



VAJIRAM & RAVI

(Institute for Civil Services Examination)

JUNE 2021

the RECITALS

Explore Current Affairs Through Q&A



**Featured
Articles**



**Mains
Q & A**



**Prelims
Q & A**

**Bridging
Gaps**

47th G7 Summit

Digital India

PERSONALCOPY

NOT FOR SALE OR CIRCULATION

VAJIRAM & RAVI

The Recitals

Explore Current Affairs Through Q&A

(June 2021)

VAJIRAM & RAVI

(INSTITUTE FOR IAS EXAMINATION)

(A unit of Vajiram & Ravi IAS Study Centre LLP)

9-B, Bada Bazar Marg, OLD RAJINDER NAGAR

NEWDELHI-110060

Ph.: (011) 41007400, (011) 41007500

Visitusat: www.vajiramandravi.com

No part of this publication may be reproduced or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, or stored in any retrieval system of any nature without the written permission of the copyright holder and the publisher, application for which shall be made to the publisher.

© VAJIRAM & RAVI IAS STUDY CENTRE LLP

VAJIRAM & RAVI

(INSTITUTE FOR IAS EXAMINATION)

(A unit of Vajiram & Ravi IAS Study Centre LLP)

9-B, Bada Bazar Marg, Old Rajinder Nagar, New Delhi 110060

Phone No: (011) 41007400, (011) 41007500

Visitusat: www.vajiramandravi.com

Printed at:

SURYA GROUP

Ph.:7503040594

Email: suryagroupmaity@gmail.com

I. Feature Article

1-9

1. 47th G7 Summit
2. Digital India

II. History And Culture (10-14)

- Astanga Yoga
- Eighth Schedule
- National Maritime Heritage Complex
- Poson Poya Festival
- World Heritage Sites
- Juneteeth

- Corbevax Vaccine
- Monoclonal Antibodies
- ICMED Scheme
- Possible Antibodies Against Nipah Virus
- Ebola Outbreak In Guinea Over
- Toycathon 2021
- Aspirational Districts
- QS World University Rankings
- Suicide Report

III. Polity And Governance (15-28)

- One Nation One Standard Mission
- SDG India Index
- Model Tenancy Act
- New Pension Rules
- UN's CEO Water Mandate
- IITFC Programme
- Right To Be Forgotten
- Model Panchayat Citizen Charter
- Cinematograph Bill 2021
- Gujarat Prohibition Act 1949
- Delimitation In J&K
- Challenging Poll Results

V. Economy And Infrastructure (49-70)

- Itat E-dwar Portal
- FAME Scheme
- Enforcement Directorate
- RoDTEP Scheme
- UNCTAD's World Investment Report
- Other Service Providers
- Hallmarking
- Horticulture
- One District One Product
- ILO's World Employment and Social Outlook: Trends 2021
- Positive Indigenisation List
- Anti-trust Bills
- RMI Freight Report
- Nano Urea Liquid
- World Competitiveness Index
- Nutrient Loss
- Corporatisation of OFB
- Economic Relief Package

IV. Social Issues (29-48)

- Civil Registration System
- TB Free
- Project O₂
- Epidemic Diseases (Amendment) Act 2020
- Indemnity
- World Drug Report
- Global Liveability Index
- One Nation One Ration Card
- National Career Service
- Silver Economy
- PRABANDH Portal
- Performance Grading Index (PGI)
- Employees's Compensation Rules
- AISHE 2019-20
- H10N3 Bird Flu Strain
- Delta Plus Variant

VI. International Affairs (71-76)

- 17+1 cooperation forum
- Israel's New PM
- Ranked Choice Voting
- Biden-Putin Summit
- China-Sri Lanka Friendship Hospital
- China Hosts ASEAN Foreign Ministers
- El Salvador Makes Bitcoin a Legal Tender
- Maldives Wins UN General Assembly Election

- China Allows Couple to Have Three Children
- China Launches First Bullet Train in Tibet

VII. India And World (77-84)

- Tax Inspectors Without Borders Programme
- ICJ
- IFC-IOR
- India Abstains on Myanmar Resolution
- India-Pak Battle Over Basmati
- India - Australia Joint Working Group on Cyber Security Cooperation
- First Arab-India Energy Forum
- Japanese Help to Build Vaccine Cold Chain Facilities in India
- US Investigation Into Digital Services Tax

VIII. Summits And Organizations (85-93)

- ADMM Plus
- Shanghai Cooperation Organisation
- SACEP
- UNHCR's Global Trend Report
- Research Stations IN Antarctica
- 42nd FAO's Conference
- OPCW
- Fukuoka Grand Prize 2021
- NATO Summit
- BRICS Network Universities
- Appointment of UN Secretary-General

IX. Defence And Security (94-103)

- Project Seabird
- Agni-P Missile
- Interpol
- IN-EUNAVFOR Joint Naval Exercise
- Theaterisation of Armed Forces
- Twitter Loses Safe Harbour
- Drone Terror Attack on Jammu Airport
- INS Sandhayak
- Indo-Thai CORPAT
- National Power Report

X. Science And Technology (104-119)

- China's EAST

- Heliosphere
- Neutrino
- China's Shenzhou-12 Spacecraft
- Peter Pan Syndrome
- Rare Earth Metals
- 5G Technology
- Internet Through LEO Satellites
- NASA's Missions To Venus
- EnVision Mission
- CHIME Telescope
- New Shephard Rocket System
- World's First Wooden Satellite
- Supersonic Plane
- CIBER-2
- AmbiTAG
- Deep Ocean Mission
- Sale of Illegal HTBT Cotton
- National Internet Exchange of India (NIXI)
- Chandrayaan-2
- PASIPHAE Project

XI. Ecology And Environment (120-133)

- Operation Oliva
- State of Finance for Nature Report
- Devika River Project
- Pyrostria Ialji
- Srivilliputhur-Megamalai Tiger Reserve
- Bharitalasuchus Tapani
- Baihetan Dam
- Pygmy Hog
- Sea Snot
- Black Carbon
- Industrial Deep Decarbonization Initiative (IDDI)
- Heritage Trees
- Southern Ocean
- World Environment Day
- Blue-finned Mahseer
- Green Hydrogen
- Ambergris
- Ramgarh Vishdhari wildlife sanctuary
- Summer Solstice
- Desertification, Land Degradation and Drought

47th G7 Summit

Recently, the 47th G7 summit was held in **Cornwall, England. United Kingdom** holds the presidency of the Group of Seven (G7) inter-governmental political forum. Agenda for the summit was - **Global Action to Build Back Better**. Australia, India, South Korea and South Africa were invited as **guest countries** to this year's G7.

Key Highlights of The Summit

- The UK had outlined **four priority areas** for its Presidency. These are:
 - leading the global recovery from coronavirus while strengthening resilience against future pandemics;
 - promoting future prosperity by championing free and fair trade;
 - tackling climate change and preserving the planet's biodiversity; and
 - championing shared values and open societies.
- The G7 countries signed the **Carbis Bay Declaration**, mainly aimed at preventing future pandemics. It contained many other thematic areas which are as follows:

A. COVID-19: Vaccines

- Participating leaders promised to **distribute 1 billion vaccines to poorer countries** to overcome the COVID-19 crisis. The goal is to "**vaccinate the world**" by the end of 2022.
- Member countries also underlined the importance of **developing a global protocol response** to avoid COVID-like crises and tackle them more effectively in the future.

B. Economy

- The Carbis Bay Declaration talks about **reinvigorate the economies** by advancing recovery plans that build on the **\$12 trillion of support** G7 countries have put in place during the pandemic.
- In order to counter China's Belt and Road initiative (BRI), G7 platform urged its member **countries to offer loans to developed countries**.
- Not only will it limit China's attempt to widen its global influence, it would also help developing countries recover from the pandemic through investments and new job opportunities.

C. Climate Change

- Leaders of the G7 summit affirmed they would work together toward a "**green revolution**."
- They agreed to **limit the rise in global temperature** to 1.5celsius degrees and reach **net-zero carbon emissions by 2050**.
- Additionally, they committed to protecting and conserving **at least 30% of land and oceans by 2030**.

D. Build Back Better for the World

- The participating leaders discussed the plan "**Build Back Better for the World**" Project. The aim is to compete with China's BRI.

- The project will catalyse **infrastructure investment for low- and middle-income countries** (in Asia and Africa). The entire process will offer a value-driven, high-standard and transparent partnership with G7.

E. Call on China for its Human Rights Abuses

- The participating countries hit out at China on “**human rights and fundamental freedoms**” in Xinjiang (Uyghur Muslims) and Hong Kong.
- It also criticised China for changing the status quo in “South China Sea”.
- It also called for a transparent **World Health Organization’s Covid origins study** to ensure accountability.

F. Taxes

- Leaders discussed the implementation of a **global minimum tax of at least 15% on multinational enterprises**.
- This is meant to **hold the companies in check** and prevent them from using tax havens detrimental to developing countries' economies.

India’s Participation

- At the invitation of UK, PM Modi participated in the Outreach Sessions of G7 Summit in **virtual format**. Due to the prevailing pandemic situation in India, PM Modi did not travel to attend the meeting.
- This was the **second time** that India participated in a G7 meeting. India had been invited by **G7 French Presidency in 2019** to the Biarritz Summit as a “*Goodwill Partner*”.

What UK’s Invite Means for India

- India’s presence at the G7 is being seen as the legacy of **decades of strong strategic ties between London and New Delhi**.
- UK was the first P5 member to support a permanent UN Security Council seat for India and the **first G7 member to invite India to a G7 Summit in 2005**.
- As the **current president of BRICS forum** and **G20 president in 2023**, India will play a key role driving in multilateral cooperation helping to build back better around the world.
- An invite to the G7 summit is also an acknowledgement that despite the current state of the Indian economy, the **world expects India to bounce back**.
- Since the 1991 economic reforms, the international community eyeing India’s potential and its huge market had been paying a lot of attention to the country.
- India will remain deeply engaged with the G7 and guest partners on all major issues, health governance, and access to vaccines, climate action and climate justice, diversification of supply chains and building economic resilience, to name just a few.

India’s Stand at The Summit

- Underscoring the need for genuine global solidarity and leadership, India gave the mantra of “**One Earth One Health**”. It was based on the idea that **no one is safe until everyone is safe**.

- PM Modi sought the strong support of G7 leadership for **India and South Africa's proposal for a TRIPS waiver at the WTO**. TRIPS waiver is an important element of his "**Global Vaccination Plan**", a roadmap to vaccinate the entire global population by doubling vaccine production.
- On the issue of **Climate Change**, India highlighted the fact that **it is the only G20 country on track to meet its Paris commitments**. India called on the G7 to meet their **unfulfilled promise of \$100 billion annually** in climate finance.
- During the session pertaining to **open societies and open economies**, India **underscored the vulnerabilities inherent in open societies**.
- India signed off on a joint statement by G-7 and guest countries (together these countries were called as **Democracies 11** by the PM of UK) on "open societies".
- The statement reaffirmed and encouraged the values of "freedom of expression, both online and offline, as a freedom that safeguards democracy and helps people live free from fear and oppression".
- It also referred to "**politically motivated internet shutdowns**" as one of the threats to freedom and democracy.
- It should be noted that another G-7 statement criticising China was **not signed by India**.

Analysis

1. Corporate Tax Deal

- G7 grouping have reached a "historic" deal on taxing multinational companies. Participating countries agreed to **counter tax avoidance** through measures to make companies pay in the countries where they do business.
- They also agreed in principle to **ratify a global minimum corporate tax rate of 15%** to counter the possibility of countries undercutting each other to attract investments.
- The minimum corporate tax is also aimed to counter the **low effective rates of tax shelled out by some of the world's biggest corporation** such as Apple, Facebook etc.
- These companies often use their subsidiaries to **shift profits out of major markets into low-tax countries**. With the new corporate tax deal, they will not be able to do so.

What are the Issues with the Plan?

- Challenge of getting all major nations on the same page
- It impinges on the right of the sovereign nations to decide a nation's tax policy.
- A global minimum rate would essentially take away a tool that countries use to push policies that suit them. Lower tax rate is often used by countries to push economic activity.

What Does it Mean for India?

- India has already been trying to engage with foreign nations in order to enhance exchange of information under Double Taxation Avoidance Agreements, Tax Information Exchange Agreements and Multilateral Conventions to plug loopholes.
- **India's position** regarding shifting of tax base to other tax heavens **stands vindicated** and India is likely to see a boost in its corporate tax collection.

- **India, in September 2019, reduced corporate taxes** for domestic companies to 22% and for new domestic manufacturing companies to 15%. The cuts effectively brought India's headline corporate tax rate broadly at par with the average 23% rate in Asian countries.
- Hence, a global minimum corporate tax would help India in attracting new investments as well.

2. Build Back Better World (B3W) Initiative

- In order to counter China's growing economic clout, G7 countries offered developing nations an infrastructure plan. This plan is being led by United States president Joe Biden.
- The Build Back Better World (B3W) initiative, will provide a **transparent infrastructure partnership to help narrow the \$40 trillion**.
- It calls for spending hundreds of billions of dollars in infrastructure in collaboration with the private sector while adhering to climate standards and labour practices.
- The B3W is **not merely a financial spin to BRI or responding to the debt trap diplomacy** of China's political ambitions. It is a geopolitical kickback around the BRI that should help **create a new development model**.

Significance of B3W for India

- India refused to join the Chinese initiative in the past and raised its voice against the BRI.
- B3W will provide a **good alternative to India**. India will be able to attract foreign investments in infrastructure creation under this initiative.
- This initiative will also provide India a platform to forge partnerships in order to invest in other developing countries such as African countries.
- So far, India has decided to study the plan, and might **engage with it at a later stage**.

About G7

- G7 originally came into **being in 1975** when the heads of the **world's six leading industrial nations**- the US, UK, France, Germany (West), Japan and Italy decided to hold a meeting in the wake of the oil shock of 1973 and the following financial crisis.
- The **six countries were joined by Canada** in 1976.
- In 1998, Russia was formally inducted in the group, which transformed G7 into G8.
- However, when **Russia annexed Crimea** in 2014, it was suspended from the grouping. As a result, the group became **G7 again in 2014**.
- **Current members are** - US, UK, Canada, France, Germany, Italy and Japan (Most developed and the advanced economies of the world)

- Making financial transactions electronic & cashless.
- Using Geospatial Information Systems (GIS) for decision support systems & development.

3. Digital Empowerment of Citizens

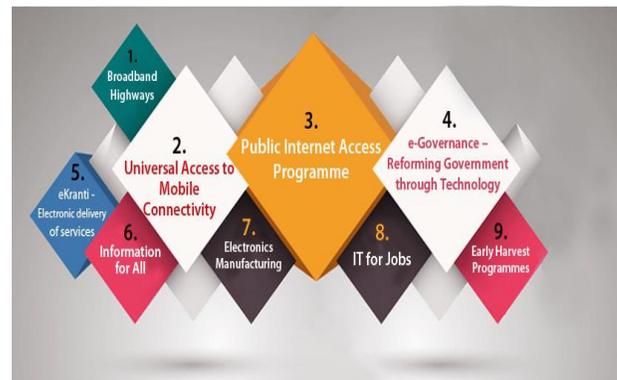
- Universal digital literacy.
- Universally accessible digital resources.
- Availability of digital resources/services in Indian languages.
- Collaborative digital platforms for participative governance.

Pillars of Digital India

The programme was designed to provide thrust to the nine pillars of growth areas, namely Broadband Highways, Universal Access to Mobile Connectivity, Public Internet Access Programme, e-Governance: Reforming Government through Technology, e-Kranti – Electronic Delivery of Services, Information for All, Electronics Manufacturing, IT for Jobs and Early Harvest Programmes.

1. Broadband Connectivity

- This pillar covers three sub components, namely Broadband for All - Rural, Broadband for All - Urban and National Information Infrastructure (NII).
- NII would integrate the network and cloud infrastructure in country to provide high speed connectivity and cloud platform to various government departments up to panchayat level.
- These infrastructure components include networks such as State Wide Area Network (SWAN), National Knowledge Network (NKN), National Optical Fibre Network (NOFN), Government User Network (GUN) and the MeghRaj Cloud.



2. Universal Access to Mobile Connectivity

This pillar focuses on network penetration and filling the gaps in mobile connectivity in the country. The Department of Telecommunications is the nodal department for this initiative.

3. Public Internet Access Program

- The two sub components of Public Internet Access Programme are Common Services Centres (CSCs) and Post Offices as multi-service centres.
- CSCs are the access points for delivery of essential public utility services, social welfare schemes, healthcare, financial, education and agriculture services, for citizens in rural and remote areas of the country. In doing so, it is enabling the government's mandate of a socially, financially and digitally inclusive society.
- Similarly, a total of 150,000 Post Offices are proposed to be converted into multi service centres.

4. E-Governance - Reforming Government through technology

- This pillar entails improving the efficiency of govt processes through use of Information Technology.
- All govt databases & information should be in electronic form. The workflow inside govt departments and agencies should be automated and it should also allow visibility of these processes to citizens.

- Moreover, IT would be used to automate, respond and analyze data to identify and resolve persistent problems.

5. e-Kranti

Considering the critical need for transforming e-Governance and promote mobile Governance and Good Governance in the country, the e-Kranti approach was adopted by the Centre with the vision of transforming e-Governance for transforming governance. The key principles of e-Kranti are:

- **Transformation and not Translation** - All project proposals in e-Kranti must involve substantial transformation in the quality, quantity and significant enhancement in productivity & competitiveness.
- **Integrated Services and not Individual Services** - A common middleware and integration of the back end processes and processing systems is required to facilitate integrated service delivery to citizens.
- **ICT Infrastructure on Demand** – Govt departments should be provided with Information & Communications Technology (ICT) infrastructure, such as connectivity, cloud & mobile platform on demand.
- **Mobile First** - All applications should be designed/ redesigned to enable delivery of services through mobile.
- **Language Localization** - All information and services in e-Governance projects should be available in Indian languages as well.
- **Security and Electronic Data Preservation** - All online applications and e-services to follow prescribed security measures including cyber security.

6. Information for All

- Online hosting of information & documents to facilitate open and easy access to information for all.
- Government shall pro-actively engage through social media and web based platforms to inform and interact with citizens.

7. Electronics Manufacturing

This pillar focuses on promoting electronics manufacturing in country with target of NET ZERO Imports. The Production Linked Incentive (PLI) scheme launched in various domains will help the government to improve the electronics manufacturing capacity of the country in order to become self-sufficient.

8. IT for jobs

This pillar focuses on providing training to the youth in the skills required for availing employment opportunities in the IT sector.

9. Early Harvest Programs (EHP)

EHP consists of those projects which are to be implemented in a short timeline. Some of the projects under EHP are:

- Biometric Attendance.
- Wi-Fi in All Universities.
- Public Wi-fi hotspots.
- SMS based weather information.

- National Portal for lost and found children.

Digital India Initiatives

The initiatives under Digital India fall under three umbrellas of *Infrastructure, Services and Empowerment*.

A. DI Initiatives - Infrastructure

Aadhaar

- Aadhaar identity platform is one of the key pillars of 'Digital India', under which every resident of the country is provided with a unique identity or Aadhaar number.
- It is a strategic policy tool for social and financial inclusion, public sector delivery reforms, managing fiscal budgets, increasing convenience and promoting hassle-free people-centric governance.

BharatNet

- BharatNet originally named National Optical Fibre Network or NOFN, aims to lay down 8 lakh km of incremental optical fibre cable (OFC) to all the 2,50,000-plus Gram Panchayats (GP) in the country.
- The objective is to extend fibre connectivity — available at the state capital, district headquarters and blocks — to every panchayat, and provide broadband internet services to India's rural population.
- It aims to facilitate the delivery of e-governance, e-health, e-education, e-banking, and other services to the rural India.

DigiLocker

- DigiLocker is a Digital Wallet to empower citizens digitally. It's a secure cloud based platform for issuance, sharing and verification of critical lifelong documents or certificates.
- It provides access to authentic digital documents issued from over 100 issuers including, Central & State agencies such as Transport Department, Income Tax Department, Revenue Department, State & Central Education Boards etc.
- It has created a new ecosystem for true paperless governance by promoting usage of digital documents.

Government e-Marketplace (GeM)

- Government e-Marketplace (GeM) is single window solution for online procurement of common goods & services required by various government departments/organizations/PSUs. It aims to enhance transparency, efficiency and speed in public procurement.
- It also provides the tools for direct purchase, e-bidding and reverse e-auction to facilitate the government users to achieve the best value for the money.

B. DI Initiatives - Services

- **BHIM:** Bharat Interface for Money (BHIM) is an app that makes payment transactions simple, and quick using Unified Payments Interface (UPI). It enables direct bank to bank payments instantly and collect money using a Mobile number or Payment address.

- **CCTNS:** Crime and Criminal Tracking Network & Systems aims at creating a comprehensive and integrated system for enhancing the efficiency and effectiveness of policing. It intends to create a nationwide networking infrastructure for investigation of crime and detection of criminals.
- **e-Pathshala:** Developed by NCERT, e-Pathshala provides educational e-resources including textbooks, audio, video, periodicals through website and mobile app.
- **GIS:** Geographic Information System (GIS Software) is designed to store, retrieve, manage, display and analyze different types of geographic and spatial data. It allows users to produce maps and other graphic displays of geographic information for analysis and to build decision support systems in any organization or research bodies.
- **GSTN:** Goods and Service Tax Network aims to provide reliable, efficient and strong IT infrastructure for the smooth functioning of the Goods & Services Tax. This will enable economic agents to use the entire nation as One Market with minimal indirect tax compliance cost.
- **CoWIN:** CoWIN is a cloud-based IT solution for planning, implementing, monitoring, and evaluating COVID-19 vaccination in the country. It tracks the beneficiaries and also the vaccines at the national, State and district levels, along with monitoring the utilisation, wastage and coverage of vaccination.

C. DI Initiatives - Empowerment

- **PMJDY:** Pradhan Mantri Jan Dhan Yojana aims to bring about comprehensive financial inclusion of all the households in the country. It incorporates universal access to banking facilities, financial literacy, access to credit, insurance and pension facility.
- **AEPS:** Aadhaar Enabled Payment System (AEPS) is a payment service that allows a bank customer to use Aadhaar as her identity to access her respective Aadhaar enabled bank account and perform basic banking transactions through a Business Correspondent.
- **NMEICT:** The National Mission on Education through Information and Communication Technology (NMEICT) uses the potential of ICT, in teaching and learning process for the benefit of all the learners in Higher Education Institutions. It aims to address all the education and learning related needs of students, teachers and lifelong learners.
- **Smart Cities:** The objective of Smart Cities is to promote sustainable and inclusive cities that provide core infrastructure and give a decent quality of life to its citizens. It also incorporates a clean and sustainable environment and application of Smart Solutions.

The platform of Digital India has proved that it can actually turn the billion dreams into reality, catapulting India's success stories into the next set of Unicorns. Going forward, the government and the relevant stakeholders need to chart out progressive policies that invite and keep new investments into the country, continue adoption of new technologies and work for industry and academia synergy in creating a talent pool which is industry ready. Doing this correctly will lay the foundations of a truly self-reliant India, where each citizen is connected and fully empowered.

VAJIRAM & RAVI

HISTORY AND CULTURE

1. As per Patanjali's Yoga Sutras, which of the following belong to the eight limbs of Yoga (Ashtanga Yoga)?

- | | |
|---------------|------------|
| 1. Pratyahara | 2. Dharana |
| 3. Shruti | 4. Samadhi |
| 5. Niyama | |

Choose the correct option using the codes below:

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

Answer: C

Explanation:

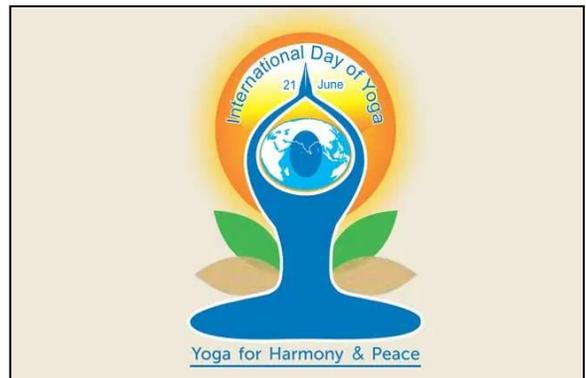
- The 7th International Yoga Day (IYD) was recently celebrated on 21st June, recognising the many benefits of the ancient Indian practice of yoga.
- In 2014, the UN proclaimed June 21 as International Day of Yoga by passing a resolution. The first IYD was observed in 2015.
- The theme for this year is 'Yoga for Wellness', which focuses on practising Yoga for physical and mental well-being.

Yoga

- Yoga is an ancient physical, mental and spiritual practice that originated in India. The word yoga is derived from the Sanskrit root Yuj and means to join or to unite, symbolizing the union of body and consciousness.
- A number of seals and fossil remains of **Indus valley civilization** with Yogic motifs and figures performing Yoga Sadhana suggest the presence of Yoga in ancient India.
- Presence of Yoga is available in folk traditions, Indus valley civilization, Vedic and Upanishadic heritage, Buddhist and Jain traditions, Darshanas, and theistic traditions of Shaivas, Vaishnavas, and tantric traditions.
- Though Yoga was being practiced in the pre-Vedic period, Sage **Patanjali** systematized and codified the then existing practices of Yoga, its meaning and its related knowledge through his Yoga Sutras.
- Sage Patanjali came up with the concept of **Ashtanga Yoga** – the eight limbs of yoga. He defined the eight limbs as yama (abstinences), niyama (observances), asana (postures), pranayama (breathing), pratyahara (withdrawal), dharana (concentration), dhyana (meditation) and samadhi (absorption).

Logo

- On the occasion of the first international Yoga Day, the Ministry of AYUSH unveiled the official logo for the Yoga Day.
- The **folding-hands logo of Yoga Day** reflects the union of individual consciousness with that of



universal consciousness, a perfect harmony between mind and body, and man and nature.

- The brown leaves in the logo symbolize the earth element, the green leaves of nature, blue the fire element while the sun symbolises the source of energy and inspiration.

2. Which of the following languages are included in the Eighth Schedule of the Constitution?

- | | |
|--------------|----------|
| 1. English | 2. Tulu |
| 3. Malayalam | 4. Dogri |
| 5. Nepali | |

Choose the correct option using the codes below:

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

Answer: B

Explanation:

- Various organisations have initiated a campaign demanding official language status for Tulu and its inclusion in the eighth schedule to the Constitution.
- Even though Tulu is considered one of the **Pancha Dravida Bhashas** (the five prominent languages of South India), it never found a place in the 8th Schedule of the Constitution as an official language, while the other four – Tamil, Kannada, Malayalam, and Telugu – made it to the list.
- At present there are 22 languages in the eighth schedule to the Constitution. These are Assamese, Bengali, Gujarati, Hindi, Kannada, Kashmiri, Konkani, Malayalam, Manipuri, Marathi, Nepali, Oriya, Punjabi, Sanskrit, Sindhi, Tamil, Telugu, Urdu, Bodo, Santhali, Maithili and Dogri.

Details of Tulu Language

- Tulu is a Dravidian language spoken mainly in two coastal districts **Dakshina Kannada and Udupi** of Karnataka and **Kasaragod district** of Kerala.
- Some scholars suggest Tulu is among the earliest Dravidian languages with a history of 2000 years.
- Tulu has a rich oral literature tradition with folk-song forms like paddana, and traditional folk theatre yakshagana. Tulu also has an active tradition of cinema.
- However, according to the Atlas of the World's Languages in Danger, published by UNESCO, Tulu is now considered a vulnerable language.

Benefits of Recognition Under Eighth Schedule

- It becomes mandatory for the government to take efforts for the development of the scheduled language.
- The language gets recognition from Sahitya Academy.
- It facilitates translation of books in the scheduled language to other recognised Indian languages.
- MPs and MLAs can speak in the scheduled language in state assemblies and parliament.
- Candidates can write all-India competitive examinations like the Civil Services exam in the scheduled language.

Answer: A

Explanation

- **Sri Lankan Buddhists** have recently **celebrated Posen Poya festival** amid COVID-19 restrictions.
- The festival commemorates the **introduction of Buddhism to Sri Lanka by the Buddhist missionary monk Mahinda in the third century BC**. The day is second only in importance to **Vesak**.
- **Mahinda met King Devanampiyatissa** on a mountain peak in **Anuradhapura** and preached the first sermon. This is why Anuradhapura is often called "**the cradle of Buddhism**" in the country.

5. Consider the following statements regarding UNESCO:

1. **UNESCO is an acronym for United Nations Educational, Social and Cultural Organization.**
2. **The agency's permanent headquarters are in Geneva.**

Which of the above statements is/are Correct?

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

Answer: D

Explanation

The **World Heritage Committee** under **UNESCO** has proposed to **downgrade** the status of **Australia's Great Barrier Reef**. The committee recommended it to be added to the list of **World Heritage sites in danger**.

Why UNESCO Wants To Downgrade The Status

- The organization is of the view that the **world's biggest coral reef system** should be added to the list **due to the impact of climate change**.
- In 2015, UNESCO noted the **outlook for the reef was poor** but kept the site's status unchanged. Since then, scientists say it has suffered three major coral bleaching events due to severe marine heatwaves.

What Other Experts Think

- Many environmental experts are saying that the Australian Government is not doing enough to protect its greatest natural asset, especially on climate change.
- Australia **reliance on coal-fired power** makes it one of the **world's largest carbon emitters** per capita. However, govt. has steadfastly backed the country's fossil fuel industries, arguing **tougher action on emissions would cost jobs**.
- On the other hand, experts of international affairs are sensing politics behind it. They blame China behind this step of UNESCO. As per them, **Chinese officials** enjoy strong sway on **three committees**, while a **Chinese lawmaker is chairman of the World Heritage Committee**. Off late, relationship between Australia and China has deteriorated.

Other Sites That Risk Losing Their Treasured Heritage Site Status

- **Venice** - The city in Italy has been damaged by "**overtourism**", and is recommended to be added in its endangered heritage list.
- **Budapest** - The Hungarian city, bisected by river **Danube**, has been put on the **endangered list** because of a major renovation of the Buda Castle quarter.

- **Liverpool** – UNESCO recommended taking Liverpool off the World Heritage list altogether. UNESCO is angry due to the redevelopment of Liverpool's historic waterfront and northern dock area.

