



WEEKLY CURRENT AFFAIRS PDFs



December 2024



A Complete and Comprehensive Current Affairs
Quick Revision PDFs For Every Aspirants.

NATIONAL AFFAIRS / GOVERNMENT SCHEME

1. PM Modi Inaugurates Development Projects Worth Over Rs 6670 Crore in Uttar Pradesh

On December 13, 2024, Prime Minister Narendra Modi visited Prayagraj, Uttar Pradesh, where he performed pooja at several sacred sites and inaugurated multiple development projects worth over Rs 6670 crore. These projects aim to enhance infrastructure, ensure clean water, and boost spiritual tourism ahead of the Mahakumbh Mela 2025. He also launched the Kumbh Sah'Al'yak chatbot to assist devotees.

- Inaugurated development projects worth over Rs 6670 crore.
- Performed pooja at Sangam Nose, Akshay Vata Vriksh, Hanuman Mandir, and Saraswati Koop.

Key Points:-

- (i) Launched the Kumbh Sah'Al'yak chatbot for Mahakumbh Mela 2025.

2. Union Minister H.D. Kumaraswamy Unveils India's Green Steel Taxonomy

On December 12, 2024, Union Minister of Steel and Heavy Industries, Shri H.D. Kumaraswamy, unveiled India's Green Steel Taxonomy at Vigyan Bhavan, marking a historic milestone in the nation's journey towards low-emission steel. The taxonomy aims to define green steel, foster innovation, and create a market for low-carbon products, supporting India's goal of achieving net-zero emissions by 2070.

- The taxonomy aims to define green steel and foster innovation in the steel sector.
- India's goal is to achieve net-zero emissions by 2070.

Key Points:-

- (i) The taxonomy sets emission intensity thresholds for green-rated steel.
- (ii) National Institute of Secondary Steel Technology (NISST) will oversee measurement, reporting, and certification.

3. Google Partners with NCERT to Launch YouTube Channels in 29 Indian Languages

Google has entered a strategic partnership with the National Council of Educational Research and Training (NCERT) to launch YouTube channels in 29 Indian languages, including Indian Sign Language, covering grades 1-12. This initiative aims to improve access to quality education in India. Additionally, Google is collaborating with the National Programme on Technology Enhanced Learning (NPTEL) to offer credentialed courses on YouTube, enabling learners to earn certificates from IITs.

- Initiative aims to make education more accessible and engaging.
- Learners can earn certificates from IITs through NPTEL-SWAYAM portal.

Key Points:-

- (i) Channels will cover grades 1-12, including Indian Sign Language.

4. India-UAE Strengthen Strategic Partnership in Key Areas at 4th Dialogue and 15th Joint Commission Meeting

India and the UAE held the 4th Strategic Dialogue on December 12, 2024, and the 15th Joint Commission Meeting on December 13, 2024, in New Delhi, co-chaired by Dr. S. Jaishankar and His Highness Sheikh Abdullah bin Zayed Al Nahyan. The discussions focused on expanding the

strategic partnership in areas such as defence, emerging technologies, nuclear energy, critical minerals, and renewable energy. Both sides reviewed the progress in implementing the India-UAE Joint Vision Statement of 2022 and emphasized cooperation in various fields, including trade, energy, education, and healthcare.

- Discussions included expanding strategic partnership in defence, nuclear energy, and more.

- Emphasized cooperation in trade, energy, education, and healthcare.

Key Points:-

(i) An MoU signed for cooperation in polar and ocean research.

5. President Murmu Granted Assent to Bharatiya Vayuyan Vidheyak

On December 12, 2024, President Droupadi Murmu granted assent to the Bharatiya Vayuyan Vidheyak, a landmark bill aimed at enhancing the designing and manufacturing of aircraft in India. This new legislation, which replaces the 90-year-old Aircraft Act, was approved by Parliament earlier in the month and aims to eliminate redundancies and modernize the aviation sector.

- President Murmu granted assent to the Bharatiya Vayuyan Vidheyak on December 12, 2024.

- The bill aims to enhance aircraft designing and manufacturing in India.

Key Points:-

(i) The new law aims to eliminate redundancies in the aviation sector.

6. Amit Shah Reviewed Anti-Naxal Operations During Chhattisgarh Visit

Union Home Minister Amit Shah visited Chhattisgarh from December 13 to 15, 2024, to review the ongoing anti-Naxal operations. This visit followed a high-level meeting on anti-Naxal operations held in August. Shah presided over a security review meeting and spent a night at a security forces' forward base in Bastar. He highlighted the success of the state BJP government in addressing the Naxalite insurgency, noting that 90 Maoists were killed, 123 arrested, and 250 surrendered under the current regime. Since August 25, 66 Maoists were killed, 177 surrendered, and 195 were arrested, with significant operations in Dantewada, Narayanpur, and Sukma. Bastar's Inspector General of Police, P Sundaraj, emphasized the impact of well-coordinated operations in former Naxal strongholds. Shah's visit coincided with increased anti-Left-Wing Extremism operations, aiming to dismantle the insurgency and restore peace. Chief Minister Vishnu Deo Sai briefed Shah on the ongoing efforts, with 207 Maoists killed in Chhattisgarh in 2024, a significant rise from the previous year.

- Amit Shah visited Chhattisgarh from December 13 to 15, 2024.

- Reviewed anti-Naxal operations and presided over a security meeting.

- Highlighted success of BJP government in addressing Naxalite insurgency.

Key Points:-

(i) Increased anti-Left-Wing Extremism operations during Shah's visit.

(ii) 207 Maoists killed in Chhattisgarh in 2024, up from 22 in 2023.

(iii) Bastar's IG emphasized impact of well-coordinated operations.

7. MOU Signed Between IEPFA and ACCA to Boost Financial Literacy in India

The Investor Education and Protection Fund Authority (IEPFA) and the Association of Chartered Certified Accountants (ACCA) signed a Memorandum of Understanding (MOU) in New Delhi to enhance financial literacy, investor education, and protection across India. This agreement marked a significant step in promoting financial education among schoolchildren in both urban and rural sectors. Mrs. Anita Shah Akella, CEO of IEPFA and Joint Secretary, Ministry of Corporate Affairs, and Helen Brand OBE, Chief Executive of ACCA, officiated the signing. The MOU includes the implementation of ACCA's Financial Literacy Programme, "Financial Education for You" (FEFY), a four-year course for students in grades 6 through 9. The program aims to develop sound financial decision-making skills among young minds. ACCA will provide the digital content free of cost, and its members will train school educators. Additionally, ACCA will organize seminars, workshops, and roundtables on financial education, investor protection, and capital market development.

- MOU signed in New Delhi by Anita Shah Akella and Helen Brand OBE.

- ACCA's Financial Literacy Programme (FEFY) to be introduced in select schools.

Key Points:-

- (i) ACCA will provide digital content and train educators.
- (ii) ACCA to organize seminars, workshops, and roundtables on financial education.

