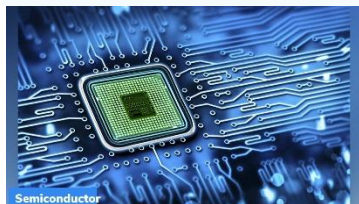


Current Affairs - 26 January 2025

INDIA'S SEMICONDUCTOR AND ELECTRONICS MANUFACTURING INITIATIVES



India is making strides in the semiconductor and electronics manufacturing sectors as it prepares for the Union Budget 2025-26. The Union Finance Ministry has brought into light the government's successful policies aimed at boosting investments and job creation through the semiconductor programme and the Production-Linked Incentive (PLI) scheme. These initiatives are crucial for establishing India as a global hub for semiconductor and electronic goods manufacturing.

Semiconductor Programme Overview

- The 'Programme for Development of Semiconductors and Display Manufacturing Ecosystem' offers attractive incentives to semiconductor packaging and design companies.
- Launched in December 2021, the Semicon India Programme has approved five semiconductor projects and supported 16 design companies.
- This initiative is expected to attract investments of ₹1.52 lakh crore and create approximately 25,000 direct jobs, along with 60,000 indirect jobs.

Incentives for Semiconductor Manufacturing

- The semiconductor programme includes fiscal support of up to 50% for setting up semiconductor and display fabrication units.
- The government collaborates with states to create high-tech clusters with necessary infrastructure.
- Additionally, fiscal support of 30% is available for capital expenditure in compound semiconductor units.

India Semiconductor Mission

Current Affairs - 26 January 2025

The India Semiconductor Mission (ISM) will be established to drive long-term strategies for developing a sustainable semiconductor ecosystem. Led by global experts, ISM will act as the nodal agency for implementing semiconductor and display manufacturing schemes efficiently.

Strategic Importance of Semiconductors

In the current geopolitical landscape, semiconductors are vital for national security and economic stability. The development of a robust semiconductor ecosystem will enhance India's self-reliance and integration into global supply chains.

Challenges in the Electronics Sector

Despite growth, India faces challenges such as low net value addition in electronics production, reliance on imports for critical components, and a lack of indigenous semiconductor foundries. These factors hinder the country's ability to fully capitalise on its manufacturing potential.

INDIA SETS AMBITIOUS TARGET FOR GI TAGS

The Government of India has set a goal to achieve 10,000 Geographical Indication (GI) tags by 2030. This initiative was announced by Union Minister of Commerce & Industry, Piyush Goyal, during the GI Samagam event in New Delhi. The current number of GI tags stands at 605. This ambitious target aims to enhance the Intellectual Property Rights (IPR) ecosystem in India.

About Geographical Indication Tags

A Geographical Indication (GI) tag identifies products originating from specific geographic locations. The quality and reputation of these products are linked to their origin. GI tags are crucial for protecting the uniqueness of Indian products and promoting regional economic development.

Legal Framework and History

The Geographical Indications of Goods (Registration and Protection) Act was enacted in December 1999, coming into effect in September 2003. This legislation provides a framework for registering unique goods and protecting their geographical origins. The first GI tag was awarded to Darjeeling tea in 2004-2005.

Current Status of GI Tags in India

Current Affairs - 26 January 2025

As of now, India has issued 605 GI tags. The number of authorized users has surged from 365 to 29,000 over the past decade. This increase reflects growing recognition and utilisation of GI products in the market.

Government Initiatives and Support

The government is adopting a whole-of-government approach to achieve the 10,000 GI tag target. A committee will be formed to oversee this initiative. Additionally, the Anusandhan National Research Foundation Fund and the One District One Product (ODOP) scheme are being leveraged to promote GI products.

Branding and Marketing Strategies

There is a need for improved branding of GI products. Collaboration with the Food Safety and Standards Authority of India (FSSAI) and the Bureau of Indian Standards (BIS) is crucial for ensuring quality standards. This collaboration aims to combat counterfeit products and enhance consumer trust.

Role of Indian Embassies

Indian embassies abroad can play a vital role in showcasing GI products. Similar to the ODOP initiative, this exposure can enhance international visibility and export potential for Indian goods.

Categories of GI Products

GI tags are applicable to a diverse range of products. These include agricultural products, natural products, manufactured items, textiles, handicrafts, and foodstuffs. Each category reflects the unique characteristics attributed to its geographical origin.

Registration Process for GI Tags

To obtain a GI tag, a product must originate from a specific location where its unique qualities are derived from its geographic environment. Registration is valid for ten years and can be renewed thereafter. If not renewed, the GI tag will be removed from the register. This structured approach aims to enhance India's IPR ecosystem while promoting economic growth through the protection of unique products and regional identities.