About UNESCO

- **UNESCO - United Nations Educational, Scientific and Cultural Organization**
- It is **specialized agency** of the United Nations (UN). The constitution, which entered into force in 1946, called for the **promotion of international collaboration in education, science, and culture**.
- UNESCO's mission is to contribute to the building of a culture of peace, the eradication of poverty, sustainable development and intercultural dialogue through education, the sciences, culture, communication and information.
- The agency's permanent headquarter is in **Paris, France**.
- **Parent Organisation** - United Nations Economic and Social Council

6. **A bill to make June 19, or "Juneteenth", a national holiday has been passed by the US Congress. Juneteenth will commemorate**

- a) **Gaining of Independence of USA**
- b) **Enactment of constitution of USA**
- c) **End of slavery after American Civil War**
- d) **Civil rights hero Martin Luther King Jr.**

Answer: C

Explanation

- A bill to establish Juneteenth (June 19) **National Independence Day** has been passed by the US Congress. Once approved by the President, it will become law.
- Law will make June 19, or "Juneteenth", a **national holiday** recognised by the federal government.
- It will commemorate the **end of slavery after the American Civil War** (1861-65).
- On June 19, 1865, Major General Gordon Granger arrived in Galveston and announced the **end of both the Civil War and slavery**. Since then, Juneteenth has become a largely symbolic date representing freedom for African Americans.
- Juneteenth will now enjoy the **same status as the 10 existing annual holidays**, which include Memorial Day, Veterans Day and Thanksgiving.
- The last such holiday – **Martin Luther King Jr. Day** – was created in 1983, in honour of the civil rights hero.

7. One Nation One Standard Mission was launched by which among the following?

- a) NITI Aayog
- b) Bureau of Indian Standards (BIS)
- c) Ministry of Agriculture & Farmers' Welfare
- d) Quality Council of India, Ministry of Commerce and Industry

Answer: B

Explanation:

- **RDSO (Research Design & Standards Organization) of Indian Railways** has become the first institution to be declared Standard Developing Organization (SDO) under "One Nation One Standard" mission of BIS.
- RDSO is the sole research and development wing of the Ministry of Railways. It is one of India's leading Standard formulating Body undertaking standardization works for the railway sector. It works under the supervision of the Railway Board. Now, RDSO can set standards for various goods that are under its domain. It functions as a technical adviser and consultant to the Railway Board, the Zonal Railways, the Railway Production Units, RITES, RailTel in respect of design and standardization of railway equipment and problems related to railway construction, operations and maintenance.
- Through One Nation One Standard scheme, BIS aims at aggregating and integrating the existing capabilities and dedicated domain specific expertise available with various organizations in the country engaged in standards development in their specific sectors, and enable convergence of all standard development activities in the country resulting in "One National Standard for One Subject".
- Thus to attain "Nation One Standard", Bureau of Indian Standards (BIS), has launched a scheme which provides for "Recognition of SDO".
- The **recognition is valid for 3 years** and will require renewal after completion of the validity period.

Bureau of Indian Standards

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

8. SDG India Index, recently in news, was released by?

- a) NITI Aayog
- b) The Energy and Resources Institute
- c) Ladakh Ecological Development and Environmental Group
- d) None of the above

Answer: A

Explanation:

- The third edition of the SDG India Index and Dashboard 2020–21 was **released by NITI Aayog**. NITI Aayog has the twin mandate to oversee the adoption and monitoring of the SDGs in the country, and also promote competitive and cooperative federalism among States and UTs.
- The SDG India Index 2020–21, **developed in collaboration with the United Nations in India**, tracks progress of all States and UTs on *17 Goals and 70 targets across 115 indicators* that are aligned to Ministry of Statistics & Programme Implementation’s (MoSPI) National Indicator Framework (NIF).
- States and Union Territories are classified as below based on their SDG India Index score:
 - Aspirant: 0–49
 - Performer: 50–64
 - Front-Runner: 65–99
 - Achiever: 100
- Since its inaugural launch in 2018, the index has been comprehensively documenting and ranking the progress made by **States and Union Territories** towards achieving the Sustainable Development Goals.

Overall Results and Findings

- Currently, there are no states in the aspirant and achiever category; 15 states/UTs are in the performer category and rest states/UTs in the front runner category.
- The **country’s overall SDG score improved by 6 points**—from 60 in 2019 to 66 in 2020–21.
- This positive stride towards achieving the targets is largely driven by exemplary country-wide performance in **Goal 6 (Clean Water and Sanitation) and Goal 7(Affordable and Clean Energy)**.
- Mizoram, Haryana, and Uttarakhand are the top gainers in 2020–21 in terms of improvement in score from 2019, with an increase of 12, 10 and 8 points, respectively.

Top-5 States	75	Kerala
	74	Himachal Pradesh, Tamil Nadu
	72	Andhra Pradesh, Goa, Karnataka, Uttarakhand
	71	Sikkim
	70	Maharashtra
Bottom-5 States	61	Chhattisgarh, Nagaland, Odisha
	60	Arunachal Pradesh, Meghalaya, Rajasthan, Uttar Pradesh
	57	Assam
	56	Jharkhand
	52	Bihar

OVERALL	Aspirant (0-49)	Nil
	Performer (50-64)	Manipur, Madhya Pradesh, West Bengal, Chhattisgarh, Nagaland, Odisha, Arunachal Pradesh, Meghalaya, Rajasthan, Uttar Pradesh, Assam, Jharkhand, Bihar
	Front Runner (65-99)	Dadra and Nagar Haveli and Daman and Diu Kerala, Himachal Pradesh, Tamil Nadu, Andhra Pradesh, Goa, Karnataka, Uttarakhand, Sikkim, Maharashtra, Gujarat, Telangana, Mizoram, Punjab, Haryana, Tripura
	Achiever (100)	Chandigarh, Delhi, Lakshadweep, Puducherry, Andaman and Nicobar Islands, Jammu and Kashmir, Ladakh
	Aspirant (0-49)	Nil

Model Tenancy Act

Union Cabinet has recently approved the Model Tenancy Act (MTA) to streamline the process of **renting property in India** and aid the rent economy in the estate sector. The Act aims to **formalise the shadow market of rental housing**, unlock vacant properties, increase rental yields, ease/remove exploitative practices, and reduce procedural barriers in registration, and increase transparency and discipline.

Need For The Act

- In India, 95% of households in rural areas live in self-owned housing, and rental housing is a predominantly urban phenomenon. Between 1951 and 2011, the **urban population in India grew by six times** and as of 2011, comprises 31% of the total population. This is projected to grow to 40% by 2036. The **2011 Census** noted that between 6.5 crore to 10 crore people (17% to 24% of the urban population) live in unauthorised housing in urban areas.
- The **2015 draft National Urban Rental Housing Policy** noted that urban areas face a significant housing shortage and stated that this cannot be addressed by home ownership.
- The **Economic Survey (2017-18)** noted that **rental housing is a key way to address informality and shortage**. It stated that rental housing enables mobility and affordability for low-income segments, who may not be able to purchase housing.
- At present, many states have their own rent laws but the laws have become outdated over a period of time and fail to serve their purpose. These restrictive and outdated rent control laws are one of the main reasons for low rental housing in India and discourage owners from renting out their vacant houses due to fear of repossession.
- One of the potential measures to unlock the vacant house is to bringing transparency and accountability in the existing system of renting of premises and to balance the interests of both the property owner and tenant in a judicious manner.
- Model laws are not binding on states. Since MTA is a model law (as land is a state subject) the responsibility will now be on the states to accept or reject it. States can adopt the Act as it is with fresh legislation, since it is a **state subject**, or they can **amend their existing rent acts to factor in the new MTA**. States and Union Territories have MoUs with the Centre under the Pradhan Mantri Awas Yojana-Urban which has this provision. Like in the case with RERA (Real Estate Regulation and Development Act), the fear is that states may choose not to follow guidelines, diluting the essence of the Model Act.

Features Of The Act

- **Written Agreement:** Verbal agreements will be out of the picture, as the MTA mandates written agreement for all new tenancies which is to be submitted to Rent Authority. Tenant will continue to pay the rent even during the pendency of a dispute with a landlord.
- **Applicability:**
 - The new Act will be **applicable prospectively** and will not affect existing tenancies.
 - The Act seeks to **cover urban and as well as rural areas**.
 - It will apply to premises let out for **residential, commercial or educational use**, but not for industrial use. It also won't cover hotels, lodging houses, inns, etc.
- **Institutional Mechanism:** It comprises of Rent Authority, Rent Court and Rent Tribunal to provide fast-track resolution of disputes.

- Rent Authority will be an officer of the rank of deputy collector. The rent authority will be set up by the district collector, with the approval of the respective state government.
- The District Collector, with the approval of the respective state government can appoint an Additional Collector or Additional District Magistrate to be the Rent Court for the purposes of this Act, within his jurisdiction. Orders of the Rent Authority can be appealed to the Rent Court having territorial jurisdiction, within a period of thirty days from the date of that order.
- The state government can appoint a District Judge or Additional District Judge as Rent Tribunal in each district. Orders of the Rent Court can be appealed to the jurisdictional Rent Tribunal, within a period of thirty days from the date of that order.
- So, the disposal of a complaint/appeal by the Rent Court and the Rent Tribunal will be mandatory within 60 days.
- The Rent Court and Rent Tribunal will have the powers of a civil court.
- **No Monetary Ceiling:** At present, in many old properties let out under archaic rent-control Acts, such ceilings have left landlords stuck with outdated rent amounts.
- **Digital Platform:** It will be set up in the local vernacular language or the language of the State/Union Territory for submitting tenancy agreement and other documents. Rent Authority will keep a tab on these agreements.
- **Subletting of Premises:** It can only be done with the prior consent of the landlord, and no structural change can be done by the tenant without the written consent of the landlord.
- **Repairs:** A landowner will have to give **24-hour prior notice** before entering the rented premises to carry out repairs or replacement.
- **Rent Provisions:** Rent cannot be increased during the ongoing tenancy contract unless the amount of increase or method of working out the increase is mentioned in the tenancy agreement. For revision of rent, landlords need to give a written notice three months in advance and the new rent will be on mutual consent.

Practices Enshrined In The Act

- The **security deposit** to be paid by the tenant should not exceed two months' rent for residential property (six months' rent in case of non-residential property), and should be a minimum of one month's rent for non-residential property.
- The Act lists the kinds of repairs each party would be responsible for, with the provision that **money for repairs can be deducted from the security deposit or rent**, as applicable, if a party refuses to carry out their share of the work.
- **No arbitrary eviction** of a tenant can be done during the tenancy period, except in accordance with provisions of the Act.
- The Rent Court can allow repossession by the landlord if the tenant **misuses the premises**, after being served a notice by the landowner. Misuse of the premises, as defined, includes public nuisance, damage, or its use for "immoral or illegal purposes". If the tenant refuses to vacate, the landlord can claim double the monthly rent for two months, and four times the monthly rent thereafter.
- In case of a **force majeure event**, the landlord shall allow the tenant to continue in possession until a period of one month from the date of cessation of such disastrous event, on the terms of existing tenancy agreement.

Conclusion

Besides its key objectives, the Model Act also seeks to ensure affordability, formalisation and increase private investment in the rental housing market. However, the framework proposed under the Model Act raises some concerns for right to privacy. The Model Act requires all landlord and tenants to intimate the Rent Authority about a rental agreement which requires both the tenant and the landlord to submit their Aadhaar numbers and attach self-attested copies of the card with the form. This may violate a **2018 Supreme Court judgement**, which states that requiring **Aadhaar card or number** can be made mandatory only for expenditure on a subsidy, benefit or service incurred from Consolidated Fund of India.

Central Civil Services - New Pension Rules

The Centre has amended its pension rules putting new restrictions on officials of **intelligence and security organisations** after retirement.

What Are New Amendments?

- The government has amended the CCS Pension Rules-1972. Under amended Rule-8(3)(a) : “No government servant, who, having worked in **any intelligence or security-related organisation included in the Second Schedule of the RTI Act**, shall, without prior clearance from the Head of the Organisation, make any publication after retirement, of any material relating to and including:
 - **Domain of the organisation**, including any reference or information about any personnel and his designation, and experience or knowledge gained by virtue of working in that organisation;
 - **Sensitive information**, the disclosure of which would prejudicially affect the sovereignty and integrity of India, the security, strategic, scientific or economic interests of the state, or relation with a foreign state or which would lead to incitement of an offence.”
- **The Second Schedule of the RTI Act** covers 26 organisations including the Intelligence Bureau, R&AW, Directorate of Revenue Intelligence, CBI, NCB, BSF, CRPF, ITBP and CISF.
- The move was prompted by concerns arising out of the fact that some **high-profile retired officers had written books** on their tenure, and some of these had revealed information.

Existing Provisions

- The pension of government servants is already **subject to their conduct after retirement**. Rule 8 of the CCS Pension Rules says: “Future good conduct shall be an implied condition of every grant of pension and its continuance.”
- The **appointing authority may, by order in writing**, withhold or withdraw a pension or a part thereof, whether permanently or for a specified period, if the pensioner is convicted of a serious crime or is found guilty of grave misconduct.
- The expression ‘grave misconduct’ includes the communication or disclosure of any secret official code or password or any sketch, plan, model, article, note, document or information which was obtained while holding office under the Government so as to prejudicially affect the interests of the general public or the security of the state.”

Restrictions For Government Employees While In Service

- Rule 7 of the CCS Conduct Rules restricts government servants from **resorting to or abetting any form of strike or coercion**.

- Rule 8 restricts them, except with government sanction, from **owning or participating in the editing or management of any newspaper** or other periodical publication or electronic media. If they publish a book or participate in public media, they “shall at all times make it clear that the views expressed by him are his own and not that of Government”.
- Rule 9 restricts a government servant from making statements of fact or opinion in writing or in a telecast or a broadcast “which has the effect of an **adverse criticism of any current or recent policy or action** of the Central Government or a State Government”
- Rule 9 of the CCS Pension Rules says that if any government official has **committed any misconduct and retires**, he or she may face departmental proceedings only until four years of the date of committing that misconduct.

Employment After Retirement

Rule 26, Death-cum-Retirement Benefits Rules, restricts a pensioner from any commercial employment for one year after retirement, except with previous sanction of the central government. Non-compliance can lead the central government declaring that the employee “shall not be entitled to the whole or such part of the pension and for such period as may be specified”.

Joining Politics after Retirement

- There is no rule to stop government servants from joining politics after their retirement. In 2013, Election Commission had written to DoPT (Department of Personnel and Training) and Law Ministry, suggesting a cooling-off period for bureaucrats joining politics after retirement, but it was rejected.
- The Legislative Department of the Ministry of Law advised “that any such restriction (against officials joining politics or contesting polls) may not stand the test of valid classification under Article 14 (equality before the law) of the Constitution of India”.

UN’s CEO Water Mandate

- **NTPC Ltd**, India’s largest power utility Under Ministry of Power, has become a signatory to the prestigious **UN Global Compact’s CEO Water Mandate**.
- The CEO Water Mandate is a UN Global Compact initiative to demonstrate commitment and efforts of companies to **better their water and sanitation agendas** as part of long-term Sustainable Development Goals.
- The CEO Water Mandate is designed to assist companies in the development, implementation, and disclosure of comprehensive water strategies and policies.
- It also provides a platform for companies to partner with like-minded businesses, UN agencies, public authorities, civil society organizations, and other key stakeholders.

UN Global Compact

- The UN Global Compact, launched in 2000, is a non-binding United Nations pact to encourage businesses and firms worldwide to adopt sustainable and socially responsible policies, and to report on their implementation.
- It is a principle-based framework for businesses, stating ten principles in the areas of human rights, labour, environment and anti-corruption.

Incredible India Tourist Facilitator Certification (IITFC) Programme

- Union Minister of State for Culture & Tourism appreciated the IITFC programme during an event organized on the occasion of World Environment Day today.
- IITFC Program, **launched by Ministry of Tourism**, will enable citizens to develop and enhance their skills associated with the tourism industry, and also incorporate knowledge of facilitating tourists across the country.
- According to WTTC (World Travel and Tourism Council), India ranked 10th among 185 countries in terms of travel & tourism's total contribution to GDP in 2019. It was 6.8% of the total economy. In FY20, the tourism sector in India accounted for 8% of the total employment in the country.
- **Objectives Of IITFC Program**
 - It acts as an enabler for transforming a local citizen with no specified skills but having **proficiency in a regional/local language** into a potential bread earner for their households.
 - This initiative will ensure a rewarding experience for the tourists, as this initiative will also **address the issue of tourist guides shortage** as well as it will provide a lot of competition that will further ensure in providing the best tourist facilitators.
 - The online learning management programme has been managed by the Indian Institute of Tourism and Travel Management. This online programme will lead to various advantages such as job creation for the local people, granting the local experience and traditional knowledge on tourist places etc.
- **Eligibility Criteria**
 - **Any 10th or 12th pass out applicants** can register online in the portal for the basic course.
 - The applicant should have **regional language proficiency or local language skills** pertaining to that particular state.
 - **A qualified professional or a passive job seeker** can register under this course to point an additional skill into the resume.
 - The **age limit of the applicant to be above 18 years** of age to register for this online course.

Right To Be Forgotten

In an important development for the 'right to be forgotten', the Delhi High Court recently ordered the removal of one of its own judgments from easy access.

Background

- The petitioner was acquitted of certain crimes by the court and the judgment was freely accessible on the Internet. Unhappy with this, the petitioner sought removal of the judgment from a leading database platform and search engines.
- The court, as a temporary relief, asked search engines to remove this order from search results, and ordered the database platform to block the judgment from being accessed by search engines.
- The High Court recognised that the petitioner may have a right to be forgotten, which must be balanced with the right of the public to access courts of record.

What Is A 'Right To Be Forgotten'?

- The 'right to be forgotten' is **the right to have publicly available personal information removed from the internet**, databases, or any other public platforms, once the personal information in question is no longer necessary, or relevant.
- The right to be forgotten has been recognised as a **statutory right in European Union under General Data Protection Regulation (GDPR)**, and has been upheld by a number of courts in the United Kingdom, and in Europe.
- In India, **there is no law that specifically provides for the right to be forgotten**. However, the Personal Data Protection Bill 2019 recognised this right.

Provisions Under Personal Data Protection Bill 2019

- Section 20 of the Bill gave an individual the right to restrict or prevent the continuing disclosure of their personal data when such data
 - **has served the purpose** for which it was collected, or is no longer necessary for said purpose;
 - **was made with consent of individual**, which consent has since been withdrawn; or
 - **was made contrary to PDP Bill** or any law in force.
- However, the provision made this right enforceable **only on an order passed by the adjudicating officer** appointed under the Bill. While passing such an order, the adjudicating officer is required to take several things into account, including
 - sensitivity of the personal data.
 - scale of disclosure and degree of accessibility that sought to be restricted or prevented.
 - role of the individual in public life.
 - relevance of the personal data to the public, and
 - nature of the disclosure and of the activities of the individual.

What The Courts Have Said?

- In **Justice Puttaswamy v. Union of India Case 2017**, the Supreme Court recognised right to be forgotten as being under the ambit of **right to privacy** (specifically informational privacy) under the Constitution.
- In this landmark **right to privacy judgment**, it observed that the "right of an individual to exercise control over his personal data and to be able to control his/her own life would also encompass his right to control his existence on the Internet".
- The court observed that if someone desired to remove personal data from the virtual space, it ought to be respected. A lot of personal information may serve no "legitimate interest", was "incorrect", or was not "necessary" or "relevant".
- However, the right to be forgotten was subject to **reasonable restrictions** based on countervailing rights such as free speech.

Model Panchayat Citizens Charter

Ministry of Panchayati Raj, in collaboration with National Institute of Rural Development and Panchayati Raj (NIRDPR), has released a Model Panchayat Citizens Charter framework for delivery of services

across the sectors, aligning actions with localised Sustainable Development Goals (SDGs). NIRDPR is an autonomous organisation under the Union Ministry of Rural Development

Aim and Objectives

- The basic objective of the Gram Panchayat Citizen Charter is to empower the citizens in relation to public services and to improve the quality of services without any prejudice, and in accordance with the expectations of the citizens. The is to provide services to the people in a time bound manner, redressing their grievances and improving their lives.
- The Panchayats are expected to utilise this framework to draw up a citizen's charter and adopt it through a resolution of the Gram Sabha by 15 August this year.
- The state governments have been requested to draw up a timebound plan of action for the purpose.

Model Panchayat Charter

The 'Gram Panchayat Citizens' Charter should include the following information –

- i) Vision and Mission of the Panchayat: The first key component of Citizens' charter is a clear statement of Panchayat "Vision and Mission". The vision implies ultimate direction in which the Panchayat seeks to move. The Mission statement provides the specific objectives which drive the Panchayat in tune with the vision.
- ii) Service Standards / Procedure for obtaining services: For obtaining a service listed in the charter, the eligible citizen shall apply to the designated officer along with the essential documents and also pay the prescribed fee if any. The following information need to be provided under service standards
 - ✓ Name of the service,
 - ✓ Details of the service (including beneficiaries and eligible persons),
 - ✓ Time frame to deliver the service,
 - ✓ Name and contact details of the person in the Panchayat responsible for providing the service.
- iii) Grievance Redressal: The Sarpanch and the Panchayat Secretary must be accessible to the Citizens to listen to the grievances and make arrangements to address the complaint effectively. Timely redressal of Citizens grievances not only reduces discontent, but also helps Panchayat to improve its functioning. If the citizen feels that the Panchayat has failed to provide a service, he can file an appeal before the designated higher authority. The contact details of the authority to whom citizen need to contact for any such complaint need to be included in the charter.

Benefits

- The Citizen Charter would ensure **transparent and effective delivery of public services** for sustainable development and enhanced citizen service experiences; deepening inclusive and accountable Local Self Governments.
- This will help in making the **citizens aware of their rights** on the one hand, and to make the Panchayats and their **elected representatives directly accountable to the people**, on the other hand.

Cinematograph Bill 2021

Soon after the Centre released draft Cinematograph (Amendment) Bill 2021, it received a lot of criticism from many actors and filmmakers.

Significant Changes Proposed

- The Ministry of Information and Broadcasting wants to add a provision to the Act giving **revisionary powers to the Centre**. If Section 5B(1), that pertains to principles for guidance in certifying films, is violated then the Centre may direct the Chairman of Central Board of Film Certification to either **re-examine the film** or **reverse the decision**.
- It proposes to give certificates to films for perpetuity, which is currently set for 10 years.
- The provisions relating to certification of films under '**unrestricted public exhibition**' category are proposed to be amended so as to further **sub-divide the existing UA category into age-based categories**.
- As per the proposed law, **films will be categorised as follows**:
 - **Category 'U'**: This is for unrestricted public exhibition.
 - **Category 'U/A'**: This requires parental guidance for children under 12. 'U/A' is further divided into three categories as per the age of children -- U/A 7+, U/A 13+ and U/A 16+.
 - **Category 'A'**: This is for adult films.
- While there are no piracy policies in the **Cinematograph Act, 1952**, in the amendments the government proposes to include **Section 6AA** to prohibit unauthorised recording.
- If the law is violated, the **punishment** will be "imprisonment not be less than three months". This may be extended to three years and with a fine "which shall not be less than Rs 3 lakh but which may extend to 5 per cent of the audited gross production cost or with both".

Criticisms Against The Bill

- Filmmakers believe that the proposed amendments will make them powerless at the hands of the state and more vulnerable to threats, vandalism and intimidation of mob censors.
- Under the proposed amendments to Cinematograph Act, Central Government would have the **power to revoke or recall certification of films** which have already been cleared by the Censor Board.
- Undermining **sovereignty of the Censor Board** and the Supreme Court, this provision will effectively give Central Government supreme power over cinema exhibition in the country, potentially **endangering freedom of expression and democratic dissent**.
- In April 2021, the government decided to **do away with Film Certification Appellate Tribunal (FCAT)**, a statutory body constituted to hear appeals of filmmakers aggrieved by cuts suggested by the CBFC. Now, filmmakers unhappy with the decision of the Censor Board are left with no option but to appeal in the High Courts, bearing legal cost of representation and financial loss due potential delays in film releases.
- Cinematograph (Amendment) Bill 2021 must clearly **define the role of CBFC** as a body which certifies film content for public exhibition, and not as a censoring body.
- While film piracy poses real challenges to filmmakers, the proposed amendments do not address this concern effectively merely by introducing a penal provisions.

Gujarat Prohibition Act, 1949

The Gujarat Prohibition Act, 1949 is being challenged before the Gujarat High Court, more than seven decades after it came into effect as the Bombay Prohibition Act.

Origin And Rationale Of Prohibition Law

- The first hint at the prohibition of liquor was through the **Bombay Abkari Act, 1878**. This Act dealt with **levying of duties on intoxicants**, among other things and aspects of prohibition via amendments made in 1939 and 1947.
- The policy of prohibition was initiated in 1939 and soon after its initiation “the popular government went out of office and for various reasons the enforcement of the policy remained dormant”.
- Then in 1940, the government reconsidered the question of prohibition and it was decided to undertake and enforce a policy of “**total prohibition**” in the whole of the **Province of Bombay** on the basis of a four-year plan.

Arguments Against The Law

- With expanding interpretation of the **right to life, personal liberty and privacy**, as contained in **Article 21** of the Constitution, a citizen has a right to choose how he lives, so long as he is not a nuisance to the society. The state cannot dictate what he will eat and what he will drink.
- Any invasion by the state in an **individual’s right to choice of food and beverage** amounts to an unreasonable restriction and destroys the **individual’s decisional and bodily autonomy**.
- Grant of health permits and **temporary permits to out-of-state tourists** on the basis that there is no intelligible differences in the classes thus being created by the state on who gets to drink and who does not and violates the **Right to Equality under Article 14** of the Constitution.
- Despite prohibition being in place for more than six decades, a steady supply of liquor continues to be available through an **underground network of bootleggers**, organised criminal gangs and corrupt officials.
- **Haryana, Tamil Nadu and Kerala** too have experimented with prohibition at different times, but abolished it due to its ineffectiveness. Prohibition did not solve the problem of alcohol consumption.
- Sometimes a change in the law precedes societal change “and is even intended to stimulate it,” and sometimes, a **change in the law is the result in the social reality**. “The **law must take cognizance of the changing society** and march in consonance with the developing concepts.

Arguments In Favour

- The right to eat non-vegetarian food within the four walls of one's home cannot be compared to the right to drink alcohol, which is injurious and can be stopped.
- If relief claimed by the petitioners of setting aside several sections are granted, it will open Pandora’s box, primarily on the ground that various research and studies have shown that alcohol tends to aggravate the sense of violence.
- Though the petitioners say there is no harm in drinking alcohol in the privacy of their homes, **most of the domestic violence crimes** against women and children are committed behind closed doors.
- The plea challenging the law is an “attack on the constitutional obligation of the primary duty of the **State as the guardian of the population to protect the health and lives** of its people”.

Conclusion

The belief that banning alcohol would check issues related with alcoholism is a very simplistic notion, whereas in reality the situation is much more complex. Between issues such as morality, prohibition or freedom of choice, also are factors like economy, jobs, etc, which cannot be ignored. What is required is an informed and a constructive dialogue on the causes and effects.

Delimitation In Jammu and Kashmir

The Central Govt. has made it clear that for the political process to begin and elections to take place in the Valley, it is crucial for the delimitation exercise to be completed in the region first.

What Is Delimitation

- Delimitation is defined as “the act or process of fixing limits or boundaries of territorial constituencies in a country or a province having a legislative body.”
- In the Indian context, Delimitation is the **process of redrawing boundaries of Lok Sabha and state Assembly seats** to represent changes in the population. It's only after this exercise has been completed that an election can be conducted.
- The **objective** is to have equal representation to equal segments of the population and ensure a fair division of geographical areas so that all political parties or candidates contesting elections have a level playing field in terms of a number of voters.
- In the normal course of events, the exercise is **carried out every few years after Census** to ensure that each seat has approximately an equal number of voters.
- The Parliament enacts a Delimitation Act under **Article 82** of the Constitution and an independent high-powered panel known as the **Delimitation Commission** is constituted to carry out the exercise.

Delimitation Commission

- It consists of a **chairman**, who can either be a retired or a sitting judge of the Supreme Court, the Chief Election Commissioner or any of the two Election Commissioners, and the Election Commissioner of the state in which the exercise is being carried out.
- Besides, a **select number of MPs and legislators** (maximum 5) of the state chosen for the delimitation exercise can also be included as additional members of the commission.
- It is a **temporary body** and entirely depends on Election Commission for carrying out the delimitation exercise. On behalf of the commission, the poll panel officials collect Census data for each district, tehsil and gram panchayat and on the basis of the information, the new boundaries are demarcated.
- Delimitation is a complex political exercise and **can take up to five years**.

J&K and Delimitation

- Assembly seats in J&K were delimited in **1963, 1973 and 1995**. The last exercise was conducted when the state was under **President's Rule** and was based on the 1981 census, which formed the basis of the state elections in 1996.
- In what used to be the state of J&K, the delimitation of Lok Sabha seats was governed by the Indian Constitution, but the delimitation of its Assembly seats was governed separately by the **Jammu and Kashmir Constitution and Jammu and Kashmir Representation of the People Act, 1957**.
- Jammu and Kashmir was **kept out of the delimitation exercise** when it was carried out in the rest of the country between 2002-2008.
- Following the **abrogation of Article 370** on August 5, 2019, Jammu and Kashmir lost its special status and became a Union Territory. A delimitation commission was constituted and asked to carve out Assembly and Parliament seats.
- According to Jammu and Kashmir Reorganisation Act of 2019, the new legislature in J&K will have **90 seats, seven more than the previous assembly**, after the constituencies are demarcated afresh.

- The completion of delimitation exercise in the Valley will signal the resumption for the political process in Jammu and Kashmir, paving way for elections to be held in the Union Territory which has been under Centre's rule since June 2018.

Concerns About J&K Delimitation

- The delimitation in J&K is a politically sensitive matter as it concerns the **representation of Kashmir** where Muslims are in majority and the Hindu-dominated Jammu in the Legislative Assembly.
- Since the delimitation is based on the census, several groups in Jammu have been strongly opposing delimitation based on the 2011 census. Per the 2011 census, **Kashmir's population is over 68 lakh against 53 lakh in Jammu**. This means Kashmir will get more seats in terms of the population ratio.
- Political parties have been demanding greater representation for Hindu-dominated Jammu in the legislative assembly.
- The mainstream political parties in J&K remain concerned that their political fortunes will see a reversal after the delimitation exercise.

Challenging Poll Results

West Bengal Chief Minister has filed an election petition in the Calcutta High Court challenging the Assembly election result of Nandigram constituency, where she had contested and lost.

What Is An Election Petition?

- The Election Commission's role ends with the declaration of results, that is once the Returning Officer has signed the final result sheet (**Form 20**).
- After that, an **election petition is the only legal remedy available** to a voter or a candidate who believes there has been malpractice in an election. Such a person can challenge the result through an election petition submitted to **the High Court of the state** in which the constituency is located.
- Such a petition has to be **filed within 45 days from the date of the poll results**; nothing is entertained by courts after that. Although the Representative of the People Act of 1951 suggests that the High Court should try to conclude the trial within six months, it usually drags on for much longer, even years.

Grounds On Which Election Petition Can Be Filed

Under **Section 100 of the RP Act**, an election petition can be filed on the grounds that:

- **Improper acceptance of nomination** of the winning candidate or improper rejection of a nomination.
- On the day of the election, the winning candidate was **not qualified to contest**.
- **Malpractice in counting process**, which includes improper reception, refusal or rejection of any vote, or the reception of any vote which is void.
- The winning candidate, his poll agent or any other person with the consent of the winning candidate has **indulged in a corrupt practice**. Section 123 of the RP Act has a detailed list of what amounts to corrupt practice, including bribery, use of force or coercion, appeal to vote or refrain from voting on grounds of religion, race, community, and language.
- **Non-compliance with the provisions** of the Constitution or the RP Act or any rules or orders made under the RP Act.