8. IIT Guwahati, IIT Mandi, and CSTEP Bengaluru Release District-Level Climate Risk Assessment Report

Indian Institute of Technology (IIT) Guwahati, IIT Mandi, and the Centre for Study of Science, Technology, and Policy (CSTEP) Bengaluru released a comprehensive report titled "District-Level Climate Risk Assessment for India: Mapping Flood and Drought Risks Using IPCC Framework" on December 13, 2024. The report, supported by the Department of Science and Technology (DST), Government of India, and the Swiss Agency for Development and Cooperation (SDC), provides a detailed analysis of district-level climate risks in India. The report identifies 51 districts with very high flood risk and 118 districts with high flood risk, with vulnerable regions including Assam, Bihar, Uttar Pradesh, West Bengal, Gujarat, Odisha, and Jammu and Kashmir. Additionally, 91 districts face very high drought risk, with Bihar, Assam, Jharkhand, Odisha, and Maharashtra being the most affected. Alarming, 11 districts, including Patna (Bihar), Alappuzha (Kerala), and Kendrapara (Odisha), are highly vulnerable to both floods and droughts. The report emphasizes the urgent need for tailored, region-specific adaptation strategies to enhance resilience and mitigate the impacts of climate change. It also highlights the importance of collective efforts and innovative frameworks to address climate challenges.

- 51 districts face very high flood risk. 118 districts face high flood risk. 91 districts face very high drought risk.

- 11 districts are highly vulnerable to both floods and droughts.

- The report calls for tailored, region-specific adaptation strategies.

Key Points:-

- (i) Emphasis on collective efforts and innovative frameworks to address climate challenges.

9. PM Surya Ghar: Muft Bijli Yojana - Gujarat, Maharashtra, and Uttar Pradesh Lead in Rooftop Solar Installations.

According to the data released by the Ministry of New and Renewable Energy (MNRE) in December 2024, Gujarat, Maharashtra, and Uttar Pradesh (UP) have emerged as the top three states with the highest number of rooftop solar installations under the 'Prime Minister - Surya Ghar: Muft Bijli Yojana (PMSGMBY).'

- Gujarat has topped the list with 2,86,545 rooftop solar installations, followed by Maharashtra with 1,26,344 installations, and Uttar Pradesh securing the third spot with 53,423 installations.

Key Points:-

- (i) As of December 9, 2024, over 6.79 lakh rooftop solar installations have been completed since the launch of the scheme in February 2024. This includes over 5.38 lakh individual residential units and around 1.41 lakh households through installations in residential welfare associations.
- (ii) So far, a total of 1.45 crore registrations and 26.38 lakh applications have been registered on the National Portal of the scheme, and subsidies have been disbursed to 3.66 lakh applicants within 15 to 21 days.

10. India Maritime Heritage Conclave 2024 Celebrates India's Seafaring Legacy

The 1st India Maritime Heritage Conclave (IMHC 2024), organized by the Ministry of Ports, Shipping and Waterways, was held on December 11-12, 2024. The event celebrated India's maritime legacy, showcased its contributions to global trade, culture, and innovation, and outlined the vision for future maritime leadership. The conclave also emphasized sustainable blue economy practices

and featured discussions on India's historical maritime achievements.

- Representatives from 11 countries attended the two-day conclave.
- The event featured discussions on sustainable maritime innovation and blue economy.

Key Points:-

- (i) Key highlights included an exhibition on shipbuilding techniques and a cultural program.

11. SWITCH Mobility Launches EiV12 and E1 Electric Buses for Urban Mobility

SWITCH Mobility Ltd, a subsidiary of Ashok Leyland and part of the Hinduja Group, launched two new low-floor electric city buses, the EiV12 for India and the E1 for Europe, on December 11, 2024. The EiV12 boasts a scalable battery capacity exceeding 400 kWh and is designed for urban commutes, while the E1 is tailored for the European market. Both models share common design philosophies and architecture, aiming to redefine urban mobility and promote sustainable transportation.

- SWITCH Mobility launches EiV12 for India and E1 for Europe.
- Both buses feature scalable battery capacities and shared design.
- Aimed at enhancing urban mobility and sustainability.

Key Points:-

12. Govt Approves Rs. 4388 Crore for Solarization of Agriculture Under PM-KUSUM Scheme.

In December 2024, the Government of India (GOI) approved Rs. 4388 crore under the Pradhan Mantri Kisan Urja Suraksha evam Utthaan Mahabhiyan (PM-KUSUM) Scheme to solarize agriculture across states in India.

- The Ministry of New and Renewable Energy (MNRE) is the nodal ministry for the scheme.
- The GOI launched PM-KUSUM in March 2019 to enhance farmers' income, improve irrigation methods, and reduce diesel consumption in agriculture.
- The scheme aims to provide energy security to farmers in India while helping the nation achieve its target of sourcing 40% of its electricity from non-fossil fuel sources by 2030, as part of the Intended Nationally Determined Contributions (INDCs), and to add around 34,800 Mega Watt (MW) of solar power by March 2026, with a total central financial support of Rs 34,422 crore.

Key Points:-

- (i) Scheme Establishes 10,000 MW of decentralized grid-connected renewable energy power plants on barren land, with a capacity of 500 kW to 2 MW. Power will be purchased by local DISCOMs at a fixed tariff.
- (ii) PM-KUSUM Scheme Provides 17.50 lakh standalone solar agricultural pumps (up to 7.5 HP) to farmers in off-grid areas, with Central Financial Assistance (CFA) of 30% (or 50% for specific regions).
- (iii) Supports the solarization of 14 lakh grid-connected agriculture pumps, allowing farmers to use solar power for irrigation and sell surplus to DISCOMs at a pre-fixed tariff. The scheme aims to solarize agriculture, enhance energy security, and reduce reliance on diesel for irrigation.

13. Union MoS Anupriya Patel Presents India's MedTech Vision at the 21st CII Annual Health Summit in New Delhi.

On December 19, 2024, the Confederation of Indian Industry (CII) organized the 21st Annual Health Summit in New Delhi, with the theme "Transforming Healthcare for Viksit Bharat 2047."

- The summit featured an exhibition showcasing the latest medical innovations and technologies, paving the way for a future-ready healthcare system.
- Union Minister of State (MOS) Anupriya Patel, Ministry of Health and Family Welfare (MoHFW) and Chemicals & Fertilizers, emphasized the importance of the MedTech (Medical Technology) vision at the Health Summit.

Key Points:-

- (i) During the summit, the government launched the National Medical Device Policy and schemes aimed at strengthening infrastructure, promoting research, and developing skills in the MedTech sector.
- (ii) The government allocated Rs 400 crore for the establishment of medical device parks and Rs 500 crore to support the growth of the MedTech industry through research and innovation.

14. Union Minister Jitendra Singh has launched India's first anti-pesticide bodysuit called "Kisan Kavach" (a protective suit for farmers).

Union Minister of State (Independent Charge) for Science and Technology and Earth Sciences, Dr. Jitendra Singh, launched Kisan Kavach, India's first anti-pesticide bodysuit.

- This bodysuit is designed to protect farmers from the harmful effects of pesticide exposure.

- Dr. Jitendra Singh is also the Minister of State for the Prime Minister's Office (PMO), Department of Atomic Energy, Department of Space, and Personnel, Public Grievances, and Pensions.

Key Points:-

(i) Kisan Kavach was developed by the Department of Biotechnology's BRIC-inStem and Sepio Health Pvt. Ltd., both based in Bangalore, Karnataka.

(ii) The Kisan Kavach Protective Shield includes a full-body suit, mask, headshield, and gloves, providing complete protection. The suit costs Rs 4,000.

