reserve Bank of India (RBI) report on ARCs, the growth of the ARC industry has not been consistent over time and not always been synchronous with the trends in non-performing assets (NPAs) of banks and non-banking financial companies (NBFCs).
  - o It supported the government's proposal for a new ARC,

#### About:

#### ASSET RECONSTRUCTION COMPANY (ARC)

- It is a specialized financial institution that buys the Non Performing Assets (NPAs) from banks and financial institutions so that they can clean up their balance sheets.
- An ARC is incorporated under the Companies Act and registered with Reserve Bank of India under section 3 of The Securitisation and Reconstruction of Financial Assets and Enforcement of Security Interest Act, 2002.
- o An asset reconstruction means acquisition by an ARC of any right or interests of any Bank or Financial Institution in any financial assistance for the purpose of realisation of such financial assistance.
- This helps banks to concentrate in normal banking activities. Banks rather than going after the defaulters by wasting their time and effort, can sell the bad assets to the ARCs at a mutually agreed value.

#### Background:

- The ARC industry began with the establishment of the Asset Reconstruction Company India Ltd (ARCIL) in 2003
- After remaining subdued in the initial years of their inception, a jump was seen in the number of ARCs in 2008, and then in 2016.

## EDEN IAS - Educational Development & Enrichment Network

- The number of ARCs has risen over time, their business has remained highly concentrated
- There has been a concentration in the industry in terms of Assets Under Management (AUM) and the Security Receipts (SRs) issued.
- During 2019-20, asset sales by banks to ARCs declined.
- It could probably be due to banks opting for other resolution channels such as IBC and SARFAESI.

### About New ARC:

- The ARC proposed in the Budget will be set up by state-owned and private sector banks, and there will be no equity contribution from the Centre.
- The introduction of a new ARC for addressing the NPAs of public sector banks may also shape the operations of the existing ARCs.
- There is a definite scope for the entry of a well-capitalised and well-designed entity in the Indian ARC industry. Such an entity will strengthen the asset resolution mechanism further.

**Source: Indian Express**

### PYTHON-5

#### Syllabus Section: Defence

#### Why in News?

DRDO conducts maiden trial of Python-5 Air to Air Missile.

#### About:

- Tejas, India's indigenous Light Combat Aircraft, added the 5th generation Python-5 Air-to-Air Missile (AAM) in its air-to-air weapons capability on April 27, 2021.
- Trials were aimed to validate enhanced capability of already integrated Derby Beyond Visual Range (BVR) AAM on Tejas.
- The test firing at Goa completed a series of missile trials to validate its performance under extremely challenging scenarios.
- Derby missile achieved direct hit on a high-speed manoeuvring aerial target and the Python missiles also achieved 100% hits, thereby validating their complete capability. The trials met all their planned objectives.

The Derby is an active radar air-to-air missile that provides fighter aircraft with outstanding and effective performance in both short ranges and Beyond Visual Range (BVR) intercepts.

**Source: PIB**

### ASSAM EARTHQUAKE

#### Syllabus Section: Geography

#### Why in News?

Recently, a powerful earthquake measuring 6.4 on the Richter Scale jolted Assam and other parts of Northeast.

#### About:

- The Northeast is located in the highest seismological zone. Continuous tectonic stress keeps building up particularly along the fault lines. Today's earthquake was an instance of accumulated stress release
- The primary earthquake had its epicentre at latitude 26.690 N and longitude 92.360 E, about 80 km northeast of Guwahati, and a focal depth of 17 km,
- The events are located near to Kopili Fault closer to Himalayan Frontal Thrust (HFT).
- **Kopili Fault:**
  - The Kopili Fault is a 300-km northwest-southeast trending fault from the Bhutan Himalaya to the Burmese arc
- **Himalayan Frontal Thrust (HFT):**
  - HFT, also known as the Main Frontal Thrust (MFT), is a geological fault along the boundary of the Indian and Eurasian tectonic plates.

**Source: Indian Express**

### GOVERNMENT OF NATIONAL CAPITAL TERRITORY OF DELHI (AMENDMENT) ACT, 2021

#### Syllabus Section: Polity and Governance

#### Why in News?

The Ministry of Home Affairs issued a gazette notification stating that the provisions of the Government of National Capital Territory of Delhi (Amendment) Act, 2021, would be deemed to have come into effect from April 27.

#### About:

- The Bill amends the Government of National Capital Territory of Delhi Act, 1991.

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- o The Act provides a framework for the functioning of the Legislative Assembly and the government of the National Capital Territory (NCT) of Delhi.

