

US, Britain, other countries ink agreement to regulate Artificial intelligence (AI)

- ▶ These countries (does not include India) unveiled a document titled **Guidelines for secure AI system development**.
 - ⊖ Guidelines are **non-binding** in nature.
- ▶ **Key Provisions of guidelines:**
 - ⊖ **Secure design** (deals with the design stage of the AI system): It includes a holistic process to assess the threats to the AI system.
 - ⊖ **Secure development:** Securing supply chain, track and protect AI related assets.
 - ◆ Manage **'technical debt'** (implied cost incurred when businesses do not fix problems that will affect them in the future) throughout an AI system's life cycle.
 - ⊖ **Secure deployment:** Applying **good infrastructure** security principles in AI system's life cycle, etc.
 - ⊖ **Secure operation and maintenance:** Constant monitoring to observe sudden and gradual changes in behaviour affecting security.
- ▶ **Need to Regulate AI:**
 - ⊖ To deal with **vulnerabilities** like-
 - ◆ **Adversarial machine learning (AML):** Exploitation of **fundamental vulnerabilities** in ML components like extracting sensitive model information.
 - ◆ **Data poisoning:** Deliberately **corrupting the training data**.
 - ⊖ **Other:** Disrupt the **democratic process**, lead to job loss, privacy violation etc.
- ▶ **Challenges in regulation:** Coordinating with **regulators across borders**, lack of **standardized definitions** and benchmarks, balancing benefits and risks etc.

About AI and Recent Efforts to Regulate it

- ▶ AI is a **machine's ability** to perform the **cognitive functions** we associate with human minds, such as perceiving, reasoning, learning, problem solving, etc.
- ▶ **Recent Efforts:**
 - ⊖ **Bletchley Declaration:** Resolved to work together for human-centric, trustworthy and responsible AI at the UK's AI Safety Summit.
 - ⊖ **Hiroshima AI Process (HAP):** Effort by **G7** to determine a way forward to regulate AI.

Decentralised Autonomous Organisations (DAOs), intersection of blockchain technology and governance

- ▶ A **DAO** is a type of organisation that operates according to a **set of rules encoded as computer programmes** known as **smart contracts (automatically execute predefined rules)**.
 - ⊖ It is designed to be **self-governing** and **self-sustaining**.
- ▶ It is powered by **blockchain technology**.
 - ◆ **Blockchain** is a **shared, immutable ledger** that facilitates the process of **recording transactions** and **tracking assets** in a **business network**.
- ▶ **Key Features of DAO:**
 - ⊖ **Decentralised:** Decision-making in it is done through **democratic process**. **Token holders (participants in DAO)** have a direct say, resulting in a **more equitable distribution of influence**.
 - ⊖ **Transparent:** **Smart contracts** ensures that operations are **transparent** and **immutable**, **fostering trust** among participants.
 - ⊖ **Inclusive:** It transcends **geographical** and **socio-economic barriers**, enabling global participation.
- ▶ **Key Applications:**
 - ⊖ **Finance:** Platforms like **MakerDAO** have introduced lending and borrowing services, enabling users to participate in the **global financial ecosystem** without relying on banks.
 - ⊖ **Digital Art:** Artists can manage **Non-fungible tokens (NFTs)**.
 - ◆ These are assets that have been tokenized via a blockchain.

⊕ **Other: Supply chain management** (transparency and traceability in global supply chains), etc.

Financial Stability Board (FSB) Publishes List of Global Systemically Important Banks (G-SIBs) 2023

- ▶ The list was published in consultation with **Basel Committee on Banking Supervision (BCBS)** and **national authorities**
 - ⊖ It has **no Indian bank in it**.
- ▶ A G-SIB is bank whose **systemic risk profile** is deemed to be of such importance that the **bank's failure** would trigger a **wider financial crisis** and **threaten the global economy**.
 - ⊖ G-SIBs are selected based on the criteria like
 - ◆ **Higher capital buffer**
 - ◆ **Total Loss-Absorbing Capacity (TLAC)**
 - ◆ **Resolvability**
 - ◆ **Higher supervisory expectations.**
 - ⊖ G-SIBs are placed in **five different buckets** corresponding to required levels of additional capital buffers.
 - ⊖ In India, G-SIB has to maintain additional **Common Equity Tier 1 Capital (CET1)**, proportionate to its **Risk Weighted Assets (RWA)**.
- ▶ On the line of G-SIBs, the **Reserve Bank India (RBI)** has established the **Framework for dealing with Domestic Systemically Important Banks (D-SIB) in 2014**.
 - ⊖ These are placed under **five different buckets**.
 - ◆ **SBI (Bucket 3) ICICI Bank and HDFC bank (Bucket 1)** are currently listed as D-SIBs.
 - ⊖ D-SIBs have to maintain additional **CET1** requirements ranging from **0.20% to 0.80% of RWA**.