(iii) Other participants in the launch included Dr. Rajesh S. Gokhale (Secretary, Department of Biotechnology), Dr. Maneesha Inamdar (Director, BRIC-inStem), and Dr. Alka Sharma (Scientist 'H' and Senior Adviser, DBT).

15. Union Minister Rammohan Naidu Unveils Logo Marking 100 Years of NSCBI Airport(Netaji Subhas Chandra Bose International Airport) in Kolkata.

On 13 December 2024, Union Minister Kinjarapu Rammohan Naidu from the Ministry of Civil Aviation (MOCA) unveiled the logo for the centenary celebrations of Netaji Subhash Chandra Bose International Airport (NSCBI Airport) in Kolkata, West Bengal, marking 100 years of its service.

- A special commemorative stamp and coin were also launched to honor the airport's 100-year journey. Additionally, an exclusive art book was released, showcasing India's rich cultural heritage through modern airport architecture.

- The event was attended by Vumlunmang Vualnam (Secretary of MOCA), Vipin Kumar (Chairman of the Airport Authority of India - AAI), and other senior officials.

Key Points:-

(i) Kolkata Airport celebrated its 100th anniversary on December 21, 2024, and a three-month-long celebration has been planned.

(ii) A special UDAN Yatri Café will be opened at the airport for passengers traveling under the Ude Desh ka Aam Naagrik (UDAN) scheme. The café will offer quality, affordable meals to improve the travel experience.

(iii) The civil aviation sector in India is growing quickly and has become the third-largest domestic aviation hub in the world.

16. West Bengal Chief Minister Mamata Banerjee launched the 'Banglar Bari' housing scheme.

In December 2024, West Bengal Chief Minister Mamata Banerjee launched the 'Banglar Bari' scheme to provide homes for the rural poor across the state. The launch event took place at the state secretariat, Nabanna, in West Bengal. "

- The scheme is fully funded by the state government, with a total budget of Rs. 14,773 crore.

- Under the scheme, each family will receive Rs. 1.20 lakh for building a house, with Rs. 60,000 provided in the first installment.

- Families in specific areas of Jangalmahal and the Darjeeling hills will receive Rs. 1.30 lakh."

Key Points:-

(i) The beneficiaries will receive the money in two phases. Over 28 lakh eligible beneficiaries have been identified through a state-conducted survey for the scheme. The Chief Minister (CM) handed over funds to 42 beneficiaries from 21 districts. More than 12 lakh beneficiaries in the state are eligible for the first installment.

(ii) An additional 16 lakh beneficiaries will receive

housing allowances before the 2026 Assembly elections in West Bengal."

(iii) Mamata Banerjee also announced the construction of a 5-kilometer-long bridge, "Gangasagar Sethu," to connect the mainland to Sagar Island. The project is estimated to cost Rs. 1,500 crore and will be fully funded by the state government, as the Centre has not responded to previous requests.

17. DRDO, IIT Delhi, and Industry Partners Forge 10 Tripartite Agreements in New Delhi.

On 19th December 2024, the Defence Research and Development Organisation (DRDO), Indian Institute of Technology (IIT) Delhi, and industry partners formalized 10 tripartite agreements at the event 'DRDO-Industry-Academia - Global Approach to Readiness of Indigenous Military Applications' (DIA-GARIMA).

- The event was organized by the DRDO-Industry-Academia Centre of Excellence (DIA-CoE) at IIT Delhi, New Delhi.

- The agreements were signed in the presence of Dr. Samir V. Kamat (Secretary, Department of Defence Research & Development, Ministry of Defence, and Chairman of DRDO), Professor Rangan Banerjee (Director, IIT Delhi), and representatives from industry partners.

- DRDO has adopted a collaborative policy involving universities and industries in defence research to foster advancements in cutting-edge defence technologies and to support the "Aatmanirbhar Bharat" initiative, promoting self-reliance in defence production.

Key Points:-

(i) DRDO partnered with MIDHANI (Rohtak), SMPP Private Limited (New Delhi), and AR

Polymers (MKU, Kanpur) to produce modular-design bullet-resistant jackets weighing 8.2 kg and 9.5 kg, providing 360-degree protection.

(ii) Agreements were signed with Reliance Industries Limited (Mumbai) for ballistic material development and with multiple industries for producing Extreme Cold and Extreme Heat Protective Clothing, including Aeronav Industrial Safety Appliance and Arrow Garments.

(iii) Established in 2017 at IIT Delhi, the DRDO-Industry-Academia Centre of Excellence (DIA-CoE) has launched 50 research projects worth ₹375 crore, focusing on soldier-centric innovations like lightweight body armour, smart soldier jackets, and extreme weather gear.

INTERNATIONAL

1. WHO Reports 38% Decline in Global Drowning Death Rate Since 2000

The World Health Organization (WHO) released its first-ever drowning prevention report, highlighting a 38% reduction in global drowning death rates since 2000. Despite this progress, over 30 people still drown every hour, totaling 300,000 deaths in 2021. The majority of victims are children and young adults under 29. The report emphasizes the need for ongoing efforts and practical interventions to further reduce drowning deaths, particularly in low- and middle-income countries.

- WHO reports a 38% drop in drowning deaths since 2000.

- Drowning remains a significant public health issue with 300,000 deaths in 2021.

- Nearly half of drowning deaths are among people below 29 years of age.

Key Points:-

- (i) Low- and middle-income countries experience 90% of drowning deaths.
- (ii) WHO recommends community-based actions to prevent drowning.

2. UNCCD COP16 to Tackle Desertification and Drought in Riyadh, Saudi Arabia

The sixteenth session of the Conference of the Parties (COP16) of the United Nations Convention to Combat Desertification (UNCCD) will be held from December 2-13, 2024, in Riyadh, Saudi Arabia. This event, under the theme "Our Land. Our Future," will mark the 30th anniversary of UNCCD and will be the largest UN land conference to date. COP16 aims to accelerate global efforts on land restoration and drought resilience, focusing on a people-centered approach to combat desertification and land degradation, especially significant in the Middle East and North Africa region.

- COP16 will take place in Riyadh, Saudi Arabia from December 2-13, 2024.
- Theme: "Our Land. Our Future." .
- Marks the 30th anniversary of UNCCD.

Key Points:-

- (i) Largest UN land conference to date.
- (ii) Focus on accelerating land restoration and drought resilience.

3. Three Indian Women Featured in Forbes' 2024 List of The World's 100 Most Powerful Women.

Forbes unveiled its 2024 list of The World's 100 Most Powerful Women, highlighting the achievements of women who have made significant impacts in various fields. Three Indian