## Provisions of the GNCT of Delhi (Amendment) Act 2021:

- The Bill amends certain powers and responsibilities of the Legislative Assembly and the Lieutenant Governor.
- Restriction on laws passed by the Assembly: The Bill provides that the term “government” referred to in any law made by the Legislative Assembly will imply Lieutenant Governor (LG).
- Rules of Procedure of the Assembly: The Act allows the Legislative Assembly to make Rules to regulate the procedure and conduct of business in the Assembly. The Bill provides that such Rules must be consistent with the Rules of Procedure and Conduct of Business in the Lok Sabha.
- Inquiry by the Assembly into administrative decisions: The Bill prohibits the Legislative Assembly from making any rule to enable itself or its Committees to:
  - o consider the matters of day-to-day administration of the NCT of Delhi and
  - o conduct any inquiry in relation to administrative decisions.
- Assent to Bills:
  - o The Act requires the LG to reserve certain Bills passed by the Legislative Assembly for the consideration of the President.
  - o The Bill requires the LG to also reserve those Bills for the President which incidentally cover any of the matters outside the purview of the powers of the Legislative Assembly.
- LG’s opinion for executive actions:
  - o The Act specifies that all executive action by the government, whether taken on the advice of the Ministers or otherwise, must be taken in the name of the LG.
  - o The Bill adds that on certain matters, as specified by the LG, his opinion must be obtained before taking any executive action on the decisions of the Minister/ Council of Ministers.

**Source: The Hindu**

## NET ZERO PRODUCERS’ FORUM

### Syllabus Section: International Institutions Why in News?

- Saudi Arabia to join ‘Net Zero Producers Forum’ on climate change.

#### About:

- Saudi Arabia will join the United States, Canada, Norway, and Qatar in forming ‘Net Zero Producers Forum’ for oil and gas producers.
- The forum will discuss how they can support the implementation of the Paris Agreement on climate change.

### The Net Zero Producers Forum

The Net Zero Producers Forum aims to develop pragmatic net zero emission strategies, including:



Methane abatement.



Advancing the circular carbon economy approach.



Development and deployment of clean-energy and carbon capture and storage technologies.



Diversification from reliance on hydrocarbon revenues.

- Saudi Arabia is the world's biggest crude exporter,
- In the past, Saudi Arabia's Crown Prince Mohammed bin Salman has said the kingdom aims to reduce its carbon emissions by generating 50% of the country's energy from renewables by 2030.
- US President Joe Biden unveiled plans to cut emissions by 50%-52% from 2005 levels at the two-day climate summit kicked off on Earth Day and attended virtually by leaders of 40 countries.

## GLOBAL IMMUNIZATION STRATEGY

### Syllabus Section: International Institutions/ Health Issues

#### Why in News?

WHO unveils global immunization strategy to save 50 million lives by 2030.

#### About:

- UN-led global immunization strategy was unveiled to reach more than 50 million children who have missed lifesaving jabs against measles and other diseases because of COVID-19 disruption.
- WHO, along with UNICEF and the vaccine alliance Gavi, said their new global strategy has the potential to save 50 million lives within less than a decade.

## EDEN IAS - Educational Development & Enrichment Network

- WHO chief Tedros Adhanom Ghebreyesus said, to avoid multiple outbreaks of life-threatening diseases like measles, yellow fever and diphtheria, it must be ensured that routine vaccination services are protected in every country in the world.
- A WHO survey showed more than one third of countries were still seeing disruptions to their routine immunisation services.
- The joint statement said, around 60 mass vaccination campaigns were currently postponed in 50 countries, putting 228 million people, mostly children, at risk of diseases such as measles and polio.

**Source: All India News**

### SEBI RULE FOR FUND MANAGER COMPENSATION

**Syllabus Section: Economy**

**Why in News?**

- The Securities and Exchange Board of India (SEBI) has said that a minimum 20% of the compensation of mutual fund managers and other key personnel in an asset management company (AMC) should be in the form of units of the mutual fund schemes they manage.

**About:**

- To align the interest of the Key Employees of the AMCs with the unitholders of the mutual fund schemes, it has been decided that a part of compensation of the Key Employees of the AMCs shall be paid in the form of units of the scheme(s),
- Minimum of 20% of the salary/perks/bonus/ non-cash compensation (gross annual CTC) net of income tax and any statutory contributions (i.e. PF and NPS) of the Key Employees of the AMCs shall be paid in the form of units of Mutual Fund schemes in which they have a role/oversight
- Key employees include CEO, CIO, COO, fund managers and others.
- Exchange Traded Funds (ETFs), Index Funds, Overnight Funds and existing close ended schemes have been excluded from the order.
- The provisions of this circular shall be applicable with effect from July 01, 2021.

