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Message from the Editor



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Dear students,

The present issue of “**LISAS CAREER IN FOCUS**” contains important information on different recent developments of national, international and regional sphere.

We have taken special care to ensure that the topics covered in this issue are beneficial for the candidates preparing for different competitive examinations including both UPSC & OPSC Civil Services Examinations. Our coverage on current events is both factual as well as analytical. I am quite sure that it would be beneficial for all of you.

ALL THE BEST

Dr. Linu Chayani

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- **Making India A Start-Up Nation**
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ISSUES OF THE MONTH

AI'S ROLE IN INDIA'S HEALTH CARE SYSTEM

India's health care system faces significant challenges, including inadequate infrastructure, shortage of healthcare professionals, and uneven access to quality care across its vast and diverse population. In



recent years, there has been growing interest in leveraging artificial intelligence (AI) to address some of these persistent healthcare gaps. AI technologies promise to increase efficiency, improve access to medical expertise, and potentially revolutionize healthcare delivery in a country where resources are often stretched thin.

However, the integration of AI in healthcare, particularly in a country as complex as India, raises critical questions about feasibility, sustainability, and ethical implications. While AI excels at processing data and automating repetitive tasks, it lacks crucial human qualities essential for healthcare, such as empathy, cultural understanding, and the ability to navigate nuanced patient conditions. As India explores the potential of AI in healthcare, it must carefully weigh the potential benefits against the need to address foundational healthcare issues and develop comprehensive regulations to ensure AI tools

adhere to the core medical ethic of "Do No Harm."

Significance of AI in Healthcare

- **Revolutionizing Diagnostics:** Artificial Intelligence is transforming medical diagnostics with unprecedented accuracy and speed.
 - In radiology, AI algorithms can detect subtle abnormalities in medical images that might escape the human eye.
 - For instance, a study published in *Nature* in 2020 showed that AI systems resulted in absolute reductions of 1.2% and 2.7% in the rates of false-positive and false-negative detection of biopsy-confirmed breast cancer.
 - As AI continues to evolve, it promises to enhance diagnostic accuracy across various medical fields, from ophthalmology to pathology.
- **Personalized Treatment Plans:** AI is ushering in an era of precision medicine by analyzing vast amounts of patient data to create personalized treatment plans.
 - By considering an individual's genetic makeup, lifestyle factors, and medical history, AI can recommend targeted therapies with higher efficacy and fewer side effects. •
 - IBM Watson Oncology, for example, has been used in over 230 hospitals worldwide, assisting oncologists in developing personalized cancer treatment plans.

- This tailored approach not only improves patient outcomes but also optimizes resource allocation in healthcare systems.
- **Drug Discovery and Development:** AI is dramatically accelerating the drug discovery and development process, potentially bringing life-saving medications to market faster and at lower costs.
- Machine learning algorithms can analyze biological data, predict drug-target interactions, and optimize molecular structures, significantly reducing the time and resources required for early-stage drug discovery.
- In 2020, Insilico Medicine used AI to design, synthesize, and validate a novel drug candidate for fibrosis in just 46 days, a process that traditionally takes years.
- **Enhancing Clinical Workflows:** AI is streamlining clinical workflows, reducing administrative burdens, and allowing healthcare professionals to focus more on patient care.
- Natural Language Processing (NLP) algorithms can automatically transcribe and summarize doctor-patient conversations, update electronic health records, and generate clinical notes.
- Additionally, AI-driven scheduling systems can optimize patient flow, reduce wait times, and improve resource allocation in hospitals.
- **Remote Monitoring and Telemedicine:** AI is playing a pivotal role in expanding the reach of healthcare through remote monitoring and telemedicine solutions.
- AI-powered wearables and IoT devices can continuously monitor patient vital signs, detect anomalies, and alert healthcare providers to potential issues before they become critical.
- During the Covid-19 pandemic, the use of AI in telemedicine surged, with platforms like Babylon Health using AI chatbots to triage patients and provide initial consultations.
- This technology is particularly significant for rural and underserved areas, where access to specialists is limited.
- WHO's Sarah is a prototype of a digital health promoter, available 24/7 in eight languages via video or text.
- She can provide tips to destress, eat right, quit tobacco and e-cigarettes, as well as give information on several other health topics.
- However, she is not designed to give medical advice.
- **Enhancing Medical Education and Training:** AI is revolutionizing medical education and training by providing personalized learning experiences and simulating complex clinical scenarios.
- Virtual reality (VR) and augmented reality (AR) platforms powered by AI can create immersive training environments for medical students and professionals.
- For instance, companies like Fundamental VR offer AI-driven haptic VR systems that allow surgeons to practice procedures with realistic feedback.
- AI-powered adaptive learning systems can also tailor medical curricula to individual students' needs, potentially accelerating the learning process and producing more competent healthcare professionals.

Major Challenges of AI in Healthcare in India

- **Infrastructure Limitations:** India's healthcare infrastructure faces significant constraints that challenge the widespread adoption of AI technologies.
- Many healthcare facilities, particularly in rural and semi-urban areas, lack the basic

technological infrastructure required to support AI systems.

- A recent study stated that of the 7,821 Health and Wellness Centres in rural India, only 3,496 (45%) have an electricity back-up facility.
- This infrastructure gap makes it difficult to implement and maintain sophisticated AI systems
 - **Data Challenges:** India faces a major hurdle in the availability and quality of healthcare data required for training effective AI models.
- The fragmented healthcare system, comprising both public and private providers, results in inconsistent data collection practices.
- While many healthcare facilities in India maintain electronic health records (EHRs), there are no provisions for integrating this data for analysis, nor clear guidelines on how long health records should be retained.
- This issue is further exacerbated by problems related to data quality, standardization, and interoperability.
 - **Digital Divide:** The digital divide in India poses a significant barrier to the equitable implementation of AI in healthcare.
- While urban centers may benefit from AI-driven healthcare solutions, rural areas often lack the necessary digital infrastructure.
- 45% of the Indian population do not access the internet as of 2023, according to a joint study by the Internet and Mobile Association of India (IAMAI) and Kantar.
- This disparity in digital access means that AI healthcare solutions may primarily benefit urban populations, potentially widening the existing healthcare gap.
 - **Regulatory Hurdles:** The absence of comprehensive regulations specifically

addressing AI in healthcare presents a significant challenge in India.

- While the Digital Information Security in Healthcare Act (DISHA) was proposed in 2017 by the Ministry of Health & Family Welfare, to regulate digital health data, it has yet to be enacted.
- This regulatory vacuum creates uncertainty for AI developers and healthcare providers, potentially slowing innovation and adoption.
- The lack of clear guidelines on issues such as AI algorithm validation, liability in case



of AI errors, and patient data protection poses risks to both patients and healthcare providers.

- **Ethical and Cultural Considerations:** Implementing AI in healthcare in India raises complex ethical and cultural challenges due to the country's vast diversity.
- Issues such as algorithmic bias, informed consent, and privacy take on additional dimensions in a multicultural, multilingual society with varying levels of health literacy.
- AI algorithms used in Indian healthcare settings trained on datasets primarily from Western countries, raises concerns about their applicability to the Indian population.

- Cultural sensitivities around health issues and data sharing also pose challenges.
- **Cost and Resource Allocation:** The high costs associated with developing, implementing, and maintaining AI systems in healthcare pose a significant challenge for India's resource-constrained health sector.
- While AI promises long-term cost savings, the initial investment can be substantial.
- The average cost to implement AI in healthcare ranges between USD 20,000 and USD 1,000,000, a significant sum for many healthcare providers.
- This cost barrier is particularly challenging given that India's healthcare spending was only 1.8% of its GDP in 2020-21.
- **Language and Localization Issue:** India's linguistic diversity presents a unique challenge for AI implementation in healthcare.
- With 22 official languages and hundreds of dialects, creating AI systems that can effectively communicate with and understand patients across the country is a complex task.
- This language barrier can lead to misdiagnosis, miscommunication, and reduced effectiveness of AI tools.

ICMR Guidelines for AI Use in the Health Sector

In March 2023, the Indian Council of Medical Research (ICMR) released "The Ethical Guidelines for Application of AI in Biomedical Research and Healthcare," outlining 10 key patient-centric ethical principles for AI use in healthcare.

10 Guiding Principles:

- **Accountability and Liability:** Regular audits ensure optimal AI functioning, made available to the public.

- **Autonomy:** Human oversight is essential, with patient consent required, informing them of risks.
- **Data Privacy:** AI must safeguard privacy and personal data at every stage.
- **Collaboration:** Promotes interdisciplinary, international partnerships.
- **Safety and Risk Minimization:** Prevents misuse, ensures data security, and requires ethical committee assessments.
- **Accessibility, Equity, and Inclusiveness:** Aims to bridge the digital divide by ensuring AI infrastructure access.
- **Data Optimization:** Addresses biases and errors due to poor data quality or representation.
- **Non-Discrimination and Fairness:** Ensures universal, bias-free AI technology.
- **Trustworthiness:** AI must be valid, reliable, ethical, and lawful to gain user confidence.
- **Transparency:** Clinicians need systematic methods to test AI's validity and reliability.