Current Affairs - 26 January 2025



SUPERMASSIVE BLACK HOLE CHALLENGES ASTROPHYSICS

An international team used NASA's James Webb Space Telescope (JWST) and Chandra X-ray Observatory to discover a unique black hole, LID-568. LID-568 is feeding on matter at a rate 40 times higher than what scientists believed was possible

Background on Supermassive Black Holes

- Supermassive black holes are prevalent in galaxies, often residing at their centres.
- They possess masses ranging from millions to billions of solar masses.
- For instance, Sagittarius A*, the supermassive black hole in the Milky Way, weighs about 4.3 million solar masses.
- However, the mechanisms behind their substantial growth remain a mystery.

About LID-568

- **Location & Discovery:** LID-568 is a low-mass supermassive black hole from 1.5 billion years after the Big Bang. It was first detected by the Chandra X-ray Observatory and later studied with JWST's infrared technology.
- **Exceptional Growth:** The black hole has a mass 10 million times that of the Sun, growing at a rate far beyond the Eddington limit, challenging traditional models of black hole growth.
- **Primordial Black Hole:** It might be a primordial black hole, possibly formed from collapsing gas clouds or early star explosions, rather than traditional stellar collapse.

Significance of the Findings

The discovery of LID-568 challenges existing models of black hole formation. Traditional theories suggest that supermassive black holes form from the remnants of early stars or through the collapse of primordial gas clouds. However, these models struggle to account for the rapid growth of such massive black holes in the early universe, where matter was scarce.

Current Affairs - 26 January 2025

INCREASING FREQUENCY OF MULTI-YEAR DROUGHTS WORLDWIDE



Multi-year droughts (MYDs) are increasingly common and severe, as brought into light by a recent 40-year study. The research indicates that these droughts have expanded globally, impacting ecosystems and water supplies. This trend is linked to climate change, which exacerbates drought conditions. The study, conducted by a consortium of researchers from various institutions, analysed data from 1980 to 2018.

About Multi-Year Droughts

- Multi-year droughts are prolonged dry periods lasting two years or more.
- These events lead to soil moisture depletion. They also result in reduced streamflow, which can have severe consequences for agriculture and ecosystems. MYDs can cause massive crop failures and increased tree mortality.
- The study identified 13,176 MYDs from 1980 to 2018, each representing an event of duration.

Global Impact of Droughts

The research showed that the global land area affected by MYDs has increased by approximately 50,000 square kilometres annually. The most affected regions include temperate grasslands. The study identified the ten most severe MYDs across various continents, with notable occurrences in central Chile, the western United States, and parts of Australia.

Notable Drought Events

Among the top ten MYDs, five occurred between 2007 and 2018. The eastern Congo basin experienced the longest MYD, lasting from 2010 to 2018 and affecting an area of over 1.4 million square kilometres. The southwestern Amazon also faced a nine-year MYD, with its peak impact occurring in 2015. These events illustrate the extensive reach and duration of MYDs globally.

Influence of El Niño Events

Current Affairs - 26 January 2025

The study found a correlation between MYD occurrences and El Niño events in 1998, 2010, and 2015. This suggests that the effects of El Niño extend beyond the tropics, influencing drought patterns in various regions. The years following these El Niño events saw some of the largest areas impacted by MYDs.

Future Projections and Preparedness

The study warns that long-lasting droughts may become more frequent and severe in the 21st century. It emphasises the need for better preparedness and collaborative efforts to mitigate the impacts of these extreme events. Effective strategies are crucial for adaptation to the changing climate and its associated challenges.

ISRO'S 100TH LAUNCH



The Indian Space Research Organisation (ISRO) is set to mark milestone with its 100th launch. Scheduled for January 29, 2025, the GSLV-F15 mission will deploy the NVS-02 satellite from the Satish Dhawan Space Centre. This mission enhances India's Navigation with Indian Constellation (NavIC), an independent regional navigation satellite system.

NavIC Overview

- NavIC is India's regional navigation system.
- It provides Position, Velocity, and Timing (PVT) services.
- The primary service area extends 1,500 km beyond India.
- NavIC consists of two service types – Standard Positioning Service (SPS) and Restricted Service (RS).
- NavIC signals are designed to provide a position accuracy of better than 20 meters and a timing accuracy of better than 50 nanoseconds.
- SPS signals work well with other global navigation satellite systems like GPS, Glonass, Galileo, and BeiDou.

Significance of GSLV-F15

Current Affairs - 26 January 2025

- The GSLV-F15 is crucial for deploying the NVS-02 satellite.
- This satellite is part of the second generation of NavIC satellites.
- It is designed to replace older satellites in the Indian Regional Navigation Satellite System (IRNSS).
- The GSLV-F15 mission will last approximately 19 minutes.