What Happens If Court Finds That A Contention Of Malpractice Is Correct

- This depends on relief that is claimed by the petitioner in her election petition. Under Section 84 of the RP Act, the petitioner may ask that the **results of all or the winning candidates may be declared void.**
- In addition to that, the petitioner may also ask the court to declare her (in case the petition is filed by a candidate) or any other candidate as the winner or duly elected.
- So the verdict on an election petition, if found in favour of the petitioner, may result in a fresh election or the court announcing a new winner.

- Out of the total registered deaths, the share of male and female was 59.6% and 40.4% respectively. The share of institutional deaths in total registered deaths was 32.1%.
- 19 States have achieved a 100% death registration rate. Eleven States/Union Territories achieved more than 90% registration of deaths within the prescribed period of 21 days.
- In the case of registration of infant deaths, the share of urban area was 75.5% compared to 24.5% in rural areas.

C. Sex Ratio at Birth data

- Sex ratio at birth is the number of females born per thousand males. The World Health Organisation estimates that the natural sex ratio at birth is about 952 females to every 1,000 males.
- In a huge improvement from the previous census, none of the State/UT has recorded sex ratio at birth (SRB) below 901. The **highest SRB** was reported by Arunachal Pradesh (1,024), followed by Nagaland (1,001) Mizoram (975) and Andaman & Nicobar Islands (965).
- The **lowest SRB** was reported by Gujarat (901), Assam (903) and Madhya Pradesh (905), followed by Jammu & Kashmir (909).
- Though tribal communities have traditionally had better sex ratios than the rest, Chhattisgarh, a tribal state, has recorded the highest fall in SRB, from 968 in 2017 to 931 in 2019.
- In the same period, among larger states, Telangana has recorded the biggest improvement, from 915 to 953, followed by Uttarakhand, where the SRB went from 929 to 960.

10. Which of the following State/UT/Districts in India have been certified as TB Free?

- | | |
|-------------------|-----------------------------|
| 1. Sikkim | 2. Goa |
| 3. Lakshadweep | 4. Budgam (Jammu & Kashmir) |
| 5. Surat (Gujrat) | |

Select the correct code:

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

Answer: C

Explanation

- An event on ‘**Global Drive to Scale-up TB Prevention**’ was organized by **WHO Global Tuberculosis Programme**.
- The purpose was to discuss key actions needed at the global and country-level to scale up TB prevention strategies and drive progress towards achieving the 2022 UN High-Level Meeting target on TB preventive treatment.
- Tuberculosis (TB) is caused by **bacteria (Mycobacterium tuberculosis)** that most often affect the lungs. It **spreads from person to person** through the air. A person needs to inhale only a few of these germs to become infected.

Answer: B

Explanation:

- During the second wave of Covid, there have been several incidents of violence against doctors serving in Covid wards. To address this concern, the Union Home Secretary has asked the states and UTs to keep a close watch on such cases and invoke Epidemic Diseases Act, where applicable.
- Thus, EDA was amended to include protections for healthcare personnel fighting epidemic diseases. It also expands the powers of the central government to prevent the spread of such diseases.
- States and UTs have also been asked to keep a close watch on any objectionable content in social media that may worsen the situation.

Epidemic Diseases Act, 1897

- The Epidemic Diseases Act (EDA) was enacted in 1897 by the British government in India, to handle the epidemic of **bubonic plague** that had spread in the former Bombay Presidency.
- The Act empowers the state governments to take special measures and prescribe regulations in an epidemic. EDA is now routinely enforced across the country for dealing with outbreaks of diseases such as swine flu, dengue, and cholera.

Provisions of EDA

- If a State Government is satisfied that any part of the State is threatened with an outbreak of any dangerous epidemic disease, the government can invoke the EDA.
- The government may provide regulations for the inspection of persons travelling by railway, separation in hospitals and temporary accommodations of persons, suspected by the inspecting officer of being infected with the disease.
- It provides for **penalties** under the Act. Any person disobeying any regulation or order is charged with an offence punishable under Section 188 of the Indian Penal Code.
- Any offence under Section 188 is a **cognisable offence**. Under a cognisable offence the police officer has the authority to make an arrest without a warrant.
- The Act gives **immunity to the implementing officers** for actions taken under the Act.

Provisions Under Epidemic Diseases (Amendment) Act, 2020

- The Bill defines healthcare service personnel as persons who are at risk of contracting the epidemic disease while carrying out duties related to the epidemic. These include:
 - Public and clinical healthcare providers such as doctors and nurses including ASHA (Accredited Social Health Activist) workers at the community level.
 - Any person empowered under the Act to take measures to prevent the spread of the disease.
- The amendment makes acts of violence against healthcare professionals a **cognizable and non-bailable offence**.
- Persons convicted under the Act have to **pay compensation to the healthcare service personnel** whom they have hurt. In case properties of health workers, including their ambulances, are damaged, the attackers will have to pay twice the market price of such assets.
- Cases registered under the Act will be investigated by a police officer, not below the rank of Inspector.

One Nation, One Ration Card (ONORC)

- ONORC scheme was launched to enable migrant workers and their family members to buy subsidised ration from any fair price shop anywhere in the country under NFSA.
- Before ONORC, a ration card holder could buy food grains only from an FPS assigned to him/her in the locality in which he/she lived. If a beneficiary shifted to another state, he/she had to apply for a new ration card in the second state.
- Registering for ration cards at the new location is a difficult process, especially if some members of the household still remain in their original home.

Functioning of ONORC

- ONORC is based on technology that involves details of beneficiaries' ration card, Aadhaar number, and electronic Points of Sale (ePoS).
- The system runs with the **support of two portals** — IM-PDS and Annavitran which host all the relevant data. The **Annavitran portal** enables a migrant worker or his family to avail the benefits of PDS outside their district but within their state. Further, the **IM-PDS portal** provides the technological platform for the inter-state portability of ration cards.

Beneficiaries

- The main beneficiaries of the scheme are the country's migrant workers. According to data from the Census 2011, there are more than 45 crore internal migrants in India.
- Apart from this, field studies estimate that four crore to ten crore people are short-term migrants, often working in cities, but not moving there permanently.
- Women who change locations after marriage, will also benefit from the scheme, as they find it difficult to start accessing ration benefits using a new household's card.

Benefits

- Under the old system, beneficiaries were dependent on a single fair price shop. Under the new system, if they are denied service or face corruption or poor quality in one shop, they are free to move to a different shop.
- It is expected that allowing ration card portability will also reduce corruption and improve access and service quality by removing monopolies.
- The scheme is also driving faster implementation of initiatives to digitise and integrate the food storage and public distribution system.

Completion of NDUW Portal

- The court also reprimanded Labour Ministry for delay in completing the work on National Database for Unorganised Workers (NDUW) portal.
- NDUW portal will be used to register and identify migrant workers and unorganised labourers to ensure their rights, welfare and food security.
- The court had ordered the Ministry to finalise the NDUW module way back in 2018. However, the Centre has blamed various technical and operational issues for the delay.
- The court has now ordered the Centre to complete the work on the portal by July 31 and complete the registration of workers by December 31 this year.

- The programme is shaped on the recommendations of the empowered expert committee (EEC) report on start-ups for elderly.
- India's elderly population is on the rise and the share of elders, as a percentage of the total population in the country, is expected to increase from around 7.5% in 2001 to almost 12.5% by 2026, and surpass 19.5% by 2050.
- Thus, there is an urgent need to create a more robust eldercare ecosystem in India, especially in the post-COVID phase. Keeping this need in mind, an amount of Rs 100 crore has been assigned for the promotion of the silver economy.

SAGE Programme

- The SAGE programme and portal have been launched with a view to help people who are interested in entrepreneurship in the field of providing services for elderly care.
- The SAGE portal will be a one-stop access of elderly care products and services by credible start-ups. The start-ups selected under SAGE will be those which will provide new innovative products and services to elderly persons in various areas like health, travel, finance, legal, housing, food etc.
- A fund of upto Rs.1 crore as one-time equity will be granted to each selected start-up.

19. PRABANDH portal is associated with:

- a) **Education**
- b) **Health**
- c) **Defence**
- d) **None of the above.**

Answer: A

Explanation:

- With COVID disruptions to education leading to higher levels of dropouts, the Centre has set up a module to map out-of-school children.
- Globally, the United Nations had estimated that **almost 24 million school age children** are at risk of dropping out from the educational system due to the pandemic.
- The online module would allow for the mapping of the children with the nearest Special Training Centres, on the PRABANDH portal, to provide bridge courses.
- This will facilitate age appropriate admissions of children in the age group of 6-14 years and those belonging to socially and economically disadvantaged groups.
- For out-of-school children in the 16-18 years of age group and belonging to Socially and Economically Disadvantaged Group, financial assistance has been made available for the first time from the year 2021-22, to continue their education through Open/Distance Learning mode

PRABANDH Portal

- PRABANDH (P**R**oject Appraisal, B**U**dgeting, A**C**hievements and D**A**ta Handling System) portal was launched to utilise technology in order to enhance efficiency and manage the implementation of Samagra Shiksha scheme.
- It intends to bring transparency and accuracy in the system w.r.t. approvals, financial status etc.
- It also aims to streamline the Financial Management System, to enable more accurate assessment of actual requirement of funds for implementation and to facilitate efficient decision making.

Samagra Shiksha

- Samagra Shiksha is a centrally sponsored scheme for school education extending from **pre-school to class 12**, with the broader goal of improving school effectiveness.
- It **subsumed three Schemes**: Sarva Shiksha Abhiyan (SSA), Rashtriya Madhyamik Shiksha Abhiyan (RMSA) and Teacher Education (TE).
- Its vision is to ensure inclusive and equitable quality education from pre-school to senior secondary stage in accordance with the Sustainable Development Goal (SDG) for Education.
- The main outcomes of the scheme are envisaged as universal access, equity and quality, promoting vocationalisation of education and strengthening of Teacher Education Institutions (TEIs).

20. Performance Grading Index (PGI), recently in news, was released by?

- a) Ministry of Education
- b) Niti Aayog
- c) Ministry of Environment, Forest and Climate Change
- d) None of the above

Answer: A

Explanation:

- Union Education Minister approved the release of Performance Grading Index (PGI) 2019-20 for States and Union Territories.
- PGI is a tool to provide insights on the status of school education in States and UTs including key levers that drive their performance and critical areas for improvement.
- **Department of School Education and Literacy (DoSEL)**, as an implementing agency, has designed the PGI to catalyse transformational change in the field of school education. The PGI for States and Union Territories was first published in 2019 with reference year 2017-18.
- The PGI is structured in **two categories**, namely, Outcomes and Governance & Management and comprises 70 indicators in aggregate with a total weightage of 1000. Further, under the Outcomes category there are three domains: Access; Infrastructure and Facilities; and Equity.

Source of Information

The information on the indicators are drawn from data available with the DoSEL from the Unified District Information System for Education (UDISE), National Achievement Survey (NAS) of NCERT, Mid Day Meal website, Public Financial Management System (PFMS) and the information uploaded by the States and UTs on the Shagun portal of DoSEL

Domain wise Performance

- Punjab, Chandigarh, Tamil Nadu, Andaman & Nicobar Islands and Kerala occupy the highest grade (Grade A++) for 2019-20.
- In case of **learning outcomes**, it has been observed that, in general, the scores obtained in the higher standards are less than those in the lower standards. Thus, it is important to ensure better interventions at the lower standards as it will have a positive effect at the higher levels.

REPORT CARD

- ▶ Punjab, Chandigarh, TN, Andaman & Nicobar Islands, and Kerala got the highest grade, A++, in school edu
- ▶ Delhi, Gujarat, Haryana, Rajasthan, Puducherry, and Dadra & Nagar Haveli got A+
- ▶ Punjab scored maximum in governance and management; Bihar and Meghalaya got the lowest in infrastructure and facilities

- Nineteen States and UTs have shown improvement by 10% or more in **Governance and management**. However, 24 States/ UTs have scored less than 80% of the maximum possible score. Punjab has scored maximum points for governance and management.
- Thirteen states and UTs showed improvement by 10 per cent or more in **Infrastructure and Facilities**. Infrastructure and facilities is the second biggest concern with 20 States/ UTs having scored less than 80% of maximum possible score. Bihar and Meghalaya have scored the lowest in terms of infrastructure and facilities.
- Andaman & Nicobar Islands, Lakshadweep and Punjab have shown improvement by 10% or more in **Access domain**. Arunachal Pradesh, Manipur and Odisha have shown more than 10% improvement in the **Equity domain**.

Employee's Compensation Rules

- The Ministry of Labour and Employment has notified the **draft rules relating to Employee's Compensation** under the Code on Social Security, 2020. The draft rules relating to compensation are aimed at ensuring payments to workers or to their families in case of disability or death.
- The Labour Ministry has sought comments from the stakeholders on the proposed draft Rules within 45 days following which it will be notified and become effective.

Code on Social Security (CSS), 2020

- The Code on Social Security, 2020 was passed by the Parliament in September, 2020. It amends and consolidates the laws relating to social security to extend social security to employees and workers in the organised and the unorganised sectors.
- It also contains provisions relating to employer's liability for compensation in case of fatal accidents, serious bodily injuries or occupational diseases.
- Although the Centre has not yet notified the date of implementation of CSS, 2020, it plans to notify and implement the compensation provision in the Code even before the Code.
- This is to avoid any legal disputes arising over compensation to India workers, either working domestically or overseas, in case of loss of life due to the pandemic.
- The proposed draft Rules will supersede the Employee's Compensation Rules, 1924, Employee's Compensation (Transfer of Money) Rules, 1935 and Employee's Compensation (Venue of Proceedings) Rules, 1996.

Draft Rules

- The draft Compensation rules aim to ensure that payments are made within 30 days to the workers or to their families in case of death or disability.
- If the compensation amount is not paid by the employer within 30 days, the employer will be liable to pay interest at the rate of 12% per annum from the due date till the time the compensation is made.

Code on Social Security 2020: Key Concerns

- The onus lies on informal workers registering as beneficiaries, further they do not have digital literacy and connectivity
- Women engaged in the unorganised sector remain outside the purview of maternity benefit.
- For informal sector workers, access to employees' provident fund remains unfulfilled too in the new code
- Although payment of gratuity was expanded in the new Code, it still remains inaccessible for a vast majority of informal workers

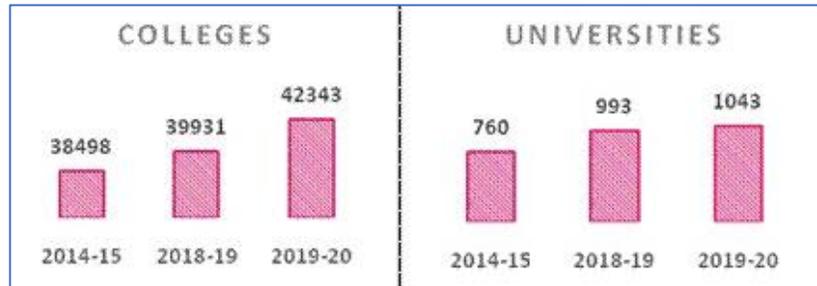
- The draft Rules also contain provisions for arrangements with other countries for the transfer of money paid as compensation under the Code.

AISHE 2019-20

The Ministry of Education recently released the **All Indian Survey of Higher Education (AISHE) report 2019-20**. The AISHE report provides key performance indicators on the current status of higher education in the country. It is the **10th** in the series of AISHE, **annually released** by the Department of Higher Education.

Highlights Of The Report

- Overall, India has 1,043 universities, 42,343 colleges and 11,779 standalone institutions schools in the country.
- The number of universities has increased by 30.5% from 2015-16 to 2019-20 and the number of colleges has also increased by about 8.4% in the same period.
- Only 8,565 colleges in India or about a fifth (21.4%) were government colleges in 2019-20. But there is wide regional variation in the share of government colleges across different states.
- College density**, i.e. the number of colleges per lakh eligible population (in the age-group 18-23 years) varies from 7 in Bihar to 59 in Karnataka, as compared to All India average of 30. 60.56% of the colleges are located in rural areas.
- The total number of teachers in higher education was 15,03,156 and the **Pupil Teacher Ratio** in 2019-20 was 26.
- The share of women at the demonstrator/tutor position in educational institutions is 65.5%, but it falls to 27.5% at the level of associate professor/professor.



Enrolment Numbers

- Total enrolment in higher education** was 3.85 crores in 2019-20 as compared to 3.74 crores in 2018-19, registering a growth of 11.36 lakh (3.04 %).

- Uttar Pradesh** comes at number one with the highest student enrolment followed by Maharashtra and Tamil Nadu.



- The **Gross Enrolment Ratio (GER) in higher education**, which is calculated for 18-23 years of age group, has increased from 26.3% in 2018-19 to **27.1%** in 2019-20. GER was 24.3% in 2014-15.
- GER is a measure used to determine the percentage of students enrolled at different grade levels.

Improvement In Female Enrolment

- In the last five years from 2015-16 to 2019-20, there has been a growth of 11.4% in overall student enrolment. During the same period, the rise in female enrolment is 18.2%.

- Further, the Gross Enrolment Ratio of females stands at 27.3%, which is better than the GER of males at 26.9%.
- The **Gender Parity Index (GPI)** in higher education in 2019-20 is 1.01 against 1.00 in 2018-19. GPI is a socioeconomic index designed to measure the relative access to education of males and females.
- The survey also found a very high increase of female participation at MA, MSc and MCom levels during the last five years. However, it is in the professional and technical courses where female enrolment is significantly lower.

Course Wise Enrolment

- Nearly 85% of the students (2.85 crore) were enrolled in the six major disciplines such as Humanities, Science, Commerce, Engineering & Technology, Medical Science and IT & Computer.
- There has been a significant shift in the choice of the discipline of study, as in the last five years engineering and technology registered a negative growth (-13.4), while medical science enrolment has increased by 51.1% in the same period.
- However, some professional programmes such as MBA, MBBS, BEd and LLB continue to attract more students.
- At the undergraduate level, the highest number (32.7%) of students is enrolled in Arts/Humanities/Social Sciences courses followed by Science (16%), Commerce (14.9%) and Engineering and Technology (12.6%).

H10N3 Bird Flu Strain

- China has reported the first case of human infection with the **H10N3 strain of bird flu**. The strain is “not a very common virus.”
- H10N3 is a **low pathogenic or relatively less severe strain** of the virus in poultry and the risk of it spreading on a large scale is very low.
- Several strains of bird flu have been found among animals in China but mass outbreaks in humans are rare.
- **H5N8 is a subtype of the Influenza A virus** (also known as the bird flu virus). While it only presents a low risk to humans, it is highly lethal to wild birds and poultry.
- Influenza A viruses are the only influenza viruses known to cause flu pandemics, i.e., global epidemics of flu disease. A **pandemic can occur** when a new and very different influenza A virus emerges that both infects people and has the ability to spread efficiently between people.

Delta Plus Variant

- The World Health Organisation (WHO) has categorised **only B.1.617.2**, one of the three strains of the B.1.617 COVID-19 variant, **as a “variant of concern”** and noted that lower rates of transmission have been observed for the other two lineages.
- WHO has tagged B.1.617.2 strain of coronavirus as ‘**Delta**’ variant, which has further mutated. Mutated form of the Delta variant is termed as “**Delta Plus**” or “**AY.1**” variant.
- The **B.1.617 variant was first detected in India** and was divided in three lineages - B.1.617.1, B.1.617.2 and B.1.617.3.

Corbevax Vaccine

- India has placed an advance order to block 300 million doses of a new **Covid-19 vaccine, Corbevax**, from Hyderabad-based company **Biological E**.
- Corbevax is a “**recombinant protein sub-unit**” vaccine, which means it is made up of a specific part of SARS-CoV-2 — the spike protein on the virus’s surface.
- The spike protein allows the virus to enter the cells in the body so that it can replicate and cause disease. However, when this protein alone is given to the body, it is not expected to be harmful as the rest of the virus is absent.
- The body is expected to develop an immune response against the injected spike protein. Therefore, when the real virus attempts to infect the body, it will already have an immune response ready that will make it unlikely for the person to fall severely ill.
- Other Covid-19 vaccines approved so far are either **mRNA vaccines, viral vector vaccines or inactivated vaccines**.
 - Inactivated vaccines, which include killed particles of the whole SARS-CoV-2 virus, attempt to target the entire structure of the virus.
 - Corbevax, like the mRNA and viral vector Covid-19 vaccines, targets only the spike protein, but in a different way.
 - Viral vectors and mRNA vaccines use a code to induce our cells to make the spike proteins against which the body has to build immunity.

Monoclonal Antibodies and Covid-19

- An experimental monoclonal antibody cocktail, **REGEN-COV2**, has been found to be a life-saving treatment for some of the most severely affected Covid-19 patients, results of a clinical trial in the UK have shown.
- Monoclonal antibodies are **artificially created antibodies** that aim to **aid the body’s natural immune system**. They target a specific antigen — a protein from the pathogen that induces immune response.
- Monoclonal antibodies can be created in the lab by exposing white blood cells to a particular antigen. In the case of Covid-19, scientists usually work with the spike protein of the SARS-CoV-2 virus, which facilitates the entry of the virus into the host cell.
- To **increase the quantity of antibodies produced, a single white blood cell is cloned**, which in turn is used to create identical copies of the antibodies.
- **Need for Monoclonal Antibodies**
 - In a healthy body, the immune system is able to create antibodies — tiny Y-shaped proteins in blood that recognise microbial enemies and bind to them, signalling the immune system to then launch an attack on the pathogen.
 - However, for people whose immune systems are unable to make sufficient amounts of these antibodies, scientists provide a helping hand.

History

- In the 1900s, Nobel-prize winning German immunologist **Paul Ehrlich** proposed the idea of a ‘**Zauberkugel**’ (**magic bullet**), a compound which selectively targets a pathogen.

- **Muromonab-CD3** is the **world's first monoclonal antibody** to be approved for clinical use in humans. Muromonab-CD3 is an **immunosuppressant drug** given to reduce acute rejection in patients with organ transplants.
- Monoclonal antibodies are now relatively common. They are used to **treat HIV, Ebola virus infection** and are especially useful against the **drug-resistant virus**.

- **Itolizumab targets CD6**, a protein found in the outer membrane of a T-cell. **T-cell is a type of white blood cell** that plays a central role in the body's immune response.
- **Tocilizumab inhibits IL-6 activity**, a molecule that causes cytokine storm-related complications in severe Covid.

Indian Certification of Medical Devices (ICMED) Scheme

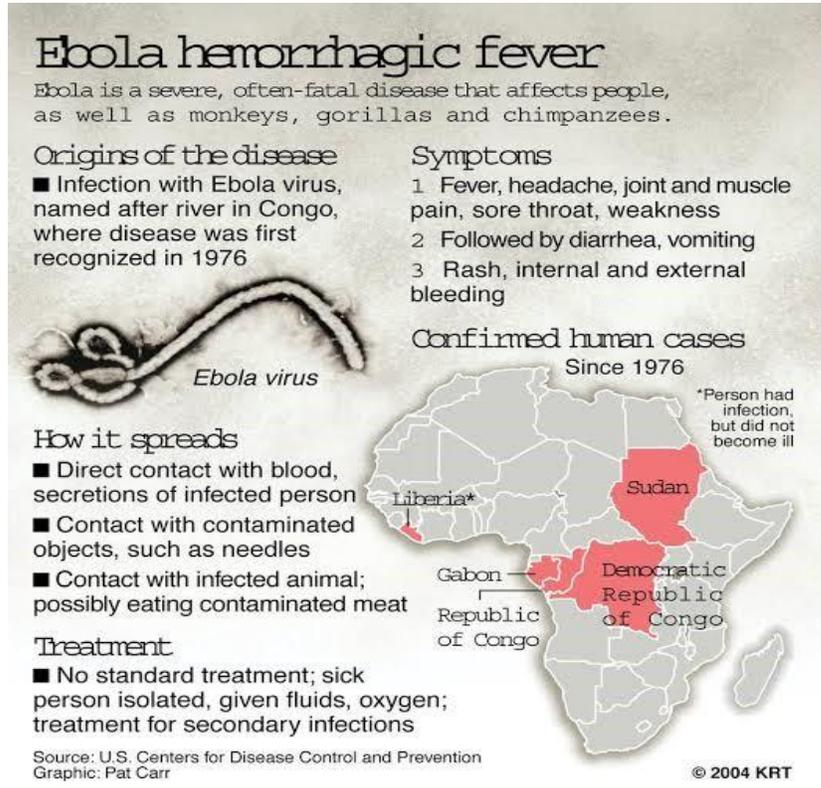
- The **Quality Council of India (QCI)** and the **Association of Indian Manufacturers of Medical Devices (AiMeD)** have launched the **ICMED 13485 PLUS Scheme**. It will undertake verification of the quality, safety and efficacy of medical devices.
- The ICMED scheme was launched for **Certification of Medical Devices in 2016**.
- The ICMED 13485 PLUS is the first scheme around the world in which **quality management systems** along with **product certification standards** are integrated with regulatory requirements.
- This scheme will be an **end-to-end quality assurance scheme** for medical devices sector in India.
- It will go a long way in assisting the procurement agencies to **tackle** the challenges relating to the **menace of counterfeit products and fake certification**.
- This will also help in **eliminating the circulation and use of sub-standard medical products or devices** of doubtful origin that could prove to be serious health hazards.

Possible Antibodies Against Nipah Virus

- A cross-sectional survey by *Indian Council of Medical Research- National Institute of Virology* has found the *presence of antibodies against the Nipah virus (NiV) in some bat species from a cave in Mahabaleshwar, Maharashtra*.
- Nipah virus (NiV) is a **zoonotic virus (it is transmitted from animals to humans)** and can also be transmitted through contaminated food or directly between people.
- In infected people, it causes a range of illnesses from asymptomatic (subclinical) infection to acute respiratory illness and fatal encephalitis.
- The virus can also cause severe disease in animals such as pigs, resulting in significant economic losses for farmers. There are **currently no drugs or vaccines** specific for Nipah virus infection.
- NiV is on the top-10 priority list pathogens identified by the World Health Organization.
- Fruit bats of the family Pteropodidae – particularly species belonging to the Pteropus genus – are the natural hosts for Nipah virus.
- India has experienced four NiV outbreaks, with the case fatality rate between 65 percent and 100 percent. The most recent outbreak started in Kerala in 2018.
- **Pteropus medius bats**, which are large fruit-eating bats, are the **incriminated reservoir for NiV in India** as both NiV RNA and antibodies were detected in the samples of these bats collected during previous NiV outbreaks.

WHO Declares Ebola Outbreak In Guinea Over

- An Ebola outbreak in Guinea that started in February, infecting 16 people and killing 12, has been **declared over by the World Health Organization.**
- In May 2021, the **Democratic Republic of the Congo (DRC)** has officially declared the end of the 12th Ebola outbreak.
- **Ebola Virus Disease (EVD)**, formerly known as **Ebola haemorrhagic fever**, is a rare but severe, often fatal illness in humans.
- The virus is **transmitted to people from wild animals** and spreads in the human population through human-to-human transmission.
- Good outbreak control relies on case management, infection prevention and control practices, surveillance and contact tracing, a good laboratory service, safe and dignified burials and social mobilisation. **Community engagement** is key to successfully controlling outbreaks.
- Early supportive care with rehydration, symptomatic treatment improves survival. There is yet **no licensed treatment proven** to neutralise the virus.



Toycathon 2021

- The Toycathon 2021 grand finale was recently held. At the event the PM urged people to be vocal for local toys.
- Global toy market is worth nearly \$100 billion. Of which, India contributes only around \$1.5 billion. India imports around 80 per cent of the toys from abroad.
- Thus, the main objective of Toycathon is to help India to develop into a global hub for toys and games and to create an ecosystem for the domestic toy industry and the local manufacturers.
- It was launched to design and develop toys and games based on Indian culture and ethos, local folklore and heroes, and Indian value systems.
- It is a joint initiative by the Ministry of Education, WCD Ministry, MSME Ministry, DPIIT, Textile Ministry, I&B Ministry and AICTE launched in January to crowd-source innovative toys and games ideas. From the ideas submitted around 1500 ideas were selected for the finale.

Aspirational Districts

The United Nations Development Programme (UNDP) recently released an appraisal (evaluation) report of the Aspirational Districts Programme (ADP).

Aspirational Districts Program

- The ADP was launched in 2018, with the objective of transforming 112 most backward districts across 28 states through the convergence of government programmes and schemes.
- It focuses on **development across 5 sectors** of Healthcare and Nutrition; Education; Agriculture and Water Resources; Basic Infrastructure; and Skill Development & Financial Inclusion.
- It is anchored by **NITI Aayog** which works in collaboration with central and state governments.
- The programme approach is based on **3 Cs - Convergence, Competition and Collaboration**

Key Findings

- The findings of this evaluation confirm that significant progress has been made since the beginning of the programme. Due to efforts made under ADP, previously neglected districts, including those in remote locations and those affected by Left Wing Extremism, have experienced more growth and development in the last three years than ever before.
- A comparison between the Aspirational Districts and their counterparts found that ADs have outperformed non-Ads.
- Sectors such as **Healthcare and Nutrition, Education**, and to an extent Agriculture and Water Resources have seen some major changes. The continued focus of the programme on health and nutrition has even helped the districts in handling the Covid crisis with greater resilience.

Reasons for Improvement

- A key feature that sets the ADP apart from other development programmes is the clear and comprehensive framework it provides to the districts.
- ADP's focus on constant real-time monitoring and data driven decision-making has been a chief contributor to better governance. This has especially helped district administrations in identifying the strengths or weaknesses of a district, resulting in more strategic and informed approaches for development.
- The stakeholders credited Convergence as a crucial reason for the better performance of the districts. It helped districts to move away from working in isolation towards synchronised planning and governance.
- The report also recognizes the unique collaborative nature of the programme to bring all stakeholders, including state and local governments, development partners, and citizens, together to achieve goals and targets.

Way Ahead

- The programme has strengthened the technical and administrative capacities of the districts, however, the report said there was a need to focus more on capacity building.
- Stakeholders also suggest that more indicators should be measured on a quarterly or annual basis rather than monthly basis, as it would help to implement sustainable and long-term changes.
- Given the positive impact of the programme, it is necessary to ensure the focus on development is encouraged further and momentum gained so far is maintained.
- Thus, the success of the programme should be scaled up and replicated for other sectors and districts.

QS World University Rankings

- The QS World University Rankings were released recently. It is annual publication of university rankings by Quacquarelli Symonds. This year, the rankings listed the world's top 1,300 universities.
- For the rankings, institutions and universities are judged on **six indicators**-- academic reputation, employer reputation, citations per faculty, faculty/student ratio, international faculty ratio and international student ratio.

