

SIR M. VISVESVARAYA?

Engineer's Day is celebrated in India on September 15 every year to honour the contributions of Bharat Ratna Sir Mokshagundam Visvesvaraya, also known as Sir MV, who was born on this day in 1861.



About Sir M Visvesvaraya:

- Mokshagundam Visvesvaraya, widely known as Sir MV, was a distinguished engineer, statesman, and scholar who held the position of Diwan of Mysore from 1912 to 1918.
- He was known as the father of Modern Mysore for his outstanding contribution to society.
- **Birth:** He was born on **15th September 1861** in Muddenahalli village in **Karnataka**.
- **Education:** He completed his Bachelor of Arts (BA) from the University of Madras and completed **civil engineering from the College of Science in Pune**.
- **Contributions:**
 - He was the **chief engineer responsible for the construction of the Krishna Raja Sagara Dam in Mysore**.
 - He **designed and patented automatic water floodgates in 1903**, which were **first installed at the Khadakwasla reservoir in Pune**.
 - In **1917**, Visvesvaraya established the **Government Engineering College in Bengaluru**, which was later named **University Visvesvaraya College of Engineering** in his honour.
 - He was a **renowned precursor of economic planning in India**.
- **Awards:**
 - In **1955**, the Government of India honoured him with the **highest civilian honour — Bharat Ratna** for his numerous industrial, economic and social projects.
 - He was also **conferred the British knighthood by King George V**, earning the title "**Sir**."

Key Facts about Krishnaraja Sagar (KRS) Dam:

- **Location:** It is located below the confluence of river Kaveri with its tributaries, Hemavati and Lakshmana Tirtha, in the district of Mandya in Karnataka.
- The dam was constructed during the rule of the Maharaja of Mysore, Krishnaraja Wadiyar IV, and it was named in his honour.
- The construction of the KRS Dam began in 1911 and it was completed in 1931.
- The dam was designed by Sir M. Visvesvaraya, a famous Indian engineer.
- It is 2,621 meters (8,600 ft) long and 40 meters (130 ft) high.
- Its reservoir is about 130 Sq. Kms, which was the largest in Asia at the period when it was built.
- Brindavan Gardens, an ornamental garden, is attached to the dam.

WHO IS AN ADVOCATE-ON-RECORD (AOR)?

A Supreme Court (SC) Bench recently imposed a cost of ₹2,000 on an advocate-on-record (AoR) for sending a young junior to appear before the Bench without any papers.



About Advocate-on-Record (AoR):

- The concept of AoR was introduced by the SC with the power given to it under Article 145(1) of the Indian Constitution, which states that the SC may, from time to time, make rules for regulating the practices and procedures in the court.
- “Advocate on record” is a title given to an advocate who can represent a cause or pleading before the SC.
- Only these advocates are entitled to file any matter or document before the SC. They can also file an appearance or act for a party in the SC.
- No other High Court in India has a similar provision.
- Order IV Rule 5 of the Supreme Court Rules, 2013 lays down the requirements to be fulfilled to become an AoR.

- They are as follows:
 - The Advocate is required to be enrolled with any State Bar Council.
 - The Advocate is required to have a prior experience of at least 4 years.
 - The Advocate has undergone a training of 1 year under a senior AoR.
 - The Advocate has appeared for the examination conducted by the SC.
 - The Advocate is required to have an office in Delhi within a radius of 10 miles from the SC house and give an undertaking to employ a clerk, who shall be a registered clerk, within one month of being registered as an advocate on record.
 - Once registered, an AOR is issued a unique identification number that must be used on all documents filed in the SC.
-

SUPREME COURT JOINS NATIONAL JUDICIAL DATA GRID

Why in news?

- Chief Justice of India D.Y. Chandrachud announced the onboarding of the Supreme Court on the National Judicial Data Grid (NJDG) in open court.
 - Now we have **all three tiers of Indian judiciary on the NJDG portal.**
- With this, real-time data on the filing and disposal of cases in the Supreme Court will now be available at the fingertips of the common man, just a click of a mouse away.
- The information available on the NJDG-SCI (Supreme Court of India) portal would include:
 - the current pendency of civil and criminal cases,
 - filing and disposal of cases in the previous month,
 - number of cases pending before three-judge, five-judge and even nine-judge Benches.

e-Courts Integrated Mission Mode Project

- It is a project by the Government of India to improve access to justice using technology.
 - It is a national e-Governance project of the Department of Justice, Ministry of Law and Justice.