women secured places on this prestigious list: Nirmala Sitharaman, Roshni Nadar Malhotra, and Kiran Mazumdar-Shaw. Nirmala Sitharaman, ranked 28th, served as India's Minister of Finance and Corporate Affairs. She made history in 2019 as the first woman to hold these roles full-time and was reappointed in 2024. Nirmala played a key role in managing India's USD 4 trillion economy and projected that India would become the third-largest economy in the world by 2027. She was a strong advocate for women's financial empowerment, encouraging entrepreneurship, improving access to credit, and promoting financial literacy. Before entering politics, Nirmala had an accomplished career at the BBC World Service and was a member of India's National Commission for Women. Roshni Nadar Malhotra, ranked 81st, was the Chairperson of HCL Technologies and the CEO of HCL Corporation. She led the USD 12 billion company, founded by her father, Shiv Nadar. Roshni played a key role in the company's growth and success, particularly in expanding its global reach. Beyond her corporate role, she was deeply involved in social initiatives. She was a trustee of the Shiv Nadar Foundation and founded The Habitats Trust, which worked to protect and conserve natural habitats. With a background in journalism and an MBA from Kellogg, Roshni made a significant mark in both business and philanthropy. Ranked 82nd, Kiran Mazumdar-Shaw was the founder of Biocon, a leading biopharmaceutical company. Under her leadership, Biocon expanded globally, including the establishment of one of Asia's largest insulin production facilities. She oversaw Biocon Biologics' USD 3.3 billion acquisition of Viartis' biosimilars business and played a key role in the IPO of Biocon-backed Bicara Therapeutics. Kiran, who originally aspired to be a doctor, transformed herself into a successful entrepreneur and philanthropist. In 2019, she made a generous donation of USD 7.5 million to cancer research. The top spots on the Forbes list were held by

influential women such as Ursula von der Leyen, President of the European Commission, Christine Lagarde, President of the European Central Bank, and Giorgia Meloni, the Prime Minister of Italy. These Indian women demonstrated leadership that extended beyond their professional achievements, shaping the future of their industries, empowering others, and contributing to the betterment of society. Their inclusion in this list recognized their exceptional contributions on both national and global levels.

- **Nirmala Sitharaman** ranked 28th, served as India's Minister of Finance and Corporate Affairs.
- **Roshni Nadar Malhotra** ranked 81st, was the Chairperson of HCL Technologies.
- **Kiran Mazumdar-Shaw** ranked 82nd, was the founder of Biocon.

Key Points:-

4. According to World Bank India Becomes the Leading Recipient of Remittances Among LMICs, Receiving USD 129 Billion Inflows in 2024.

According to the World Bank (WB)'s latest data, India has emerged as the top recipient of remittances among Low and Middle-Income Countries (LMICs) in 2024, with an estimated inflow of USD 129 billion. This marks an increase of 3.2% compared to USD 125 billion in 2023.

- India is followed by Mexico (USD 68 billion), China (USD 48 billion), the Philippines (USD 40 billion), and Pakistan (USD 33 billion). The surge is mainly attributed to a recovery in the job markets in High-Income Countries (HICs) within the Organisation for Economic Co-operation and Development (OECD).

Key Points:-

- (i) Globally, remittance inflows have increased by

5.8% in 2024, compared to a modest growth of 1.2% in 2023.

(ii) Officially recorded remittances to LMICs are projected to reach USD 685 billion in 2024.

(iii) The South Asia region is projected to register the highest increase in remittance flows at 11.8% in 2024, compared to a 5.1% increase in 2023. This growth is mainly driven by continued strong flows to India, Pakistan, and Bangladesh.

BANKING & FINANCE

1. Public Sector Banks in India Achieve Record Net Profit and GNPA Reduction

Public Sector Banks (PSBs) in India have recorded their highest-ever aggregate net profit of ₹1.41 lakh crore for FY 2023-24, reflecting a significant turnaround in the sector. The Gross Non-Performing Assets (GNPA) ratio dropped to 3.12% by September 2024, showcasing improved asset quality. PSBs have also paid ₹61,964 crore in dividends over the past three years, underscoring their financial health. Additionally, their efforts in financial inclusion have expanded access to banking, with significant contributions through government schemes and initiatives.

- PSBs achieved a net profit of ₹1.41 lakh crore in FY 2023-24.

- GNPA ratio declined to 3.12% in September 2024.

- PSBs paid ₹61,964 crore in dividends over the past three years.

Key Points:-

(i) Significant contributions to financial inclusion and government schemes.

(ii) Capital to Risk (Weighted) Assets Ratio (CRAR) improved to 15.43%.

2. Indian Government Secures ₹3,044.54 Crore Loan from KfW Germany for Bangalore Metro Phase 2.

The Government of India signed an agreement with the German state-owned development bank KfW for a loan of 340 million euros (₹3,044.54 crore) to support Phase 2 of the Bangalore Metro Rail Project. This agreement, signed on December 13, 2024, marks the completion of 100% financial closure for the project. A separate project agreement was also signed between Bangalore Metro Rail Corporation Limited (BMRCL) and KfW Germany for the said loan. With this new loan agreement, the external funding for Phase 2 of the Bangalore Metro Rail Project is now complete, paving the way for the next phase of construction and expansion of the metro network in the city.

- Indian Government secured ₹3,044.54 crore loan from KfW Germany.
- Loan agreement signed on December 13, 2024.
- 100% financial closure achieved for Bangalore Metro Phase 2.

Key Points:-

- (i) Separate project agreement signed between BMRCL and KfW Germany.
- (ii) External funding for Phase 2 now complete.

3. RBL Bank and Bajaj Finance End Co-Branded Credit Card Partnership.

RBL Bank and Bajaj Finance have mutually decided to end their co-branded credit card partnership, which was initially established in 2016 and renewed in 2021. The decision to cease the issuance of new co-branded cards was driven by a strategic shift towards diversifying origination channels and reducing reliance on a single partner¹. RBL Bank had been acquiring fewer cards through this partnership over the past year,

moving from 126,000 cards in September 2023 to 37,000 cards in September 2024. Despite the end of the partnership, RBL Bank will continue to service the existing portfolio of approximately 3.4 million co-branded credit cards, ensuring seamless support and customer satisfaction¹. Cardholders can continue to use their cards under the same terms and conditions, and upon renewal, the cards will be reissued as RBL Bank-branded credit cards.

- RBL Bank and Bajaj Finance ended their co-branded credit card partnership.
- Partnership initially established in 2016 and renewed in 2021.

Key Points:-

- (i) Decision driven by strategic shift and reduced reliance on a single partner.
- (ii) RBL Bank will continue to service existing 3.4 million co-branded cards.
- (iii) Cardholders can continue using their cards under existing terms.

4. SEBI Introduces New Asset Class "SIF" (Specialised Investment Fund) with a Minimum Investment Requirement of Rs 10 Lakh.

In December 2024, the Securities and Exchange Board of India (SEBI) notified a new asset class "Specialised Investment Fund (SIF)" between Portfolio Management Services (PMS) and Mutual Funds (MFs). As per the SEBI directions, the new asset class will accept investments of Rs 10 lakh or above across all investment strategies. However, accredited investors are exempted from the requirement of minimum investment amount.

- The primary objective of introducing this new asset class is to bridge the gap between MFs and PMS, while ensuring robust risk management and investor protection.

- The notification came following the amendment made to the SEBI (Mutual Funds) Regulations, 1996.

Key Points:-

- (i) As per the new rules, fund managers of SIFs must hold relevant NISM certification, and the fees and expenses for SIF investment strategies will comply with Regulation 52 of the Mutual Fund (MF) regulations.
- (ii) Under SIF regulations, investments in non-investment-grade debt instruments are capped at 20% of NAV (extendable to 25% with approval), while G-secs, treasury bills, and triparty repos are exempt; fees follow MF Regulation 52.
- (iii) Under the new SIF regulations, investment in non-investment-grade debt instruments is limited to 20% of the NAV (can be increased to 25% with prior approval), while government securities, treasury bills, and triparty repos are exempt from these restrictions.