Global Rankings

- Globally, **MIT** is the top university for the 10th consecutive year. The University of Oxford has risen to second rank for the first time since 2006, while Stanford University and the University of Cambridge share the third spot.
- Singapore's National University of Singapore and Nanyang Technological University, and China's Tsinghua University and Peking University, are the only Asian universities in the global top 20.

Top varsities | JNU, featuring for the first time in the QS World Universities Ranking list, is among the top-600 in the world = indicates shared ranking

2022 global rank	Name
177=	Indian Institute of Technology, Bombay
185	Indian Institute of Technology, Delhi
186=	Indian Institute of Science, Bengaluru
255=	Indian Institute of Technology, Madras
277=	Indian Institute of Technology, Kanpur
280	Indian Institute of Technology, Kharagpur
395=	Indian Institute of Technology, Guwahati
400=	Indian Institute of Technology, Roorkee
501-510 (ranking band)	University of Delhi
561-570 (ranking band)	Jawaharlal Nehru University, Delhi

Highlights From India

- India has three institutions in the global top 100 rankings. **IIT Bombay** maintained its position as the top Indian institution for the fourth consecutive year, although it fell five places in the global rankings to the 177th position.
- IIT Delhi, with a global rank of 185, has become India's second-best university, by overtaking the Indian Institute of Science (IISc), which got a rank of 186. IISc is the world's top research university as per the citations per faculty indicator.
- India's tally in the top 200 universities hasn't shown any change for the fifth straight year. Apart from **IIT-Bombay, IIT-Delhi and IISc**, no other Indian institution has been ranked among the **top 200** since 2017.
- The total number of Indian higher education institutions placed among the world's top 1,000 hasn't shown any significant change. While **22 Indian universities** are featured among the top 1,000 this time, there were 21 in QS WUR 2021.
- Indian institutions continue to struggle in the institutional teaching capacity category, measured by faculty-student ratio, with 23 institutions seeing a drop in their scores.

Concerns

- Several institutions have voiced their concern that the rankings do not accurately reflect the quality of education in India, as they are largely dependent on international perception factors.
- Half of the score comes from reputation indicators which are based on perception, rather than any objective methodology.

Suicide Report

The World Health Organisation (WHO) recently released a report titled **Suicide worldwide in 2019**.

Key Findings

- Suicide remains one of the leading causes of death worldwide – taking more lives each year than HIV, malaria, war and homicide. Around 703,000 people or one in a 100, died by suicide in 2019 and many of these were young people.

- Suicide was the **fourth-leading cause of death among young people aged 15-29 globally** in 2019. More than half of global suicides (**58 per cent**) occurred before the **age of 50 years**.
- While rates varied between countries, regions and gender, **more than twice as many men kill themselves, compared to women**. Those rates are generally greater in high-income countries, while the highest suicide rates for women were found in lower middle-income countries.
- Some **77 %** of global suicides in 2019 occurred in **low- and middle-income countries**.
- Per 100,000 people, the 2019 global average of suicide rates stood at 9.0. But, three WHO regions — Africa, Europe and South-East Asia — recorded suicide rates higher than the global average.
- While the report showed a global suicide drop of 36 per cent between 2000 and 2019, the Americas Region witnessed a 17 per cent increase.

Recommendations

- From job loss to financial stress and social isolation, the various risk factors triggered by the Covid pandemic make suicide prevention even more important now.
- To help countries reduce the global suicide mortality rate by a third by 2030, WHO has published new **LIVE LIFE guidelines**. These are:
 - Limiting access to the means of suicide, such as highly hazardous pesticides and firearms.
 - Educating the media on responsible reporting of suicide.
 - Developing socio-emotional life skills in adolescents.
 - Early identification, assessment, management and follow-up of anyone affected by suicidal thoughts and behaviour.

21. Itat E-dwar Portal is related to

- a) e-filing portal of Income Tax Appellate Tribunal
- b) Online Land recording portal of Kashmir
- c) Single window system to enhance export
- d) Portal for citizens to report wildlife crime

Answer: A

Explanation:

- Government formally launched **e-filing portal of Income Tax Appellate Tribunal (ITAT)** named 'itat e-dwar'.
- It will enhance the **accessibility, accountability and transparency** in the day to day working of the ITAT. It would not only result in **economization** of the use of paper, savings in costs but also **rationalization** of the fixation of cases leading to quicker disposal of cases.

22. Consider the following statements about FAME scheme:

1. FAME scheme was launched by the Ministry of New and Renewable Energy.
2. Under FAME scheme, subsidies are given to manufacturers of electric vehicles.

Which of the statements given above is/are correct?

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

Answer: B

Explanation:

- In a major change to the on-going FAME-II scheme, the Department of Heavy Industry has notified incentives for India-made electric two-wheelers.
- Currently, most of the electric two-wheeler vehicles are costlier than the Internal Combustion Engine two wheelers. Thus, the government aims to promote electric two-wheeler usage in the country by reducing this price gap.
- Aiming at faster adoption and manufacturing of electric vehicles in India, the Centre has decided to increase subsidies on India made electric two-wheelers. According to the notification, the subsidy for India made electric two-wheelers has been increased to ₹15,000 per kWh, from the earlier subsidy rate of ₹10,000 per kWh.
- The Centre has also increased the cap on incentives for electric two-wheelers at 40 % of the cost of vehicles, from 20 % earlier.

Benefits

- The incentive will support the manufacturers to reduce price of electric two wheelers in the country.
- Together with the other important factors like extremely low running cost, low maintenance and zero emission, such price levels will push more riders to switch from a combustion-engine model to an electric model.

- The increase in adoption of EVs will facilitate government's plan of making India an electric vehicle nation by 2030.
- Moreover, a focus on locally built electric two wheelers can make India the manufacturing hub of EVs.

FAME Scheme

- Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India (FAME-India) Scheme was launched by the **Ministry of Heavy Industries and Public Enterprises** under the National Electric Mobility Mission Plan.
- It is an incentive scheme for promotion of electric and hybrid vehicles (xEV) in the country. The incentives are given as subsidies to the manufacturers of electric vehicles and infrastructure developers of electric vehicles.
- The FAME India Scheme is aimed at incentivising all vehicle segments i.e. 2 Wheeler, 3 Wheeler Auto, Passenger 4 Wheeler Vehicle, Light Commercial Vehicles and Buses. The scheme covers Hybrid & Electric technologies like Mild Hybrid, Strong Hybrid, Plug in Hybrid & Battery Electric Vehicles
- The **First Phase** of the scheme began in 2015 and was completed in March, 2019.

FAME II

- The **Phase-II of FAME Scheme** was approved with an outlay of Rs. 10,000 Crore for a period of 3 years from April 2019.
- Out of total budgetary support, about 86 percent of fund has been allocated for Demand Incentive, to create demand for xEVs in the country.
- This phase aims to generate demand by supporting 7000 e-Buses, 5 lakh e-3 Wheelers, 55000 e-4 Wheeler Passenger Cars and 10 lakh e-2 Wheelers.
- Only vehicles fitted with advanced chemistry battery and registered vehicles are incentivized under the scheme.
- In addition, creation of **charging infrastructure** is also supported under the scheme.
- With greater emphasis on providing affordable & environment friendly public transportation options for the masses, scheme will be applicable mainly to vehicles used for public transport or those registered for commercial purposes in e-3W, e-4W and e-bus segments. However, privately owned registered e-2Ws are also covered under the scheme as a mass segment.

23. Consider the following statements about Enforcement Directorate (ED):

1. It comes under the Department of Expenditure.
2. It is responsible for investigating offences of money laundering.

Which of the statements given above is/are correct?

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

Answer: B

Explanation:

In two separate orders, the Special Prevention of Money Laundering Act (PMLA) court has allowed the SBI-led consortium of banks to restore to it, properties collectively worth Rs 5,600 crore belonging to

businessman Vijay Mallya and Kingfisher Airlines. This will enable banks to sell these properties which were attached by the Enforcement Directorate (ED) during the probe, and recover dues.

Money Laundering

- **Money laundering** is the illegal process of converting money earned from illegal activities (such as drug trafficking) into clean money.
- **Clean money** is money that can be freely used in legitimate business operations and does not have to be hidden from the authorities.
- Hawala, bulk cash smuggling, fictional loans, shell companies and trusts, real estate, gambling, and fake invoicing are some of the common methods of money laundering.

Prevention of Money Laundering Act, 2002

- Prevention of Money Laundering Act, 2002 was enacted to fight the criminal offence of legalizing the income/profits from an illegal source.
- The Act puts the responsibility on banking companies, financial institutions and intermediaries to verify identity of clients, maintain records and share information in prescribed form to Financial Intelligence Unit - India (**FIU-IND**).
- The **Enforcement Directorate** is responsible for investigating offences of money laundering under PMLA.
- **Special Courts** have been set-up in a number of States/UTs by the Central Government to conduct the trial of offences punishable under PMLA.

FIU-IND

- Financial Intelligence Unit – India (FIU-IND) is an independent body reporting directly to the **Economic Intelligence Council (EIC)** headed by Finance Minister of India.
- It was established in 2004 as the central national agency responsible for receiving, processing and analysing information relating to suspect financial transactions.
- It is responsible for coordinating and strengthening efforts of national and international intelligence. It also undertakes investigations for pursuing the global efforts against money laundering and related crimes.

Enforcement Directorate

- The Enforcement Directorate (ED) is a law enforcement and economic intelligence agency responsible for enforcing economic laws and fighting economic crime in India. It comes under the **Department of Revenue, Ministry of Finance**.
- The *prime objective* of the ED is the enforcement of two key Acts namely, the Foreign Exchange Management Act 1999 (**FEMA**) and the Prevention of Money Laundering Act 2002.
- ED has the power to **attach the asset** of the culprits found guilty of the violation of FEMA. It has also been empowered to undertake, search, seizure, arrest, prosecution action, and survey, etc. against the offences committed under PMLA.

Other Functions of ED

- Processing cases of fugitive/s from India under the Fugitive Economic Offenders Act, 2018.
- Sponsoring cases of Preventive Detention under the Conservation of Foreign Exchange and Prevention of Smuggling Activities Act, 1974 (COFEPOSA) with respect to FEMA violations.

- FDI in developing economies was relatively strong, declining by 8%, mainly because of strong flows in Asia. As a result, developing economies accounted for two thirds of global FDI, from just under half in 2019.
- However, in developing countries the number of newly announced greenfield projects fell by 42% and international project finance deals – important for infrastructure – fell by 14%. **Greenfield investment** is a kind of FDI, in which the parent company creates a subsidiary in the host country and builds its operations.
- Global FDI flows are expected to reach its bottom in 2021 and recover with an increase of 10% to 15%. This would still be around 25% below the 2019 level. Current forecasts show a further increase in 2022, which will bring FDI back to the 2019 level.

Regional Trends

- FDI flows to Europe declined by 80%, while those to North America fell less sharply (-40%). It fell by 45% in Latin America and the Caribbean and 16% in Africa.
- In contrast, flows to Asia rose by 4%, with East Asia being the largest host region, accounting for half of global FDI in 2020.
- FDI in South Asia rose by 20 per cent to USD 71 billion, driven mainly by strong Mergers and Acquisitions (M&A) in India. In China, FDI increased by 6 per cent to USD 149 billion.

Impact on SDG Sectors

- COVID has also led to a fall in investment flows to sectors relevant for the Sustainable Development Goals (SDGs) in developing countries.
- The pandemic worsened declines in sectors that were already weak before the pandemic – such as power, food and agriculture, and health.
- The drop in foreign investment in SDG-related sectors may reverse the progress achieved in SDG investment in recent years and increase risks for a sustained post-pandemic recovery.

Highlights From India

- FDI increased by 27 per cent to USD 64 billion in 2020 from USD 51 billion in 2019.
- Pushed by Mergers and Acquisitions (M&A), India became the **fifth largest FDI recipient** in 2020. Cross-border M&As increased by 83 per cent to USD 27 billion, with major deals involving ICT, health, infrastructure and energy.
- However, FDI in greenfield projects in India reduced by 19 per cent to USD 24 billion.
- FDI outflows from South Asia fell 12 per cent to USD 12 billion, driven by a drop in investment from India. India ranked 18 out of the world's top 20 economies for FDI outflows, with 12 billion dollars of outflows recorded from the country in 2020 as compared to 13 billion dollars in 2019.

UNCTAD

- UNCTAD was established by United Nations General Assembly in 1964, as a permanent intergovernmental body.
- Headquartered in **Geneva**, UNCTAD reports to UN General Assembly and United Nations Economic and Social Council.
- The creation of UNCTAD was based on concerns of developing countries over the international market, multi-national corporations, and a great difference between developed nations and

- **Metals Covered Under hallmarking:** The government, through a notification issued on June 14, 2018, notified two categories—gold jewellery and gold artefacts; and silver jewellery and silver artefacts—under the purview of hallmarking. So, hallmarking in India is available for jewellery of only two metals—gold and silver.
- **Exemptions**
 - According to the Department of Consumer Affairs, Export and re-import of jewellery as per Trade Policy of Government of India — **Jewellery for international exhibitions, jewellery for government-approved B2B domestic exhibitions** will be exempted from mandatory Hallmarking.
 - **Watches, fountain pens and special types of jewellery** such as Kundan, Polki and Jadau will be also exempted from hallmarking.
- **Purity Standards:** As per BIS standards, there are **three categories** of hallmarking based on purity of gold—**22 carat, 18 carat and 14 carat**. However, the Ministry on 15 June announced that Gold of **Additional carats 20, 23 and 24** will also be allowed for Hallmarking. Also, jewellers can continue to buy back old gold jewellery without a hallmark from consumers.
- **Penalty:** No penalty will be imposed on jewellers for non-compliance with the hallmarking norm till August 2021.

Need Of Making Hallmarking Mandatory

- The hallmarking of jewellery/artefacts is required to enhance the credibility of gold jewellery and customer satisfaction through third party assurance.
- **India is the biggest consumer of gold.** However, the level of hallmarked jewellery is very low in the country. According to the Ministry, at present, only 30% of Indian gold jewellery is hallmarked.
- One of the reasons responsible for low level is **non-availability of sufficient assaying and hallmarking centres (A&HC)**. There are about only 35,879 jewellers across the country, who are certified by BIS. The number of A&HC is 945.
- The govt had announced mandatory hallmarking of gold several years back. However, it could not implement the same and kept postponing the dates. In Nov' 2019, the government had announced the mandatory hallmarking of gold jewellery and artefacts across the country from January 15, 2021.
- However, later it extended the date of implementation to June 1, 2021, granting more time to jewellers to register themselves with the BIS in the wake of Covid-19 outbreak. In May this year, it extended the deadline by a fortnight.

Impact

- The current move will help to establish accountability in the sector, and will help consumers ensure the quality of gold jewellery they are buying.
- The new rules will not hurt the end consumer as the government has allowed jewellers to buy back old gold jewellery without hallmarks from the consumer.
- Jewellery that conforms to the benchmark will enjoy a premium, which will push households to exchange their older jewellery for new, hallmarked jewellery. This can potentially help to monetise around USD 1.5 trillion of gold and jewellery.
- Majority of the country's gold jewellery retailing market is unorganized and not led by large chains. Mandatory hallmarking will standardise the purity of gold jewellery and make the industry more structured as well as further shift the business from the unorganised to the organised segment.

- It also has the potential to transform the entire horticulture ecosystem, improving its global competitiveness by building last-mile connectivity.
- The programme framework will ensure engagement of state governments through CDAs, and institutionalization of learnings for future replication and scaling up of the programme in other clusters.

National Horticulture Board

- National Horticulture Board (NHB) was set up in 1984, as an autonomous organization under the administrative control of Ministry of Agriculture and Farmers Welfare.
- Its main objectives are to improve integrated development of horticulture industry and to help in coordinating, sustaining the production and processing of fruits and vegetables

29. Consider the following statements about One District One Product (ODOP):

1. Only one cluster of ODOP is allowed in one district.
2. Adjacent districts in a State can form a cluster of ODOP.

Which of the statements given above is/are correct?

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

Answer: B

Explanation:

- The **Pradhan Mantri Formalisation of Micro food processing Enterprises (PMFME) Scheme** recently completed a year, during which it achieved various milestones.
- PMFME scheme is a **centrally sponsored scheme** launched by the **Ministry of Food Processing Industries (MoFPI)**. It was launched last year under the Atmanirbhar Bharat Abhiyan package.
- It aims to enhance the competitiveness of *existing individual micro-enterprises* in the unorganized segment of the food processing industry and promote formalization of the sector.
- The scheme has proposed an outlay of Rs. 10,000 crore over a period of five years from 2020-21 to 2024-25.

Objectives

- Provide support to Farmer Producer Organizations, Self Help Groups (SHGs), and Producers Cooperatives along their entire value chain and increase access to credit.
- Increase access to common services like common processing facility, laboratories, storage, packaging, marketing and incubation services.
- Strengthening of institutions, research and training in the food processing sector.
- Increased access to professional and technical support for enterprises.
- Enhanced compliance with food quality and safety standards.

Milestones Achieved Under PMFME

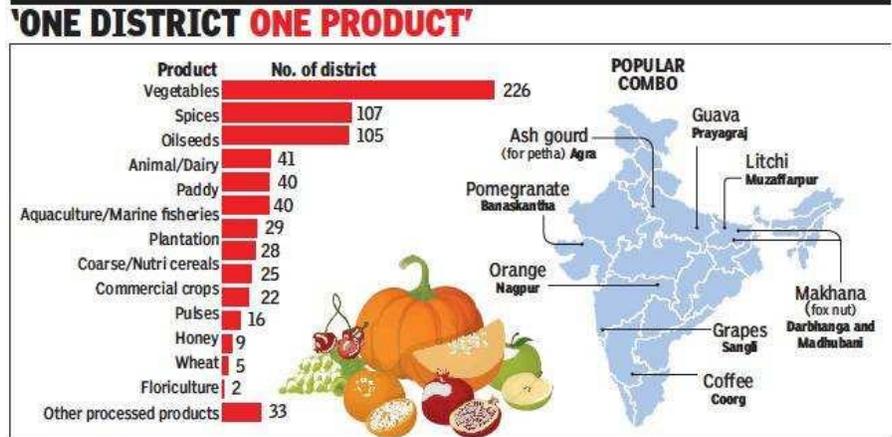
- For ministerial convergence, MoFPI has signed agreements with *Ministry of Rural Development, Ministry of Tribal Affairs, and Ministry of Housing and Urban Affairs.*

VAJIRAM & RAVI

- For institutional convergence of the scheme, MoFPI also signed six Memorandum of Understanding (MoUs) with ICAR, NCDC, TRIFED, NAFED, RSETI and NSFDC.
- The National Institute of Food Technology Entrepreneurship and Management (NIFTEM) and the Indian Institute of Food Processing Technology (IIFPT) are performing a key role in providing training and research support to selected enterprises/groups/clusters.
- Further, 54 Common Incubation Centres have been approved in 17 States and UTs.

One District One Product approach

- The PMFME scheme adopts One District One Product (ODOP) approach to **convert each district of the country into an export hub** by identifying products with export potential in the district.
- There may be more than one cluster of ODOP in one district. There may be a cluster of ODOP consisting of more than one adjacent district in a State.



- It aims to promote manufacturing & services industry in the district and generate employment in the district by supporting local exporters/manufacturers.
- It aims to extract benefits of scale in terms of procurement of inputs, availing common services and marketing of products.

Progress Under ODOP

- Under the ODOP component of the scheme, MoFPI has approved ODOP for 707 districts for 35 States and UTs, including 137 unique products.
- The ODOP digital map of India has been launched to provide details of ODOP products of all the States and UTs.
- The digital map also has indicators for Tribal, SC, ST, and aspirational districts. It will enable stakeholders to make efforts for its value chain development.

Financial Support

- PMFME is providing seed capital to SHGs with the support of National Rural Livelihood Mission (NRLM) and its network of State Rural Livelihood Mission (SRLM) operating at the state level.
- Further, an agreement has been signed with the Union Bank of India as the Nodal Bank of the scheme and MoUs with 11 banks as official lending partners for the Scheme.

30. Consider the following statements about International Labour Organization (ILO):

1. ILO was created under the League of Nations.
2. ILO has been awarded the Nobel Peace Prize

Which of the statements given above is/are correct?

a) 1 only

b) 2 only

c) Both 1 and 2

d) Neither 1 nor 2

Answer: C**Explanation:**

The International Labour Organisation (ILO) has recently released the **World Employment and Social Outlook: Trends 2021**. It examines global and regional trends in employment, unemployment, labour force participation and productivity.

Key Findings

- The COVID pandemic has caused unparalleled disruption worldwide and all countries have suffered a sharp deterioration in employment and national income, which has increased existing inequalities.
- In 2020, an estimated 8.8 % of total working hours were lost – the equivalent of the hours worked in one year by 255 million full-time workers.
- **Latin America and Caribbean**, and **Europe and Central Asia**, are the two worst-affected regions.
- Global unemployment is expected to stand at 205 million in 2022, surpassing the level of 187 million in 2019. This corresponds to an unemployment rate of 5.7%. Excluding the Covid crisis period, such a rate was last seen in 2013.
- To make matters worse, many of the newly created jobs are expected to be of low productivity and poor quality.

Increased Inequalities

- Workers with higher skill levels tend to work in occupations that have been less affected by employment losses and have benefited from options for working remotely.
- Informal employees were three times more likely, than their formal counterparts, to lose their jobs as a result of the crisis. Moreover, because of their informal status, they were less likely to benefit from social protection. As many of these workers have lower savings rates, they have been more likely to fall deeper into poverty.
- Furthermore, many migrant workers experienced an abrupt termination of their employment along with non-payment or delayed payment of wages, and at the same time often lacked access to social protection benefits

Impact on Gender Equality

- The crisis has endangered progress on gender equality, as women have suffered disproportionate job losses.
- Additionally, 90 per cent of women who lost their jobs in 2020 exited the labour force, which suggests that their working lives are likely to be disrupted over an extended period.
- The burden of intensified childcare and home- schooling activities has disproportionately fallen on them, leading to a rise in unpaid working time for women that reinforces traditional gender roles

Career Transition And Growth

- Entering the labour market during a recession reduces longer-term employment probabilities, wages and the prospects for on-the-job skills development.
- Although recessions may also prompt young workers to invest more strongly in formal education, the share of young people not in employment, education or training increased between 2019 and 2020 in 24 out of 33 countries.

Way Ahead

- Preventing long-lasting damage to global economic and social outcomes requires a comprehensive human-centred policy agenda.
- International policy action is needed to ensure worldwide access to vaccines and financial assistance for developing countries – including through debt restructuring.
- Focus should be to strengthen the institutional foundations of inclusive, sustainable and resilient economic growth and development by enhancing social protection systems and promoting formalization.
- Governments, in consultation with employers' and workers' organizations, need to address long-standing work deficits so that labour markets can be rebuilt in a more just and sustainable way

About International Labour Organization (ILO)

- The ILO is a **specialized agency** of the United Nations (UN) to set labour standards, develop policies and devise programmes promoting decent work for all women and men.
- It is the **only tripartite U.N. agency** which brings together governments, employers and workers of 187 member States.
- **Headquarter** - Geneva, Switzerland
- Parent organization: Economic and Social Council of the United Nations
- It is also a member of the **United Nations Development Group (UNDP)**, a coalition of UN organization aimed at helping meet the Sustainable Development Goals.
- **Members** - The ILO has 187 member states (186 Countries + The Cook Islands)
- It was established in 1919 under the League of Nation, as part of the **Treaty of Versailles**.
- **Key Reports Published by ILO** - World Employment and Social Outlook; Global Wage Report
- The ILO had received **Nobel Peace Prize in 1969**, for improving fraternity and peace among nations, pursuing decent work and justice for workers, and providing technical assistance to other developing nations.

Eight ILO Fundamental Conventions

- The Forced Labour Convention, 1930,
- The Abolition of Forced Labour Convention, 1957,
- The Freedom of Association and Protection of the Right to Organise Convention, 1948,
- The Right to Organise and Collective Bargaining Convention, 1949,
- The Equal Remuneration Convention, 1951,
- The Discrimination (Employment and Occupation) Convention, 1958,
- The Minimum Age Convention, 1973, and
- The Worst Forms of Child Labour Convention, 1999

India's Stand on these conventions

India has **not ratified the two conventions** (out of 8). These are:

- Freedom of Association and Protection of the Right to Organise Convention, 1948 and
- Right to Organise and Collective Bargaining Convention, 1949 (No. 98).

- The statutory rules in India, for the government employees, prohibits certain rights such as right to strike, to openly criticize government policies etc.
- After ratification to these two conventions, India would be forced to grant these rights to the civil servants. Hence, India has not ratified these two conventions.

Positive Indigenisation List

- The Ministry of Defence has notified its second negative arms imports list now renamed as the 'positive indigenisation list' of 108 items.
- The items on the positive indigenisation list can only be purchased from indigenous sources (domestic sources) as per the provisions given in the Defence Acquisition Procedure (DAP) 2020.
- The first negative imports list of 101 items was announced in August 2020. The new list takes the total number on the list to 209. The import of these items will be progressively banned from December 2021 to December 2025.

Background

- As per Stockholm International Peace Research Institute, which tracks defence exports and imports globally, India has been the **second largest defence importer** between 2014 and 2019 with \$ 16.75 billion worth of imports during this period.
- The Make in India scheme announced in 2014 aimed to develop the indigenous (domestic) defence industry, but has failed to achieve its targets.
- In order to address these issues, the government planned to reduce defence imports by increasing indigenisation in the sector. Out of Rs 1.35 lakh crore allocated for capital acquisition for defence in this year's budget, the government has reserved more than 60 % — Rs 70,221 crore — for domestic procurement.

Items On The List

- The second list lays special focus on weapons/systems which are currently under development/trials and are likely to translate into firm orders in the future.
- Like the first list, import substitution of ammunition which is a continuous requirement has been given special focus.
- The list comprises complex systems, sensors, simulator, weapons and ammunitions like Helicopters, Air Borne Early Warning and Control (AEW&C) systems, Tank Engines, Medium Power Radar for Mountains and many more such items.

Impact

- The move will give further boost to indigenisation with active participation of public and private sector. It will facilitate an environment for Indian defence manufacturers to create world class infrastructure and assist in the government's '**Make in India**' vision.
- It will also give a much-needed **boost to domestic Research & Development** by attracting fresh investment into technology and manufacturing capabilities.
- It also provides an **excellent opportunity for start-ups and MSMEs** (Micro, Small and Medium Enterprises) to grow in the defence sector.
- This will eventually **help the government to reduce its dependence on imports** in the defence sector and reduce its large defence import expenditure.

- The boost in domestic manufacturing can also help the country to **develop itself into an exporter of defence goods** and help to restore the long-term economic growth.

Defence Acquisition Procedure (DAP) 2020

- The Defence Acquisition Procedure, 2020 came into effect from October 2020 by replacing the Defence Procurement Procedure (DPP).
- DAP, 2020 seeks to **empower the domestic defence industry** through the Make in India initiative with the eventual aim of turning India into a global manufacturing hub.
- DAP has provisions to **encourage FDI** to establish manufacturing hubs both for import substitution and exports, while protecting interests of Indian domestic industry.
- DAP also places greater emphasis on **time-bound defence procurement processes** through the setting up of a project management unit and framing of realistic and verifiable GSQRs (General Staff Qualitative Requirements).
- It also aims to improve **ease of doing business**, with emphasis on simplification, delegation and making the process industry friendly.

Anti-trust Bills

The U.S. House of Representatives Judiciary Committee recently started the process of considering six Bills that will prevent anti-trust practices used by big technology companies like Google, Facebook, Amazon and Apple (called the Big Four). These Bills form the biggest action to come out of the anti-trust investigations these companies have been facing in the U.S. over the last few years.

Anti-trust Laws

- **Anti-trust laws**, also referred to as **competition laws**, are laws developed by governments to protect consumers from unjust business practices and to ensure fair competition.
- Anti-trust laws are applied to a wide range of questionable business activities, including market allocation, bid rigging, price fixing, and monopolies.
- The goal of these laws is to provide an equal business environment to similar businesses that operate in a specific industry, while preventing them from gaining too much power over their competition.
- If these laws didn't exist, consumers would not benefit from different options or competition in the marketplace. Furthermore, consumers would be forced to pay higher prices.

Reasons For Introducing New Anti-Trust Bills

- The major anti-trust laws in U.S. are the ***Sherman Act of 1890*** and the ***Clayton Act of 1914***. However, the evolution of technology has reduced the effectiveness of these laws in dealing with anti-trust cases.
- According to a report submitted in U.S. Congress, increase in consumer prices is the currently accepted indicator of unfair practices. However, it is difficult to use this indicator to monitor actions of companies like Google and Facebook, as they make money from advertising and give many products for free.
- The six bills intend to give more power to anti-trust proceedings against new-age technology firms.

Details Of The Bills

- The Augmenting Compatibility and Competition by Enabling Service Switching (**ACCESS**) Act promotes interoperability. It will force platforms (like Google) to allow users to take data such as contacts lists and profile information with them, while migrating to other platforms.

- Bills To Prevent Monopolies
 - The **Platform Competition and Opportunity Act** would restrict big tech companies from preventing competition by buying up smaller rivals, similar to Facebook's purchase of Instagram for \$1 billion.
 - The **Ending Platform Monopolies Act** would prevent companies from becoming competing players on their own platforms. For example, Amazon sells its own brands, competing with smaller retailers that use its e-commerce platform. The Bill aims to prevent similar scenarios.
 - The **American Choice and Innovation Online Act** would prevent companies from giving preferences to their own products in the marketplaces owned by them. For example, it would prevent instances like, Google search results prioritising YouTube videos or Amazon highlighting its own brands.
- Bills To Improve Law Enforcement
 - The **Merger Filing Fee Modernization Act** increases the government fee on large corporate mergers to increase funding for anti-trust law enforcement.
 - The **State Antitrust Enforcement Venue Act** would prevent companies from shifting anti-trust cases to courts that could be favourable to these companies.

Impact Of The Bills In India

- India already has some versions of these laws, like the one that prevents Amazon from selling brands that it owns on its platform.
- Any behavioural change that these companies may be forced to adopt in the U.S, which is their largest market, would likely be adopted in all their global markets.
- If implemented globally, an equal platform for brand visibility on Google and Amazon will benefit retailers in India.

RMI Freight Report

- NITI Aayog and Rocky Mountain Institute (RMI) recently released a new report, titled **Fast Tracking Freight in India: A Roadmap for Clean and Cost-Effective Goods Transport**.
- The report highlights issues in India's logistics sector and key opportunities for India to develop a new freight architecture.

India's Logistics Sector

- The logistics sector represents **5% of India's GDP and employs 2.2 crore people**. Trucks and other vehicles handle most of the movement of these goods.
- As national freight activity will grow by five times till 2050, India's freight transport ecosystem has a critical role to play in supporting India's priorities. Some of these include international competitiveness, job growth, urban and rural livelihoods, and clean air and environment.
- India's cumulative energy consumption from freight transport between 2020 and 2050 under a business as usual (BAU) scenario will be around 5.8 billion tonnes of oil equivalent (TOE). However, India can reduce this energy consumption by 50 % under an efficient scenario through various interventions.