Frameworks: India's frameworks supporting AI in healthcare include the Digital Health Authority under the National Health Policy (2017), DISHA 2018, and Medical Device Rules, 2017.

How India can Effectively Implement AI in Healthcare?

- **Strengthen the National Health Resources Database:** India can enhance its National Health Resources Repository (NHRR) by incorporating advanced AI technologies.
- By integrating the National Digital Health Mission with AI-ready data protocols through NHRR, India could build a robust AI Healthcare Model.
- The success of Estonia's e-Health system, which covers 95% of the population's health data, demonstrates the feasibility of this approach.
- **Develop India-specific AI Models:** To address the challenge of AI models not

being suitable for the Indian population, the government can collaborate with academic institutions and tech companies to develop India-specific AI models.

- These models should be trained on diverse Indian datasets, considering factors like genetic diversity, regional disease patterns, and socio-economic determinants of health.
- For instance, IIT-Delhi researchers developed AI-based detectors for malaria, TB, cervical cancer.
- The government could establish an "AI for Indian Healthcare" challenge, similar to the successful Google AI for Social Good program, inviting researchers and startups to develop solutions tailored to India's unique healthcare challenges.
- Create a Tiered AI Implementation Strategy: To address the digital divide, India can adopt a tiered AI implementation strategy.
- In urban areas with better infrastructure, advanced AI systems for diagnostics and treatment planning can be implemented in tertiary care hospitals.
- For rural areas, initially focus on deploying simpler, more robust AI tools that can work with limited connectivity, such as AI-powered mobile apps for basic health screenings or telemedicine platforms with offline capabilities.
- For example, the 'NITI Aayog AI for All' initiative could be expanded to include healthcare-specific programs for rural areas.
- The success of the AarogyaSetu app, demonstrates the potential for widespread adoption of mobile health technologies in India.
- Establish a Regulatory Sandbox for Healthcare AI: To navigate regulatory hurdles, India can create a 'Regulatory

Sandbox' for healthcare AI, allowing controlled testing of AI solutions in real-world settings under regulatory supervision.

- This approach would help develop appropriate regulations while fostering innovation.
- The sandbox could be modelled after the Reserve Bank of India's fintech sandbox, which has successfully incubated several innovative financial solutions.
- For healthcare AI, the sandbox could initially focus on non-critical areas like administrative processes or low-risk diagnostic tools.
- The Indian Council of Medical Research (ICMR) could oversee this sandbox, collaborating with tech companies and hospitals to test AI solutions before wider deployment.
- Integrate AI Education in Medical Curriculum: To address the skills gap, India should integrate AI and data science modules into medical and nursing education curricula.
- This could include mandatory courses on AI in healthcare, hands-on training with AI tools, and internships with health-tech companies.
- Additionally, the government could partner with online learning platforms to offer certified AI in healthcare courses for practicing professionals.
- The success of initiatives like the Stanford University's AI in Healthcare online course, demonstrates the potential of this approach.
- Establish Ethical Guidelines for AI in Healthcare: To address ethical concerns, India should develop comprehensive ethical guidelines for AI in healthcare, considering its unique cultural and social context.

- These guidelines should cover issues like data privacy, algorithmic bias, and the role of AI in clinical decision-making.
- The government could establish an AI Ethics Committee under the Ministry of Health and Family Welfare, comprising medical professionals, ethicists, AI experts, and patient advocates.
- This committee could draw inspiration from the European Commission's Ethics Guidelines for Trustworthy AI, adapting them to the Indian context.
- Create AI-Ready Healthcare Infrastructure: India needs to focus on creating AI-ready infrastructure in healthcare facilities.
- This involves ensuring stable electricity supply, robust internet connectivity, and necessary hardware in healthcare centers.
- The government could leverage existing schemes like the National Rural Health Mission to include digital infrastructure upgrades.
- For instance, the successful implementation of solar-powered primary health centers in Chhattisgarh, which ensured 24/7 electricity could be replicated and expanded to include digital infrastructure.
- Launch Public Awareness Campaigns: To address the challenge of patient trust and acceptance, India should launch comprehensive public awareness campaigns about AI in healthcare.
- These campaigns should focus on explaining the benefits and limitations of AI in simple, relatable terms.
- Use various media channels, including social media, television, and community outreach programs.
- For instance, the success of the Pulse Polio campaign, which used celebrity endorsements and grassroots mobilization could be a model for AI awareness.

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MAKING INDIA A START-UP NATION

India now boasts the world's third-largest startup ecosystem, with over 140,000 registered startups and a unicorn emerging every 20 days. This growth has been supported by top-tier higher education institutions, government capital expenditure, and widespread internet penetration. However, to sustain this momentum and achieve the vision of a developed India by 2047, there's a need to integrate education, entrepreneurship, and employment more effectively.



The potential for growth is significant, especially when comparing India's startup ecosystem to those of the US and UK. If 5% of Indian graduates opted for entrepreneurship, matching global trends, it could lead to the creation of 50,000 new startups annually, potentially generating millions of jobs. To achieve this, India needs to rethink its higher education metrics, emphasizing entrepreneurship alongside traditional placement rates. By transitioning from a linear approach to a synergistic paradigm integrating education, entrepreneurship, and employment, India can aim for exponential economic growth during its AmritKaal period.

Current Status of India's Startup Sector

- **Ecosystem Size and Growth:** India boasts a robust startup ecosystem, ranking third globally with over 1.4 lakh registered startups under the Department for Promotion of Industry and Internal Trade (DPIIT).
- This dynamic ecosystem is characterized by its rapid growth, consistently adding

more startups per day than any other country.

- Furthermore, the emergence of one unicorn every 20 days over the past seven to eight years highlights the immense potential and entrepreneurial spirit within the Indian startup landscape.
- **Job Creation:** The Indian startup ecosystem has been a significant driver of job creation, with DPIIT-recognized startups generating more than 15.5 lakh direct job opportunities.
- In 2023 alone, these startups created an impressive 3.9 lakh jobs, representing a remarkable 46.6% year-on-year increase and a substantial 217.3% growth over the past five years.
- This trend underscores the startups' pivotal role in providing employment opportunities and contributing to the country's economic development.
- **Economic Contribution:** The impact of startups extends beyond job creation, as they have made a substantial contribution to the Indian economy.
- In FY23, startups and their corporate counterparts injected a significant USD 140 billion, representing nearly 4% of India's GDP. This substantial contribution highlights the startups' role as key drivers of economic growth and innovation.

How India's Startup Sector is Booming?

- **Digital Infrastructure Revolution:** The widespread adoption of digital technologies, spearheaded by initiatives like Digital India, has created a fertile ground for startups.
- The Unified Payments Interface (UPI) has been a game-changer, with transaction

values surpassing Rs 20 lakh crore in August 2024.

- This digital backbone, coupled with the world's lowest data costs (averaging ₹6.7 per GB in 2023), has enabled startups to reach a vast customer base efficiently.
- **Supportive Government Policies:** The Indian government's proactive stance through initiatives like Startup India and Stand Up India has been instrumental.
- As on 30th June 2024, Department for Promotion of Industry and Internal Trade has recognized 1,40,803 entities as startups with tax benefits and easier compliance norms.
- As on 31st December 2022, under the Fund of Funds Scheme (FFS) for startups, Rs. 7,980 crore has been committed to 99 Alternative Investment Funds (AIFs).
- **Burgeoning Talent Pool:** India's demographic dividend, with 65% of its population under 35, provides a vast talent pool for startups.
- The country produces over 1.5 million engineering graduates annually, with a growing focus on emerging technologies.
- The National Education Policy 2020's emphasis on vocational education and entrepreneurship is further enhancing this talent pipeline.
- **Maturing Funding Ecosystem:** Despite global economic uncertainties, India's startup funding ecosystem has shown resilience.
- While 2023 saw a funding winter, 2024 has witnessed a resurgence. Indian tech startups raised USD 4.1 billion in H1 2024, 4% higher than H2 2023, remaining fourth-highest funded country globally.

- The rise of domestic venture capital firms and the entry of global investors have diversified funding sources.
- **Sector-Specific Opportunities:** Emerging sectors like cleantech, spacetechnology, and deeptech are driving the next wave of innovation.
- The Indian spacetechnology sector, bolstered by the government's decision to open up the space sector to private players, saw investments of USD 124.7 million in 2023 (for Space Start-Ups).
- Skyroot Aerospace's successful launch of India's first privately developed rocket, Vikram-S, in November 2022, marked a milestone in this sector.
- **Growing Domestic Market:** With a steady GDP growth rate, India will have 140 million new middle-class households by 2030 according to the World Economic Forum, presenting a massive opportunity for startups.
- The increasing disposable income and changing consumer behaviours are driving demand across sectors.
- According to Grant Thornton, e-commerce in India is expected to be worth USD 188 billion by 2025.
- **Corporate-Startup Synergies:** Increased collaboration between established corporates and startups has created win-win situations.
- Many large Indian conglomerates have set up startup accelerators or venture funds.
- For instance, Reliance Industries' JioGenNext has supported over 170 startups.
- The acquisition of online pharmacy 1mg by Tata Digital in 2021, illustrates the potential of such collaborations.