5. Max Life Insurance Rebrands as Axis Max Life Insurance.

In December 2024, Max Life Insurance Company Limited (MLICL) officially changed its name to Axis Max Life Insurance Company Limited (AMLICL) after receiving corporate and regulatory approvals. The updated brand identity includes a new logo that features Axis Bank's 'A' and a burgundy color.

- Axis Max Life Insurance Limited is a joint venture between Max Financial Services Limited (MFSL) and Axis Bank Limited.

Key Points:-

- (i) Axis Bank's board of directors approved a plan to buy more shares in Max Life, increasing its total stake in the company from 19.02% to 19.99%. As a result, MFSL's stake in Max Life decreased from

87% to 81%.

- (ii) The visual merger of Axis and Max symbolizes stronger trust in the brand, which is highlighted through the 'Double Bharosa' campaign featuring Rohit Sharma, the captain of the Indian cricket team, and his wife Ritika Sajdeh.
- (iii) The partnership between two well-known financial service companies will help the business achieve its long-term growth goals. This will be done by expanding carefully into areas beyond major cities (metro and tier 1 cities).

6. RBI Cancels Zavron Finance's Registration Over Irregular Lending Practices.

The Reserve Bank of India (RBI) cancelled the registration of Nagpur-based Zavron Finance on December 2, 2024, due to multiple violations of RBI guidelines on digital lending practices. Zavron Finance outsourced core decision-making functions such as credit appraisal, loan disbursal, interest rate determination, and KYC verification to third-party service providers without conducting due diligence on their competence, security, and internal controls. The company also failed to provide loan agreements and sanction letters in vernacular languages to its customers, violating the fair practices code. As a result, Zavron Finance is no longer authorized to conduct business as a non-banking financial institution (NBFI).

- RBI cancelled Zavron Finance's registration on December 2, 2024.
- Violations included outsourcing core functions without due diligence.
- Failure to provide loan agreements in vernacular languages.

Key Points:-

- (i) Zavron Finance is prohibited from operating as

an NBFIL.

7. YES BANK has launched a new platform called 'YES Business', powered by IRIS Biz, to support and empower MSMEs and businesses.

In December 2024, YES BANK, India's sixth-largest private sector bank, introduced 'YES Business', a dedicated initiative to focus more on the business sector and meet their specific needs. This platform aims to simplify banking and related services for Micro, Small, and Medium Enterprises (MSMEs), bringing everything together in one unified solution.

- The launch of YES Business is powered by the IRIS Biz app, a digital platform by YES BANK. It combines core banking services with additional tools to make business operations easier and helps entrepreneurs efficiently manage various aspects of their business.
- It allows business owners to set up a current account completely online with Video KYC, reducing paperwork and speeding up the process.

Key Points:-

- (i) The app offers a single view to manage both personal and business accounts, making it easier for business owners to track their financial health.
- (ii) The app offers in-app support for accounting, taxation, payroll, and global trade finance, helping users manage essential tasks without using multiple external platforms.
- (iii) Features like Merchant EASY and Merchant PRIME offer services such as soundboxes for payment confirmations, same-day fund settlements, and higher cash deposit limits, making it easier for merchants and traders to manage their transactions efficiently.

8. SBI Life Launches 'Smart Platina Supreme' Plan to Secure Financial Future.

SBI Life Insurance, a private life insurance company, has launched 'SBI Life - Smart Platina Supreme', a non-linked, non-participating life insurance savings plan. This policy provides guaranteed income benefits, along with 110% of the total premiums paid at the end of the payout period.

- The 'Non-linked' aspect of this policy means that the returns are fixed and not influenced by market fluctuations, such as stock prices or mutual funds. Additionally, the 'Non-participating' feature indicates that policyholders do not receive any profits, bonuses, or dividends based on the insurance company's performance, in contrast to participating policies.

Key Points:-

- (i) The policy will be active for a period ranging from 8 to 15 years.
- (ii) After the policy matures, the payouts can be received over a period of 15, 20, 25, or 30 years.
- (iii) Anyone between the ages of 3 and 60 can buy this policy.

MOUs and Agreement

1. CII (Confederation of Indian Industry) and AICTE (All India Council for Technical Education) have signed an MoU to promote skill development focused on industry needs.

The Confederation of Indian Industry (CII) and the All India Council for Technical Education (AICTE) have signed a Memorandum of Understanding (MoU) to improve skill development in AICTE-approved institutions. This MoU was signed during the 11th CII Global Summit on Skill Development 2024, held in New Delhi.

- The MoU will offer industry-based training programs in all AICTE-approved technical institutions, focusing on the skills needed by industries now and in the future.

Key Points:-

(i) Key people present at the event included Atul Kumar Tiwari (Secretary, Ministry of Skill Development and Entrepreneurship, and Chairman of the National Council for Vocational Education and Training - NCVET), Prof. TG Sitharam (Chairman of AICTE), Nicholas McCaffrey (Deputy High Commissioner of Australia to India), and Aditya Ghosh (Chairman of the CII National Committee on Skill Development & Livelihood).

(ii) The theme of the 11th CII Global Summit on Skill Development 2024 is "Building a Resilient Skilled Talent Pool: Driving Industry Growth."

2. IAF signs MoU with IISc and FSID to promote science and innovation.

On November 19, 2024, the Headquarters Maintenance Command (HQMC) of the Indian Air Force (IAF) formalized a Memorandum of Agreement (MoA) with the Indian Institute of Science (IISc.), Bengaluru (Karnataka), and Bengaluru-based Foundation for Science Innovation and Development (FSID) in a ceremony held in Bengaluru through the Base Repair Depot, Panchwati, Palam.

- This initiative aims to address key challenges faced by the IAF, including radar systems, aircraft, and various Information Technology (IT) communication platforms.

- The event was attended by Air Vice Marshal VRS Raju (Deputy Senior Maintenance Staff Officer, HQMC), Air Commodore Harsh Bahl (Air Officer Commanding, Base Repair Depot, Panchwati, Palam)

on behalf of the IAF, and Captain Sridhar Warriar (Retd.) (Registrar, IISc) and Prof. B. Gurumoorthy (Director, FSID).

Key Points:-

(i) The agreement will facilitate access to both organizations' testing facilities, fostering mutual benefit to enhance academic collaboration between the IAF and IISc, particularly in relation to Post Graduate (PG) programs.

(ii) Advanced technologies such as Artificial Intelligence (AI), Machine Learning (ML), and Digital Twin-based systems will also be explored to enhance lifecycle management, predictive maintenance, and resource optimization.

(iii) This partnership contributes to strengthening self-reliance under the 'Atmanirbhar Bharat' initiative, encouraging the participation of startups, Micro, Small, and Medium Enterprises (MSMEs), and other industrial entities in defense indigenization programs.

SPORTS

1. D Gukesh Becomes Youngest-Ever World Chess Champion, Defeats Ding Liren

Indian Grandmaster D Gukesh made history by becoming the youngest-ever World Chess Champion at the age of 18, defeating China's Ding Liren in the decisive 14th and final game. This victory also marked Gukesh as the first teenager to achieve this milestone. The year 2024 has been remarkable for Gukesh, who also won the Candidates tournament and led India to a gold medal at the Chess Olympiad. Born on May 29, 2006, in Chennai, India, Gukesh began playing chess at the age of seven and quickly rose through the ranks, winning multiple youth championships and earning the title of International Master at 12. In August 2023, he became the youngest player

ever to reach a rating of 2750 and surpassed Viswanathan Anand as the top-ranked Indian chess player. Gukesh's rapid ascent continued as he won the Candidates tournament, earning a place in the World Championship. His victory against Ding Liren cements his place in chess history and follows in the footsteps of Viswanathan Anand, who won the World Chess Championship four times.