Issues In India's Logistics Sector

- Low Share Of Railways:** The share of railways in freight transportation in India has been declining since 1951. In 2020, it stood at merely 18% as compared to road's share of 71%. This is due to insufficient rail capacity, especially on certain high-density routes.

ii) High Logistics Cost: Logistics costs in India are high, accounting for 14 % of the GDP. Transportation and inventory costs account for more than 90 % of these costs. These high costs are partly a result of low logistics efficiency due to a fragmented market, lack of standardised trucking assets, old vehicles and obsolete warehousing technologies.

iii) Poor Fuel Economy

- Internal combustion engine (ICE) vehicles, mostly powered by diesel, dominate India’s road-based freight activity. Moreover, trucks in India also have poor fuel economy, which is partly due to lack of information about fuel-saving technologies among fleet operators.
- Poor fuel economy leads to high costs and higher emissions from freight activity. For example, fuel costs account for 70 percent of a diesel-powered heavy-duty truck’s total cost of ownership.
- Furthermore, electric vehicle sales penetration of freight vehicles is less than 1 percent. This is due to high costs of EVs and reluctance to invest in EVs due to lack of access to finance.

Recommended Solutions

i) Enhance Intermodal Transport

- Enhance the share of rail mode in India, by increasing rail network capacity and promotion of intermodal transport.
- Identify and upgrade corridors with high potential for intermodal transport and ensure better modal integration across rail, road, and water.

ii) Optimise Truck Usage

- Optimise truck usage by improving transportation and warehousing practices.
- Maximise vehicle productivity through efficient packaging and loading and improve the performance of warehouses by implementing advanced digitised tools.

iii) Optimise Fuel Consumption

- Optimise fuel consumption and emissions standards of Internal Combustion Engine vehicles
- Promote the use of Electric Vehicles and implement supportive policies and pilot projects to manufacture high quality EVs and a strong charging infrastructure.
- Promote collaboration across industry players to share experiences with technology solutions.



Benefits

- These solutions can help India to save Rs 311 lakh crore cumulatively over the next three decades.
- Further, India can achieve 10 gigatonnes of cumulative CO₂ emissions savings between 2020 and 2050 and also reduce nitrogen oxide (NOx) and particulate matter (PM) emissions by 35% and 28%, respectively until 2050.
- The proposed solutions will lead to higher economic growth, more employment opportunities, better public health, and enhanced logistics productivity, which will meet many of India’s development goals.
- They can also help India to establish itself as a leader in logistics innovation and efficiency in the Asia-Pacific region and beyond.

Rocky Mountain Institute

- Rocky Mountain Institute (RMI) is a US based non-profit organisation.
- It engages businesses, communities, institutions, and entrepreneurs to accelerate the adoption of market-based solutions that cost-effectively shift from fossil fuels to renewable energy.

- RMI has been supporting India's mobility and energy transformation since 2016.

Nano Urea Liquid

Indian Farmers Fertiliser Cooperative Limited (IFFCO) recently launched **world's first Nano Urea Liquid (NUL)** for farmers across the world.

Urea Usage In India

- India is dependent on imports to meet its urea requirements. During 2019-20, the production of urea was only 244.55 lakh metric tonnes (LMT) as against the consumption volume of 336 LMT. India imported 91.99 LMT urea fertiliser in 2019-20 to fill this gap.
- Urea forms 82 % of the total nitrogenous fertilisers consumed in India and it has recorded exponential increase in consumption over the years.
- Around 30-50 per cent of nitrogen from urea is utilised by plants and the rest gets wasted due to quick chemical transformation.
- Excess urea causes environmental pollution, harms soil health, and makes plants more susceptible to disease and insect infestation, delayed maturity of the crop and production loss.

Nano Urea Liquid

- NUL is developed to replace conventional urea and has been found **effective and efficient for plant nutrition** which increases the production with improved nutritional quality. Due to the ultra-small size and surface properties of nano urea, it gets absorbed by the plants when sprayed on their leaves. Upon penetration, these nanoparticles reach plant parts where nitrogen is required and release nutrients in a controlled manner.
- Besides this, **NUL requirement will be lower** than conventional urea fertiliser. NUL can reduce the requirement by 50%.
- Moreover, nano urea is **cheaper** as a 500 ml bottle of the liquid will replace at least one bag of conventional urea. This will reduce the input cost of the farmers and increase their incomes.
- Furthermore, due to its small size, it will **significantly bring down the cost of logistics and warehousing**.
- Use of NUL by farmers will boost balanced nutrition program by reducing the excess use of urea in the soil and will make the crops stronger and healthier.
- It will also have a huge positive impact on the quality of underground water, significant reduction in the global warming with an impact on climate change and sustainable development.

World Competitiveness Index

The Institute for Management Development (IMD) has recently released the World Competitiveness Index. It measures the economic well-being, people's prosperity and competitiveness of 64 nations by examining **four factors** -- economic performance, government efficiency, business efficiency, and infrastructure.

Highlights

- **Switzerland** was at the top of the list, followed by Sweden, Denmark, Netherlands and Singapore. US remained stable at tenth position and China jumped four places to be at 16th position.
- Top-performing Asian economies are **Singapore (5th)**, Hong Kong (7th), Taiwan (8th) & China (16th).

- Among the **BRICS nations**, India (43rd) is ranked second after China (16th), followed by Russia (45th), Brazil (57th) and South Africa (62th).
- As per the report, top-performing economies are characterised by varying degrees of investment in innovation, digitalization and diversified economic activities. Strength in these areas prior to the pandemic allowed these economies to address the economic implications of the crisis more effectively.
- Further, effectiveness of key public spending, such as public finance, tax policy and business legislation, are seen as essential policies to relieve the pressure on the economies hit by Covid-19

Highlights from India

- India's position has remained unchanged at 43 for the third year in a row.
- Among the four indices used, India's ranking in government efficiency increased to 46 from 50 a year ago, while its ranking in other parameters such as economic performance (37), business efficiency (32) and infrastructure (49) remained the same.
- India's improvements in the government efficiency factor are mostly due to relatively stable public finances (e.g., despite difficulties brought by the pandemic, in 2020 the government deficit stayed at 7%).
- It, however, added that the short-term performance of India's economy will depend on its ability to address the pandemic.

Nutrient Loss

- Researchers from various institutes under the Indian Council of Agricultural Research (ICAR) have found depleting trends in grain density of zinc and iron in rice and wheat cultivated in India.
- Zinc and iron deficiency affects billions of people globally and the countries with this deficiency have diets composed mainly of rice, wheat, corn, and barley.
- Zinc and iron concentrations in grains of rice cultivars (plant variety) released in the 1960s were 27.1 mg/kg and 59.8 mg/kg. This depleted to 20.6 mg/kg and 43.1 mg/kg, respectively in the 2000s.
- In wheat, the concentrations of zinc and iron --- 33.3 mg/kg and 57.6 mg/kg in cultivars of the 1960s, dropped to 23.5 mg/kg and 46.4 mg/kg, respectively during the 2010s.

Reasons for Depletion

- There could be several possible reasons for such depletion: one is a '**dilution effect**' that is caused by decreased nutrient concentration in response to higher grain yield.
- This means the rate of yield increase is not compensated by the rate of nutrient take-up by the plants. Also, the soils supporting plants could be low in plant-available nutrients.

Way Ahead

- Though the Indian government has taken initiatives such as providing supplementation pills to school children, it is not enough.
- Furthermore, growing newer-released (1990s and later) cultivars of rice and wheat cannot be a sustainable option to reduce zinc and iron malnutrition in Indian population.
- These negative effects need to be addressed by improving the grain ionome (the nutritional make-up), while releasing cultivars in future breeding programmes.

- There is also a need to focus on other options like biofortification, where breeding of food crops that are rich in micronutrients can be conducted.

Biofortification

- Biofortification is the process by which the nutritional quality of food crops is improved through agronomic practices, conventional plant breeding, or modern biotechnology.
- Biofortification differs from conventional fortification as it aims to increase nutrient levels in crops during plant growth rather than through manual means during processing of the crops.
- Biofortification thus presents a way to reach populations where supplementation and conventional fortification activities may be difficult to implement.

Corporatisation of OFB

- Addressing a long awaited reform, the Union Cabinet has approved a plan to corporatise the Ordnance Factory Board (OFB), which currently has 41 factories.
- After the implementation of the plan, the 41 factories would be subsumed into **seven 100 % government-owned corporate entities**, registered under the Companies Act 2013.
- The seven entities will be grouped as follows: *ammunition and explosives, vehicles, weapons and equipment, troop comfort items, opto-electronics gear, parachutes and ancillary products.*
- An empowered group of ministers (EGoM), constituted last year under the Defence Minister, will oversee the board's corporatisation and review any issues arising from time to time.

Background

- The ordnance factories are the oldest and the largest organisation in the country's defence industry. In 1787, a gunpowder factory was established at Ishapore by the British.
- Over the years, the ordnance factories have been characterised by ***poor quality products, delayed timelines, high production cost, and lack of technological advancements.***
- Thus, during the past two decades, several high-level committees have underlined the need to improve the functioning of OFB and turn its factories into vehicles of self-reliance for the country's defence preparedness.
- An internal army assessment last year highlighted concerns about faulty ammunition and armament supplied by the OFB causing army casualties and hurting the exchequer.
- The Comptroller and Auditor General has also raised questions about the quality of products supplied by the OFB and its overall performance in its reports.

Employee Concerns

- The factories controlled by the board employ around 81,000 people who have gone on strike since the changes were announced.
- However, the government has assured that there would be no change in the service conditions of the OFB employees and the government was committed to safeguarding their interests.
- All OFB employees (Group A, B and C) from different production units will be transferred to the corporate entities on deemed deputation for an initial period of two years without changing their service conditions as government employees.
- Moreover, the pension liabilities of the retirees and existing employees will continue to be borne by the government.

Impact Of The Change

- The OFB currently comes under the administrative control of the Department of Defence Production in the Defence Ministry. The corporatisation of OFB will give the organisation autonomy and take it out of the direct control of the Department of Defence Production.
- The new structure will help overcome various shortcomings in the existing OFB set-up by eliminating inefficient supply chains and provide these companies incentive to become competitive.
- It will transform the ordnance factories into productive and profitable assets, deepen product specialisation, boost performance and improve quality, cost efficiency and accountability.
- It will also help to increase OFB's share in the domestic market through better capacity utilisation and also help to tap new export opportunities.

Economic Relief Package

- The Ministry of Finance recently announced various measures, amounting to Rs. 6,28,993 crore, to provide relief to diverse sectors affected by the 2nd wave of COVID pandemic.
- The measures announced can be clubbed into 3 broad categories:
 - Economic relief from pandemic.
 - Strengthening public health.
 - Impetus for growth & employment.

Economic Relied From Pandemic

The government has decided to expand the Emergency Credit Line Guarantee Scheme (ECLGS), launched as part of Aatma Nirbhar Bharat Package in May, 2020, by Rs 1.5 lakh crore

Loan Guarantee Scheme

- Under this new scheme, additional credit of Rs 1.1 lakh crore will flow to the businesses. This includes Rs 50,000 crore for health sector and Rs 60,000 crore for other sectors, including tourism.
- The health sector component is aimed at up scaling medical infrastructure targeting underserved areas.
- Maximum loan admissible under the scheme is Rs. 100 crore and guarantee duration is up to 3 years. Loans available under the scheme will be much cheaper compared to the normal interest rates.

Credit Guarantee Scheme for Micro Finance Institutions

- It is a new scheme, which aims to benefit the smallest borrowers who are served by the network of Micro Finance Institutions (MFIs).
- Guarantee will be provided to Scheduled Commercial Banks for loans to new or existing NBFC-MFIs or MFIs for on lending upto Rs 1.25 lakh to approximately 25 lakh small borrowers.
- The scheme focuses on new lending, and not on repayment of old loans. Another feature of the scheme is that all borrowers (including defaulters upto 89 days) will be eligible.

Strengthening Public Health

- Besides supporting the health sector through credit guarantee scheme, a new scheme for strengthening public health infrastructure and human resources with outlay of Rs. 23,220 crore was also announced.
- The new scheme will focus on short term emergency preparedness with special emphasis on children and paediatric care/paediatric beds.

31. 17+1 cooperation forum is a China-led format to

- a) Expand cooperation between Beijing and the Central and Eastern Europe
- b) Expand cooperation between Beijing and the Central and Eastern Africa
- c) Expand cooperation between Beijing and the Central and Western Europe
- d) Ensure growth and investment in Belt Road Corridor

Answer: A

Explanation

- Lithuania has **quit China's 17+1 cooperation forum with central and eastern Europe**. It has called this forum divisive.
- Lithuania, a Baltic Country, has urged other EU members to pursue "a much more effective 27+1 approach and communication with China."

About 17+1

- It is a **China-led format** with an aim to expand **cooperation between Beijing and the CEE (Central and Eastern Europe) member countries**, with investments and trade for the development of the CEE region.
- It was founded in 2012 in Budapest.
- Member Countries include **twelve EU member states and five Balkan states** — Albania, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Greece, Hungary, Latvia, Lithuania, Macedonia, Montenegro, Poland, Romania, Serbia, Slovakia and Slovenia.
- This platform is largely seen as an extension of China's flagship Belt and Road initiative.

32. Who among the following has taken oath as Israel's new Prime Minister?

- a) Yair Lapid
- b) Naftali Bennett
- c) Benjamin Netanyahu
- d) None of the above

Answer: B

Explanation

- **Naftali Bennett** has been sworn in as **Israel's new Prime Minister**, ousting PM Benjamin Netanyahu from power. **Netanyahu** was the PM for uninterrupted 12 years.
- The new government is an unprecedented **coalition of ideologically divergent political parties** drawn from the Right, the Left and the Centre, along with an Arab party.
- It has a razor-thin majority in a 120-member house.
- Bennett is the leader of the **right-wing Yamina party**.

Electoral Process of Israel

- Under Israel's Basic Law, national **Knesset** (Parliament) elections are scheduled to take place **every four years on a Tuesday in the Jewish month of Cheshvan**. But early elections are a frequent occurrence.

- Israel follows a “**closed-list**” **method of proportional representation**. In this system, citizens have the chance to **vote for a party or group of parties** but **not for individual candidates to Knesset**.
- The **120 seats in the Knesset** are then assigned proportionally to each party that received votes, provided that the party gained votes which met or exceeded the electoral threshold
- Parties have various ways of choosing the order of candidates on their list. Party leaders may appoint candidates directly, the party may vote amongst themselves, or they can hold primaries with voters.
- When seat distributions are over, the President steps in to select a Knesset member who is most likely to be able to form a stable government. This is usually the leader of the party who received the most seats. If a party ever wins more than 50% it could form a government without coalition.

Ranked-Choice Voting

- For the **first time**, the New York city have used **ranked-choice voting** for primary elections held for the post of Mayor.
- The process allowed **voters list up to five candidates in order of preference**, instead of picking just one candidate.

What is Ranked-Choice Voting

In the system, voters get to rank their preferred candidates. It works in following manners:

- If someone gets 50% plus one after all the first-choice votes are counted, then the election is over and that candidate wins.
- But if no one gets 50% plus one, then the counting goes to Round 2.
- The person with the lowest number of first-place votes is eliminated, and that candidate's voters' second choices get redistributed as votes for other candidates.
- This reallocation of votes goes on until someone reaches 50% plus one.

Advantages Of This Voting System

- The **winner gets a majority of the vote** – In usual system, generally a candidate getting highest number of votes is deemed elected.
- However, in a diverse country like India, this can simply mean that a candidate with a **plurality of the overall vote** can be elected, not necessarily the person with majority support.
- This method gives **voters a greater say in who gets elected** and it encourages **candidates to appeal to a broad set of voters**.

Disadvantages

- It is **complicated**. Due to in-built complications, **voters can get confused** which in turn can lead to errors. Lots of people do not fill out all the choices.
- It is less democratic because it is **against the idea of one person, one vote**.
- It could **encourage horse-trading** as it would open the door for **candidates to make deals** with one another about **who their voters should go for as a second choice**.

Biden-Putin Summit

- U.S. President Joe Biden and Russian President Vladimir Putin have met for the **first time in Geneva** (chosen as a location for the talks for its history of political neutrality).

- This summit holds significance as **U.S.-Russia relations remain tense** following a slew of **geopolitical clashes** and **international sanctions** in recent years.

Key Highlights

- The agenda for the summit included: strategic stability, climate change as well as nuclear stability, arms control and cybersecurity.
- It also included range of other topics such as the fate of jailed opposition leader Alexei Navalny, Ukraine, Belarus and the outlook for Russian and U.S. nationals imprisoned in each other's countries.
- Both leaders have decided to return their Ambassadors to the Embassies and announced "**a strategic stability dialogue**" to **discuss terms of arms control measures**.
- It should be noted that **neither the US nor Russia currently has an ambassador** in-country, and Russia recently included the **US on its official list of "unfriendly states"**.
- Although there was no major breakthrough, this summit demonstrated a willingness to strengthen engagement and reduce tensions.

Background:

- Relations have hit the lowest point in recent years since the end of the Cold War. Russia's annexation of Crimea from Ukraine in 2014 got it **suspended from the then G-8** and **earned it international sanctions**.
- Since then, Russia has been accused of **2016 U.S. election meddling, two nerve agent attacks** (in the U.K. in 2018 and allegedly on Navalny in 2020) as well as involvement in cyberattacks and human rights abuses.
- Since then both sides have come out of many important treaties which included **New START Treaty, Open Skies Treaty** etc. This has further increased the distrust between these two countries.
- In this context, the meeting was seen as a chance to calm relations and introduce some much-needed stability into affairs.

China-Sri Lanka Friendship Hospital

- Sri Lankan President Gotabaya Rajapaksa inaugurated the **China-Sri Lanka Friendship Hospital** in Polonnaruwa. It was built with a **Chinese grant of \$ 60 million**.
- The hospital, located in Sri Lanka's North Central Province, will specialise in treating kidney ailments. The hospital is said to be **one of the largest in South Asia for nephrology** care, with a capacity of 200 beds.
- In addition to sanctioning loans and a currency swap facility worth more than \$ 2 billion since the pandemic struck last year, China also announced \$90 million grant to Sri Lanka in October 2020.

China Hosts ASEAN Foreign Ministers

- Recently, China hosted **Foreign Ministers from the 10 ASEAN countries** to mark the 30-year of relations. The **10 ASEAN members** are Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Vietnam.
- The meeting covered issues from restoring tourism and other economic exchanges battered by COVID-19, to more coordinated efforts in fighting the pandemic and the feasibility of creating a "vaccine passport" to allow freer travel among them.

Analysis

- China claims almost the **entire South China Sea** and is **locked in conflict** over the ownership of islands with Asean members like the Philippines, Brunei, Malaysia, and Indonesia.
- The Philippines has complained repeatedly **over the presence of Chinese boats moored at a reef** that it claims. Earlier, Malaysia protested over an alleged intrusion by 16 Chinese military aircraft into its airspace
- Despite these differences, **China's economic and diplomatic heft** has helped override such concerns. China-ASEAN cooperation is growing day by day.
- This is evident from the fact that despite the ongoing grim COVID-19 situation, both sides agreed to hold a face-to-face special foreign ministers' meeting.

El Salvador Makes Bitcoin a Legal Tender

- Central American nation El Salvador became the **first country in the world that has legalized the use of Bitcoin**. Bitcoin will be used along with US dollars in daily operations.
- The country has **used the US Dollar as official currency** since 2001.

Analysis

- El Salvador's economy relies heavily on remittances, which make up around 20% of the country's GDP. Due to low penetration of digital banking and less citizens having bank accounts, there are **multiple intermediaries in the remittance chain** who take cuts of as high as 20%.
- Hence, it is expected that the **involvement of bitcoin will remove intermediaries**. The impact Bitcoin has on these remittance inflows **would be worth monitoring for India**, which is home to the largest remittance market in the world.

Cryptocurrency

Cryptocurrency is an electronic or digital currency that **works on a peer-to-peer basis**. It weeds out the need for a trusted third party such as a bank. Cryptocurrencies have shown impressive gains and many believe that it will offer serious competition to national currencies issued by central banks.

Advantages:

- Information is **Transparent**
- **User Anonymity**
- **No Third-party Interruptions** – as there is no way to interrupt user transactions or place freezes on Bitcoin accounts.
- **Very Low Transaction Fees** - This can be a major advantage for MSME sector.
- Any **transfer in Bitcoins happens very quickly**, eliminating the inconvenience of typical authorization requirements and wait periods.
- **Freedom in Payment** - Bitcoin users can pay for their coins anywhere they have Internet access.

Risks Posed by These Currencies:

- **Risk and Volatility** - There is no underlying or backing of any asset for these currencies and their value seems to be a matter of speculation.
- **Cyber Security Threat** – These are prone to losses arising out of hacking, loss of password, compromise of access credentials, malware attack etc.

- **Outside the regulatory zone** – These are being traded on exchange platforms set up in various jurisdictions whose legal status is unclear.
- **Source of Money Laundering and Terror financing** – Due to anonymity, black money can proliferate easily and terror funding becomes easy.

Maldives Wins UN General Assembly Election

- **Maldives' Foreign Minister** Abdulla Shahid **won** the election to the post of **President of the 76th Session** of United Nations General Assembly for 2021-22. This is the *first time Maldives will be occupying this office*.
- This time the UNGA head was to be **chosen from the Asia-Pacific grouping. Maldives and Afghanistan** were two countries fighting for this post.

India's Role

- **Indian diplomats had been active behind the scenes** in helping the Maldives win this election. Maldives had announced its candidature for the 76th General Assembly Presidency in 2020.
- Afghanistan also announced its candidature for this post in January 2021. The announcement had caused an **awkward tussle within the Asia Pacific group**.
- India has close ties with both countries and therefore the announcement by Afghanistan complicated the matter.
- However, citing the fact that India had declared its support for Maldives publicly in November 2020, it expressed its **inability to support Afghanistan on this issue**.
- It should be noted that India's tenure at the UN Security Council will last until December 2022 while Maldives tenure will last until September 2022. Hence, it is being expected that the period will see smooth coordination between these two at the UN.

President Of UNGA

- The presidency of UNGA rotates annually between the **five geographic groups: African, Asia-Pacific, Eastern European, Latin American and Caribbean, and Western European and other States**.
- It is a general tradition that a **permanent member** of the UNSC **does not serve as UNGA president**.
- The President of UNGA is the chair and presiding officer of the General Assembly.

China Allows Couple to Have Three Children

- China has announced that it will **allow couples to have up to three children**, after census data showed a **steep decline in birth rates**.
- China scrapped its decades-old **one-child policy in 2016**, replacing it with a two-child limit. However, it failed to lead to a sustained upsurge in births.
- Human rights groups, however, have criticized the govt. saying that it has no business regulating how many children people have.
- They contend that **rather than 'optimising' its birth policy**, China should instead **respect people's life choices** and end any invasive and punitive controls over people's family planning decisions.

China Launches First Bullet Train in Tibet

- China has operationalised its first fully electrified bullet train in the remote Himalayan region of Tibet. It **connects the provincial capital Lhasa and Nyingchi** (part of Sichuan-Tibet Railway).
- The **Sichuan-Tibet Railway** will be the **second railway into Tibet** after the **Qinghai-Tibet Railway**. It will go through the southeast of the Qinghai-Tibet Plateau, one of the world's most geologically active areas.
- The regions connected by the bullet train are strategically located Tibetan border town **close to Arunachal Pradesh**. Nyingchi is prefecture-level city of Medog which is adjacent to the Arunachal Pradesh border.
- **China claims Arunachal Pradesh as part of South Tibet**, which is firmly rejected by India.

33. Tax Inspectors Without Borders Programme has been launched by

- a) **United Nations Development Programme (UNDP)**
- b) **Organisation for Economic Cooperation and Development (OECD)**
- c) **Both a and b**
- d) **Neither a nor b**

Answer: C

Explanation

India has been chosen as a partner country in Bhutan's TIWB programme. India provided the Tax Expert for this programme.

Key Highlights:

- India in collaboration with the United Nations Development Programme (UNDP) and the TIWB Secretariat aims to **aid Bhutan in strengthening its tax administration**.
- It will transfer technical know-how and skills to Bhutan's tax auditors, as well as share the best audit practices. The focus of the programme will be in the area of **International Taxation and Transfer Pricing**.
- This programme is expected to be of about 24 months' duration and is seen as **another milestone** in the continued **cooperation between India and Bhutan** and India's continued and active support for **South-South cooperation**.

About Tax Inspectors Without Borders (TIWB) Programme

- It is a **joint initiative** of United Nations Development Programme (UNDP) and Organisation for Economic Cooperation and Development (OECD).
- Launched in July 2015, it is a **capacity-building programme** which **aims to strengthen developing countries' auditing capacity** and multinationals' compliance worldwide.

34. Consider the following statements regarding International Court of Justice (ICJ):

1. **ICJ is the principal judicial organ of the UN.**
2. **The seat of the Court is at the Peace Palace in The Hague.**
3. **Its official languages are English and French.**

Which of the above statements is/are Correct?

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

Answer: D

Explanation

- **Pakistan's Parliament** has passed a bill that will **help Kulbhushan Jadhav appeal against the death sentence** given to him by a military court.
- The Bill, named as *The International Court of Justice (Review and Re-consideration) Bill*, is aimed at allowing Jadhav to have consular access.

Background

- Jadhav, an Indian national, had been arrested in Pakistan's restive province of Balochistan in 2016 and accused of terrorism, spying, and subversive activities.
- He was sentenced to death by a Pakistani military court in 2017.
- In May 2017, India appealed against Pakistan in ICJ to render justice for Jadhav.
- Finally, in July 2019, the ICJ **stayed the execution** of Jadhav. It directed Pakistan to stay his execution and **allow him consular access**.
- The ruling upheld that Islamabad had **violated Article 36 of Vienna Convention of Consular Relations, 1963**.

Vienna Convention on Consular Relations

- It is an international treaty that defines a framework for consular relations between independent sovereign states.
- **Article 5** of the convention **defines the consular functions**. It lists **thirteen functions of a consul**, including "*protecting in the receiving State the interests of the sending State and of its nationals, both individuals and bodies corporate, within the limits permitted by international law*".
- **Article 36** addresses communications between consular officers and nationals of the sending state. The Convention provides that "consular officers shall be free to communicate with nationals of the sending State and to have access to them."

About ICJ:

- The International Court of Justice (ICJ) is the **principal judicial organ** of the United Nations (UN).
- It was established in June 1945 by the Charter of the United Nations and began work in April 1946.
- The seat of the Court is at the **Peace Palace in The Hague** (Netherlands).
- All members of the UN are parties to the statute of the ICJ, and nonmembers may also become parties.
- The Court's role is to settle in accordance with international law, legal disputes submitted to it by States and to give advisory opinions on legal questions referred to it by authorized United Nations organs and specialized agencies.
- The Court is composed of **15 judges** who are elected for terms of office of nine years by the United Nations General Assembly and the Security Council.
- It is assisted by a Registry, its administrative organ. Its official languages are **English and French**. The court's judgment is **final and without appeal**.

U.K. Appointed a Liaison Officer To Information Fusion Centre

The **United Kingdom has officially joined** the Indian Navy's Information Fusion Centre-Indian Ocean Region (**IFC-IOR**). It has appointed Lieutenant Commander Stephen Smith as a liaison officer to IFC-IOR.

Key Highlights

- This appointment is part of the **2030 roadmap announced** by Indian PM and his British counterpart after their virtual summit in May.
- UK is the **fifth country to send its officer** after the US, Japan, France and Australia.
- This step **boldly underlines UK and Indian desires to work together** in the Indian Ocean Region and wider Indo-Pacific.

Roadmap 2030

- An ambitious '**Roadmap 2030**' was adopted at India-UK Virtual Summit, held in May 2021, to **elevate bilateral ties to a 'Comprehensive Strategic Partnership'**.
- The roadmap will pave the way for a **deeper and stronger engagement over next 10 years** in key areas of people-to-people contacts, trade & economy, defence & security, climate action and health.

About IFC-IOR

- In December 2018, Indian launched the **Information Fusion Centre – Indian Ocean Region (IFC-IOR)**, at **Information Management and Analysis Centre (IMAC) Gurugram**.
- The IFC-IOR aims to engage with partner nations and multi-national maritime constructs to develop **comprehensive maritime domain awareness and share information on vessels of interest** (i.e., *information on "white shipping", or commercial shipping*).
- It has been also **recognised** by the **UN's International Maritime Organization**.

Need For Such Centre

- The Indian Ocean Region is vital to world trade and economic prosperity of many nations as more than 75% of the world's maritime trade and 50% of global oil consumption passes through the IOR.
- However, maritime terrorism, piracy, human trafficking, illegal and unregulated fishing, arms running and poaching pose myriad challenges to maritime safety and security in the region.
- The scale, scope and the multi-national nature of maritime activities, make it difficult for countries to address these challenges individually. Hence, collaborative efforts between maritime nations in the IOR, is essential.

UK's Presence in the Western Indian Ocean Region

- UK has **seven permanent bases** in Kenya, Singapore, Brunei, Nepal, Bahrain, Oman, and British Indian Ocean Territory (BIOT).
- Seven ships remain deployed at any time to provide security in the Western region of the Indo-Pacific.
- In this context, India – UK maritime partnership will help India's position in Indo-Pacific region.

India Abstains from Voting on Myanmar Resolution

- India has abstained from a vote on a UN General Assembly resolution on Myanmar. The resolution was **seeking to delegitimise the Myanmar military junta** and to **prevent flow of arms into the country**.

- The **resolution was overwhelmingly passed** with a vote of 119-1. A total of **36 countries abstained from voting** which included India, China, Russia and Indian neighbours such as Nepal, Bhutan and Bangladesh.

About Resolution on Myanmar

- The resolution, among other things, called on the Myanmar military:
 - to end the state of emergency, reopen the “democratically elected parliament”,
 - release detained civilian leaders “immediately and unconditionally”,
 - swiftly implement the five-point consensus reached at the Association of Southeast Asian Nations meeting in April,
 - allow the UN Special Envoy of the Secretary-General on Myanmar to visit the country.
- Although **not legally binding** on member states, the document carries significant political heft.