- The Project was conceptualized based on ‘**The National Policy and Action Plan for Implementation of ICT in the Indian Judiciary - 2005**’ of the e-Committee of the Supreme Court of India.
- The project aims to provide services to litigants, lawyers, and the judiciary by computerizing district and subordinate courts.
- The project's goals include:
 - Automating processes to provide transparency of information access to stakeholders
 - Enhancing judicial productivity
 - Making the justice delivery system affordable, accessible, cost effective, and transparent

National Judicial Data Grid (NJDG):

- **About:**

- A part of the on-going **e-Courts Integrated Mission Mode Project**, NJDG is a flagship project launched in **2015** and is implemented under the aegis of the e-Committee Supreme Court of India.
- NJDG is a system for monitoring pendency and disposal of the cases in High Courts and Subordinate Courts.
- It is a **database** of orders, judgments and case details of 18,735 District & Subordinate Courts and High Courts created as an online platform under the eCourts Project.
- The statistics of pendency at National, State, District and at Individual Court level is available to anyone visiting the **National Judicial Data Grid portal**.
- Currently, litigants can access case status information on 23.81 crore cases, and more than 23.02 crore orders/judgements.

- **Features:**

- NJDG provides the consolidated figures of pendency of cases in Judiciary.
- Statistical data is automatically updated daily.
- Pending Civil and Criminal Cases segregated into varied categories.
- Information pertaining to Institution and Disposal of cases is shown.
- Serves as National Judicial Data Warehouse.

PATENTS (AMENDMENT) RULES, 2023 & CONCERNS RELATED TO IT

Why in News?

- Last month, the Draft Patents (Amendment) Rules, 2023 were made public by the Department for Promotion of Industry and Internal Trade.
- Various advocacy groups have raised concerns over the draft rules.

What is a Patent?

- A patent is the **granting of a property right by a sovereign authority to an inventor**.
- This grant provides the inventor exclusive rights to the patented process, design, or invention for a designated period in exchange for a comprehensive disclosure of the invention.
- The Office of the Controller General of Patents, Designs and Trade Marks (CGPDTM), also known as **India Patent Office**, grants patent so that any invention can be freely commercialised or utilised without any fear of infringement.
 - The head patent office is located in Kolkata, West Bengal.
- The Indian Patent Office grants patents which are governed by the **Indian Patents Act, 1970**.

Draft Patents (Amendment) Rules, 2023:

- In August 2023, the Ministry of Commerce and Industry proposed and published Draft Patent (Amendment) Rules, 2023 (the “draft rules”).
- It invited objections and suggestions from all stakeholders within a timeline of 30 days from the date of the publication of the draft Rules.

Key Term(s):

- **Paris Convention:**
 - The Paris Convention for the Protection of Industrial Property, signed in Paris, France, in **1883**, was one of the first intellectual property treaties.

- It applies to industrial property in the widest sense, including patents, trademarks, industrial designs, utility models, service marks, trade names, geographical indications and the repression of unfair competition.
- **Patent Cooperation Treaty:**
 - The Patent Cooperation Treaty is an international patent law treaty, concluded in 1970.
 - It provides a unified procedure for filing patent applications to protect inventions in each of its contracting states.
- **Budapest Treaty:**
 - Adopted in 1977, the Budapest Treaty concerns a specific topic in the international patent process: **microorganisms**.
 - All states party to the Treaty are obliged to recognize microorganisms deposited as a part of the patent procedure, irrespective of where the depository authority is located.
- **Patent Evergreening:**
 - In simple terms, patent evergreening refers to the continuing extension of patent rights. It also refers to the process of obtaining many patents for the same item.
 - It is a technique used by businesses to prevent the entry of generic competitors.
 - Currently, in India, the term of every patent granted is **20 years** from the date of filing of application.

[NAVIC \(NAVIGATION WITH INDIAN CONSTELLATION\): AS APPLE SUPPORTS NAVIC, CENTRE CONSIDERS MAKING TECH MANDATORY, OFFERING ADDITIONAL INCENTIVES](#)

Why in News?

- After convincing Apple to support navigation technology NavIC in some new iPhone 15 models, the Union government may mandate manufacturers to embed the homegrown GPS alternative in all smartphones sold in India by 2025.
- According to the Ministry of Electronics and Information Technology (MeitY), all 5G phones would be required to support NavIC by January 1, 2025, and other phones by December 2025.