NVS-02 Satellite Features

- NVS-02 has a lift-off mass of 2,250 kg.
- It is equipped with advanced atomic clocks for precise timing.
- The satellite operates on the standard I-2K bus platform.
- It will be positioned at 111.75°E, replacing IRNSS-1E.
- The NVS-02 includes navigation payloads in multiple frequency bands.

Advancements in Navigation Technology

The NVS series incorporates L1 band signals. This is as it aligns with frequencies used by the US Global Positioning System (GPS). Such compatibility is expected to enhance the use of NavIC in smaller devices like fitness trackers.

Challenges and Improvements

The initial IRNSS satellites faced issues, including malfunctioning atomic clocks. These challenges necessitated replacements before the end of their operational life. The new generation of satellites aims to address these issues. They are designed for a longer lifespan of 12 years.

Recent Developments in Navigation Services

Despite criticisms regarding underutilisation of NavIC services, recent advancements have been made. The development of user receivers has progressed since 2017. New mobile devices are now capable of receiving NavIC signals, expanding its practical applications.

Future of Indian Navigation

The NVS series will consist of five satellites. Each satellite aims to enhance the accuracy and reliability of NavIC services. The successful launch of NVS-02 will pave the way for further advancements in India's navigation capabilities.

Current Affairs - 26 January 2025

MADHYA PRADESH ENFORCES LIQUOR BAN IN RELIGIOUS TOWNS



Madhya Pradesh has recently taken step towards prohibition by banning liquor sales in 17 religious towns. This decision, announced by Chief Minister Mohan Yadav, coincides with the 300th birth anniversary of the revered Maratha ruler Devi Ahilyabai Holkar. The towns affected include Ujjain, Orchha, and Maheshwar, among others. This move aims to address long-standing concerns regarding alcohol consumption in holy areas while navigating the complex socio-economic landscape of the state.

Historical Context of Prohibition in Madhya Pradesh

- Prohibition has been a recurring theme in Madhya Pradesh politics.
- In the 1990s, former Chief Minister Digvijaya Singh attempted to shift liquor shops based on community consent. However, enforcement was weak, leading to increased illicit liquor production.
- Subsequent attempts by other leaders, including Uma Bharti and Shivraj Singh Chouhan, also faced challenges. Chouhan's earlier efforts included closing liquor shops near the Narmada River but lacked a comprehensive ban.

Economic Implications of Liquor Sales

- Alcohol sales contribute to Madhya Pradesh's revenue, accounting for approximately 15% of state income.
- In 2023, the excise department generated ₹13,590 crore from liquor sales.
- This revenue is vital for funding welfare schemes and infrastructure projects.
- The financial reliance on alcohol complicates the implementation of prohibition measures.

Cultural Resistance to Prohibition

Madhya Pradesh is home to traditional brewing practices, particularly among tribal communities. Many view prohibition as an infringement on their cultural identity and livelihood. This resistance poses a challenge to the state's efforts to enforce a blanket ban on alcohol sales.

Current Affairs - 26 January 2025

REPUBLIC DAY PARADE 2025 CREATES HISTORY WITH GUINNESS WORLD RECORD

The Republic Day Parade 2025 was a vibrant celebration of India's rich folk and tribal traditions. It earned a Guinness World Record for being the 'Largest Indian Folk Variety Dance.' Check below for more details.

The event, recognized by the Guinness World Records as the 'Largest Indian Folk Variety Dance.'

New Delhi: The Republic Day Parade 2025 was a cultural extravaganza that commemorated the rich and colorful history of folk and tribal forms of Bharat. The Ministry of Culture and Sangeet Natak Akademi's stunning performance, "Jayati Jai Mamah Bharatam" (JJMB), enthralled onlookers.

According to a press statement from the Ministry of Culture, this amazing group included more than 5000 folk and tribal musicians from all across India, reflecting cultural legacy, young power, and Nari Shakti, symbolizing the diverse tapestry of Indian culture.

Showcasing India's Cultural Heritage on a Global Stage

India's vibrant cultural heritage took center stage as over 5,000 artists performed more than 50 folk and tribal dance styles. The choreography celebrated themes like *Viksit Bharat* (Developed India), *Ek Bharat Shreshtha Bharat* (One India, Great India), and *Virasat Bhi, Vikas Bhi* (Heritage and Progress).

Guinness World Record Achievement

The event, recognized by the Guinness World Records as the 'Largest Indian Folk Variety Dance,' highlighted India's immense cultural wealth and captivated millions worldwide with its grandeur and scale.

Republic Day Parade 2025: Display of Folk and Tribal Traditions

The performances seamlessly brought together diverse regional identities into a unified celebration of patriotism. The dances paid homage to local traditions, agricultural practices, harvest rituals, and celebrations of auspicious events and the victory of good over evil.