**Significance:**

- It will boost the transparency of fund manager compensation.
- It helps build accountability.

- It ensures that fund houses actually link the pay of fund managers to performance and go beyond lip service.
- It could encourage whistleblowing if wrongdoing is happening.
- It will give a lot of psychological comfort to investors

**Source: Live Mint**

### TIANHE MODULE

**Syllabus Section: Science and Technology**

**Why in News?**

China launched the core module of its space station, kicking off a series of key launch missions that aim to complete the construction of the station by the end of next year

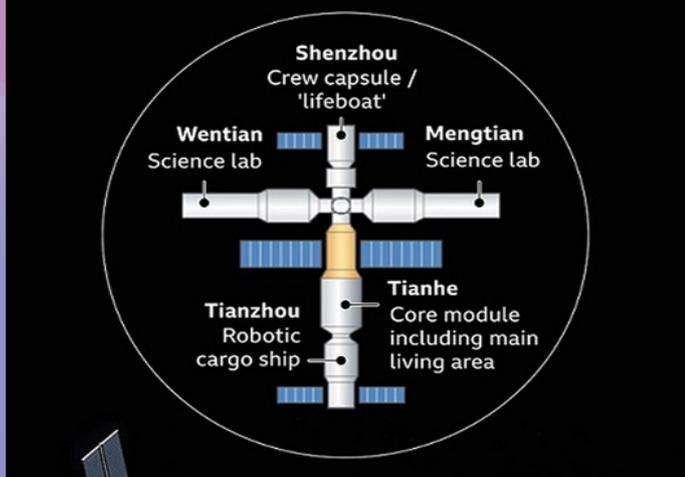
**About:**

- The Long March-5B Y2 rocket, carrying the Tianhe module, blasted off from the Wenchang Spacecraft Launch Site on the coast of the southern island province of Hainan.
- The Tianhe module will act as the management and control hub of the space station Tiangong, meaning Heavenly Palace, with a node that could dock with up to three spacecraft at a time for short stays, or two for long
- Tianhe has a total length of 16.6 meters, a maximum diameter of 4.2 meters and a take-off mass of 22.5 tonnes, and is the largest spacecraft developed by China.
- The space station will be a T shape with the core module at the centre and a lab capsule on each side.
- The station will operate in the low-Earth orbit at an altitude from 340 km to 450 km. It has a designed lifespan of 10 years, but experts believe it could last more than 15 years with appropriate maintenance and repairs.

# EDEN IAS - Educational Development & Enrichment Network

## China's space station

How it will look when fully assembled



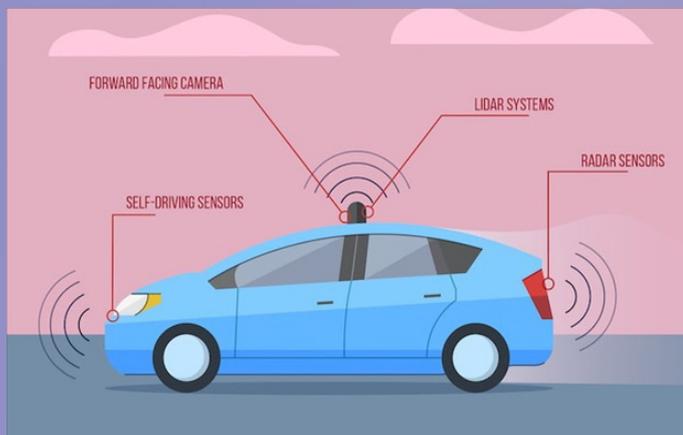
Source: All India News

## AUTONOMOUS VEHICLES

### Syllabus Section: Science and Technology

#### Why in News?

The UK has become the first country to announce regulation of the use of self-driving vehicles at slow speeds on motorways.



#### About:

- Britain's transport ministry said that it was working on specific wording to update the country's highway code for the safe use of self-driving vehicle systems.
- The ministry will start with Automated Lane Keeping Systems (ALKS) - which use sensors and software to keep cars within a lane, allowing them to accelerate and brake without driver input.
- The use of ALKS would be restricted to motorways, at speeds under 60 km per hour.
- The UK government wants to be at the forefront of rolling out autonomous driving technology and the transport ministry forecasts by 2035 around 40% of new UK cars could have self-driving capabilities, creating up to 38,000 new skilled jobs.
- However, the dangers of drivers apparently misunderstanding the limits of technology has been an issue in the United States, where regulators are reviewing about 20 crashes involving Tesla's driver assistance tools, such as its 'Autopilot' system.

Source: All India Radio