- Surpassed Viswanathan Anand as top-ranked Indian chess player in 2023.
- Gukesh is the first teenager to win the World Chess Championship.

Key Points:-

- (i) D Gukesh becomes youngest-ever World Chess Champion at 18.

2. Mumbai Triumphs Over Madhya Pradesh to Win Second SMAT Title.

In the thrilling final of the Syed Mushtaq Ali Trophy 2024, Mumbai defeated Madhya Pradesh by 5 wickets to claim their second title. Rajat Patidar's unbeaten 81 helped Madhya Pradesh set a target of 175 runs. Mumbai's chase was led by Suryakumar Yadav's 48 off 35 balls and Suryansh Shedge's quickfire 36 off 15 balls, which saw them reach the target in just 17.5 overs.

- Madhya Pradesh's Innings: Rajat Patidar played a stellar knock of 81 off 40 balls, guiding his team to a competitive total of 175/8.
- Mumbai's Chase: Suryakumar Yadav and Ajinkya Rahane provided a solid start, but it was Suryansh Shedge's explosive 36 off 15 balls that sealed the victory.
- Key Performances: Suryakumar Yadav scored 48 off 35 balls, Ajinkya Rahane contributed 37 off 30 balls,

and Suryansh Shedge played a crucial role with his quickfire innings.

Key Points:-

- (i) Mumbai chased down the target of 175 runs with 5 wickets in hand and 13 balls to spare.

3. India defeated Bangladesh in the final of the U-19 Women's Asia Cup 2024.

India emerged victorious in the final of the 1st edition of the Asian Cricket Council (ACC) Under (U)-19 Women's T20 Asia Cup 2024, defeating Bangladesh by 41 runs on 22nd December 2024 at the Bayuemas Oval in Kuala Lumpur, Malaysia.

- The tournament took place from 15th December to 22nd December 2024 in Kuala Lumpur, Malaysia.
- India was led by captain Niki Prasad, while Bangladesh's team was captained by Sumaiya Akter.
- India claimed the championship title, with Bangladesh finishing as runners-up and Nepal securing the 3rd position.

Key Points:-

- (i) Gongadi Trisha of India was named Player of the Match in the finals and also received the Player of the Series award. She emerged as the tournament's top scorer, amassing 159 runs across 5 innings.
- (ii) The U-19 Women's T20 Asia Cup was organized by the Asian Cricket Council (ACC), featuring a total of 6 teams. These included four Asian full members—Bangladesh, India, Pakistan, and Sri Lanka—along with the hosts, Malaysia, and Nepal, who qualified as the winners of the Women's U-19 Asia Qualifier 2025.

4. Pranav Venkatesh clinches the FIDE World U-18 Youth Rapid and Blitz Chess titles.

Indian Grandmaster Pranav Venkatesh won two gold medals on December 17, 2024, at the FIDE (International Chess Federation) World Youth Under-18 (U-18) Open Rapid and Blitz events. The tournament took place at the Terme Catez Hotel in Brezice, Slovenia, from December 13 to 17, 2024.

- In the Rapid category, Pranav scored 9.5 points, securing the gold medal. Russia's Alexander Khripachenko earned the silver with 9 points, and Ukraine's Roman Pryh took the bronze with 7.5 points.
- In the Blitz category, Pranav finished at the top with 19.5 points, winning another gold. Russia's Dmitry Mochalov won the silver with 15.5 points, while Khripachenko (Russia) claimed the bronze with 14.5 points.
- Pranav became a Grandmaster in 2022 after achieving his third GM norm at the Limpede Cup 2022. He is the 75th Grandmaster in the history of India.

Key Points:-

- (i) Pranav was the only Grandmaster (GM) participating in the entire event, which had six categories across both Rapid and Blitz formats.
- (ii) International Master (IM) Eline Roebers from the Netherlands was the only female player in the open events. She was also one of only two players to defeat Pranav in the Blitz format.
- (iii) The FIDE World U-18 Youth Rapid & Blitz Chess tournament, organized by FIDE (International Chess Federation) and the Slovenian Chess Federation, featured 340 players from 35 countries competing in U14, U16, and U18 categories across both open and girls' sections.

5. DD (Doordarshan) partners with HIL for live broadcast and announces the launch of the Women's Hockey India League.

In December 2024, Doordarshan (DD), India's national television broadcaster, has teamed up with the Hockey India League (HIL) to provide live coverage of the 2024-25 hockey season across the country.

- This season is historic as it marks the launch of the Women's Hockey India League (Women's HIL), alongside the men's tournament.
- The introduction of the women's league shows Hockey India's commitment to gender inclusivity and promoting women's hockey at the national level.
- The tournament, which starts on December 28, 2024, will feature eight men's teams and four women's teams. Matches will take place at the Marang Gomke Jaipal Singh Astroturf Hockey Stadium in Ranchi (Jharkhand) and the Birsamunda Hockey Stadium in Rourkela (Odisha).

Key Points:-

- (i) The Women's Hockey India League will conclude on January 26, 2025, in Ranchi, while the men's final is scheduled for February 1, 2025, in Rourkela.
- (ii) In addition, DD's partnership with HIL will cover all Hockey India National Championships and other events organized by Hockey India, ensuring the sport is accessible nationwide.
- (iii) Doordarshan (DD) is run by Prasar Bharati, a board formed by the Government of India (GoI).

AWARDS

1. Air India Bags Global Awards for Excellence in Design and Passenger Experience

Air India has been recognized with the Good Design Award Australia 2024 for its Vista Verve inflight offering, lauded for its innovative design and exceptional quality. Additionally, the airline received three APEX Awards at the Future Travel Experience (FTE) Awards in Singapore, highlighting its excellence in passenger experience, cabin service, and onboard culinary offerings.

- Vista Verve includes innovative tableware, lead-free glassware, and luxurious linens.

Key Points:-

- (i) The airline received three APEX Awards at the FTE Awards in Singapore.

2. UNESCO Asia-Pacific Awards for Cultural Heritage Conservation: 2024 Edition Details Announced

The UNESCO Asia-Pacific Awards for Cultural Heritage Conservation honors individuals and organizations for outstanding efforts in restoring or conserving heritage structures, places, or properties. Since 2000, the program has recognized 290 winners from 27 countries, fostering best practices and inspiring similar projects across the region. The 2024 awards are open for submissions, with a deadline of 30 June 2024. Winners will be announced in November 2024 in various categories, highlighting significant achievements in cultural heritage conservation and sustainable development.

- 290 winners from 27 countries since 2000.
- Fosters best practices and inspires conservation projects.

Key Points:-

- (i) The program has awarded 290 winners from 27 Asia-Pacific countries since 2000.

3. Renowned Hindi writer Suryabala honored with the 34th Vyas Samman.

Hindi writer Suryabala has been selected for the 34th Vyas Samman 2024 in recognition of her novel "Kaun Des Ko Vasi: Venu Ki Diary", published in 2018.