Roadblocks to the Growth of Indian Startups

- **Regulatory Hurdles:** The complex and sometimes ambiguous regulatory

environment poses significant challenges for startups.

- For instance, the recent debate over the categorization of app-based cab services like Ola and Uber under the Motor Vehicles Act has created operational uncertainties.
- The recent Digital Personal Data Protection Act, 2024 while necessary, adds compliance burdens on startups.
 - **Talent Retention Hurdle:** While India produces a large number of graduates, retaining top talent remains a challenge.
- The startup sector faces competition from established MNCs and the lure of overseas opportunities.
- A 2023 study by Randstad revealed that 60% of Indian tech professionals are willing to relocate abroad for better career prospects.
- High-profile exits, like that of Paytm's Amit Nayyar in 2021, highlight the talent retention issue.
 - **Market Saturation and Hyper-Competition:** Certain sectors in the Indian startup ecosystem are becoming increasingly crowded, leading to intense competition and reduced profit margins.
- The edtech sector, once booming, faced a downturn post-pandemic, forcing players like BYJU's and Unacademy laying off employees.
 - This hyper-competition often leads to unsustainable cash burn and market consolidation.
- **Infrastructure Gaps and Uneven Funding:** While India has made significant strides in digital infrastructure, substantial gaps remain.
- Even in urban areas, internet penetration stands at 71%, leaving a significant portion of the population unreached.

- The urban-rural digital divide is stark, with rural internet density at 37% compared to 69% in urban areas.
- This disparity limits the addressable market for many digital startups. For instance, agritech startup DeHaat, despite its success, faces challenges in scaling due to limited internet access among rural farmers.
- Also, despite growth in funding it remains largely uneven for instance, India's more than 6000 women-led startups remain unfunded.
 - **Scaling Challenges:** Many Indian startups struggle to scale beyond their initial success. Issues range from operational inefficiencies to difficulties in expanding to new markets.
- Despite this robust growth, data shows that about 90% of Indian start-ups fail within the first five years, primarily due to scaling issues
 - **Lack of Deep Tech Innovation:** While India excels in creating innovative business models, it lags in deep tech innovations.
- R&D spending in India remains low at 0.7% of GDP in 2023, compared to 3.5% in the US.
- This gap is evident in areas like semiconductor design, where India has few startups despite the government's USD 10 billion incentive scheme announced in 2021.
- The lack of industry-academia collaboration further exacerbates this issue. Out of the approximately 40,000 higher education institutions in India, less than 1% actively participate in high-quality research.
 - **Exit Challenges:** The Indian startup ecosystem still struggles with providing viable exit options for investors.

- There have been 46 IPOs in 2023, raising a cumulative Rs 41095.36 crore. This marks a 30% decline from Rs 59301.7 crore raised through 40 IPOs in 2022
- The lackluster performance of some listed startups has made both investors and founders cautious.

Measures can be Adopted to Enhance the Startup Sector in India

- **Streamlined Regulatory Sandbox:** Implement a comprehensive regulatory sandbox across sectors, expanding on the success of RBI's fintech sandbox.
 - This would allow startups to test innovative products in a controlled environment without full regulatory burden.
 - Extend this model to sectors like healthtech, edtech, and cleantech.
- **Targeted Skill Development Programs:** Launch sector-specific skill development initiatives in collaboration with industry leaders and academia.
 - Focus on emerging technologies like AI, blockchain, and IoT. The government's Skill India program can be leveraged and expanded for this purpose.
- **Decentralized Startup Hubs:** Develop tier-2 and tier-3 cities as startup hubs through targeted infrastructure and incentives.
 - This can be modeled on the success of Mohali's startup ecosystem, which saw a significant increase in startup registrations between 2021 and 2023.
 - Implement a hub-and-spoke model where each major city (hub) supports surrounding smaller cities (spokes).
- **Enhanced Tax Incentives:** Extend and expand tax benefits for startups beyond the current three-year limit to five years for all recognized startups.

- Introduce additional tax breaks for deep-tech startups and those addressing critical national priorities.
- For example, Israel's tax benefits for tech companies, which include a reduced corporate tax rate of 12%, have significantly boosted their startup ecosystem.
- There is a need to Implement a similar model in India.
- **Robust IP Protection Framework:** Streamline the patent filing and approval process, reducing the average time.
 - Introduce fast-track examination for startups in critical sectors. Implement an IP awareness program targeting a large number of startups annually.
 - Japan's accelerated examination system, which reduced patent examination time to an average of 14 months, can serve as a model.
- **Government Procurement Boost:** Mandate a certain percentage of government procurement from startups, similar to the existing 25% procurement requirement from MSMEs.
 - The US Federal Government's goal to award 23% of prime government contracts to small businesses can be a benchmark.
 - This could potentially open up a market worth billions for Indian startups.
- **Sector-Specific Incubation Centers:** Establish sector-specific incubation centers in collaboration with industry leaders.
 - Focus on areas like spacetechnology, biotechnology, and cleantech. For instance, the success of T-Hub in Hyderabad can be replicated with a sector-specific focus.
- **Startup-Academia Collaboration Platform:** Create a national platform to facilitate collaboration between startups and academic institutions.

- This can be modelled on successful programs like the UK's Knowledge Transfer Partnerships.
- Set a target to facilitate 1,000 such collaborations annually by 2025.
 - Enhanced Funding Access: Expand the Fund of Funds for Startups (FFS) and create sector-specific funds.
- Introduce a credit guarantee scheme for startup loans, similar to the UK's Enterprise Finance Guarantee.
 - Digital Infrastructure Push: Accelerate the implementation of initiatives like BharatNet to ensure high-speed internet connectivity across all villages by 2025. This is crucial for startups to reach untapped markets.

- The success of Estonia's e-Residency program in fostering a digital business environment can be a model.

India's startup ecosystem has shown immense potential, contributing significantly to economic growth and job creation. However, to sustain and accelerate this momentum, it is essential to address regulatory hurdles, foster deeper collaboration between academia and industry, and ensure equitable access to funding and infrastructure. By integrating education, entrepreneurship, and employment, India can unlock its entrepreneurial potential and move closer to becoming a developed nation by 2047.

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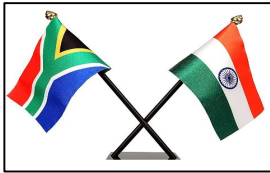
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NEW PATHWAYS IN INDIA-AFRICA COLLABORATIONS

Africa, often described as the "land of the future," holds immense importance for India's strategic and economic interests, particularly in the realm of critical minerals. Housing 30% of the world's known critical mineral reserves, the continent presents a crucial opportunity for India to secure its supply



chain. India's deep-rooted political, economic, and historic connections with Africa, bolstered by a three-

million-strong diaspora and USD 75 billion in investments, provide a solid foundation for enhancing cooperation in this sector.

However, India faces significant challenges in leveraging this potential. China's established control over the critical minerals value chain in Africa poses economic and security risks. Moreover, African nations are actively implementing policies to move beyond the 'pit-to-port' model, focusing on value addition and minerals-based industrialization. By aligning its Critical Minerals Mission with African priorities for value addition and responsible practices, India can forge mutually beneficial partnerships while supporting Africa's developmental agenda and securing its own supply chain.

Significance of Africa for India

- **Economic Powerhouse:** Africa's economic potential presents significant opportunities for Indian businesses and investors.
- With a projected GDP growth of 4% in 2023 and 4.3% in 2024, the continent is becoming an increasingly attractive market.
- India-Africa bilateral trade reached USD 98 billion in 2022-23, with USD 43 billion attributed to the mining and mineral sectors.

- The African Continental Free Trade Area (AfCFTA), operational since 2021, creates a single market of 1.3 billion people, offering immense potential for Indian exports and investments.
- Africa's population is projected to reach 2.5 billion by 2050, presenting a significant market for Indian goods and services.
- **Geopolitical Ally:** Africa's 54 nations represent a significant bloc in international forums, making the continent a crucial geopolitical ally for India.
- India's support for African representation in the UN Security Council and other global bodies demonstrates its commitment to a more equitable world order.
- The African Union (AU) has been made a permanent member of the G20 during India's 2023 G20 Presidency.
- As global power dynamics shift, a strong India-Africa partnership can help balance other influential players in the region, particularly China.
- **Energy Security:** Africa plays a vital role in India's energy security strategy by offering diverse energy resources.
- India currently sources about 15% of its oil demand (approximately 34 million tonnes) from Africa.
- Countries like Nigeria and Angola are key oil suppliers to India.
- Also, Africa's vast mineral reserves, particularly critical minerals, are crucial for India's energy transition and technological advancement.
- The International Solar Alliance, spearheaded by India, has earmarked USD 2 billion for solar projects in Africa.
- This energy partnership not only secures India's energy needs but also supports

Africa's electrification goals, creating a win-win situation.