▶ About FSB

- ⊖ FSB is an international body that **monitors and makes recommendations** about the **global financial system**, headquartered in Basel (Switzerland).
- ⊖ It was established in 2009 (endorsed by G-20) as the successor to the **Financial Stability Forum**.
- ⊖ India is also member of FSB.

Ministry of Fisheries, Animal Husbandry & Dairying released the "Basic Animal Husbandry Statistics 2023" on National Milk Day (26th Nov)

- ▶ **Key highlights**
 - ⊖ Total Milk production in the country is estimated at **230.58 million tonnes** during 2022-23 registered a **growth of 22.81%** over the past 5 years.
 - ⊖ Wool production has registered a **negative growth of 16.84%** and **meat production registered a growth of 20.39%** over the past 5 years.
- ▶ National Milk Day is celebrated to honor **Dr. Verghese Kurien**, the "Father of the White Revolution in India," on his birth anniversary.
- ▶ **About white revolution**
 - ⊖ India launched **Operation Flood in 1970** to increase milk production.
 - ⊖ India has emerged as the **largest producer of milk in the world** with one-fourth of global production.
 - ⊖ **Major factors that contributed to the success** of the white revolution are
 - ◆ **Institution of cooperatives** especially for marketing of milk.
 - ◆ **Investments in milk processing.**
 - ◆ **Artificial insemination** in cows and
 - ◆ **Absence of restrictive regulations** on milk marketing and trade.
 - ⊖ **Government initiative for dairy development**
 - ◆ **The Rashtriya Gokul Mission** for the development and conservation of indigenous bovine breeds.
 - ◆ **National Livestock Mission** for entrepreneurship development and breed improvement.
 - ◆ **The Livestock Health & Disease Control scheme** to improve animal health.
 - ◆ **National Programme for Dairy Development** to enhance the quality of milk and milk products.

Challenges faced by the dairy sector

Low productivity of milch animals

Increased emission of greenhouse gases by ruminants

Very low share of export

President calls for the establishment of an All India Judicial Service (AIJS) for recruiting judges

- ▶ The AIJS is a reform push to **centralize the recruitment of judges at the level** of additional district judges and district judges for all states.
- ▶ Presently, **according to Article 233** “appointments of persons to be, and the posting and promotion of, **district judges are made by the Governor in consultation with the High Court.**
- ▶ The **42nd Constitutional Amendment amended Article 312 (1)** empowering Parliament to make laws for creating one or more All-India Services, including an AIJS.
- ▶ **Need for AIJS**
 - ⊖ **To fill the existing vacancies:** Over **5000 posts of Judges are currently vacant** in the lower judiciary.
 - ⊖ **To reduce the pendency load:** Nearly **85% of the pending cases** are at the level of the District Judiciary.
 - ⊖ **Favors better representation:** judges will be selected from all sections of society and get elevated to the higher judiciary.
- ▶ **Challenges in implementing AIJS**
 - ⊖ **Against Separation of powers:** it allows the executive to step in the process of judicial appointments.
 - ⊖ **Disturbs the federal structure of the judiciary:** centralized mechanism will interfere with the appointment powers of the respective High Courts.
 - ⊖ **Issue of Court language:** the lower judiciary uses the local regional language.

Lightning kills 24 in Gujarat

- ▶ Lightning is an **electrical discharge** caused by imbalances between storm clouds and the ground, or within the clouds themselves.
- ▶ **How does lightning occur?**
 - ⊖ The discharges are **generated in giant moisture-bearing clouds.**
 - ⊖ **As water vapor moves upward** in the cloud, the falling temperature causes it to change into small ice crystals.
 - ⊖ They continue to move up, **gathering mass until they are so heavy** that they start to fall to Earth.
 - ⊖ This leads to a **collision** between smaller ice crystals moving up and bigger crystals coming down.
 - ⊖ Collisions **trigger the release of electrons** and free electrons cause more collisions.
 - ⊖ The top layer of the cloud gets positively charged, while the middle layer is negatively charged leading to flow between the layers.
 - ⊖ In comparison to the **middle layer** of the cloud, **Earth becomes positively charged.** As a result, some current gets directed towards the Earth.
 - ◆ It is this flow of current that **results in damage to life and property on Earth.**
- ▶ **National Disaster Management Authority guidelines**
 - ⊖ **Early warning and Communication,** lightning incidents can be detected by the ground-based Lightning Detection Network in real time.
 - ⊖ **Prevention, Mitigation, and Preparedness Measures,** including Emergency Plans, installing lightning arrestors, etc.