About NavIC (Navigation with Indian Constellation):

- NavIC, also known as the Indian Regional Navigation Satellite System (IRNSS), is an independent stand-alone indigenous navigation satellite system developed by the **Indian Space Research Organisation (ISRO)**.
- NAVIC was approved in 2006 (at a cost of \$174 million) and was expected to be completed by 2011, but only become operational in **2018**.
- NavIC, which consists of **7 satellites**, covering the whole of India's landmass and up to 1,500 km from its boundaries, is conceived with the **aim of removing dependence on foreign satellite systems for navigation**, particularly for "strategic sectors."
- Currently, NavIC's **application** in India is limited in -
 - **Public vehicle tracking**, for providing emergency warning alerts to fishermen venturing into the deep sea where there is no terrestrial network connectivity and
 - For tracking and providing information related to natural disasters.
- **The next step India is pushing for is to include it in smartphones.** According to **India's draft satellite navigation policy 2021**, the government will work toward "expanding the coverage from regional to global."

What is the Advantage of having a Regional Navigation System?

- India is the **only country** that has a regional satellite-based navigation system.
 - **There are four global** satellite-based navigation systems - the American GPS, the Russian GLONASS, the European Galileo, and the Chinese Beidou.
 - **Japan** has a four-satellite system that can augment GPS signals over the country, **similar to India's GAGAN** (GPS Aided GEO Augmented Navigation).
- **With fully operational NavIC** (with ground stations outside India [Japan, France, and Russia] for better triangulation of signals) open signals will be accurate up to 5m and restricted signals will be more accurate (GPS ~20m).
- Unlike GPS, **NavIC uses satellites in high geo-stationary orbit** - the satellites move at a constant speed relative to Earth, so they are always looking over the same region on Earth.

- NavIC signals **come to India at a 90-degree angle**, making it easier for them to reach devices located even in congested areas, dense forests, or mountains.

Old vs New (2nd-Generation) Satellites of NavIC:

- Each of the 7 satellites currently in the IRNSS constellation rode the lighter **Polar Satellite Launch Vehicle (PSLV)** - ISRO's workhorse launch rocket.
 - The last IRNSS satellite, **IRNSS-1I** was launched in 2018 to replace an older, partially defunct satellite in the constellation.
 - **IRNSS-1I** was ISRO's **9th** satellite for the NavIC constellation, but is **considered to be the 8th** because the IRNSS-1H launched in 2017 was lost after the heat shield of the payload failed to open on time.
- **The 2nd-generation satellite** named as **NVS-01** (launched in May 2023), the first of ISRO's NVS series of payloads, is **heavier**.
 - The satellite will have a **Rubidium atomic clock onboard**, a significant technology developed indigenously to **determine the location of objects**.
 - **Currently, only four IRNSS satellites are able to provide location services**. The other satellites can only be used for messaging services.
 - The 2nd generation satellites **will send signals in a third frequency, L1** (besides the L5 and S in the existing satellites) **to increase interoperability and use in wearable devices**.
 - The 2nd-generation satellites **will also have a longer mission life** of more than 12 years (existing satellites - 10 years).

K2-18B EXOPLANET

Recently, NASA's James Webb Space Telescope found tentative evidence which suggests signs of life on a distant exoplanet, K2-18b.



About the K2-18b Exoplanet:

- It was first **discovered in 2015**, more than 120 light-years from Earth, during the space agency's K2 mission.



CROSS & CLIMB ROHTAK



- It is 8.6 times **bigger than Earth**.
- It could be a "Hycean" world with a hydrogen-rich atmosphere and a surface covered by ocean water.
- Now, a new investigation with the Webb telescope has revealed **traces of carbon-bearing molecules in its atmosphere**, including methane and carbon dioxide.

Key points about the James Webb Space Telescope

- This telescope was built in **collaboration between NASA, the European Space Agency (ESA) and the Canadian Space Agency**.
- It was launched in December 2021.
- It is presently at a point in space known as the Sun-Earth **L2 Lagrange point**, approximately 1.5 million km beyond Earth's orbit.
- Lagrange Point 2 is one of the five points in the orbital plane of the Earth-Sun system.
- It's the largest, most powerful **infrared space telescope ever built**.

Objectives: It will examine every phase of cosmic history, from the Big Bang to the **formation of galaxies, stars, and planets** to the evolution of our Solar System.