- **Maritime Security:** Africa's eastern coast is crucial for India's maritime security interests in the Indian Ocean Region (IOR).
 - India has signed defense agreements with several African nations, including Mozambique and Madagascar.
 - The Indian Navy's anti-piracy operations off the coast of Somalia since 2008 have protected not just Indian but global maritime trade.
 - In 2022, the first edition of India-Mozambique-Tanzania Trilateral Exercise (IMT TRILAT), a joint maritime exercise among the Indian, Mozambique and Tanzanian navies was held.
- **Diaspora Dynamics:** The 3 million-strong Indian diaspora in Africa serves as a bridge between the two regions.
 - Historically, Indian-origin communities have played significant roles in African economies.
 - India is leveraging this connection through initiatives like the PravasiBharatiya Divas, which in 2019 focused on the Indian diaspora in Africa, aiming to strengthen economic and cultural ties.

What Role can Africa Play in India's Critical Minerals Need?

- **Lithium Lifeline:** Africa's vast lithium reserves, particularly in countries like Zimbabwe, Namibia, and Ghana, are crucial for India's electric vehicle (EV) ambitions.
 - Zimbabwe is the sixth-largest producer of lithium.
 - With India aiming for 30% EV penetration by 2030, securing African lithium could be game-changing.
 - For instance, if India could secure even 5% of Zimbabwe's estimated lithium

reserves, it could potentially power over 500,000 electric cars.

- **Rare Earth Elements:** Africa hosts significant deposits of rare earth elements (REEs), crucial for high-tech industries.
 - Countries like South Africa, Malawi, and Kenya have untapped REE potential.
 - India's REE imports are expected to rise with increasing demand in electronics and defense sectors.
 - For example, one F-35 fighter jet requires 417kg of REEs.
- **Platinum Group Metals:** South Africa holds over 90% of the world's platinum reserves and is a major producer of other platinum group metals (PGMs) like palladium and rhodium.
 - These metals are essential for catalytic converters and fuel cells.
 - With India pushing for hydrogen fuel cell vehicles, securing PGM supplies from Africa is crucial.
- **Copper Conduit:** African nations like Zambia and the DRC are major copper producers. India's copper demand is expected to be 1.433 million tonnes by 2026, driven by renewable energy and EV sectors.
 - Securing African copper could be vital for India's ambitious renewable energy target of 500 GW by 2030.
- **Graphite Goldmine:** Madagascar and Mozambique are established flake and powder graphite producers, essential for EV batteries and energy storage systems.
 - A typical EV battery requires about 50-100 kg of graphite.
 - Partnerships with African nations could help India achieve its goal of 50% cumulative electric power installed

capacity from non-fossil fuel-based energy resources by 2030

Key Areas of Friction Between India and Africa

- **Investment Inertia:** Despite India's growing economic engagement with Africa, Indian investments on the continent lag behind those of China and Western countries.
- Indian companies often struggle with risk perception, lack of local market knowledge, and competition from established players.
- For instance, in 2020, ArcelorMittal, an Indian-owned company, exited a USD 2.2 billion iron ore project in Senegal due to various challenges.
- This investment gap limits India's economic footprint and influence in Africa.
- **Perception Issues of Indian Products:** There's a persistent perception in some African markets that Indian products are of inferior quality compared to Western or Chinese alternatives.
- This issue affects various sectors, from pharmaceuticals to machinery.
- Tainted syrup medicine imported from India was the cause of an outbreak of kidney failure that killed more than 60 children in the West African nation of Gambia in 2022.
- These incidents, though not representative of all Indian products, damage India's reputation and market share in Africa.
- **Diplomatic Dilemma:** India's engagement with Africa has been criticized for being too focused on East and Southern Africa, neglecting other regions.
- This imbalance is reflected in trade figures: India's exports to South Africa alone stood at USD 8.47 billion in 2022-23.
- West African countries, despite their economic potential, receive comparatively less attention.

- This uneven engagement can lead to missed opportunities and perceptions of neglect in certain African regions.
- **Project Execution Predicament:** India's development projects in Africa have often faced delays and implementation challenges.
- The Rivatex textile factory revival project in Kenya, funded by India, faced significant delays.
- These issues can erode trust and make African countries hesitant to engage in future projects with India, especially when compared to the often faster (though sometimes criticized) project execution by Chinese companies.
- **Resource Rivalry:** As both India and China seek to secure resources in Africa, competition has intensified, sometimes leading to friction.
- This is particularly evident in the oil and gas sector.
- For example, in 2006, India lost out to China in a bid for oil assets in Angola.
- This competition can lead to inflated prices and strained diplomatic relations, as African countries balance relationships between these Asian giants.

Measures can India Adopt to Enhance its Relations with Africa

- **Trade Treaty Transformation-Crafting Win-Win Agreements:** Negotiate and implement comprehensive economic partnership agreements with key African regional blocs like the African Continental Free Trade Area (AfCFTA).
- Focus on reducing tariffs on African goods, particularly in sectors where Africa has a comparative advantage, such as agriculture and minerals.
- For example, India could offer preferential access for African coffee, cocoa, and rare earth minerals in exchange for greater

access for Indian pharmaceuticals and IT services.

- Skill Share Surge: Expand and modernize India's capacity-building programs in Africa, like the Indian Technical and Economic Cooperation (ITEC).
- Launch a "Digital Skills for Africa" initiative, targeting to train African youth in IT, AI, and data science.
- Establish Indian Institutes of Technology (IIT) and Indian Institutes of Management (IIM) branches in key African countries.
- Resource Reciprocity: Develop a strategic minerals partnership program, focusing on joint ventures between Indian and African companies in critical mineral extraction.
- Establish an India-Africa Mineral Development Fund to finance these projects.
- Target key resources like lithium in Zimbabwe, cobalt in DRC, and rare earth elements in South Africa.
- Infrastructure Impetus: Create a dedicated "India-Africa Infrastructure Commission" to oversee and expedite Indian infrastructure projects in Africa.
- Set clear timelines and accountability measures for project completion.
- Focus on high-impact, quick-turnaround projects like solar power installations, water

treatment plants, and digital connectivity initiatives.

- Modernizing African Agriculture: Develop an "India-Africa Agriculture Innovation Corridor" to transfer Indian agricultural technologies and practices to Africa.
- Set up Indo-African model farms across the continent by 2026, showcasing Indian agricultural techniques and equipment.
- Launch a "Digital Farmer" app in partnership with African governments, aiming to reach 10 million African farmers with crop advisory and market linkage services.
- For example, replicate the success of India's e-NAM (electronic National Agriculture Market) platform in key African agricultural markets.

Africa's strategic significance for India is underscored by its vast reserves of critical minerals, economic potential, and geopolitical importance. By forging comprehensive trade agreements, enhancing skill development, and investing in infrastructure and agriculture, India can strengthen its ties with Africa and secure its critical mineral needs.

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INDIA'S ETHANOL REVOLUTION: ENERGY AND AGRICULTURE

India's ambitious push for ethanol blending in gasoline has led to an unexpected shift in its agricultural landscape and global trade position. Once Asia's top corn exporter, India has now become a net importer for the first time in decades, primarily due to the government's decision to promote corn-based ethanol production. This policy change, aimed at reducing carbon emissions and ensuring ample sugar supply for domestic consumption, has created a significant corn shortage, compelling the country to import a record 1 million tons in 2024, mainly from Myanmar and Ukraine.



The ripple effects of this transition are being felt across multiple sectors. While the move supports India's climate goals and aims to decrease reliance on sugarcane for ethanol, it has inadvertently squeezed local poultry producers and starch manufacturers who are now grappling with soaring feed costs. The corn prices in India have risen far above global benchmarks, leading industry associations to demand duty-free corn imports and even a reconsideration of the ban on genetically modified corn. As India appears set to become a permanent net importer of corn, this shift is not only reshaping domestic agricultural priorities but also scrambling global supply chains, with traditional export markets now turning to South America and the United States for their corn needs.

What is Ethanol?

- Ethanol is a colourless, flammable liquid organic compound with a chemical formula C_2H_5OH .
- It is a primary alcohol produced naturally by the fermentation of sugars by yeasts, and is also produced industrially.
- Ethanol is a volatile, colourless, and flammable liquid with a characteristic alcoholic odour.

Production of Ethanol

- Fermentation: Yeast converts sugars (from grains, fruits, or other sources) into ethanol and carbon dioxide.
- Distillation: The fermented mixture is heated, and the ethanol vapour is separated from the other components.
- The ethanol vapour is condensed, resulting in a higher concentration of ethanol.
- Dehydration: To produce anhydrous ethanol (ethanol with a water content of less than 1%), a dehydration process is often used.
- Major Ethanol Blends
 - E10: Contains 10% ethanol and 90% gasoline.
 - E20: Contains 20% ethanol and 80% gasoline.
 - Flex Fuel Vehicles: Vehicles designed to run on a range of ethanol-gasoline blends, including E85.

Significance of Ethanol Production for India

- Energy Security and Import Reduction: India's push for ethanol production is a strategic move to reduce its heavy dependence on oil imports.