Why Did India Abstain From Voting

- India said that the resolution **did not reflect its views**. It further stated that India did not believe the resolution was going to aid the joint efforts towards strengthening the democratic process.
- As per India, the resolution was tabled in UNGA **without adequate consultations** with neighbours and regional countries. This is not only unhelpful but may also prove counter-productive to the efforts of ASEAN to find a solution.
- India believes that the **solution to the crisis** in Myanmar **needs to come from the region**.
- India has walked the **diplomatic tightrope on Myanmar** since the military coup of February 2021. This tightrope strategy is tied to two things – the **importance of Myanmar for India**; and New Delhi’s desire to **preserve its channels of communication with the Burmese generals** and **prevent them from moving further into China’s lap**.
- **India’s Interest**
 - India firmly believes in working with whoever is in power in Naypyitaw to protect its own bilateral and regional interests.
 - Security relationship between the two sides is crucial to tackling **militancy in the north-eastern states**.
 - Indian absence would give boost to **Chinese presence** in the region. It will also **jeopardize India’s Act East policy**.
 - Also, it should be noted that **India has signed a series of defence deals** with the Myanmar military in recent years. Hence, any resolution with an aim to prevent the flow of arms into Myanmar could be interpreted as New Delhi’s endorsement of an informal arms embargo.
 - In October 2020, India announced the **handing over of a kilo-class submarine INS Sindhuvir to the Myanmar navy**. The Indian gig is the first submarine for the Myanmar navy.

Background

- On February 1, 2021 Myanmar's **military seized power** after detaining Aung San Suu Kyi and other democratically elected leaders. The military declared a **one-year state of emergency**.

- Army seized control following a general election in which Ms Suu Kyi's NLD party won by a landslide. The army alleged that the landslide election win was **marred by fraud**.

India and Pakistan Battle over Basmati

India has ***applied for protected geographical indication status*** for Basmati rice from the European Union's Council on Quality Schemes for Agricultural Products and Foodstuffs. If provided, it would give India sole ownership of the basmati title in the EU.

India – Pakistan Battle

- In India, historically, the Basmati rice has been **cultivated in Indo-Gangetic plains** at the foothills of the Himalayas. This region is spread over Himachal Pradesh, Punjab, Haryana, Uttarakhand, Uttar Pradesh, Delhi and Jammu and Kashmir.
- However, Basmati rice has also been grown for centuries in the **Kalar tract**, which lies **between the Ravi and Chenab rivers** in Pakistan's Punjab province.
- Based on this fact, **Pakistan has opposed India's claim**. Pakistan is the only other basmati rice exporter in the world.
- Granting GI tag status to India in EU would adversely impact Pakistan's export as EU is a major market for its basmati.

Background

- In July 2018, India applied for Protected Geographical Indication or PGI status for Basmati rice before the European Union.
- The process gathered steam after a recent India-EU trade summit.

Facts Supporting India's Claim Over Basmati

- The first-ever recorded reference to 'basmati' rice is found in the epic Indian poem Heer Ranjha dated 1766.
- Reports to the UK House of Commons in 1874, along with the Paris & Vienna Universal Exhibitions of 1867 & 1873, mention '**Indian Basmuttee rice**'.
- French, Spanish & Moroccan courts have also **rejected the 'Basmati' trademark for rice grown outside India**.
- Over the last two decades, India also implemented **steps to protect the legal status of 'Basmati', including DNA testing**. While **Pakistan hasn't taken such steps**, it does claim a joint heritage.

What Next?

- As per EU rules, the two countries **must try to negotiate an amicable resolution** by September. However, if an agreement cannot be reached and the European Union rules in India's favour, Pakistan would have the **option of approaching the European courts**.
- Other possible solution would be the **decision of the joint heritage**. Pakistan is a recent country, created after the partition of India. Hence, **historically, the reputation and geographic area [for basmati] are common to India and Pakistan**.

India - Australia Joint Working Group on Cyber Security Cooperation

- The **first meeting** of Joint Working Group on **Cyber Security Cooperation** between India and Australia was held virtually.
- The Joint Working Group on Cyber Security Cooperation is a mechanism established under the **Framework Arrangement on the Cyber and Cyber-enabled Critical Technology Cooperation** between India and Australia to implement the **2020-25 Plan of Action under the Framework**.
- This mechanism brings together policy makers and working level experts in the area to strengthen bilateral cooperation.
- It should be noted that the relationship between these two countries was **elevated to Comprehensive Strategic Partnership (CSP)** in June 2020.

First Arab-India Energy Forum

- The **first edition** of the **Arab-India Energy Forum (AIEF)** was held in a virtual format.
- It was held under the co-chairship of **India and Morocco**.
- The forum explored potential and challenges of cooperation in the fields of energy transition, intra-regional power trading, hydrocarbons and nuclear power generation.
- The third meeting of India and the League of Arab States, held in January 2021, decided to organise this event as part of implementation of the **Executive Programme of Arab-India Cooperation Forum**.
- The second edition of the AIEF will be organised in India during the year 2023.

Demand for Oil in India

- An International Energy Agency report stated that India's demand for oil is expected to continue growing and reach about 6 million barrels per day by 2024, up from 4.4 million barrels per day in 2017, representing an annual growth of 3.9 percent.
- It is far higher than the global average of 1.2 percent, the IEA said.
- As per the report, **India could become the largest consumer of oil by the mid-2020s**.

Japanese Help to Build Vaccine Cold Chain Facilities in India

- The Government of Japan has announced assistance of US\$ 9.3 million to support India's response to the COVID-19 pandemic. This grant will provide India with **cold chain equipment** including cold-storage facilities, to ensure vaccines reach all.
- The assistance is **channelled through UNICEF**.
- Vaccines are required to be continuously stored in a limited temperature range otherwise they would lose its potency.
- Among the available covid-19 vaccines, stringent storage conditions are required for Pfizer & Biotech's COVID-19 vaccine. Moderna COVID-19 vaccine requires temperatures of -20°C at which it can remain stable for up to six months.

US Investigation Into Digital Services Tax

- The US has announced further **suspension of punitive tariffs for six months** on India, Austria, Italy, Spain, Turkey, and the United Kingdom while it continues to resolve the digital services taxes investigation.
- Key issues related to international taxation, including the digital services taxes (DST) are being negotiated by the multilateral institutions such as OECD and the G20.
- As a result, US decided to suspend the punitive tariffs so as to provide time for those negotiations to continue to make progress.

Background

- The US conducted a year-long investigation into digital services taxes imposed by countries. These investigations were **conducted by USTR** (United States Trade Representative).
- The investigation found that the DST adopted by the above-mentioned countries **discriminated against US digital companies**. It said that these taxes were **inconsistent with principles of international taxation** and burdened US companies.
- As a retaliation measure, the US announced **25 per cent tariffs on over \$2 billion worth** of imports from these six countries.
- However, it **immediately suspended the duties** to allow time for international tax negotiations.

Case Against India

- In case of India, the **USTR's proposed** course of action includes **additional tariffs of up to 25 per cent ad valorem** on an aggregate level of trade.
- It would collect **duties on goods of India** in the range of the amount of DST that India is expected to collect from US companies.
- Around 26 categories of goods are in the preliminary list of products that would be subject to the additional tariffs.

Digital Taxes in India:**1. Equalization Levy**

- It was introduced in Budget 2016. Its aim was to tax foreign digital companies.
- It proposed to levy a 6% tax payable on gross revenues from online advertising services. Hence, it was **limited to advertisement services only**.

2. Significant Economic Presence (SEP)

- The government had introduced the concept of SEP in line with its **plan to tax digital companies** in the **Finance Act, 2018**.
- SEP was defined to mean, among other things, systematic and continuous soliciting of business activities or engaging in interaction with such number of users as may be prescribed in India through digital means.
- This provision was earlier proposed to be effective from assessment year 2021-22, but has **now been deferred to 2022-23**.

3. Finance Bill 2020

- The Finance Bill has proposed changes to the income tax Act **to add new source rules** that deem **certain types of a foreign assessee's income to be of Indian origin** and hence taxable in the country.
- This will make an **overseas platform** that advertises, streams or sells goods to an Indian IP address **taxable in the country**.
- Basically, it **expanded the scope of the existing equalization levy** to a range of digital services that **includes e-commerce platforms**. It imposed a **2 per cent DST** on trade and services by non-resident e-commerce operators with a turnover of over Rs 2 crore.
- Estimates by the USTR indicate that the **value of the DST payable by US-based company groups to India will be up to approximately \$55 million per year**.

Summits And Organisations

35. Consider the following Countries:

- | | |
|-----------|----------|
| 1. Japan | 2. India |
| 3. Russia | 4. USA |

Which of the above do(es) not belong to ASEAN Defence Ministers' Meeting Plus (ADMM Plus)?

- | | |
|------------|----------------------|
| a) 1 and 2 | b) 3 and 4 |
| c) 2 and 3 | d) None of the above |

Answer: D

Explanation

- **8th ADMM-Plus** meeting was held recently. Indian Defence Minister participated in the meeting. It was organized in virtual format.
- As the **chair of ASEAN grouping** this year, **Brunei** hosted this meeting.

Why This Meeting Was Important

- China has sovereignty disputes in the South China Sea. It not only **rejected the 2016 verdict of Permanent Court of Arbitration** but also intensified militarization of the region.
- Moreover, recently, in June 2021, **China-organised ASEAN foreign ministerial meeting** at which it pushed for a **Code of Conduct on the South China Sea**. Other stakeholders of the region in terms of maritime trade were excluded from the discussion.
- As a result, many analysts believe that the proposed Code is expected to further **consolidate China's grip over the region**, without conceding its sovereignty claims.
- China has been insisting on a **"territorial sea" concept** of potentially blockading entry and exit through the South China Sea waters.
- As a result, the other dialogue partners of ADMM Plus such as the United States, Japan, Australia and India have been insisting on **uninterrupted freedom of navigation**.

About ADMM-Plus

- It was established the during the **2nd ADMM in Singapore in 2007**. The first ADMM-Plus was organised at Hanoi, Vietnam in 2010.
- It is an annual **meeting of Defence Ministers of 10 ASEAN countries and eight dialogue partner countries**.
- **Membership** - It includes ten ASEAN Member States and eight Plus countries, namely Australia, China, India, Japan, New Zealand, Republic of Korea, Russia, and the United States.
- **Areas of Cooperation** - Maritime security, counter-terrorism, humanitarian assistance and disaster relief, peacekeeping operations and military medicine

- This is in addition to the millions who have fled countries such as Syria and Afghanistan due to long wars or fighting.
- 2020 is the ninth year of continuous rise in forced displacement worldwide. Last year, **one per cent of humanity was displaced** and there were twice as many forcibly displaced people than in 2011, when the total was just under 40 million.

Source And Destination Countries

- More than two thirds of all people who fled abroad came from **just five countries**: Syria (6.7 million), Venezuela (4.0 million), Afghanistan (2.6 million), South Sudan (2.2 million) & Myanmar (1.1 million).
- For the seventh year in a row, **Turkey** hosted the largest refugee population worldwide (3.7 million refugees). It was followed by Colombia (1.7 million), Pakistan (1.4 million), Uganda (1.4 million) and Germany (1.2 million).

Way Ahead

- The **1951 Refugee Convention** and the **Global Compact on Refugees** do provide the legal framework and tools to respond to displacement. However, there is a much greater need of political will to address issues that force people to leave in the first place.
- Solutions require global leaders and those with influence to put aside their differences, and instead focus on preventing and solving conflict and ensuring respect for human rights.

United Nations High Commissioner for Refugees (UNHCR)

- Headquartered in Geneva, UNHCR was created in 1950 to address the refugee crisis that resulted from World War II.
- It is mandated to lead and co-ordinate international action to protect refugees and resolve refugee problems worldwide. Its primary purpose is to safeguard the rights and well-being of refugees.
- It works to ensure that everyone can exercise the right to seek asylum and find safe shelter in another state, with the option to return home voluntarily, integrate locally or to resettle in a third country.
- An **asylum seeker** is a person who has left his/her home country because of war or other factors, and has entered another country, and applies for asylum, that is, international protection, in this new country.

39. Consider the following research stations of India:

- | | |
|---------------------|------------|
| 1. Maitri | 2. Bharati |
| 3. Dakshin Gangotri | 4. Himadri |

Which of the above stations is/are not part of India's engagement in Antarctica?

- | | |
|-----------|-----------|
| a) 1 Only | b) 2 Only |
| c) 3 Only | d) 4 Only |

Answer: D

- The Conference is FAO's supreme governing body and **takes place every two years.**

About FAO

- FAO is a **specialized agency** of the United Nations that leads international efforts to defeat hunger and improve nutrition and food security.
- The UN has six main organs. Five of them — the General Assembly, the Security Council, the Economic and Social Council, the Trusteeship Council and the Secretariat — are based at UN Headquarters in New York. The sixth, the International Court of Justice, is located at The Hague in Netherlands.
- It is based in **Rome (Italy)**. Its sister bodies are the **World Food Programme (WFP)** and the **International Fund for Agricultural Development (IFAD)**.

India's Association with FAO

- India has had a historic association with FAO. Indian Civil Service Officer **Dr Binay Ranjan Sen** was the Director General of FAO during 1956-1967.
- The World Food Programme, which has won the **Nobel Peace Prize 2020**, was established during his time.
- India's proposals for the **International Year of Pulses in 2016** and the **International Year of Millets 2023** have also been endorsed by FAO.

About WFP

- It is the **food-assistance branch of United Nations**. It is the world's largest humanitarian organisation addressing hunger and promoting food security.
- Its efforts focus on emergency assistance, relief and rehabilitation, development aid and special operations. In 2019, **WFP assisted 97 million people** – the largest number since 2012 – in 88 countries.
- Founded in 1961, it is **headquartered in Rome**. It works closely with its two Rome-based sister organizations, the **FAO** of the United Nations and the **IFAD**.

Criticism Faced by WFP

- Early in its history, the group was accused of **bolstering US economy by buying its produce**. The WFP has since tried to strike a balance between purchasing locally and avoiding any potential inflation of food prices.
- Some economists have also argued the **WFP makes some nations overly reliant on foreign aid**.

41. Consider the following statements regarding the Organisation for Prohibition of Chemical Weapons (OPCW):

1. It is an intergovernmental organisation and the implementing body for the Chemical Weapons Convention.
2. It is headquartered at Geneva, Switzerland.
3. Although nominated twice, this organization has so far failed to receive the Noble Peace Prize.

Which of the above statements is/are Correct?

About NATO

- NATO is an intergovernmental military alliance of **30 European and North American countries** which was signed in 1949.
- It is a **system of collective defence** where independent member states agree for mutual defence in case of any attack by external party.
- **North Macedonia is the newest member** of NATO (joined the bloc in March 2020).
- **Headquarters:** Brussels, Belgium.

BRICS Network Universities

- Indian Institute of Technology, Bombay hosted a three-day virtual conference of BRICS network universities.
- BRICS Network University is a union of higher education institutions of the five BRICS member countries.
- **India has assumed the chairship** of 13th BRICS Summit this year. This conference was hosted by India under the education stream.
- The participating members discussed **various aspects of electric mobility** like traffic management, hydrogen technology, hybrid vehicles, lithium-ion batteries and linkage between e-mobility and livelihoods.
- It was formed with the objective of enhancing educational cooperation in general, and for research and innovation.
- **IIT Bombay is the lead institution of India for the BRICS network university.**

BRICS Foreign Ministers Meeting

- India hosted the meeting of BRICS Foreign Ministers in its capacity as the chair of organization. This was also the **landmark occasion of 15th anniversary of BRICS.**
- For the **first time**, BRICS foreign ministers **agreed on a common, standalone joint statement on reforming the multilateral system.** They agreed to instill new life in the discussions on reform of UN Security Council.
- They have also agreed to a **set of six principles** that should guide the reform of multilateral institution. These principles are:
 - make global governance more inclusive, representative and participatory
 - inclusive consultation and collaboration for the benefit of all
 - make multilateral organisations more responsive, action-oriented and solution-oriented based on the norms and principles of international law and the spirit of mutual respect, justice, equality, mutual beneficial cooperation.
 - use innovative and inclusive solutions, including digital and technological tools
 - strengthen capacities of individual States and international organizations
 - promote people-centered international cooperation at the core

- BRICS brings together **five of the largest developing countries** of the world, representing **41 % of the global population, 24 % of the global GDP and 16 % of the global trade.**

Appointment of UN Secretary-General

- UN General Assembly has appointed **Antonio Guterres** as the UN Secretary General for a second term beginning January 1, 2022. His new term will end on December 31, 2026.
- Antonio Guterres started his first term in 2017. He was the **ninth UN chief.**
- While there are **no term limits applicable to this post**, no Secretary-General has so far served more than two terms.

How Is UN Secretary-General Chosen

- The Secretary-General is **appointed by the General Assembly** on the **recommendation of the Security Council.** Hence, the selection is therefore subject to the veto of any of the five permanent members.
- Essentially, the Secretary-General is chosen during closed-door sessions of the Security Council, and approval by the General Assembly is seen more as a formality.
- The backing of **10 elected non-permanent members** of the Security Council is also crucial as a **candidate requires at least nine out of 15 votes to be recommended for the top job.**
- For any candidate to have a real chance at being considered for the top post, a **recommendation by any UN member state is essential.**

Explanation:

- India successfully test-fired **Agni-P, also known as Agni Prime**, the next generation nuclear-capable ballistic missile in India's nuclear arsenal.
- With a **range of 1,000-2,000 kilometers**, the deadly missile is capable of covering vital targets all across Pakistan.
- The missile comes with new composites, propulsion systems, innovative guidance and control mechanisms, besides the latest navigation systems.
- The missile has a canisterised system. This means that the movement and launch options increase for the Strategic Forces Command, which oversees India's nuclear arsenal.
- It is **not a replacement** for any of the existing missiles. Agni P is the **lightest and smallest of the Agni series** because of technological advancements which makes it very maneuverable and **increases the accuracy while making it difficult to intercept**.
- The missile **can be launched from rail or road** and can be transported to various parts of the country.

45. Consider the following statements regarding Interpol:

1. **Interpol is an international police organization of United Nation.**
2. **Agents of Interpol have the power to make arrests.**
3. **Once the Interpol issues Red Notices, States are obliged to follow these notices.**

Which of the above statements is/are Correct?

- | | |
|------------|----------------------|
| a) 1 and 2 | b) 1 and 3 |
| c) 2 and 3 | d) None of the above |

Answer – D

Explanation

- “**Operation Pangea XIV**” was coordinated by the **International Criminal Police Organization** (Interpol). This operation targeted the **sale of fake medicines and products online**.
- It involved the police, customs and health regulatory authorities of **92 countries** against **the sale of fake and illicit medicines and medical products**.
- Indian agencies also participated in the operation. The Central Bureau of Investigation is the **nodal body for the Interpol in the country**.

About Interpol:

- **Full Name** - International Criminal Police Organisation
- Interpol is an **international police organisation** made up of 194 member countries. Interpol does not work under UN. It has enjoyed a special role – that of **Permanent Observer at the United Nations** - since 1996.
- **Founded** in 1923; **Headquartered** at Lyon, France
- It is **not a police force** in the traditional sense—its agents are **not able to arrest criminals**.

- It is **more of an information-sharing network**, providing a way for national police forces to co-operate effectively and tackle international crime ranging from human trafficking and terrorism to money laundering and illegal art dealing.
- The organization operates centralised criminal databases that contain fingerprint records, DNA samples and stolen documents.
- “**Red Notice**” - a notification that a member state would like someone arrested. States are not obliged to follow these notices, but will often treat them as a warrant for someone’s arrest and extradition.
- **Kim Jong Yang** of South Korea was elected **president of Interpol for a two-year term** until 2020.

IN-EUNAVFOR Joint Naval Exercise

- **Indian Navy - European Union Naval Force (IN-EUNAVFOR)** Exercise was conducted in the Gulf of Aden. This was the **maiden exercise** between these two.
- European Naval Force was represented by naval forces of **Italy, Spain and France**.
- The aim of this exercise was to enhance their war-fighting skills as an integrated force to promote peace, security and stability in the maritime domain.
- EUNAVFOR and the Indian Navy converge on multiple issues including counter piracy operations and protection of vessels deployed under the charter of World Food Programme.
- They also have regular interaction through **SHADE** (Shared Awareness and De-confliction) meetings held **annually at Bahrain**.
- **EUNAVFOR was formed in 2008** to establish the **executive EU military maritime operation** for Somalia – Op ATLANTA to counter acts of piracy and armed robbery off the Somali Coast.

Theaterisation of Armed Forces

All stake holders related to the **formulation of theatre commands** met recently. The aim of the meeting was to **iron out differences on issue of structure of Theatre Commands**. The meeting was chaired by the Chief of Defence Staff.

Present Model In India

- At present, India has **17 single service commands** and **only two tri-service commands**.
- The **17 single service commands** are divided as: Army – 7 commands; Airforce – 7 commands; Navy – 3 commands
- The two tri-service commands are - **Andaman and Nicobar Command (ANC)**, and the **Strategic Force Command** (handles the nuclear weapons).
- Creating Theatres would involve merging existing commands. Also, after restructuring, the **ANC command** will come under the proposed **Maritime Theatre Command** and **SFC** will be under **National Security Council**.

What Is Theaterisation

- Theaterisation is a concept which seeks to **integrate the capabilities of the three services** - army, air force and navy – in **order to optimally utilise their resources** for wars and operations.
- Theatre commands will have **units of Army, Navy and Air Force**. All of them will work as a single entity looking after security challenges in a specified geographical territory under an operational commander.
- It will **create a military structure** in which specific theatre commands/units – created by integrating elements/assets from all the three services - will be **placed under the Theatre Commander** (often a three-star general, drawn from any of the three services, depending on the function assigned).
- India's first chief of defence staff General Bipin Rawat has been given the mandate to steer the theaterisation drive.

Theaterisation Model Under Consideration

The plan under consideration talks about setting up of **six theatre commands**. These are:

1. **Air Defence Theatre Command** – It will control air defence resources of all three services. It will be tasked with **protecting military assets from airborne enemies**. It will be headed by a top three-star Indian Air Force officer **based in Prayagraj**.
2. **Maritime Theatre Command** - This will be responsible for securing India from seaborne threats. Headed by a top three-star Indian Navy officer and will be **based in Karwar, Karnataka**.
3. **Northern Command** (Comprising Jammu & Kashmir and Ladakh)
4. **Western Command**
5. **Eastern Command**
6. **Logistics Command** - to avoid **duplication of efforts and resources**.

[It should be noted that the *first phase involves the creation of Air Defence Command and Maritime Theatre Command*]

How Will The Role Of Service Chiefs Change After Theaterisation

- The operational control of the theatre commands will eventually come under the CDS. This would leave the Service chiefs with no direct control over their assets operationally.
- The service chiefs will be responsible for raising, training and sustaining their forces.
- Also, as **each chief will be a member of Chiefs of Staff Committee (COSC)**, and an expert of his/her domain, his or her inputs will be necessary for all operational decisions.

What About Militaries of Other Countries

- Most leading countries including those of **USA, Russia, China, UK, France, function as per the theatre command concept**. The idea is to achieve seamless integration among land, sea and other forces for better coordination and response.
- The US military has 11 combatant commands, each with a geographic or functional mission.
- Similarly, China has five theatre commands – eastern, southern, western, northern and central. Its western theatre handles the entire border with India.

What Is The Issue?

- Apprehensions against the current model of theaterisation have been raised by the Ministry of Home Affairs and the Air Force.
- Air force has **observations regarding the asset division**. The organization fears that it will lose control over its assets and operations. However, experts do believe that this fear is unjustified because the change will happen at the level of army commander. **Nothing will change** from the ground till the level of Army commanders and equivalent. All air bases, squadrons and air assets will continue to function under IAF officials.
- The MHA is worried about the **operational command of the Central Armed Police Forces (CAPF)**. It fears that the control of CAPF would go the Ministry of Defence.

First Chief of Defence Staff

In December 2019, General Bipin Rawat became the **country's first Chief of Defence Staff (CDS)**. The **other countries** that hold Chief of Defence Staff in the world includes **Italy, France, China, Spain, UK, Canada and Japan**.

Role of CDS

- The CDS acts as the **Principal Military Adviser** to the defence minister on tri-service matters. The three service chiefs will continue to advise the defence minister on matters exclusively concerning their respective forces.
- Though a **four-star general** like the three chiefs, the CDS will be the '**first among equals**' in the hierarchy. But the Army, Navy and IAF chiefs will have operational command of their forces.

Twitter Loses Safe Harbour

- Micro-blogging platform Twitter **has failed to appoint statutory officers** (Resident Grievance Officer, Nodal Officer and Chief Compliance Officer) as mandated by the new Information Technology (IT) Rules, 2021.
- As a result, the protection **under Section 79 of the Information Technology (IT) Act**, accorded to Twitter **for being a social media intermediary, now stands withdrawn**.
- In other words, Twitter has reportedly lost the **coveted "safe harbour" immunity in India**.

What Does it Mean

- Losing the safe harbour means that Twitter's senior executives **might face legal actions** under relevant IPC for '**unlawful**' activities on the platform - even if conducted by users.
- Now twitter will **no longer be treated as an intermediary** with no legal fallout for the actions of its users.

Protection accorded to Intermediaries under Section 79 of IT Act

- Section 79 says that any intermediary shall **not be held legally or otherwise liable for any third-party** information, data, or communication link made available or hosted on its platform.

- In other words, as long as a **platform acts just as the messenger** carrying a message from point A to point B, without interfering with its content in any manner, it will be safe from any legal prosecution brought upon due to the message being transmitted.

About the New IT Rules:

India's new IT rules came into force on May 26. The **Information Technology (Intermediary Guidelines and Digital Media Ethics Code) Rules, 2021**, seeks to regulate social media platforms, OTT players & digital media.

Key Highlights Of The Rule

A. Removal of Content from Social Media

- The new guidelines will make it mandatory for platforms such as WhatsApp to **aid in identifying the “originator” of “unlawful” messages**.
- The rules lay down **10 categories of content** that the social media platform should not host.
- The rules stipulate that upon receipt of information about the platform hosting prohibited content from a **court or the appropriate government agency**, it should remove the said content within 36 hours.

B. Categorisation of Social Media

- The rules also made a distinction between a **significant social media intermediary** and a **regular social media intermediary**.
- However, it is yet to be defined the user size to determine who will constitute a significant social media intermediary, though the officials indicated players with more than 50 lakh users will be considered.

C. Related to Safe Harbour Mechanism

- **Section 79 of the Information Technology Act** provides a “**safe harbour**” to intermediaries that host user-generated content, and exempts them from liability for the actions of users if they adhere to government-prescribed guidelines.
- The new guidelines prescribe **an element of due diligence** to be followed by the intermediary, failing which the **safe harbour provisions would cease** to apply to these platforms.

D. Grievance Redressal Mechanism

- The guidelines mandates that the intermediaries, including social media platforms, should establish a mechanism for receiving and resolving complaints from users.
- These platforms will **need to appoint a grievance officer** to deal with such complaints, who must acknowledge the complaint within 24 hours, and resolve it within 15 days of receipt.

E. Ensuring Compliance

- The social media platforms will be required to **appoint a chief compliance officer** resident in India, who will be responsible for ensuring compliance with the rules.
- They will be required also to appoint a **nodal contact person for 24x7 coordination** with law enforcement agencies.

- The platforms will need to publish a monthly compliance report mentioning the details of complaints received and action taken on the complaints, as well as details of contents removed proactively by the significant social media intermediary.

F. Penalties for Companies Violating these Guidelines

- In case an intermediary fails to observe the rules, it would **lose the safe harbour**, and will be **liable for punishment** “under any law for the time being in force including the provisions of the IT Act and the Indian Penal Code”.

G. Rules for OTT Services

- It has called for a **grievance redressal system for OTT platforms**. The government is also asking OTT platforms to self-regulate.
- While films have a censor board, OTT platforms such as YouTube, Netflix, etc. will require to self-classify their movies and content based on age.
- For this, the government has prescribed **self-classification of content into five categories** based on age suitability. These categories include U, “U/A 7+”, “U/A 13+”, “U/A 16+” and “A”.
- Also, there has to be a **mechanism of parental lock** and ensuring compliance with the same. Platforms like Netflix already have an option for a parental lock.

H. Rules for Digital News Portals

- For publishers of news on digital media, they will be “required to observe Norms of Journalistic Conduct of the Press Council of India and the Programme Code under the Cable Television Networks Regulation Act thereby providing a level playing field between the offline (Print, TV) and digital media.
- It also wants a three-level grievance redressal mechanism. This will include self-regulation by the publishers; self-regulation by the self-regulating bodies of the publishers and oversight mechanism.
- The rule also wants digital media to **appoint a Grievance Redressal Officer** based in India who shall be responsible for the redressal of grievances received by it. The officer shall take decision on every grievance received by it within 15 days.
- There maybe **one or more self-regulatory bodies of publishers**. According to the rules, this body “shall be headed by a retired judge of the Supreme Court, a High Court or independent eminent person and have not more than six members.”

Drone Terror Attack on Jammu Airport

- The **Indian Air Force (IAF) base in Jammu** was attacked using two low-intensity improvised explosive devices (IEDs). These IEDs were **dropped from two drones**.
- It was the **first time** that suspected Pakistan-based terrorists have used **unmanned aerial vehicles in an attack**.

Drones: Threat to Internal Security

- **Transfer of weaponry to terrorists** – Drones are capable to ferry arms and ammunition across the international border. In December 2019, the **Punjab police unmasked a terror network using**

drones to ferry arms and ammunition across the international border from Pakistan. In May 2019, the **BSF detected weapons dropped** by a suspected Pakistan drone in Jammu.

- **Attack on critical infrastructure** – In September 2019, the Saudi Arabia's largest oil field was attacked using a swarm of drones highlighting the capability of drone in carrying out pinpointed attack on critical infrastructure of a nation.
- **Intelligence gathering** – Drones have proved its usefulness in intelligence gathering and surveillance. If we closely analyse the pattern of drone detection on Indo Pak borders, we can say that drones are widely being used to gather information.
- **Supports Organised Crime** - The use of drones, especially by the **drug cartels**, is not a new modus operandi. These methods are frequently used by the Mexican drug cartels on the US Mexico border for smuggling of drugs and other contrabands.
- **Challenge to anti-terror operations** - Police and security forces, trained in conventional methods to counter-terrorism, find themselves clueless when confronting unmanned aerial vehicles.

Why Tackling Drone is Challenging?

- **Conventional radar systems fail** to detect small flying objects. If these radars are calibrated to detect drones, these systems might confuse a bird for a drone.
- Currently, border forces in India largely **use eyesight to spot drones** and then shoot them down. Shooting these drones are very difficult as they fly at altitude difficult to target.
- Technology to **disable their navigation, interfere with their radio frequency, or just fry their circuits** using high energy beams have also been tested. **None of these has, however, proven foolproof.**

Why Terror Outfits Are Turning Towards Drones:

- If spreading terror is the principal aim, drones offer a **cheap and precise method**. Recruiting, training, and handling of human terror operatives is far more costly, and complex compared to operating drones.
- When designed to **inflict damage on critical infrastructure** or highly symbolic targets, drones present a very attractive option for terror outfits.
- Using drones can help terrorist organisations to **avoid an attrition of cadres** as terror operations can be conducted from safe havens across international borders.

India's Anti-drone Technology

- India's DRDO has made some investments in **anti-drone technologies** such as the **ADITYA Directed Energy Weapon (DEW) and laser dazzles**. However, it is not yet into mass production.
- The DRDO's Counter-Drone System was deployed for VVIP protection at the Republic Day parades in 2020 and 2021, the Prime Minister's Independence Day speech last year, and former US President Donald Trump's visit to Motera Stadium, Ahmedabad last year.