- The novel delves into the perceptions of Indian youth regarding America as a land of opportunity, the challenges they face upon moving there, the temptations they encounter, and the cultural conflicts they experience.
- The selection was made by a committee chaired by Prof. Ramji Tiwari.
- Pushpa Bharathi was awarded the 33rd Vyas Samman for her book "Yaadein Yaadein Aur Yaadein".

Key Points:-

- (i) Suryabala, born in 1943 in Varanasi, is a renowned Hindi writer with over 50 novels, biographies, and children's stories. She has received several accolades, including the Bharat Bharti in 2019 and the Priyadarshini Award in 2003, for her outstanding literary contributions.
- (ii) The Vyas Samman, presented annually by the K.K. Birla Foundation, honors exceptional Hindi literary works published in the last decade. The award includes a cash prize of Rs 4 lakh, a citation, and a plaque. It was first awarded in 1991 to Dr. Ram Vilas Sharma.
- (iii) Some of Suryabala's notable works include Dikshanta (1992), Mere sandi-patra (2003), and Dishaaheen (2010). In addition to the Vyas Samman, she has been honored with the Maharashtra Hindi Academy Award, Ratni Devi Goenka Award, and 'Vyangya Sri' award by Hindi Bhavan Nyas.

4. Christopher Nolan and Emma Thomas Awarded Knighthood and Damehood.

In December 2024, Oscar-winning filmmaker Christopher Nolan and his wife, Emma Thomas, were awarded royal honors of 'knighthood' and 'damehood,' respectively, by King Charles III in recognition of their extraordinary contributions to the film industry. The ceremony took place at Buckingham Palace in London, United Kingdom (UK).

- The couple has collaborated on numerous blockbuster films since 1997 through their production company, Syncopy.
- Knighthood is a title bestowed upon men and damehood upon women, allowing them to use the titles 'Sir' and 'Dame' before their names in recognition of their outstanding contributions to film production.

Key Points:-

- (i) Christopher Nolan, known for films like Oppenheimer, Inception, and Interstellar, has gained global recognition for his visionary filmmaking, while Emma Thomas has produced all of his films, including Memento and Batman Begins.
- (ii) Their collaboration on Oppenheimer (2023) received widespread acclaim, winning 7 Academy Awards, including Best Picture, and grossing over USD 976 million. The film explores the life of J. Robert Oppenheimer, the physicist behind the development of nuclear weapons during WWII.
- (iii) In March 2024, Christopher Nolan received his first Oscar for Best Director for Oppenheimer. Emma Thomas became the first British female producer to win the Oscar for Best Picture for the film.

5. 'Brain Rot' Named Oxford Word of the Year 2024.

The Oxford Word of the Year for 2024 has been announced as 'brain rot', following a public vote with over 37,000 participants. The term 'brain rot' is defined as the supposed deterioration of a person's mental or intellectual state due to overconsumption of trivial or unchallenging online content. The usage of 'brain rot' increased by 230% between 2023 and 2024, highlighting societal concerns about the impact of excessive consumption of low-quality online content, particularly on social media platforms like TikTok. Initially used in Henry David Thoreau's 1854 book "Walden," the term has found new relevance in the digital age, especially among Gen Z and Gen Alpha communities. It describes both the low-quality content and its perceived negative impact on mental health. The term has also been used humorously within online communities to describe nonsensical or embarrassing content. The selection of 'brain rot' reflects the growing awareness and discourse around the potential negative effects of digital content consumption on mental health, particularly among younger generations.

- Defined as the deterioration of mental state due to overconsumption of trivial online content.
- Term originally used in 1854 by Henry David Thoreau.

Key Points:-

IMPORTANT DAYS

1. National Mathematics Day was celebrated on December 22.

National Mathematics Day (NMD) is celebrated every year on December 22 to honor the birth anniversary of Indian mathematician Srinivasa Ramanujan.

- This day is observed to raise awareness about the importance of mathematics in human progress and to recognize Ramanujan's significant contributions to the field.

- December 22, 2024, marks the 137th birth anniversary of Srinivasa Ramanujan.

Key Points:-

(i) National Mathematics Day (NMD) was introduced by former Prime Minister Manmohan Singh on December 26, 2011, at Madras University, to celebrate the 125th birth anniversary of Srinivasa Ramanujan, who was born on December 22, 1887.

(ii) On this occasion, former Prime Minister Manmohan Singh also declared that 2012 would be celebrated as the National Mathematics Year.

(iii) The first National Mathematics Day (NMD) was celebrated on December 22, 2012.

DEFENCE**1. Ministry of Defence Signs Contract with HAL for 12 Su-30MKI Aircraft**

On December 12, 2024, the Ministry of Defence signed a contract with Hindustan Aeronautics Limited (HAL) for the procurement of 12 Su-30MKI aircraft, boosting India's 'Aatmanirbhar Bharat' initiative with an approximate cost of ₹13,500 crore and 62.6% indigenous content

- Contract signed on December 12, 2024, for 12 Su-30MKI aircraft.

- Cost: ₹13,500 crore, including taxes and duties

Key Points:-

(i) Aircraft to be manufactured at HAL's Nasik division

2. HSL has partnered with Kongsberg Maritime to provide advanced RAS equipment for FSS.

In December 2024, Hindustan Shipyard Limited (HSL), based in Visakhapatnam, Andhra Pradesh (AP), formed a strategic maritime partnership with Kongsberg Maritime, a leading provider of marine systems and solutions based in Kongsberg, Norway. This collaboration aims to supply advanced Replenishment-at-Sea (RAS) equipment for the Indian Navy's (IN) fleet of five Fleet Support Ships (FSS), which will improve operational capabilities and logistical efficiency.

- In August 2023, the Ministry of Defense (MoD) signed a contract with Hindustan Shipyard Limited (HSL) for the acquisition of five Fleet Support Ships (FSS) for the Indian Navy, with an estimated cost of Rs 19,000 crore.

- Fleet Support Ships (FSS) are large naval vessels designed to provide essential support to the Indian Navy (IN). More than 50% of the components for the FSS project will be sourced locally, in line with India's vision of 'Atmanirbhar Bharat' (Self-Reliant India).

- The FSS will serve both military and humanitarian purposes. They can be used for emergency evacuations or to deliver relief supplies to areas affected by disasters during Humanitarian Aid and Disaster Relief (HADR) operations.

Key Points:-

(i) The delivery of these ships is expected to begin by mid-2027, with the keel-laying ceremony for the first ship taking place in November 2024 at HSL in Visakhapatnam.

(ii) These ships, weighing over 40,000 tonnes, will carry vital supplies such as fuel, water, and ammunition to warships, allowing them to operate far from ports.

(iii) The FSS will help the Navy stay operational

for longer periods without needing to return to port.

SCIENCE AND TECHNOLOGY

1. ISRO Successfully Conducts Sea Level Hot Test of CE20 Cryogenic Engine

ISRO has carried out a successful sea level hot test of its CE20 Cryogenic Engine with a nozzle area ratio of 100 at the ISRO Propulsion Complex, Mahendragiri, Tamil Nadu on November 29, 2024. The test demonstrated the performance of a multi-element igniter necessary for engine restart capability, overcoming challenges such as flow separation inside the nozzle. This innovative test method aims to reduce complexity and cost in acceptance testing of cryogenic engines.

- The test featured a nozzle area ratio of 100 and a multi-element igniter.
- Test aims to simplify acceptance testing processes.

Key Points:-

(i) CE20 engine has been qualified for thrust levels of 19, 20, and 22 tonnes for various missions.