- By blending ethanol with petrol, India aims to cut its oil import bill, which could widen to USD 101-104 billion in the current fiscal from USD 96.1 billion in 2023-24.
- The government's target of 20% ethanol blending by 2025-26 could potentially save the country USD 4 billion annually in foreign exchange.
- This shift not only improves energy security but also provides a buffer against volatile global oil prices, enhancing India's economic stability.
- Agricultural Diversification and Rural Economy Boost: Ethanol production offers a significant opportunity to diversify India's agricultural sector and boost rural incomes.
- The recent policy shift to promote corn-based ethanol alongside sugarcane has created a new market for farmers.
- In 2024, about 3.5 million tons of corn were used to produce 1.35 billion liters of ethanol, quadrupling from 2023.
- This diversification not only provides alternative income sources for farmers but also helps in managing crop surpluses, potentially stabilizing agricultural commodity prices and improving farm incomes.
- Environmental Impact and Climate Change Mitigation: Ethanol blending is a key component of India's strategy to reduce greenhouse gas emissions.
- A study on E20 (20% ethanol blending in petrol) showed that carbon monoxide emissions decreased by about 50% in two wheelers and about 30% in four wheelers by using E20 compared to E0.
- Technological Innovation and Industrial Growth: The ethanol production drive is spurring technological innovation in India's biofuel sector.
- Companies are investing in advanced biofuel technologies, including second-generation (2G) ethanol production from agricultural residues.
- For instance, Indian Oil Corporation has set up the country's first 2G ethanol plant in Panipat with a capacity of 100 kiloliters per day.
- This push is not only creating a new industrial sector but also promoting research and development in biotechnology and chemical engineering, potentially positioning India as a leader in sustainable fuel technologies.
- Geopolitical Leverage and Global Positioning: India's ethanol program has significant geopolitical implications.
- By reducing oil imports, India can potentially decrease its vulnerability to global oil politics. Furthermore, as one of the world's largest ethanol producers, India is positioning itself as a key player in the global biofuel market.
- Also, the ethanol blending program saved Rs 24,300 crore foreign exchange in 2022-23.
- This not only enhances India's trade position but also aligns with its aspirations for global leadership in sustainable development.
- Waste Management and Circular Economy: Ethanol production is becoming a crucial component of India's waste management strategy and circular economy initiatives.
- The use of agricultural residues and food waste for ethanol production addresses the critical issue of stubble burning, particularly in northern India.
- The government's GOBAR-DHAN scheme, which aims to convert biodegradable waste into biogas and ethanol, exemplifies this approach.

Key Issues Related to Ethanol Production

- The Corn Conundrum: India's shift to corn-based ethanol has dramatically altered its corn trade dynamics.
 - Once Asia's top corn exporter, India is now set to import a record 1 million tons in 2024.
 - This reversal has caused domestic corn prices to soar above global benchmarks, severely impacting poultry and starch industries.
 - For instance, in 2024, India's corn exports are expected to plummet to 450,000 tons from the usual 2-4 million tons.
 - This shift not only affects domestic industries but also disrupts established trade relationships with countries like Vietnam and Bangladesh, forcing them to seek alternative suppliers.
- Food vs. Fuel Debate: The diversion of food crops like corn and sugarcane for ethanol production has reignited the food vs. fuel debate.
 - With ethanol distilleries now competing for corn supplies, there's a projected shortfall of 5 million tons for traditional users.
 - This competition is driving up food prices and potentially threatening food security.
 - For example, the farm gate price of broiler chickens has risen to about 75 rupees, while production costs have surged to 90 rupees, pushing poultry farmers into losses.
 - This scenario raises critical questions about prioritizing fuel over food in a country still grappling with malnutrition.
- Water Woes: Ethanol production, particularly from water-intensive crops like sugarcane, is exacerbating India's water crisis.
 - Sugarcane, which covers only 3% of India's cropland, consumes about 70% of irrigation water in some states.
- The push for increased ethanol production could further strain water resources in already water-stressed regions.
 - For instance, Maharashtra, a major sugarcane-producing state, faced severe droughts in recent years, with over 20,000 villages requiring water tankers in 2018. The continued expansion of sugarcane cultivation for ethanol could worsen this situation.
- Green Fuel with a Gray Lining: While ethanol is promoted as a cleaner fuel, its production process raises environmental concerns.
 - The intensive use of fertilizers and pesticides in sugarcane and corn cultivation leads to soil degradation and water pollution.
- Moreover, the conversion process of crops to ethanol is energy-intensive, potentially offsetting some of the emissions benefits.
 - A study by the Institute for Energy Economics and Financial Analysis (IEEFA) suggests that the lifecycle emissions of corn ethanol could be 24% higher than gasoline when considering land-use changes and production emissions.
- Economic Ripple Effects: The ethanol push is causing significant disruptions across various industries.
 - The poultry sector, which relies heavily on corn for feed, is facing a crisis due to skyrocketing costs.
 - The All India Poultry Breeders Association has demanded the import of 5 million tons of duty-free corn to alleviate the situation.
 - Similarly, the starch industry, another major corn consumer, is grappling with supply shortages and price hikes.

- This economic reshuffling is leading to job losses and potential food price inflation, impacting the broader economy.
- **Policy Patchwork:** The rapid push for ethanol production has led to a patchwork of policies that sometimes conflict with other agricultural and environmental goals.
 - For instance, the abrupt curb on using sugarcane for fuel following a drought has led to confusion and supply chain disruptions.
 - The ban on genetically modified (GM) corn severely limits import options, exacerbating supply shortages.
 - These policy inconsistencies create an uncertain regulatory environment, potentially deterring long-term investments in the sector and hampering sustainable growth.
- **Infrastructure Inadequacies:** India's ambitious ethanol blending targets are outpacing the development of necessary infrastructure.
 - The country lacks adequate blending facilities, storage capacities, and transportation networks to handle increased ethanol production and distribution.
 - This infrastructure gap could lead to inefficiencies, increased costs, and potential supply disruptions, challenging the feasibility of meeting the 20% blending target by 2025-26.

Steps can be taken to ensure Ethanol Production is more sustainable and economically viable

- **Diversifying Feedstock:** To reduce pressure on food crops, India should aggressively promote the use of alternative feedstocks for ethanol production.
 - This includes scaling up second-generation (2G) ethanol production from agricultural

residues and third-generation (3G) ethanol from algae.

- The government could set targets for 2G and 3G ethanol production and provide incentives for private sector investment in these technologies.
- **Maximizing Yield, Minimizing Impact:** Implementing precision agriculture techniques can significantly improve the sustainability of ethanol feedstock cultivation.
 - This involves using IoT sensors, drones, and AI-driven analytics to optimize water usage, fertilizer application, and pest control.
 - For example, the Maharashtra government's project to use drones for precision farming in sugarcane cultivation has shown water savings of up to 25%.
 - Scaling such initiatives nationally could dramatically reduce the environmental footprint of ethanol production while improving yields.
- **Water-Smart Policies:** Introducing strict water management policies in ethanol production is crucial.
 - This could include mandating water recycling in distilleries, promoting drip irrigation in sugarcane cultivation, and incentivizing water-efficient crops for ethanol production.
 - The success of Madhya Pradesh's 'Kapildhara' scheme, which has helped install drip irrigation systems, could be replicated in other states.
- **Flex-Fuel Vehicle Push:** Accelerating the adoption of flex-fuel vehicles (FFVs) can create a stable, long-term demand for ethanol.
 - The government could think of mandating that all new vehicles sold after a target year be flex-fuel compatible.

- Brazil's successful FFV program, where over 80% of new cars sold are flex-fuel, serves as a model.
- This shift would not only ensure consistent ethanol demand but also provide consumers with fuel choice flexibility, potentially stabilizing ethanol prices.
- **Zonal Ethanol Production:** Implementing a zonal approach to ethanol production can optimize resource use and reduce transportation costs.
- This involves identifying ideal eco-regions for specific feedstocks and encouraging localized production and consumption.
- For instance, promoting sorghum-based ethanol in drought-prone regions of Maharashtra and Karnataka, while focusing on rice residue-based ethanol in Punjab and Haryana.
- **Integrated Biorefinery Complexes:** Developing integrated biorefinery complexes can significantly enhance the economic and environmental viability of ethanol production.
- These complexes would combine ethanol production with other value-added processes like biogas generation, bioplastics manufacturing, and CO2 capture for industrial use.
- The Godavari Biorefineries in Maharashtra, which produces ethanol along with specialty chemicals and electricity, exemplifies this model.
- **Smart Blending Infrastructure:** Investing in smart blending infrastructure is crucial for achieving higher blending targets efficiently.
- This includes deploying automated blending systems at fuel depots and implementing blockchain-based tracking of ethanol from production to retail.
- **Crop Insurance for Ethanol Feedstocks:** Introducing specialized crop insurance schemes for ethanol feedstocks can encourage farmers to shift to these crops.
- This could include weather-indexed insurance products tailored for sugarcane, sorghum, and other ethanol feedstocks.
- The success of the PradhanMantriFasalBimaYojana could be leveraged to design a sub-scheme specifically for ethanol crops.
- **Circular Economy in Distilleries:** Promoting a circular economy approach in ethanol distilleries can significantly enhance their sustainability.
- This involves mandating the use of distillery waste for biogas production, using the resulting slurry as organic fertilizer, and capturing CO2 for industrial use.
- The Dalmia Bharat Sugar and Industries' zero liquid discharge plant in Uttar Pradesh, which converts all its waste into valuable products, serves as an excellent model.