Does India Plan To Use Drones In Warfare

- In the last decade or so, the use of drones by Indian security forces have increased dramatically. India now employs UAVs, primarily obtained from **Israel and the US**, for both external and internal security.

- India's defence forces have availed drone systems such as **Searchers and Heron** for intelligence and surveillance along the Line of Control in Jammu and Kashmir, and the Line of Actual Control along the border with China.
- In January 2021, the Indian Army carried out a live demonstration of **Drone Swarming capability** in attack and support task. Army showcased a **swarm of 75 indigenously designed and developed drones**.
- This demonstration is a recognition of the Indian Army's steady embrace of emerging and disruptive technologies to transform itself from a manpower intensive to a technology enabled force to meet future security challenges.

Drone Defence Dome – 'Indrajaal'

- Hyderabad-based technology R&D firm Grene Robotics has designed and developed **India's first indigenous drone defence dome** called "**Indrajaal**".
- It has the capability to autonomously protect an area of 1000-2000 sq km against the aerial threats by assessing and acting on aerial threats such as Unmanned Aerial Vehicles (UAVs), loitering munitions etc.
- It will not only provide protection to defence bases but it will be beneficial for linear infrastructures like international borders against advanced weaponry.

INS Sandhayak

- Hydrographic survey ship INS Sandhayak, the first of its class indigenously designed and built, was decommissioned after 40 years of service. The ship was commissioned to the Indian Navy in 1981.
- The ship has also been an active participant in many significant operations such as **Operation Pawan – assisting the Indian Peace Keeping Force in Sri Lanka in 1987**, Operation Sarong, **Operation Rainbow - rendering humanitarian assistance post 2004 Tsunami** and participation in the maiden joint **Indo-US HADR Exercise 'Tiger-Triumph'**.
- Hydrographic vessels carry out surveys related to measurement and description of features which affect maritime navigation, marine construction, offshore oil exploration and related activities.

Indo-Thai CORPAT

- The 31st edition of **India-Thailand Coordinated Patrol (Indo-Thai CORPAT)** was conducted which saw the participation of **Indian Naval Ship (INS) Saryu**, an indigenously built Naval Offshore Patrol Vessel.
- The two countries have been **undertaking CORPAT bi-annually** along their **International Maritime Boundary Line (IMBL) since 2005**.
- The aim is to reinforce maritime links between the two countries and keep this vital part of the Indian Ocean safe and **secure for international trade from unlawful activities** like Illegal Unreported Unregulated (IUU) fishing, drug trafficking, maritime terrorism, armed robbery and piracy.
- It further helps enhance the operational synergy by exchange of information for prevention of smuggling, illegal immigration and for conduct of Search and Rescue (SAR) operations at sea.

Cyber Capabilities and National Power Report

- The **Cyber Capabilities and National Power Report** was released by **International Institute for Strategic Studies (IISS)**, an influential think tank that has done a qualitative assessment of cyber power in 15 countries.
- The countries covered in this report are:
 - **US, United Kingdom, Canada and Australia** (four of the Five Eyes intelligence allies).
 - **France and Israel** (the two most cyber-capable partners of the Five Eyes states).
 - **Japan** (also an ally of the Five Eyes states).
 - **China, Russia, Iran and North Korea** (the principal states posing a cyber threat to Western interests).
 - **India, Indonesia, Malaysia and Vietnam** (four countries at earlier stages in their cyberpower development).
- In the report, a country’s cyber capabilities have been assessed in **seven categories**: *strategy and doctrine; governance, command and control; core cyber-intelligence capability; cyber empowerment and dependence; cyber security and resilience; global leadership in cyberspace affairs; and offensive cyber capability*.
- The report has divided the countries into **three tiers of cyber power**:
 - **First Tier**: States with world-leading strengths across all the categories in the methodology.
 - **Second Tier**: States that have world-leading strengths in some of the categories.
 - **Third Tier**: States that have strengths or potential strengths in some of the categories but significant weaknesses in others.

THEIR PLACEMENT
<p>TIER 1: United States ¶</p>
<p>TIER 2: Australia, Canada, China, France, Israel, Russia, UK ¶</p>
<p>TIER 3: India, Indonesia, Iran, Japan, Malaysia, North Korea, Vietnam.</p>

Highlights Of The Report

- India’s offensive cyber capability is **“Pakistan-focused” and “regionally effective”**, and not tuned towards China.
- India’s approach towards institutional reform of cyber governance has been **“slow and incremental”**, with key coordinating authorities for cyber security in the civil and military domains established only as late as 2018 and 2019 respectively.
- India has a **good regional cyber-intelligence reach but relies on partners**, including the United States, for wider insight.
- Despite the geo-strategic instability of its region and a keen awareness of the cyber threat it faces, India has made only “modest progress” in developing its policy and doctrine for cyberspace security.
- India’s “best chance” of moving up to the second tier of cyber powers is **by harnessing its great digital-industrial potential and adopting a whole-of-society approach** to improving its cyber security.
- The **US was the only country in the top tier in terms of cyber security** because of its unparalleled digital-industrial base, its cryptographic expertise and the ability to execute sophisticated, surgical cyber strikes against adversaries.

Explanation:

- Scientists have shown that the **geometry of space-time can cause neutrinos to oscillate**. Einstein's theory of general relativity says that gravitation is the manifestation of space-time curvature.
- A neutrino is a **subatomic particle** that is very similar to an electron, but has **no electrical charge and a very small mass**, which might even be zero.
- Neutrinos come from the sun (solar neutrinos) and other stars, cosmic rays that come from beyond the solar system, and from the Big Bang from which our Universe originated.
- Neutrinos are one of the most abundant particles in the universe. They can also **be produced in the lab**.
- Neutrinos come in three types or "flavours" – **electron neutrino, tau neutrino and muon neutrino**.
- **Atmospheric neutrinos** are produced from cosmic rays which consist of protons and heavy nuclei.
- **Neutrino oscillation** means that different types of neutrinos change into one another. Probing of oscillations of neutrinos and their relations with mass are crucial in studying the origin of the universe.

Features of Neutrinos

- The neutrino is a tiny elementary particle, but it is **not part of the atom**. They are **difficult to detect** because they have very little interaction with matter.
- It **interacts very weakly with other matter particles** so weakly that every second trillions of neutrinos pass through our bodies without being noticed.
- A neutrino's **spin always points in the opposite direction** of its motion and the phenomenon of neutrino oscillations requires neutrinos to have tiny masses.

49. Consider the following sentences about China's Shenzhou-12 Spacecraft:

1. **It has successfully docked three astronauts to China's new space station core module Tianhe**
2. **With this, China became the fifth country in the world and second in Asia to carry out a manned mission on its own.**
3. **The space station will operate in low-Earth orbit at an altitude of 340-450 km above Earth's surface.**

Which of the above sentences is/are correct?

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

Answer: B

Explanation

- China's **Shenzhou-12 spacecraft** with three astronauts has successfully docked with China's new space station core module **Tianhe**. Tianhe is one of three main components of China's space station, rivalling the only other station in service – the **International Space Station (ISS)**.

Rare Earth Metals

Rare Earth Elements or Rare Earth Metals are a **set of 17 chemical elements** in the periodic table — the **15 lanthanides, plus scandium and yttrium**, which tend to occur in the same ore deposits as the lanthanides, and have similar chemical properties. They have unique catalytic, metallurgical, nuclear, electrical, magnetic and luminescent properties. While named ‘rare earth’, they are in fact not that rare and are **relatively abundant in the Earth’s crust**. The estimated size of the Rare Earth sector is between \$10 billion and \$15 billion. About 100,000-110,000 tonnes of Rare Earth elements are produced annually around the world.

Strategic Importance of Rare Earth Metals

- Rare earth elements (REEs) are important in technologies of consumer electronics, computers and networks, communications, clean energy, advanced transportation, healthcare, environmental mitigation, and national defence, among others.
- These elements are **central to new post-pandemic economic landscape**: they underpin everything from advanced ballistics systems to industrial machinery and TV screens, contributing a total value of nearly \$200 billion to the Indian economy.
- Rare Earth elements are used in **space shuttle components, jet engine turbines, and drones**.
- Cerium, the most abundant Rare Earth element, is **essential to NASA’s Space Shuttle Programme**.
- They are also crucial to emerging technologies such as **renewable energy and electric vehicles**.
- Scandium is used in **televisions and fluorescent lamps**, and yttrium is **used in drugs to treat rheumatoid arthritis and cancer**.

Rare Earth – Key Applications



Steps India Can Take To Boost Production

India has the **world’s fifth-largest reserves of rare earth elements**, nearly twice as much as Australia, but it imports most of its rare earth needs in finished form from its geopolitical rival, China. The key challenge for India is to **scale up upstream and downstream processes** in the rare earths value chain.

With adjustments to the existing policy, India could emerge as a rare earths supplier to the world. India could use these resources to power a high-end manufacturing economy geared to the needs of the 21st century.

- India must **open its rare earth sector up to competition and innovation**, and attract the large amounts of capital needed to set up facilities to compete with, and supply to, the world.
- It could create a new **Department for Rare Earths (DRE)** under the Ministry of Petroleum & Natural Gas, drawing on its exploration, exploitation, refining, and regulation capabilities.
- The DRE could secure access to REEs of strategic importance by **offering viability gap funding to companies** to set up facilities in the upstream sector. This could make Indian REOs globally competitive.
- This DRE should oversee policy formulation and focus on attracting investment and **promoting R&D**.
- It should also create an autonomous regulator, the **Rare Earths Regulatory Authority of India (RRAI)**, to resolve disputes between companies in this space and check compliance.

According to a 2016 estimate, the **Indian REE industry could potentially net a capital employment of about Rs 121,000 crore**, including Rs 50,000 crore worth of foreign exchange. India has granted government corporations such as Indian Rare Earths Limited (IREL) a monopoly over the primary mineral that contains REEs. It should strive to implement these reforms to ride the next wave towards high-tech manufacturing.

Extra Mile

Rare Earth Metals

The 17 Rare Earths are cerium (Ce), dysprosium (Dy), erbium (Er), europium (Eu), gadolinium (Gd), holmium (Ho), lanthanum (La), lutetium (Lu), neodymium (Nd), praseodymium (Pr), promethium (Pm), samarium (Sm), scandium (Sc), terbium (Tb), thulium (Tm), ytterbium (Yb), and yttrium (Y).

Global Scenario

- **China controls nearly 90% of global rare earth production**, posing a vulnerability to manufacturing industries. In 2019, the U.S. imported 80% of its rare earth minerals from China while the EU gets 98% of its supply from China.
- Recently, the U.S. Senate passed a law aimed at improving American competitiveness that includes provisions to improve critical minerals supply chains.

5G Technology

- The Delhi High Court dismissed the petition filed by Bollywood actor Juhi Chawla against the roll-out of 5G technology in India.
- **5G or fifth generation** is the latest upgrade in the **long-term evolution of mobile broadband networks**. 5G mainly works in 3 bands, namely low, mid and high-frequency spectrum.
 - i) The **low band spectrum** works well in terms of coverage and speed of internet and data exchange, the maximum speed is limited to 100 Mbps (Megabits per second). While it may be **useful for commercial cellphone users**, it may **not be optimal for specialised needs of the industry**.

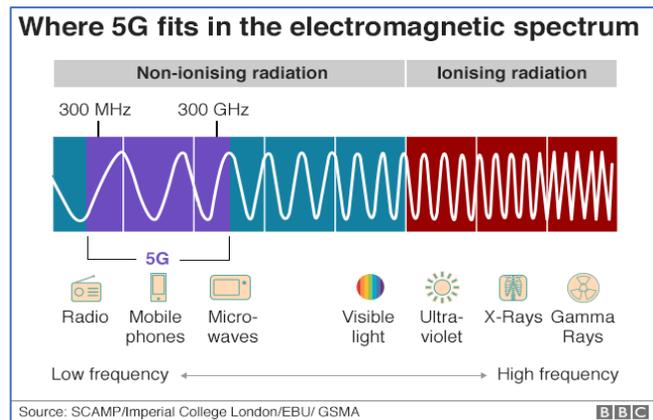
- ii) The **mid-band spectrum offers higher speeds** compared to the low band, but **has limitations in terms of coverage area and penetration of signals**. This band may be used by industries and specialised factory units for building captive networks.
- iii) The **high-band spectrum offers the highest speed of all the three bands**, as high as 20 Gbps (gigabits per second). However, it has **extremely limited coverage and signal penetration strength**.

Benefits of 5G

- 5G is designed to deliver **higher multi-Gbps peak data speeds** for even faster internet; **ultra-low latency; greater network reliability and massive network capacity** to support more people and more devices without a dip in performance.
- 5G antennas **consume significantly less power** than existing ones, which makes it a superior technology for small battery-powered devices.
- The high performance and efficiencies of 5G will power **new user experiences and connect different industries** in new ways.
- 5G is the foundation for realising the full potential of IoT. Together, **5G and IoT will create “connected intelligence”** – capabilities that will power industries and businesses and form the bedrock of most technology advancements going ahead.

Concerns Associated

- According to the World Health Organization (WHO), **no adverse health effect** has been causally linked with exposure to wireless technologies.
- However, the WHO together with the International Agency for Research on Cancer (IARC) has classified all radio frequency radiation (of which mobile signals are a part) as "possibly carcinogenic".
- The **radio wave band - used for mobile phone networks - is non-ionising**, which means it lacks sufficient energy to break apart DNA and cause cellular damage.



Internet Through LEO Satellites

- OneWeb has launched its next batch of 36 satellites as part of its programme, **‘Five to 50’ service**, whose goal is to offer internet connectivity to all regions north of 50 degrees latitude.
- OneWeb is a global communications company that **aims to deliver broadband satellite Internet around the world** through its fleet of LEO satellites.

Low Earth Orbit (LEO) Satellite Technology

- LEO satellites have been orbiting the planet since the 1990s, providing companies and individuals with various communication services.

- LEO satellites are **positioned around 500km-2000km from earth**, compared to stationary orbit satellites which are approximately 36,000km away.
- **Benefits:**
 - As LEO satellites orbit closer to the earth, they are able to **provide stronger signals and faster speeds** than traditional fixed-satellite systems.
 - Additionally, because signals travel faster through space than through fibre-optic cables, they also have the potential to rival if not exceed existing ground-based networks.
- **Challenges:**
 - LEO satellites travel at a speed of 27,000 kph and complete a full circuit of the planet in 90-120 minutes. As a result, **individual satellites can only make direct contact with a land transmitter for a short period of time** thus requiring massive LEO satellite fleets and consequently, a **significant capital investment**.
 - Most of the companies regulating LEO satellites are owned by private companies. As such, there are questions related to **who regulates these companies**.
 - These companies have to receive requisite licences to operate in each country and all these considerations make for a **complicated regulatory framework**.
 - Satellites can sometimes be seen in the night skies which **creates difficulties for astronomers** as the satellites reflect sunlight to earth, leaving streaks across images.
 - Satellites travelling at a lower orbit can also **interrupt the frequency of those orbiting above them**.
 - It may **accentuate the quantities of space junk** as there are already almost 1 million objects larger than 1cm in diameter in orbit. These objects have the **potential to damage spacecraft** or collide with other satellites.

LEO satellite broadband is only preferable in areas that cannot be reached by fibre and spectrum services. It will therefore be **suitable for rural populations and military units operating away from urban areas**.

NASA's Two Missions To Venus

- NASA announced two missions to Venus as part of its '**Discovery Program**' that aims to explore and study the solar system.
- The two missions are: **DAVINCI+** (Deep Atmosphere Venus Investigation of Noble Gases, Chemistry and Imaging) and **VERITAS** (Venus Emissivity, Radio Science, InSAR, Topography and Spectroscopy).
- The aim of these missions is to study the atmosphere and geologic features of Venus and better understand why Venus and Earth emerged so differently.
- NASA's last dedicated mission to Venus, the **Magellan spacecraft**, reached the planet in 1990.

DAVINCI+

- The DAVINCI+ will measure the **atmospheric composition of Venus and its formation and evolution**. The mission will also try to determine if the planet held an ocean of liquid water in the past.

- The mission will return the first high-resolution images of unique surface features known as “**tesserae**” on **Venus**. Scientists believe those features may be comparable to Earth's continents and suggest that Venus has plate tectonics.

VERITAS

- The VERITAS mission will study the **geology of Venus with radar, map its entire surface topography in 3D** and will try to understand why it developed differently from Earth.
- It will also **study infrared emissions from the surface** to map various kinds of rocks. The mission will also seek to understand if any volcanic or tectonic activity is present on the planet currently.
- It will also try to find out **if any active volcanoes are releasing water vapour into the atmosphere**, sustaining its greenhouse effect.

EnVision Mission

- The **European Space Agency (ESA)** announced the selection of **EnVision** as its next orbiter that will visit Venus sometime in the 2030s. EnVision is an ESA led mission with contributions from **NASA**.
- EnVision will follow another ESA-led mission to Venus called ‘**Venus Express**’ (2005-2014) that focussed on atmospheric research and pointed to volcanic hotspots on the planet's surface.
- **Objectives:**
 - To collectively study Venus to be able to understand how the different boundaries, i.e. interior, surface and atmosphere, of the planet interact with each other, in order to **gain an overall understanding of the structure and the process of Venus**.
 - **Question of how Earth and Venus evolved so differently** from each other considering that they are roughly of the same size and composition. Venus is the hottest planet in the solar system because of the heat that is trapped by its thick cloud cover.
 - A radar provided by NASA will help to **image and map the surface**.
- **Other Spacecrafts**
 - Soviet Union's Venera series
 - NASA's Magellan Mission
 - Currently, Japan's Akatsuki mission is studying the planet from Orbit.

Extra Mile

Venus

- Venus is the second-brightest object in the sky after the moon. It **appears bright because of its thick cloud cover** that reflects and scatters light.
- Venus has a **thick, toxic atmosphere** consisting primarily of carbon dioxide, with clouds of sulfuric acid droplets. The consequence is a runaway greenhouse effect that scorches the surface of Venus at **temperatures as high as 471°C**. The air on Venus is so dense and pressurized that it behaves more like a fluid than a gas near the surface.

- But while Venus is called the Earth's twin because of their similar sizes, the two planets have **significant differences between them**.
 - For one, the **planet's thick atmosphere traps heat and is the reason that it is the hottest planet in the solar system**, despite coming after Mercury, the closest planet to the Sun.
 - Further, Venus moves forward on its orbit around the Sun but spins backwards around its axis slowly. This means **on Venus the Sun rises in the west and sets in the East**.
 - **One day on Venus is equivalent to 243 Earth days** because of its backward spinning, opposite to that of the Earth's and most other planets.
 - Venus also **does not have a moon and no rings**.
 - Venusian atmosphere is richer in noble gases than Earth's, indicating different means of evolution.

Need For Studying Venus

- Scientists speculate about the existence of life on Venus in its distant past and the **possibility that life may exist in the top layers of its clouds** where temperatures are less extreme.
- Scientists are curious to know **what could have happened on the planet to render it inhospitable** to such an extent, and if this could somehow also be an indication of what could happen to Earth if humans continue to tamper with the environment.
- Scientists are also keen to find out **if the planet is active geologically** and if it maybe once also consisted of an ocean.

CHIME Telescope

- Scientists with the **Canadian Hydrogen Intensity Mapping Experiment (CHIME) Collaboration** have assembled the largest collection of **fast radio bursts (FRBs)** in the telescope's first FRB catalogue.
- FRBs are oddly bright flashes of light, **registering in the radio band of the electromagnetic spectrum**, which blaze for a few milliseconds before vanishing without a trace.
- These brief and mysterious beacons have been spotted in various and distant parts of the universe, as well as in our own galaxy.
- Their **origins are unknown** and their appearance is highly unpredictable.
- The CHIME project is a large **stationary interferometric radio telescope** located in British Columbia, Canada.
 - The telescope **receives radio signals each day from half of the sky** as the Earth rotates.
 - It consists of **four antennas consisting of 100 x 20 metre cylindrical parabolic reflectors** with 1024 dual-polarization radio receivers suspended on a support above them.
 - It is a partnership between the University of British Columbia, McGill University, the University of Toronto and the Canadian National Research Council's Dominion Radio Astrophysical Observatory.

New Shephard Rocket System

- Amazon founder Jeff Bezos's space company called **Blue Origin** concluded the online auction for the first seat on **New Shephard, a rocket system** meant to take tourists to space.
- The winning bidder will get to fly aboard New Shephard on **July 20**, which marks the **52nd anniversary of Neil Armstrong and Buzz Aldrin's moon landing**.
- New Shephard has been named after **astronaut Alan Shephard** – the first American to go to space.
- Essentially, it is a rocket system that has been designed to take astronauts and research payloads past the **Karman line – the internationally recognized boundary of space**.
- The rocket system consists of two parts, the cabin or capsule and the rocket or the booster. The capsule is fully autonomous and **does not require a pilot**.
- The system is a **fully reusable, vertical takeoff** and vertical landing space vehicle that accelerates for about 2.5 minutes before the engine cuts off.
- The idea is to provide **easier and more cost-effective access to space** meant for purposes such as academic research, corporate technology development and entrepreneurial ventures among others.
- It will also **allow space tourists to experience microgravity** by taking them 100 km above the Earth. Space tourism seeks to give laypeople the ability to go to space for recreational, leisure or business purposes. The idea is to make space more accessible to those individuals who are not astronauts and want to go to space for non-scientific purposes.

World's First Wooden Satellite

- The **European Space Agency (ESA)** has planned to put the world's first wooden satellite, **WISA Woodsat**, on Earth's orbit by the end 2021.
- The mission of the satellite is to **test the applicability of wooden materials** like plywood in spacecraft structures and **expose it to extreme space conditions**, such as heat, cold, vacuum and radiation, for an extended period of time.
- The satellite will **orbit at around 500-600 km altitude** in a roughly polar Sun-synchronous orbit.
- WISA Woodsat is a 10x10x10 cm nano satellite built up from standardised boxes and surface panels made from plywood, the same material that is found in a hardware store or to make furniture.

Supersonic Plane

- The US airline **United** announced plans to buy 15 new supersonic airliners with the ability to travel at Mach 1.7, faster than the speed of sound. If the deal gets through, the **new supersonic "Overture" aircraft** will become the world's fastest commercial airliner, reducing travel time by about half of today's planes.
- Supersonic aircraft are planes that can fly faster than the speed of sound. **Concorde**, the British-French turbojet-powered commercial airliner, was the first aircraft to carry passengers at supersonic speed. Usually, supersonic planes **can travel at the speed of around 900 kmph**, twice the speed of normal aircraft.

- **Overture Supersonic Plane**

- The Overture aircraft would travel at the speed of Mach 1.7 or 1,805 kmph with a range of 4,250 nautical miles.
- The Overture will also **not be noisy** as supersonic planes in the past were. This essentially means that it will cruise at supersonic speeds only over water, ensuring that no sonic boom or excessive noise reaches the surfaces where people live.
- Overture planes would **rely completely on sustainable aviation fuel**, made from biodegradable material. In using this, it aims for maximum fuel efficiency during operations.

- **Challenges With Supersonic Planes:**

- The costs of making “sustainable” supersonic planes are extremely high. The very nature of its flying — using excessive amounts of fuel and energy — is likely to have **high environmental costs**. Despite the use of sustainable fuels, the greenhouse gas emissions are not nullified.
- The very speed of the planes result in **producing excessive amounts of noise pollution in the environment**. The “Sonic Boom” created by these planes feels like an explosion to the human ear. This, thus, limits where and when the supersonic planes can fly.
- **Getting clearance from regulators** around the world would be a **challenging task**, especially for transatlantic flights.
- It would **not be economically feasible** for everyone.

CIBER-2

- A NASA-funded **CIBER-2 rocket’s launch window** was opened in New Mexico, USA. The aim of this mission is to **count the number of stars that exist in the Universe**.
- The experiment is measuring a mysterious glow of infrared light that fills our skies called the cosmic infrared background, which is emitted by some of the most common stars.
- The **ESA infrared space observatory Herschel** also counted the number of galaxies in infrared and measured their luminosity previously.
- Scientists have estimated that on average each galaxy consists of about 100 million stars, but this figure is not exact.
- To put this into perspective, an average of 100 million stars in each galaxy (there an estimated 2 trillion of them as per NASA), would give a total figure of one hundred quintillion stars or 1 with 21 zeroes after it.

AmbiTAG

- **Indian Institute of Technology, Ropar (IIT Ropar)** has developed a first-of-its-kind IoT device – AmbiTag.
- AmbiTag records **real-time ambient temperature during the transportation of perishable products**, vaccines and even body organs and blood.

- It continuously **records the temperature** of its immediate surroundings **from -40 to +80 degrees in any time zone for a full 90 days** on a single charge. It generates an alert when the temperature goes beyond a pre-set limit.
- **Significance**
 - Recorded temperature helps to know whether that particular item transported from anywhere in the world is still usable or perished because of temperature variation.
 - This information is **particularly critical for vaccines including Covid-19 vaccine**, organs and blood transportation.
 - Besides perishable items including vegetables, meat and dairy products, it **can also monitor the temperature of animal semen during transit.**

Deep Ocean Mission

- The **Cabinet Committee on Economic Affairs** has approved the proposal of the "**Deep Ocean Mission**". The aim is to **explore the deep ocean for resources** and **develop deep-sea technologies** for sustainable use of ocean resources.
- The estimated cost of this mission mode project will be Rs. 4077 crore **for a period of 5 years** to be implemented in a phase-wise manner.
- The **Ministry of Earth Sciences (MoES)** will be the nodal ministry for implementing the multi-institutional mission

Major Components Of The Mission:

- **Development of Technologies for Deep Sea Mining:** A **manned submersible** will be developed to **carry three people to a depth of 6000 metres** in the ocean with a suite of scientific sensors and tools. An **Integrated Mining System** will be also developed for **mining polymetallic nodules** at those depths in the **central Indian Ocean.**
- **Development of Ocean Climate Change Advisory Services:** It entails developing a suite of observations and models to understand and provide **future projections of important climate variables** on seasonal to decadal time scales.
- **Technological innovations for deep-sea biodiversity:** It includes bio-prospecting of deep sea flora and fauna including microbes and studies on sustainable utilization of deep sea bio-resources.
- **Deep Ocean Survey and Exploration:** To explore and identify **potential sites of multi-metal Hydrothermal Sulphides mineralization** along the Indian Ocean mid-oceanic ridges.
- **Energy and Freshwater from the Ocean:** Studies and detailed engineering design for offshore **Ocean Thermal Energy Conversion (OTEC)** powered desalination plant.
- **Advanced Marine Station for Ocean Biology:** This component is aimed at the development of human capacity and enterprise in ocean biology and engineering.

- | |
|--|
| <ul style="list-style-type: none">● The United Nations (UN) has declared the decade 2021-2030 as the Decade of Ocean Science for Sustainable Development. |
|--|

- India has a unique maritime position -its **7517 km long coastline** is home to **nine coastal states** and 1382 islands.
- India has been allotted a site of 75,000 square kilometres in the Central Indian Ocean Basin (CIOB) by the UN International SeaBed Authority for exploitation of polymetallic nodules (PMN).
- These are rocks scattered on the seabed containing iron, manganese, nickel and cobalt.

Sale of Illegal HTBt Cotton

- The illegal cultivation of **herbicide tolerant (HT) Bt cotton** has seen a huge jump this year, with sale of illegal seed packets more than doubled from 30 lakh last year to 75 lakh this year.
- There are many issues with the sale of illegal seeds. Farmers are at risk with such illegal cotton seed sale as there is **no accountability of the quality of seed**, it **pollutes the environment**, the **industry is losing legitimate seed sale** and the **government also loses revenue** in terms of tax collection.
- Bt cotton is the **only transgenic crop** that has been approved by the Centre for commercial cultivation in India. The commercial release of this hybrid was sanctioned by the government in 2002.
- Developed by **US giant Bayer-Monsanto**, it involves insertion of two genes viz '**Cry1Ab**' and '**Cry2Bc**' from the soil bacterium **Bacillus thuringiensis** into cotton seeds.
- It has been genetically modified to produce an insecticide to combat the cotton bollworm, a common pest. The HTBt cotton variant adds another layer of modification, making the **plant resistant to the herbicide glyphosate**, but has not been approved by regulators.
- Fears include glyphosate having a carcinogenic effect, as well as the unchecked spread of herbicide resistance to nearby plants through pollination, creating a variety of superweeds.

Related Laws in India

- In India, it is the responsibility of the **Genetic Engineering Appraisal Committee (GEAC)** under the Environment Ministry to assess the safety of a genetically modified plant, and decide whether it is fit for cultivation. The GEAC comprises experts and government representatives, and a decision it takes has to be approved by the Environment Minister before any crop is allowed for cultivation.
- Legally, sale, storage, transportation and usage of unapproved GM seeds is a punishable offence under the **Rules of Environmental Protection Act 1989**.
- The sale of unapproved seeds can attract action under **Seed Act of 1966** and **Cotton Act of 1957**.
- The **Environmental Protection Act** provides for a jail term of five years and a fine of Rs 1 lakh for violation of its provisions, and cases can be filed under the other two Acts.

National Internet Exchange of India (NIXI)

- The **National Internet Exchange of India (NIXI)** announced a **new email service** that will be available to all .IN domain users on-demand, and it will have 10GB storage space.
- NIXI is a **not-for-profit organization** registered under section 8 of the **Companies Act 2013**. It has been working since 2003 for spreading the internet infrastructure to the citizens of India through the following activities:

- Internet Exchanges through which the internet data is exchanged amongst ISP's, Data Centers and CDNs.
- .IN Registry, managing and operation of .IN country-code domain and .भारत IDN domain for India.
- IRINN, managing and operating Internet protocol (IPv4/IPv6).
- NIXI was set up for peering of ISPs among themselves for the purpose of routing the domestic traffic within the country, instead of taking it all the way to US/abroad, thereby resulting in **better quality of service (reduced latency)** and **reduced bandwidth charges for ISPs** by saving on International Bandwidth.
- NIXI is managed and **operated on a neutral basis**, in line with the best practices for such initiatives globally.