2. Manastu Space Hands Over Green Propulsion System to DRDO

Manastu Space Technologies, a Mumbai-based start-up, has handed over its iBooster Green Propulsion System to the Defence Research and Development Organisation (DRDO). This hydrogen peroxide-based propulsion technology is designed for 100-500 kg satellites and will undergo testing in an upcoming ISRO mission. It offers enhanced performance, safety, and sustainability, supporting DRDO's satellite missions and showcasing the role of Indian startups in national defense and space capabilities.

- Designed for 100-500 kg satellites, it supports orbit raising, station-keeping, and deorbiting.
- Supported by DRDO's Technology Development Fund, highlighting innovation and collaboration.

Key Points:-

(i) DRDO's Technology Development Fund supports research and development in defense technologies.

3. "TDB-DST Extends Support to Agnikul Cosmos to Strengthen India's Space Ecosystem".

The Ministry of Science & Technology has extended its support to Agnikul Cosmos Pvt. Ltd, based in Chennai, to develop and commercialize "Agnibaan," a customizable two-stage launch vehicle. This vehicle can carry payloads of up to 300 kg to orbits at an altitude of 700 km.

- The initiative is supported by the Technology Development Board (TDB), a statutory body under the Department of Science & Technology (DST).
- TDB has provided financial assistance for the "Development and Commercialization of a Modular Configurable Launch Vehicle for 100 Kg Payload."

Key Points:-

(i) Key People: Rajesh Kumar Pathak (Secretary, TDB), and Srinath Ravichandran and Syed Peer Mohamed Shah Khadri (Founders of Agnikul Cosmos).

(ii) Agnikul Cosmos has achieved a historic milestone with the successful maiden launch of AgnibaanSORTeD, the world's first flight using a single-piece 3D-printed rocket engine.

4. Advanced Greenhouse Gas Observation Satellite Launched.

The Greenhouse gases Observing SATellite 2 (GOSAT-2), also known as "IBUKI-2," was launched in October 2018 as a successor to GOSAT, the first satellite dedicated to greenhouse gas observations. GOSAT-2, developed by the Japan Aerospace Exploration Agency (JAXA) in collaboration with the National Institute for Environmental Studies (NIES) and the Ministry of the Environment (MOE) of Japan, features advanced sensors and improved performance for more accurate and comprehensive data collection. The main sensor, Thermal And Near infrared Sensor for carbon Observation-Fourier Transform Spectrometer-2 (TANSO-FTS-2), offers enhanced signal-to-noise ratio (SNR) in both the Short Wavelength InfraRed (SWIR) and Thermal InfraRed (TIR) bands. This improvement allows for better data quality and increased accuracy in greenhouse gas concentration analysis, particularly in high-latitude regions during winter. GOSAT-2 introduced an intelligent pointing mechanism to avoid cloud-covered areas, increasing the amount of usable observation data. Additionally, a new spectral band for carbon monoxide (CO) observations has been added, aiding in the evaluation of urban and biomass burning effects. The Cloud and Aerosol Imager-2 (TANSO-CAI-2) on GOSAT-2 also features forward and backward observation directions to avoid sun glint areas, improving cloud detection accuracy.

- **GOSAT-2 launched in October 2018 as a successor to GOSAT.**
- **New spectral band added for carbon monoxide (CO) observations.**
- **Developed by JAXA, NIES, and MOE of Japan.**

Key Points:-

Enhanced signal-to-noise ratio (SNR) in SWIR and TIR bands.

Intelligent pointing mechanism to avoid cloud-

covered areas.

OBITUARY

1. Renowned Gujarati Singer Purushottam Upadhyay Passes Away at 90

Purushottam Upadhyay, a legendary Gujarati singer and composer, passed away at his Mumbai residence on December 11, 2024. Known for timeless hits and contributions to over 20 films and 30 plays, his demise marks the end of an era in Gujarati music. Prime Minister Narendra Modi expressed condolences, calling him a "legendary singer."

- **Known for timeless hits and contributions to films and plays.**
- **Prime Minister Narendra Modi expressed condolences.**

Key Points:-

(i) Purushottam Upadhyay, a legendary Gujarati singer, passed away at 90.

2. World Mourns the Loss of Tabla Maestro Zakir Hussain.

Tabla maestro Zakir Hussain passed away at a hospital in San Francisco on December 16, 2024, due to complications from idiopathic pulmonary fibrosis. He was 73 years old. Hussain had been hospitalised for two weeks before his condition deteriorated, leading to his transfer to the ICU. Tributes continue to pour in from around the world, celebrating his extraordinary legacy and contributions to music.

- **Zakir Hussain died at the age of 73 due to complications from idiopathic pulmonary fibrosis.**

- Musicians, celebrities, and fans from across the globe have paid tribute to his legacy.
- Hussain won four Grammy Awards, including three at the 66th Grammy Awards earlier this year.

Key Points:-

3. Environmentalist and Padma Shri awardee Tulsi Gowda has passed away.

In December 2024, environmentalist Tulsi Gowda, also known as the 'Encyclopedia of Forest', passed away at the age of 86 in Honnali, Karnataka. She was born in 1938 in Honnali.

- In 2021, she was honored with the Padma Shri Award, India's fourth-highest civilian award, for her outstanding contributions to environmental conservation.
- Tulsi Gowda came from the Halakki tribal family and was lovingly called "Vruksha Maate" (Mother of Trees) by her tribe, due to her deep knowledge of the forest.
- Tulsi Gowda, renowned for planting over 1,00,000 trees in Karnataka, annually nurtured 30,000 saplings, enhancing one community reserve, five tiger reserves, 15 conservation areas, and 30 wildlife sanctuaries, preserving diverse ecosystems.

Key Points:-

- (i) The University of Agricultural Sciences, Dharwad (UASD), Karnataka, awarded her an honorary doctorate for her exceptional environmental knowledge and efforts.
- (ii) In 1986, she received the Indira Priyadarshini Vrikshamitra Award (IPVM), which recognizes outstanding work in tree planting and the development of barren lands.
- (iii) In 1999, she was honored with the Karnataka Rajyotsava Award (also called the Kannada

Rajyotsava Award), which is the second-highest civilian award in Karnataka, given annually to distinguished citizens over the age of sixty.

ENVIRONMENT

1. Five New Species of Darwin Wasps Discovered in India and Thailand

Researchers at the Ashoka Trust for Research in Ecology and the Environment (ATREE) have discovered five new species of Darwin wasps, marking the first record of the Microleptinae subfamily in India. These wasps, known for their parasitic life cycle, include four new species from India—*Microleptes chiani*, *M. gowrishankari*, *M. sandeshkaduri*, and *M. tehriensis*—and one from Thailand, *M. depressus*. This study highlights the importance of taxonomic research in understanding biodiversity and ecological functions. The Ichneumonidae family, to which these wasps belong, consists of 42 subfamilies, with Microleptinae being among the smallest. The discovery underscores the need for further research on the distribution and diversity of the Microleptinae subfamily.

- The Ichneumonidae family consists of 42 subfamilies.
- Highlights the importance of taxonomic research in biodiversity.

Key Points:-

- (i) Marks the first record of the Microleptinae subfamily in India.
- (ii) New species include *Microleptes chiani*, *M. gowrishankari*, *M. sandeshkaduri*, *M. tehriensis*, and *M. depressus*.