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TURNING AGRICULTURE INTO A GROWTH ENGINE FOR INDIA

The Indian agriculture sector, traditionally seen as low-tech and subsistence-oriented, has the potential to become a driver of growth and job creation. While agriculture currently employs 46% of the workforce and contributes 18% to GDP, its growth is inconsistent and environmentally costly. To make agriculture a key engine for growth, it is essential to overcome ecological, technological, and institutional challenges. This includes regenerating water resources, expanding irrigation, embracing crop diversity, and adopting high-tech



solutions like micro-irrigation and climate-resilient farming methods.

Moreover, the focus should be on creating synergy between agriculture and the rural non-farm sector, encouraging group farming models, and enhancing allied sectors like fisheries and livestock. Institutional innovations, such as promoting smallholder cooperation through group farming, have shown promising results, increasing productivity and empowering farmers, especially women. By embracing these changes, Indian agriculture can become more technologically advanced, environmentally sustainable, and economically viable, attracting educated youth and driving the country's growth.

Current Status of the Indian Agriculture Sector

- Economic Contribution: Agriculture and allied sectors contributed 18.8% to India's Gross Value Added (GVA) in 2021-22.
- The sector grew by 3.9% in 2021-22, up from 3.6% in 2020-21, showing resilience during the pandemic.
- Employment: Agriculture employs about 46% of India's workforce.
- However, the sector's share in employment has been gradually declining, down from 81% in 1983.
- Production: India's foodgrains production touched a record 315.7 million tonnes in 2021-22 despite climate change challenges. (Economic Survey 2022-23)
- Exports: Agricultural exports grew by 19.92% in 2021-22, reaching USD 50.21 billion.
- Major export items include rice, wheat, cotton, and spices.
- Organic farming: The total area under organic certification process (registered under National Programme for Organic Production) is 7.3 mha (2023-24)
- Recent Government Initiatives:
 - PradhanMantriKisanSammanNidhi (PM-KISAN)
 - PradhanMantriFasalBimaYojana (PMFBY)
 - Soil Health Card Scheme
 - PradhanMantriKrishiSinchaiYojana (PMKSY)
 - e-National Agriculture Market (e-NAM)
 - National Mission on Sustainable Agriculture
 - ParamparagatKrishiVikasYojana (PKVY)
 - Digital Agriculture Mission
 - Unified Farmer Service Platform (UFSP)

- National e-Governance Plan in Agriculture (NeGP-A)
- Mission Organic Value Chain Development for North Eastern Region (MOVCDNER)
 - Recent Technological Developments:
- Drone Technology: In 2021, the government approved subsidies up to 100% of the cost of agriculture drones for drone purchase by farm machinery training institutes.
- The Namo Drone Didi scheme aims to provide drones to 15,000 selected women SHGs during the period 2023-24 to 2025-2026.
- Satellite Imaging and Remote Sensing: ISRO's RISAT-1A satellite, launched in 2022, is being used for agricultural assessment and improvement.
- Happy Seeder Technology: Designed to address stubble burning in rice-wheat systems, it enables wheat sowing without removing paddy straw, reducing air pollution and improving soil health.
- PUSA Decomposer: Developed by the Indian Agricultural Research Institute (IARI), this microbial solution rapidly decomposes crop residues when sprayed on stubble.
- Nano Urea: Introduced by IFFCO in 2021, this liquid fertilizer with nanoscale nitrogen particles boosts nutrient use efficiency and reduces environmental pollution.

Why is Indian Agriculture Underperforming Despite Employing the Majority?

- Fragmented Land Holdings: India's agricultural land is highly fragmented, with the average farm size decreasing from 2.3 hectares in 1970-71 to 1.08 hectares in 2015-16.
- As per India's Agriculture Census 2015-16, 86.1% of Indian farmers are small and marginal (SMF) i.e., have a landholding size smaller than 2 hectares
- More than half of these live in five Indian states of Uttar Pradesh, Bihar, Madhya Pradesh, Maharashtra and Andhra Pradesh.
- This fragmentation limits economies of scale, mechanization, and access to credit.
- Such small plots make it challenging to implement modern farming techniques or invest in technology, leading to lower productivity and income for farmers.
- Irrigation Challenges in a Changing Climate: Despite having 18% of the world's population, India has only 4% of global water resources.
- Over Reliance on monsoon rains, coupled with inefficient irrigation practices, hampers agricultural productivity.
- As of 2022-23, only 52% of cultivated land has access to irrigation.
- The Economic Survey 2017-18 estimated that climate change could reduce annual agricultural incomes by 15-18% on average, and up to 25% in unirrigated areas.
- The recent heat waves in 2022 and 2023, which damaged wheat crops in several states, exemplify the vulnerability of Indian agriculture to climate variability.
- Technological Lag, Innovation Gap: While the Green Revolution significantly boosted productivity in the 1960s and 70s, Indian agriculture has since struggled to keep pace with technological advancements.
- The adoption of precision farming, drone technology, and AI-driven solutions remains low.
- This technological lag contributes to lower yields compared to global standards - India's rice yield is less compared to China's.

- **Market Inefficiencies:** The Agricultural Produce Market Committee (APMC) system, while intended to protect farmers, has often led to exploitation by intermediaries.
 - Farmers typically receive only 15-20% of the retail price of their produce.
 - The recent farm laws of 2020 (now repealed) attempted to address this issue but faced significant opposition.
 - E-NAM (Electronic National Agriculture Market) launched in 2016 aims to create a unified national market, but as of February 2024, only about 1.77 crore farmers were registered on the platform.
- **Credit Crunch- The Debt Trap:** Limited access to formal credit forces many farmers to rely on informal lenders who charge exorbitant interest rates.
 - According to NABARD's All India Rural Financial Inclusion Survey 2017, only 30.3% of agricultural households availed credit from institutional sources.
 - According to the latest 'Situation Assessment of Agricultural Households and Land Holdings of Households in Rural India, 2019', over half of India's agricultural households were in debt, with an average outstanding amount of ₹74,121.
 - This debt burden often leads to a cycle of poverty and, in extreme cases, farmer suicides.
- **Policy Paralysis-The Subsidy Conundrum:** India's agricultural policy has long been dominated by subsidies, which often distort market dynamics and resource allocation.
 - The Government recently estimated that total subsidy on fertilizer could touch ₹2.25-lakh crore during FY24.
 - While these subsidies aim to support farmers, they often lead to overuse of inputs like water and fertilizers, causing environmental degradation.
- The Minimum Support Price (MSP) system, while providing a safety net, has led to overproduction of certain crops like wheat and rice at the expense of more nutritious and environmentally suitable alternatives.
 - This policy-induced cropping pattern mismatch affects both agricultural sustainability and farmers' incomes.
- **Post-Harvest Losses:** India loses a significant portion of its agricultural produce due to inadequate storage and transportation infrastructure.
 - According to the ICAR-Central Institute of Post-Harvest Engineering and Technology, annual post-harvest losses are estimated at ₹92,651 crore.
 - The cold storage capacity in India can only accommodate about 11% of the country's total produce.
 - This leads to distress sales by farmers during harvest seasons, further reducing their income potential.
- **The Knowledge Deficit:** Despite employing a large workforce, Indian agriculture suffers from a significant skill gap.
 - This lack of formal training hampers the adoption of modern agricultural practices and technologies.
 - For example, the improper use of pesticides not only reduces crop yields but also poses health risks.
 - The PradhanMantriKaushalVikasYojana (P MKVY) has tried to address this, but its impact on the agricultural sector remains limited.
- **Diversification Dilemma:** Indian agriculture remains heavily focused on staple crops like rice and wheat. This lack of diversification not only affects soil health but also limits farmers' income potential.
 - High-value crops like fruits and vegetables, which can potentially increase farmers' incomes. However, only 17% of arable

land is being utilized for the cultivation of horticultural crops.

- The recent push for millets (2023 being the International Year of Millets) is a step towards diversification, but widespread adoption remains a challenge.
- **Gender Disparity-The Invisible Female Farmer:** Women constitute 42% of the agricultural labour force in India, yet they own only 14% of agricultural land.
- This gender disparity in land ownership affects access to credit, inputs, and decision-making power.
- According to an FAO report of 2011-12, women farmers could increase farm yield by 20-30%, which could raise agricultural output in developing countries by 2.5-4% and reduce hunger by 12-17% if they had the same access to productive resources and training as men.
- Initiatives like the Mahila Kisan Sashaktikaran Pariyojana aim to empower women farmers, but progress has been slow.