Chandrayaan-2

- Chandrayaan-2, hovering over the Moon, has now found **new developments** on the hot outermost layer of the bright star known as **Corona**.
- Scientists have found **abundances of magnesium, aluminium and silicon** in the solar corona and observed **around 100 microflares**, providing new insights about coronal mass heating.
- **Reasons for Coronal Mass Heating**
 - The corona emits **ultraviolet, X-rays** and consists of ionised gas at temperatures exceeding 2 million degrees Fahrenheit, while just 1,000 miles below, the surface known as the **photosphere** simmers at just 10,000 degrees Fahrenheit. This mysterious **difference in temperatures** is called the coronal heating problem.
 - The new observations state that the high temperatures, when moving away from the surface, could be **due to strong magnetic fields present above the Sunspots** (dark patches seen in visible images of the Sun).
- Chandrayaan-2 Mission is **India's first lander mission and lunar exploration mission** developed by the Indian Space Research Organisation (ISRO), after Chandrayaan-1. The mission was launched on board by the **GSLV MK III M1 launch vehicle**.
- It aims at studying all the **areas of the Moon combining the exosphere, the surface as well as the sub-surface** in a single mission. It was **India's first attempt to land on the lunar surface** and also aimed at exploring the south pole of the Moon.
- There are three components of the mission: an orbiter, a lander and a rover.
 - **Orbiter:** It will observe the lunar surface and relay communication between Earth and Chandrayaan 2's Lander named Vikram.
 - **Lander Vikram:** It is named after Dr Vikram A Sarabhai, the Father of the Indian Space Programme. It was designed to execute India's first soft landing on the lunar surface.
 - **Rover Pragyan:** It is a 6-wheeled, AI-powered vehicle.
- The Chandrayaan-2 mission, which was lost after it landed hard on the dark side of the Moon, remains active in the form of its orbiter hovering over the Moon.
- Scientists used the **Solar X-ray Monitor (XSM)** onboard Chandrayaan-2 in 2019 to study the Sun.

PASIPHAE Project

- The **Wide Area Linear Optical Polarimeter (WALOP)** is being developed at **Inter-University Centre for Astronomy and Astrophysics (IUCAA), India**. WALOP is a vital instrument for the PASIPHAE Project.
- **Polar-Areas Stellar-Imaging in Polarisation High-Accuracy Experiment (PASIPHAE)** is an international collaborative sky surveying project. Scientists aim to study the polarisation in the light coming from millions of stars. The survey will use two high-tech optical polarimeters to **observe the northern and southern skies, simultaneously**.
- It will focus on capturing starlight polarisation of very faint stars that are so far away that polarisation signals from there have not been systematically studied. The distances to these stars will be obtained from measurements of the GAIA satellite.
- GAIA is an ambitious mission to chart a **three-dimensional map of our Galaxy, the Milky Way**, in the process revealing the composition, formation and evolution of the Galaxy.

Importance of PASIPHAE Project

- The PASIPHAE survey will measure starlight polarisation over large areas of the sky.
- This data along with GAIA distances to the stars will help create a 3-Dimensional model of the distribution of the dust and magnetic field structure of the galaxy.
- Such data can help remove the galactic polarised foreground light and enable astronomers to look for the elusive B-mode signal.

Wide Area Linear Optical Polarimeter (WALOP):

- WALOP was planned sometime in 2013 after the success of the RoboPol experiment survey during 2012-2017.
- It is an **instrument**, when mounted on two small optical telescopes, that **will be used to detect polarised light signals emerging from the stars** along high galactic latitudes.
- WALOP will operate on the principle that at any given time, the data from a portion of the sky under observation will be split into four different channels.
- Depending on the manner in which light passes through the four channels, the polarisation value from the star is obtained.

VAJIRAM & RAVI
ECOLOGY AND ENVIRONMENT

51. Operation Olivia, recently in news, was related to?

- a) Increase the production of Olivia flowers b) Preventing money laundering
c) Protect Olive Ridley turtles d) None of the above

Answer: C

Explanation

- Every year, **Indian Coast Guard's "Operation Olivia"**, initiated in the early 1980s, helps **protect Olive Ridley turtles** as they congregate along the Odisha coast for breeding and nesting from November to December.
- **Three main factors that damage Olive Ridley turtles** and their eggs are
 - Heavy predation of eggs by dogs and wild animals.
 - Indiscriminate fishing with trawlers and gill nets
 - Beach soil erosion.

About Olive Ridley Sea Turtles

- The Olive ridley turtles are the **smallest and most abundant of all sea turtles** found in the world, inhabiting warm waters of the Pacific, Atlantic and Indian oceans.
- These turtles, along with their cousin the Kemps ridley turtle, are best known for their **unique mass nesting** called **Arribada**, where thousands of females come together on the same beach to lay eggs.
- They are carnivores, and feed mainly on jellyfish, shrimp, snails, crabs and a variety of fish and their eggs
- **The coast of Orissa in India is the largest mass nesting site** for the Olive-ridley, followed by the coasts of Mexico and Costa Rica.
- **Conservation Status**
 - **Vulnerable** by the IUCN Red list.
 - **Schedule - 1** animal under Wildlife Protection Act, 1972.
 - International trade in these turtles and their products is banned under CITES Appendix I
- **Major Threats:**
 - Unfriendly fishing practices, development and exploitation of nesting beaches for ports, and tourist centres.
 - They are still extensively poached for their meat, shell and leather, and their eggs, though illegal to harvest, have a significantly large market around the coastal regions.
 - Most severe threat is the accidental killing of adult turtles through entanglement in trawl nets and gill nets due to uncontrolled fishing during their mating season around nesting beaches.



52. State of Finance for Nature Report, recently in news, was published by?

- a) Global Green Growth Institute

- b) International Union for Conservation of Nature (IUCN)
- c) European Environment Agency (EEA)
- d) None of the above

Answer: D

Explanation:

State of Finance for Nature Report was jointly produced by **United Nations Environment Programme, World Economic Forum** and **Economics of Land Degradation**.

Highlights Of The Report

- Annual investments in **nature-based solutions (NbS)** will have to be tripled by 2030 and four-fold by 2050 from the current level of investments if the world is to meet its climate change, biodiversity and land degradation targets.
- By 2050, total investment of nature needs will amount to \$8.1 trillion, while annual investment should reach \$536 billion annually by 2050. Forest-based solutions alone would amount to \$203 billion per year.
- NbS refers to **sustainable management and use of nature** to tackle socio-environmental challenges, which ranges from disaster risk reduction, climate change and biodiversity loss to food and water security as well as human health.
 - Thus, NbS underpin the **Sustainable Development Goals**, as they support vital ecosystem services, biodiversity, and access to fresh water, improved livelihoods, healthy diets and food security (organic agriculture) from sustainable food systems.
 - Also, NbS are an essential component of the overall global effort to achieve the goals of the **Paris Agreement** on Climate Change.
- It is found that approximately **\$133 billion currently flows into NbS** annually (using 2020 as base year). It comprises about 0.10% of global GDP.
- The largest proportion of this investment (**86%**) is carried out by public financial services providers, including the governments, development finance institutions (DFIs), environmental / climate funds. NbS finance is much smaller in scale than climate finance and relies more heavily on public finance.
- Public sector spending for the same is dominated by the United States and China, followed by Japan, Germany and Australia. The **US tops the list** with approximately \$36 billion a year in NbS spending, and is closely followed by **China** with \$31 billion.
- This report, however, did not cover all types of NbS, notably those in the **marine environment were excluded**.
- The report recommended **reforming taxes, repurposed agricultural policies** and trade-related tariffs and harnessing the potential of carbon markets.

53. Devika River Project, recently in news, is located in?

- a) Jammu and Kashmir
- b) Kerala
- c) Himachal Pradesh
- d) Sikkim

Answer: A

Explanation:

- The Devika river rejuvenation project, under which bathing places, natural water bodies and catchment areas will be developed in Udhampur district of **Jammu and Kashmir**, will be ready by the end of 2021.
- The Devika river holds religious significance as it is revered by Hindus as the sister of river Ganga.
- Also known as Devika Nagari, it **originates from the hilly Suddha Mahadev temple** in Udhampur district and flows down towards western Punjab (now in Pakistan) where it **merges with the Ravi river**.

54. What is Pyrostria laljii recently in news?

- a) New tree discovered from the Andaman Islands
- b) New species of shrub frogs found in Western Ghats
- c) New Species of Amphibians with Snake-Like Venom Glands
- d) None of the above

Answer: A

Explanation:

- A **15-meter-tall tree** that belongs to the genus of the **coffee family** has recently been discovered from the **Andaman Islands**. The discovery is unique as the species is a big tree and yet had not been recorded as a new species.
- The new species, Pyrostria laljii, is also the **first record of the genus Pyrostria in India**. Plants belonging to genus Pyrostria are usually found in **Madagascar** but the recently discovered species is new to science.
- Pyrostria laljii has been assessed as '**Critically Endangered**' based on the International Union for Conservation of Nature's (IUCN) Red List criteria.
- While the genus Pyrostria is not found in India, there are several genera from the family Rubiaceae that are common in India. These plants, including **cinchona, coffee, adina, hamelia, ixora, galium, gardenia, mussaenda, rubia, morinda**, have high potential for economic value.
- The team also discovered a new species of **pokeweed named Rivina andamanensis**.

55. Which of the following pairs are matched correctly?

Protected Area	State
1. Srivilliputhur-Megamalai Tiger Reserve	Kerala
2. Guindy National Park	Tamil Nadu
3. Raimona National Park	Assam
4. Barnadi Wildlife Sanctuary	Arunachal Pradesh

Select the correct answer using the codes given below:

- a) 1 and 2
- b) 2 and 3

c) 1, 3 and 4

d) All of the above

Answer: B

Explanation:

- The **Srivilliputhur-Megamalai Tiger Reserve in Tamil Nadu** will provide protection to Megamalai, the Vaigai's primary catchment, in turn helping water levels to rise in the river.
- The **Vaigai was the river that flowed through the fabled city of Madurai**, the capital of the ancient and prosperous Pandya kingdom located in southern Tamil Nadu. The river finds a **mention in Sangam literature** dated to 300 before Common Era.
- The **Guindy National Park**, located in the heart of **Chennai's** metropolitan area, serves as the green lungs to a great metropolitan city in **Tamil Nadu**. Guindy is India's eighth-smallest national park and one of the very few national parks located inside a city.
- Assam State government notified **Dihing Patkai as a National Park**, four days after creating the 422-sq. km **Raimona National Park in western Assam's** Kokrajhar district. Assam now has the third most National Parks after the 12 in Madhya Pradesh and nine in the Andaman and Nicobar Islands.
- Wildlife specialists have the first photographic evidence of a tiger inhabiting the 26.22 sq. km **Barnadi Wildlife Sanctuary straddling northern Assam's** Baksa and Udalguri districts and bordering Bhutan.

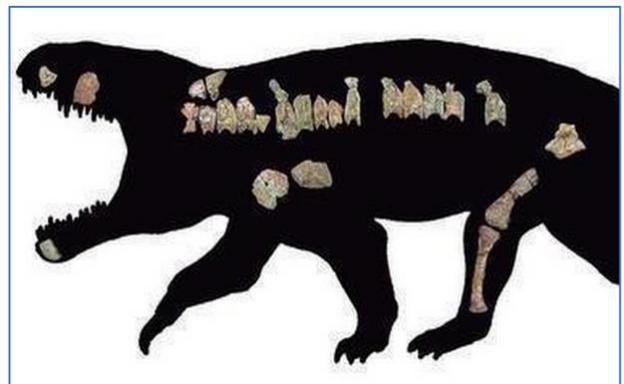
56. 'Bharitalasuchus Tapani', sometimes mentioned in media, is in reference to

- A new species of a flowering plant in the northern hilly forests of West Bengal
- A carnivorous reptile that lived 240 million years ago
- New alpine plant species discovered in Arunachal Pradesh
- New species of Sun Rose found in the Eastern Ghats

Answer: B

Explanation:

- By studying some of the specimens stored at Indian Statistical Institute, Kolkata, an international team has now thrown light on a **carnivorous reptile that lived 240 million years ago**.
- This reptile belongs to a genus and species previously unknown to science. They named it *Bharitalasuchus tapani*. In Telugu language, **Bhari** means huge, **Tala** means head, and **Suchus** is the name of **Egyptian crocodile-headed deity**.
- The studies revealed that the reptile belonged to a **family of extinct reptiles named Erythrosuchidae**.
- The first Erythrosuchidae remains were **discovered in South Africa in 1905** and more were found in China and Russia. The South African one is about 245 million years old, while the ones from China and Russia are around 240 million years old.



About Pygmy Hog

- They are effectively very small pigs, members of the family Suidae, standing at 20-30 cm in height. The pygmy hog is one of the very few mammals that build its own home, or nest, complete with a 'roof'.
- **Population:** 200-500.
- **Distribution:** The pygmy hog is now restricted to very few locations in and around Manas National Park in north-western Assam.
- **Habitat And Ecology:** This species inhabits dense, tall grasslands. They feed on roots, tubers, insects, rodents and small reptiles. They breed seasonally before the monsoons, giving birth to a litter of three to six.
- **Threats:** The main threats pygmy hogs face are loss and degradation of habitat due to human settlements, agricultural encroachments, dry-season burning, livestock grazing, commercial forestry and flood control schemes.
- **Conservation Status:** Critically Endangered' on the IUCN Red List of Threatened Species.



Sea Snot

- There has been growing environmental concern in Turkey over the accumulation of 'sea snot', a slimy layer of grey or green sludge in the country's seas, which can cause considerable damage to the marine ecosystem.
- Turkey's **Sea of Marmara, that connects the Black Sea to the Aegean Sea**, has witnessed the largest outbreak of 'sea snot'. The sludge has also been spotted in the adjoining Black and Aegean seas.
- There have also been growing concerns over President Erdogan's \$15bn **Istanbul canal mega-project**, which aims to dig a nearly 17 km channel between the Black and Marmara seas. Ecologists have argued that the move could seriously damage an already ailing marine ecosystem.
- **Bosporous Strait:** Connects Black Sea with Sea of Marmara
- **Dardanelles Strait:** Connects Sea of Marmara with Aegean Sea



What Is Causing 'Sea Snot' In Seas Of Turkey?

- 'Sea snot' is **marine mucilage that is formed when algae are overloaded with nutrients** as a result of water pollution combined with the effects of climate change. The nutrient overload occurs when **algae feast on warm weather caused by global warming**.
- **Overproduction of phytoplankton** caused by climate change and the uncontrolled dumping of household and industrial waste into the seas has led to the present crisis.

- A 'sea snot' outbreak was **first recorded in the country in 2007**. Back then, it was also spotted in the Aegean Sea near Greece. But the current outbreak in the Sea of Marmara is by far the biggest in the country's history.

Issues Associated With Sea Snot

- The growth of the mucilage, which floats up on the surface of the sea like a **brown phlegm**, is posing a severe **threat to the marine ecosystem**.
- It has caused **mass deaths among the fish population**, and also killed other aquatic organisms such as **corals and sponges**.
- The mucilage is now covering the surface of the sea and has also spread to 80-100 feet below the surface. Over a period of time, it could end up **poisoning all aquatic life, including fishes, crabs, oysters, mussels and sea stars**.
- Besides aquatic life, the 'sea snot' outbreak has also affected the **livelihoods of fishermen**. The sludge is getting collected in their nets, making them so heavy that they break or get lost. Moreover, the mucilage coating the strings make the nets visible to fish and keep them away.
- The 'sea snot' can cause an outbreak of water-borne diseases such as cholera in cities like Istanbul.

Black Carbon (BC)

Black carbon (BC) deposits, produced by human activity which accelerate the pace of glacier and snow melt in the Himalayan region, can be sharply reduced through new, currently feasible policies by an additional 50% from current levels, according to a new research by World Bank (WB).

What Is Black Carbon

- Black carbon, or soot, is part of **fine particulate air pollution (PM2.5)** and contributes to climate change. Black carbon is a kind of an aerosol. An aerosol is a suspension of fine solid particles or liquid droplets in the air. It is a **short-lived climate pollutant** with a lifetime of only days to weeks after release in the atmosphere. During this short period of time, black carbon can have significant direct and indirect impacts on the climate, the cryosphere (snow and ice), agriculture and human health.
- Black carbon is formed by the **incomplete combustion of fossil fuels, wood and other fuels**. Complete combustion would turn all carbon in the fuel into carbon dioxide (CO₂), but combustion is never complete and CO₂, carbon monoxide, volatile organic compounds, and organic carbon and black carbon particles are all formed in the process.
- The complex mixture of particulate matter resulting from incomplete combustion is often referred to as soot.

Findings of The Study

- The research report from the WB covers the **Himalaya, Karakoram and Hindu Kush (HKHK)** mountain ranges, where, it says, **glaciers are melting faster than the global average ice mass**. The rate of retreat of HKHK glaciers is estimated to be 0.3 metres per year in the west to 1.0 metre per year in the east. Black Carbon adds to the impact of climate change.

- Full implementation of current policies to mitigate BC can **achieve a 23% reduction** in the pace of melting of glacier and snow but enacting new policies and incorporating them through regional cooperation among countries can achieve enhanced benefits. National Mission on Sustaining Himalayan Ecosystem (NMSHE) is one such policy adopted in India. It is one of the eight missions under the National Action Plan on Climate Change (NAPCC)
- Deposits of BC act in two ways **hastening the pace of glacier melt**: by decreasing surface reflectance of sunlight and by raising air temperature.
- Specifically, in the Himalayas, reducing black carbon emissions from cook stoves, diesel engines, and open burning would have the greatest impact and could significantly reduce radiative forcing and help to maintain a greater portion of Himalayan glacier systems.
- Industry [primarily brick kilns] and residential burning of solid fuel together account for 45–66% of regional anthropogenic [man-made] BC deposition, followed by on-road diesel fuels (7–18%) and open burning (less than 3% in all seasons)” in the region.
- There are almost **55,000 glaciers in the HKHK Mountains**, and they store more freshwater “than any other region outside the North and South Poles. The glaciers contain estimated ice reserves of 163 cubic kilometres, of which almost **80% feeds the Indus, the Ganges and the Brahmaputra**. HKHK Region, also known as the third pole, along with China’s Tien Shan Mountains holds most ice outside the North and the South Pole.
- Glacier melt produces **flash floods, landslips, soil erosion, and glacial lake outburst floods (GLOF)**, and in the short run, the higher volumes of melt water could replace receding groundwater downstream. But in the long run, decreased water availability would aggravate water shortage.

Industrial Deep Decarbonization Initiative (IDDI)

- **India** along with **Govt. of United Kingdom** launched a new work stream to *promote industrial energy efficiency* under the Clean Energy Ministerial’s (CEM) Industrial Deep Decarbonization Initiative (IDDI) co-ordinated by **UNIDO**, at the 12th Chief Energy Ministerial (CEM).
- The IDDI, a global coalition of public and private organizations, has been supported by Germany and Canada, with more countries expected to join soon. The objective is to *infuse green technologies and stimulate demand for low-carbon industrial material, especially* in energy intensive sectors like Iron & Steel, Cement and Petrochemicals.
- India is committed to cut emissions intensity per unit of GDP by 33 to 35% by 2030 (stated in Nationally Determined Contributions). Government policies have resulted in substantial savings in energy at the demand side such as AgDSM (Agriculture Demand Side Management programme), MuDSM (Municipal Demand Side Management) etc.

About Clean Energy Ministerial

- It is a high-level **global forum** to promote policies and programs that advance clean energy technology, to share lessons learned and best practices, and to encourage the transition to a global clean energy economy.
- It was established in Dec’ 2009 at the UN’s Framework Convention on Climate Change conference of parties in **Copenhagen**. The Framework for the Clean Energy Ministerial, adopted at the seventh

Clean Energy Ministerial in 2016, defines the CEM governance structure and outlines the mission statement, objectives, membership, and guiding principles. India is also a member country

- 12th Clean Energy Ministerial (CEM12), **hosted by Chile**, convened at a critical moment to determine the medium and long-term role of clean energy in supporting the economic recovery from the COVID-19 pandemic, building momentum towards the commitment to cut emissions ahead of COP26.
- **Theme of CEM12:** “Ambition into Action-- Turning a Year of Ambition into a Decade of Delivery”.

Heritage Trees

- The Maharashtra Cabinet passed an action plan to protect and **preserve trees older than 50 years** in urban areas by terming them heritage trees.
- The plan includes the concept of heritage tree and plan of action for conservation; method to define age of the tree; compensatory plantation; rules to be followed before hacking trees; formation of the Maharashtra Tree Authority; tree census; tree cess and fine to be charged etc.
- **A State-level Tree Authority** will be formed to protect and preserve heritage trees. The authority will hear applications seeking permission to cut 200 or more trees that are five or more years old.

What Is A Heritage Tree

- A heritage tree is a large tree whose value is considered irreplaceable. These trees take decades and centuries to mature and act as prominent landmarks of a place.
- The main criteria for considering a tree as heritage tree is its **size, form, shape, age, colour and rarity**. The aesthetic, botanical, horticultural, ecological, social, cultural and historical values are also taken into account.
- A specimen associated with a historic person, place, event or period is also treated as heritage tree.
- A heritage tree can also be a tree associated with local folklore, myths, legends or traditions.
- Certain species that are relatively rare in an area, whether native or not, may also be granted special status.

Southern Ocean

- The National Geographic magazine has recognised ‘Southern Ocean’ as the **world’s fifth ocean**, hoping others will soon follow suit.
- Southern Ocean is the portions of the world ocean and tributary seas surrounding Antarctica below 60° S excluding the Drake Passage and Scotia Sea.
- The magazine says the Southern Ocean is the **only ocean ‘to touch three other oceans and to completely embrace a continent** rather than being embraced by them’.
- Its northern limit is latitude of **60 degrees south**. It is also defined by its **Antarctic Circumpolar Current (ACC)** that was formed 34 million years ago. The current flows from west to east around Antarctica. The ACC is created by the combined effects of strong westerly winds across the Southern Ocean, and the big change in surface temperatures between the Equator and the poles.

- The **International Hydrographic Organization (IHO)** too had recognised 'Southern Ocean' as a distinct body of water surrounding Antarctica in 1937 but had repealed the same in 1953. However, the United States Board on Geographic Names as well as the National Oceanic and Atmospheric Administration, both recognize the term 'Southern Ocean'.

About the IHO

- It is an **intergovernmental organization** that works to ensure all the world's seas, oceans and navigable waters are surveyed and charted.
- Established in 1921, it coordinates the activities of national hydrographic offices and promotes uniformity in nautical charts and documents. It issues survey best practices, provides guidelines to maximize the use of hydrographic survey data and develops hydrographic capabilities in Member States. India is also a member of IHO.

World Environment Day 2021

- The UN General Assembly designates **5 June as World Environment Day**, marking the first day of the **Stockholm Conference on the Human Environment**. Another resolution, adopted by the General Assembly the same day, leads to the creation of **UN Environment**.
- The theme for World Environment Day 2021 is '**Ecosystem Restoration**' and Pakistan will be the global host for the day. This World Environment Day will kick off the **UN Decade on Ecosystem Restoration (2021-2030)**, a global mission to revive billions of hectares, from forests to farmlands, from the top of mountains to the depth of the sea.
- The first World Environment Day was held in 1974 with the slogan "Only One Earth".

Blue-finned Mahseer

- The Blue-Finned Mahseer, which was on the International Union for Conservation of Nature's (IUCN) red list of endangered species, has now **moved to the 'least concern' status**.
- The Mahseer belongs to the **genus Tor**, of which there are several subspecies to be found in India and in other range countries in South Asia.
- **Habitat:** It prefers clean, fast flowing and well oxygenated waters and has a much lower fecundity rate (lays less eggs per kg of body weight) than most carps. It requires gravel /sandy stream beds to breed and can migrate considerable distances in search of suitable breeding grounds.
- **Characteristics**
 - The species is **migratory**; moving upstream during rains.
 - Mahseer are **omnivorous**. Their diet includes a wide range of algae, crustaceans, insects, frogs, other fish etc.
- In India, Mahseer have been considered sacred since the Vedic Period (1750-500 BC) and even today, Mahseer are protected and cared for in temple ponds.



- The **Humpback Mahseer** (Tor remadevii) in particular, is a charismatic fish species that is **endemic to Cauvery river**, and is on the brink of extinction. It is recognised as one of the world's top 20 freshwater megafauna and is popularly known as the "**Tiger of the Cauvery river**".

Green Hydrogen

- Hydrogen will make up 12 % of the energy mix by 2050, according to International Renewable Energy Agency (IRENA)'s World Energy Transitions Outlook. At present, less than 1 % of hydrogen produced is green hydrogen.
- Green hydrogen technologies are being promoted in sectors where direct electrification isn't feasible. Heavy duty, long-range transport, some industrial sectors and long-term storage in the power sector are some of these sectors.
- **Other Different Shades Of Hydrogen**
 - **Brown hydrogen** is produced using coal where the emissions are released to the air.
 - **Grey hydrogen** is produced from natural gas where the associated emissions are released to the air.
 - **Blue hydrogen** is produced from natural gas, where the emissions are captured using carbon capture and storage.

Indian Scenario

- The country consumes about **6 million tonnes** of hydrogen every year for **production of ammonia and methanol** in industrial sectors, including fertilisers and refineries. This could increase to **28 million tonnes by 2050**, principally due to the rising demand from the industry, but also due to the expansion of transport and power sectors.
- Thus, India's hydrogen demand will **increase five-fold by 2050**, with 80 per cent of it being green. India will become a net exporter of green hydrogen by 2030 due to its cheap renewable energy tariffs, according to the Global Hydrogen Council.
- India has favourable geographic location and abundance of sunlight and wind for the production of green hydrogen. Green hydrogen production will also **reduce the country's dependence** on imports while also staving off climate change.
- The **localisation of electrolyser production** and the development of green hydrogen projects can create a new green technologies market in India worth \$18-20 billion and thousands of jobs.
- Green hydrogen **currently costs \$5-6 per kilogram**, which is nearly triple the cost of grey hydrogen, according to a recent study. With technological improvements, green hydrogen will become more affordable and accessible sooner than expected.

Way forward

- **Set A National Target For Green Hydrogen And Electrolyser Capacity**
 - As with renewable energy, India should announce **ambitious national targets** for green hydrogen and electrolyser capacity by 2030.

- **Existing hydrogen applications** like oil refining and fertilisers should be required to use a certain percentage of green hydrogen while new greenfield hydrogen applications should only use green hydrogen from a future date (to eliminate long-term lockins).
- **A phased manufacturing programme** should be used to build a vibrant hydrogen products export industry in India such as green steel.
- **Launch An Incentive Programme For Production Of Electrolysers:** Capital costs are responsible for about 30 per cent of green hydrogen costs. Dollar-linked contracts for hydrogen procurement should be considered in sectors with relevant demand, as is done for oil and gas.
- **Implement Complementary Solutions That Create Virtuous Cycles:** Use technology that has the potential to create positive cycles and spillover effects. One example might be hydrogen infrastructure for refuelling, heating and generating electricity at airports.
- **Optimise Distribution Networks:** For many hydrogen applications, the network is vital. Hydrogen boilers make sense for heating where gas pipeline infrastructure already exists. Grid operators must choose to decarbonise the gas grid with regulator support, before shutting it down entirely. Hydrogen still has a competitive edge, even after budgeting for technological retrofitting to the network and upgrading consumer appliances.

Ambergris

There have been two cases where the Mumbai Police has arrested five persons trying to sell Ambergris or whale vomit.

What is Ambergris

- Ambergris, French for grey amber, is generally referred to as whale vomit.
- A sperm whale eats several thousand squid beaks a day. Occasionally, a beak makes its way to the whale's stomach and into its looping convoluted intestines where it becomes ambergris through a complex process, and may ultimately be excreted by the whale.
- It is a **solid waxy substance** that floats around the surface of water body and at times settles on the coast.

Significance

- This excretion is so valuable that it is referred to as floating gold. As per the latest estimates given by Mumbai Police, **1 kg of ambergris is worth Rs 1 crore** in the international market.
- The reason for its high cost is its use in the **perfume market**, especially to create fragrances like musk. It is believed to be in high demand in countries like Dubai that have a large perfume market.
- Ancient Egyptians used it as **incense**.
- It is also believed to be used in some traditional medicines.
- Due to its high value, Ambergris has been a target for smugglers especially in coastal areas. Since the sperm whale is a protected species, hunting of whale is not allowed. However, smugglers are known to have illegally targeted the fish in order to obtain the valuable Ambergris from its stomach.

Rajasthan Set To Get Its Fourth Tiger Reserve

- Rajasthan is poised to get its **fourth tiger reserve** after **Ramgarh Vishdhari wildlife sanctuary** received a nod from the National Tiger Conservation Authority (NTCA)'s technical committee.
- Prior to the formation of the state of Rajasthan, these forests were a part of the erstwhile **Bundi princely states** and were managed as **hunting reserves**. After Independence, these forests came under the control of the government of Rajasthan. In 1982, a part of the forest was declared as Ramgarh Vishdhari Wildlife Sanctuary under Section 5 of the Rajasthan Wild Animals and Birds Protection Act, 1951.
- **Other Tiger Reserves of Rajasthan**
 - Ranthambore Tiger Reserve (RTR).
 - Mukundara Hills Tiger Reserve.
 - Sariska Tiger Reserve.

Summer Solstice

- The longest day of 2021 for those living north of the Equator is June 21. In technical terms, this day is referred to as the summer solstice, the longest day of the summer season.
- It occurs when the sun is directly over the Tropic of Cancer, or more specifically right over 23.5 degree north latitude.

Why Do We Have Summer Solstice

- Since Earth rotates on its axis, the Northern Hemisphere gets more direct sunlight between **March and September** over the course of a day, which also means people living in the Northern Hemisphere experience summer during this time. Rest of the year, the Southern Hemisphere gets more sunlight.
- During solstice, the earth's axis — around which the planet spins — is tilted in a way that the **North Pole is tipped towards the sun** and the South Pole is away from it.
- Typically, this imaginary axis passes right through the middle of the Earth from top to bottom and is **always tilted at 23.5 degree** with respect to the sun. Therefore, the solstice is that instant in time when the **North Pole points more directly toward the sun** that at any other time during the year. Solstice means "**sun stands still**" in Latin.
- According to NASA, the amount of incoming energy the Earth received from the sun on this day is 30% higher at the North Pole than at the Equator.
- The maximum amount of sunlight received by the Northern Hemisphere during this time is usually on June 20, 21 or 22. In contrast, the Southern Hemisphere receives most sunlight on December 21, 22 or 23 when the northern hemisphere has its longest nights— or the winter solstice.
- Although June 21 will be the longest day in 2021, it does not necessarily mean that it brings the earliest sunrise or latest sunset. It depends on the latitudinal location of the country.

Desertification, Land Degradation and Drought

Prime Minister of India delivered the keynote address at a United Nations high-level dialogue on Desertification, Land Degradation and Drought.

Key Points

- India is on track to achieve its national commitment on land degradation neutrality, and that it's working to restore **26 million hectares of degraded land by 2030**.
- This would contribute to India's commitment to achieving an additional **carbon sink of 2.5 to 3 billion tonnes** of carbon dioxide equivalent.
- Land degradation affects over two-thirds of the world today. If left unchecked, it will erode the very foundations of our societies, economies, food security, health etc.
- The **Delhi Declaration 2019** called for better access and stewardship over land, and emphasised gender-sensitive transformative projects.
- **Banni region in Rann of Kutch in Gujarat** suffers from highly degraded land and receives very little rainfall. In that region, land restoration is done by developing grasslands, which helps in achieving land degradation neutrality.
- A **Centre of Excellence** is being set up in India to promote a scientific approach towards land degradation issues.