Types of lightning

- ▶ **Intra-cloud lightning** occurs between **opposite charges within the cloud**
- ▶ **Inter-cloud lightning** occurs between Cloud-to-Cloud
- ▶ **Cloud-to-ground lightning** occurs between **opposite charges in the cloud and on the ground.**

Also in News



Generalised Scheme of Preferences (GSP)

- ▶ India is among the top beneficiaries of European Union's GSP in 2022.
- ▶ **About GSP:**
 - ⊖ Under the scheme, the EU allows **identified products originating** in certain **developing countries preferential access** to its markets in the form of **reduced or zero rates of customs duties.**
 - ◆ As the items become more competitive and reach a particular threshold, the GSP is withdrawn.
 - ◆ The EU has already withdrawn the GSP benefit on many items.
 - ⊖ The present policy will now continue for another four years until 2027.
- ▶ GSP was instituted under the aegis of **United Nations Conference on Trade and Development (UNCTAD).**



Trade secrets

- ▶ An Indian IT Services Company has been asked to pay \$210 million by a US jury for misappropriation of US IT services firm's trade secrets.
- ▶ **About Trade secrets:**
 - ⊖ These are **intellectual property (IP) rights on confidential information** which may be sold or licensed.
 - ⊖ Information is considered trade secrets, if it fulfills following criteria:
 - ◆ **Commercially valuable** because it is secret.
 - ◆ **Known only to a limited group of persons.**
 - ◆ Subject to **reasonable steps taken by the rightful holder** of the information to keep it secret.



FASTER 2.0 and electronic Supreme Court Reports (e-SCR) portal

- Chief Justice of India launched the **FASTER 2.0** and a Hindi version of the e-SCR portal.
- About FASTER 2.0 portal**
 - It is **designed to promptly inform** jail authorities, trial courts, and high courts about court orders for the release of prisoners.
 - It aims to **ensure that prisoners are not held in jail** longer than necessary due to delays in communication.
- About e-SCR portal**
 - It provides the **digital version of the apex court's judgments** in the same manner they are reported in the official law report.



AstroSat

- AstroSat has successfully detected its **600th Gamma-ray Burst (GRB)**.
 - GRB are **short-lived bursts of gamma-ray light**, the most energetic form of light.
- About Astrosat**
 - It is the **first dedicated Indian astronomy mission** aimed at studying celestial sources in X-ray, optical and UV spectral bands simultaneously.
 - It aims to **understand high energy processes** in binary star systems containing neutron stars and black holes, etc.
 - It enables the **simultaneous multi-wavelength observations** of various astronomical objects.



Global Capability Centres (GCCs)

- Indian GCCs are increasingly emerging as a **hub for leaders with global roles**.
- About GCC:**
 - GCCs are **offshore units of multinational corporations** that operate across the globe.
 - These centres are responsible for **providing various support services**, such as IT, finance, human resources, and analytics, to their parent organizations.
 - Political stability, a growing domestic consumption-driven economy, and a strong financial regulatory structure** in India provide a favourable climate for GCCs.



Amplifi 2.0

- Ministry of Housing and Urban Affairs** launched Amplifi 2.0 (Assessment and Monitoring Platform for Liveable, Inclusive, and Future-Ready Urban India).
- About Portal:**
 - The portal aims to **provide raw data from Indian cities** available on a single platform for academics, researchers, and stakeholders to **help data-driven policymaking**.
 - Currently, **225 urban local bodies have been on-boarded**, and **data of 150 cities is available** on the portal.
 - The initiative provides the opportunity to **create new frameworks for Urban development** based on open data obtained.



Amaterasu

- Astronomers have detected a rare and **extremely high-energy** 'Amaterasu' particle falling to Earth.
 - Its source is still unidentified.
- It is named Amaterasu particle after the **Japanese sun goddess**.
- It has an energy exceeding **240 exa-electron volts (EeV)**.
 - Only the "Oh My God particle" detected in 1991 has more energy than "Amaterasu" at 320 EeV.



Ayushman Arogya Mandir (AAM)

- Centre has decided to rename **Ayushman Bharat Health and Wellness Centres (AB-HWCs)** as 'AAM' with the tagline 'Arogyam Parmam Dhanam'.
- Launched under the **Ayushman Bharat Program** in 2018, there are over **1.6 Lakh centers in the country**.
- They are envisaged to **deliver an expanded range of services** that go beyond **Maternal and child health care services**.
- They provide care for **non-communicable diseases, palliative and rehabilitative care, Oral, Eye, and ENT care, mental health, and first-level care for emergencies and trauma**.
- They also provide **free essential drugs and diagnostic services**.

Places in News



Cyprus (Capital: Nicosia)

- Cyprus wins cheese trademark case against Indian company.
- Political Boundaries**
 - Third largest island in **Mediterranean Sea** after Sicily and Sardinia. Situated at
 - north-eastern corner of Mediterranean**.
 - It lies **north of Egypt, south of Turkey, west of Syria, and southeast of mainland Greece**.
- Geographical features**
 - It has mountains like **Kyrenia and Troodos**.
 - Highest Peak: Mount Olympus**.
 - Longest river: The Pedieos**.