Key Case Studies Related to Agriculture Across the Globe

- **United Kingdom:** GrowUp Farms excels in vertical farming, offering year-round fresh produce in controlled environments.
- **The Netherlands:** RijkZwaan utilizes advanced greenhouses with climate control and LED lighting for high-quality vegetable production, and the Dutch government promotes circular agriculture through biogas energy and recycled materials.
- **China:** Zhongguancun Science Park (Z-Park) in Beijing, China is a growing hub of innovation in many areas including biomedicine.

Measures can be adopted to enhance the productivity of the Agricultural Sector :

- **Precision Agriculture-Farming by the Numbers:** Implementing precision agriculture techniques can significantly boost productivity.
- This involves using GPS-guided machinery, IoT sensors, and data analytics to optimize resource use.
- A pilot project in Maharashtra using precision agriculture techniques reported significant increase in crop yield and a significant reduction in water usage.
- Scaling this nationwide could potentially save billions of liters of water and increase overall agricultural output.
- **Crop Diversification-Beyond Wheat and Rice:** Encouraging farmers to diversify crops can increase income and improve soil health.
- The government's recent push for millets is a step in this direction.
- States like Odisha have successfully implemented crop diversification programs. This not only improved farmer incomes but also enhanced nutritional security.
- Expanding such programs nationwide, with a focus on region-specific high-value crops, can transform agricultural productivity.
- **Farmer Producer Organizations (FPOs):** Promoting and strengthening FPOs can help small and marginal farmers achieve economies of scale.
- The Sahyadri Farmers Producer Company in Maharashtra has increased farmer incomes by 25-30% through collective bargaining and direct market access.
- Replicating this model across India, with adequate support and capacity building, can significantly enhance farmer incomes and agricultural productivity.

- **Climate-Smart Agriculture:** Implementing climate-smart agricultural practices is crucial for long-term sustainability.
 - This includes promoting drought-resistant crop varieties, water conservation techniques, and climate forecasting tools.
 - For example, the flood-tolerant rice variety Swarna-Sub1 has shown yield advantages.
 - The Indian Prime Minister recently unveiled 109 varieties of 61 crops, comprising 34 field crops and 27 horticultural crops, is a step in the right direction.
- **Agri-Tech Startups:** Fostering a vibrant agri-tech startup ecosystem can drive innovation in the sector.
 - Startups like DeHaat, which provides end-to-end services to farmers, have shown promising results.
 - Creating a supportive ecosystem for such startups through incubation centers, funding, and policy support can accelerate technological adoption in agriculture.
- **Minimizing Waste, Maximizing Value:** Investing in post-harvest infrastructure, including cold storage, food processing units, and efficient transportation, can significantly reduce losses and increase farmer incomes.
 - For instance, the mega food park in Rayagada, Odisha, has benefited a large number of farmers by providing processing facilities for their produce.
 - Establishing similar infrastructure across the country, especially in major producing

regions, can help reduce the estimated annual post-harvest losses of ₹92,651 crore.

- **Agricultural Education and Extension:** Strengthening agricultural education and extension services can bridge the knowledge gap in farming communities.
 - The PRAGATI (Promoting Risk Aware Governance and Technology Infusion) scheme aims to revamp agricultural extension services.
 - Scaling such innovative extension models, coupled with modernizing agricultural universities, can create a more skilled and knowledgeable farming workforce.

To transform Indian agriculture into a robust engine of growth, it is crucial to address the sector's multifaceted challenges. Embracing precision agriculture, expanding crop diversification, and investing in post-harvest infrastructure are essential steps. Strengthening farmer cooperatives and leveraging advancements in agri-tech can enhance productivity, sustainability, and economic viability, ensuring that agriculture becomes a more dynamic contributor to India's economic development.

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INDIA-ASEAN: PARTNERS IN PROGRESS

Indian Prime Minister's upcoming visit to Singapore, marks a significant moment in the evolving India-Singapore partnership. India and Singapore are set to unveil about half a dozen agreements, including a crucial one on creating a semiconductor ecosystem. Building on the "new anchors" identified



during the recent India-Singapore Ministerial roundtable, the relationship is poised for a major leap

forward. Singapore's position as India's largest trade partner in ASEAN and its status as the leading source of foreign direct investment underscores the economic significance of this relationship.

India's engagement with Singapore serves as a crucial gateway to strengthening its broader relations with ASEAN. As India seeks to deepen its 'Act East' policy and expand its influence in the Indo-Pacific region, enhancing ties with Singapore - a key ASEAN member - becomes strategically vital.

Significance of ASEAN for India

- Historical Context and Elevation of Partnership:
 - 1992: India became a Sectoral Dialogue Partner with ASEAN, marking the start of formal engagement.
 - 2022: The 30-year anniversary of ASEAN-India relations was celebrated, designated as ASEAN-India Friendship Year, culminating in the elevation of the Strategic Partnership to a Comprehensive Strategic Partnership.
- Economic Powerhouse-Gateway to Southeast Asian Markets: ASEAN represents a crucial economic bloc for India, offering access to a market of

over 650 million people with a combined GDP of USD 3.2 trillion.

- The ASEAN-India Free Trade Area has boosted bilateral trade to USD 110.39 billion in 2021-2022.
- ASEAN is one of the major trade partners of India with a share of 11% in India's global trade.
- Singapore is India's largest trade partner in ASEAN and 6th largest trade partner worldwide and it was the largest source of FDI during the last financial year valued at USD 11.77 billion.
- Strategic Counterbalance: In the context of rising geopolitical tensions, particularly with China, ASEAN serves as a crucial strategic partner for India.
- India's 'Act East Policy' and ASEAN's 'Outlook on the Indo-Pacific' share complementary visions for regional stability.
- The elevation of India-ASEAN ties to a Comprehensive Strategic Partnership in 2022 underscores this alignment.
- India's engagement with ASEAN in forums like the East Asia Summit and ASEAN Regional Forum provides platforms to assert its role as a net security provider in the region, countering Chinese influence and promoting a rules-based international order.
- Connectivity Catalyst: ASEAN is pivotal in India's vision of enhanced regional connectivity.
- Projects like the India-Myanmar-Thailand Trilateral Highway and the Kaladan Multi-Modal Transit Transport Project, despite delays, represent India's commitment to physical integration with Southeast Asia.

- Digital connectivity initiatives, including the recent focus on 5G and cyber security cooperation, further strengthen these links.
- These connectivity projects are not just about infrastructure but are strategic investments in creating an integrated economic and cultural space that can rival China's Belt and Road Initiative in the region.
- **Cultural Confluence:** The deep-rooted historical and cultural ties between India and Southeast Asia provide a unique foundation for soft power diplomacy.
- Initiatives like the ASEAN-India Artists' Camp and Music Festival celebrate this shared heritage.
- The establishment of the ASEAN-India Network of Universities in 2022 further strengthens academic and cultural exchanges.
- These cultural links are increasingly important in an era where public diplomacy plays a crucial role in international relations, helping India build goodwill and influence in the region.
- **Technological Synergy:** ASEAN's rapidly digitalizing economies present significant opportunities for India's IT sector and start-up ecosystem.
- The inaugural ASEAN-India Start-up Festival showcases the potential for collaboration in areas like fintech, e-commerce, and artificial intelligence.
- The ASEAN-India Science and Technology Development Fund, with its recent USD 5 million boost, supports joint research in cutting-edge fields.
- **Maritime Security Collaboration:** ASEAN is a key partner in India's maritime security strategy, particularly in the context of the Indo-Pacific region.
- Collaboration on issues like piracy, illegal fishing, and disaster management in bodies like the ASEAN Regional Forum and the Expanded ASEAN Maritime Forum aligns with India's SAGAR (Security and Growth for All in the Region) doctrine.
- The inaugural ASEAN India Maritime Exercise was held in the South China Sea in May 2023.
- **Energy Security and Sustainability:** ASEAN's energy-rich members offer opportunities for India to diversify its energy sources, crucial for its growing economy.
- Simultaneously, India's expertise in renewable energy, particularly solar power, aligns with ASEAN's sustainability goals.
- The recent ASEAN-India High-Level Conference on Renewable Energy exemplifies this synergy.
- Cooperation in semiconductors, clean energy technologies and sustainable development practices positions both India and ASEAN at the forefront of global efforts to combat climate change while ensuring energy security.
- **Supply Chain Resilience:** In the post-Covid era, ASEAN has emerged as a key partner in India's efforts to build resilient supply chains.
- The pandemic exposed vulnerabilities in global supply networks, prompting a rethink of over-dependence on single sources.
- India-ASEAN cooperation in sectors like pharmaceuticals, electronics, and automobiles is crucial for creating diversified, robust supply chains.
- This collaboration aligns with broader initiatives like the Supply Chain Resilience Initiative (SCRI) involving India, Japan, and Australia, aimed at reducing dependence on China and creating more secure regional value chains.

Key concerns in India-ASEAN relations

- Trade Imbalance: India's trade deficit with the ASEAN has surged, more than doubling since the implementation of the Free Trade Agreement (FTA) in 2010.
 - This imbalance is particularly pronounced in sectors like electronics and machinery.
 - For instance, in the fiscal year 2022-2023, India's exports to ASEAN countries amounted to USD 44.04 billion, while imports significantly outpaced this, reaching USD 87.58 billion during the same period.
- Infrastructure Connectivity: While India and ASEAN have made progress in digital and cultural connectivity, physical infrastructure links remain underdeveloped.
 - The India-Myanmar-Thailand Trilateral Highway, a flagship project, has faced significant delays and is yet to be completed.
 - Similarly, the Kaladan Multi-Modal Transit Transport Project has encountered challenges.
 - These delays hamper trade flows and people-to-people connections.
- Geopolitical Balancing- Navigating the China Factor: China's growing influence in Southeast Asia poses a complex challenge for India-ASEAN relations.
 - ASEAN member states are increasingly caught between Chinese economic inducements and security concerns.
 - India's efforts to position itself as a counterbalance to China, such as through the Quad Alliance, have met with mixed responses from ASEAN countries wary of taking sides.
 - The South China Sea dispute further complicates this dynamic.
- For instance, while Vietnam and the Philippines welcome India's more active

role in the South China Sea, other members are more cautious

- Regulatory Hurdles: Differences in regulatory standards and procedures between India and ASEAN countries create significant non-tariff barriers to trade and investment.
 - For example, divergent food safety standards and certification processes hinder agricultural trade.
 - The lack of mutual recognition agreements in professional services limits the movement of skilled professionals.

India continue to face trade deficit with ASEAN

- Tariff Asymmetry: The ASEAN-India Free Trade Agreement (AIFTA) has led to asymmetric tariff reductions, disadvantaging India.
 - While India has reduced tariffs on about 74% of its tariff lines for ASEAN countries, the latter have reciprocated for only about 56% of their tariff lines.
 - This imbalance is particularly pronounced in sectors like agriculture and textiles.
 - This tariff structure has contributed to the surge in imports from ASEAN, widening the trade deficit which reached USD 25.76 billion in 2021-22.
- Non-Tariff Barriers: ASEAN countries employ various non-tariff barriers (NTBs) that hinder Indian exports.
 - These include complex regulatory requirements, stringent sanitary and phytosanitary measures, and technical barriers to trade.
 - For example, Indian pharmaceutical exports face lengthy and costly registration processes in several ASEAN countries.
 - Similarly, Indian agricultural products often struggle to meet ASEAN's strict food safety standards.

- **Manufacturing Competitiveness:** Many ASEAN countries, particularly Vietnam and Thailand, have developed robust manufacturing sectors with higher productivity levels than India.
 - This is evident in sectors like electronics and machinery.
 - For instance, India exports to Vietnam reached USD5.47 billion (down 7.43%) while Indian imports from Vietnam amounted to USD 9.34 billion (up 6.26%).
 - India's relatively lower labour productivity and higher logistics costs (14% of GDP compared to 5-10% in ASEAN) contribute to this competitiveness gap.
- **Missing Link Regional Value Chain:** India's limited integration into ASEAN-centric regional value chains exacerbates the trade imbalance.
 - ASEAN countries have successfully positioned themselves as key nodes in global supply chains, particularly in electronics and automotive sectors.
 - For example, Thailand is a major auto parts supplier for Japanese car manufacturers, while Vietnam is a crucial link in the electronics supply chain.
 - India's participation in these regional production networks remains limited, reducing its ability to capture value-added exports to ASEAN and beyond.
- **Services Trade Barriers:** While India has a comparative advantage in services, particularly in IT and ITeS, barriers to services trade in ASEAN due to language and other factors limit India's ability to offset goods trade deficit.
 - Restrictions on the movement of professionals, lack of mutual recognition agreements for qualifications, and data localization requirements in some ASEAN countries hinder India's services exports.
- **Rules of Origin Exploitation:** Weak rules of origin in the AIFTA have allowed non-ASEAN countries, particularly China, to route their exports to India through ASEAN, exacerbating the trade deficit.
 - This 'trade deflection' has been particularly problematic in sectors like electronics and machinery.
 - This issue not only inflates the trade deficit with ASEAN but also undermines India's efforts to reduce dependence on Chinese imports.

Measures can be adopted to enhance India-ASEAN Relations

- **Recalibrating the ASEAN-India Free Trade Agreement (AIFTA):** India should push for a comprehensive review and recalibration of AIFTA to address the trade imbalance.
 - This could include negotiating for more balanced tariff reductions, particularly in sectors where India has a competitive advantage such as pharmaceuticals, textiles, and IT services.
 - For instance, India could propose a phased reduction of tariffs on sensitive agricultural products while seeking greater market access for its services sector.
- **Enhancing Infrastructure Connectivity:** India needs to accelerate the completion of key connectivity projects like the India-Myanmar-Thailand Trilateral Highway and extend it to Cambodia, Laos, and Vietnam.
 - India could propose a comprehensive "Connectivity Master Plan" aligned with ASEAN's Master Plan on Connectivity 2025.
 - This could include digital connectivity initiatives, such as the proposed India-ASEAN submarine cable project, which would significantly boost digital trade and services.

- Timely completion of these projects could potentially increase India-ASEAN trade by 20-30% in the medium term.
- **Boosting Manufacturing Competitiveness:** To address the manufacturing competitiveness gap, India should focus on sector-specific interventions.
- The Production Linked Incentive (PLI) scheme, which has shown promise in sectors like electronics, should be extended to cover more industries relevant to ASEAN trade.
- India could also propose joint manufacturing initiatives with ASEAN countries, leveraging each other's strengths.
- For example, a joint India-Vietnam electronics manufacturing hub could combine India's software capabilities with Vietnam's hardware expertise.
- Such initiatives could help India integrate better into regional value chains.
- **Enhancing Energy Cooperation:** India should propose a comprehensive "ASEAN-India Energy Partnership" focusing on energy security, clean energy transition, and technology cooperation.
- This could include joint exploration and development of renewable energy technologies, semiconductors and knowledge sharing on energy efficiency.
- Joint research on emerging areas like green hydrogen and energy storage could also be initiated. Enhanced energy cooperation could help India diversify its energy sources while supporting ASEAN's sustainable development objectives.
- **Enhancing Strategic and Defense Cooperation:** India should deepen its strategic engagement with ASEAN, particularly in maritime security.
- India could offer increased capacity building assistance to ASEAN countries in areas like maritime domain awareness, anti-piracy operations, and humanitarian assistance and disaster relief (HADR).
- The Information Fusion Centre - Indian Ocean Region (IFC-IOR) could be leveraged to enhance maritime cooperation.
- India should also consider joint defense production initiatives with technologically advanced ASEAN countries like Singapore and Indonesia, which could enhance interoperability and strategic trust.
- **Aligning on Climate Change and Sustainability:** India should propose an "ASEAN-India Green Partnership" focusing on climate change mitigation, renewable energy, and sustainable development.
- This could include technology transfer in areas like solar energy, where India has made significant strides with initiatives like the International Solar Alliance.
- Joint research projects on climate-resilient agriculture, given the shared vulnerability to climate change, could be initiated.
- Such initiatives could position India as a responsible partner in addressing shared environmental challenges.

How India Can Leverage Singapore to Enhance Its Relations with ASEAN?

- **Economic Gateway:** Singapore's strategic location and its status as a major financial hub make it an ideal economic gateway for India into the ASEAN region. India can:
 - Use Singapore as a base for Indian companies, especially startups and tech firms, to expand into Southeast Asian markets
 - Leverage the Comprehensive Economic Cooperation Agreement (CECA) to boost trade and investment flows with other ASEAN countries
 - Collaborate with Singapore to promote digital financial inclusion across ASEAN,

building on successes like the UPI-PayNow linkage.

- Maritime Security Cooperation: Given Singapore's strategic location at the Malacca Strait and its support for India's role in regional maritime security, India can:
 - Expand joint naval exercises like SIMBEX to include other ASEAN nations, enhancing regional maritime cooperation
 - Collaborate with Singapore to promote maritime security initiatives within ASEAN, such as the ASEAN-India Maritime Exercise
- Technology and Innovation Hub: Singapore's emphasis on innovation and technology aligns well with India's digital ambitions. India can:
 - Partner with Singapore to develop joint initiatives in emerging technologies like block chain, AI, and cyber security, which can be extended to other ASEAN countries
 - Use Singapore as a test bed for Indian tech

innovations before scaling them across ASEAN

- Supply Chain Resilience: Building on the collaboration during the COVID-19 pandemic, India can:
 - Use Singapore's expertise in logistics and supply chain management to enhance connectivity with other ASEAN nations
 - Collaborate on initiatives to ensure the free flow of essential goods and services across the region during crises.

India's strategic engagement with ASEAN, highlighted by the evolving partnership with Singapore, underscores a pivotal shift towards deeper economic, technological, and security collaborations. As India leverages Singapore's position and expertise to enhance its regional footprint, the ongoing commitment to strengthening ASEAN ties promises substantial mutual benefits. Addressing trade imbalances and expanding cooperation in key sectors will be crucial for realizing the full potential of this dynamic relationship.

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INDIA'S BIOTECH REVOLUTION

India's Cabinet has approved the BioE3 (Biotechnology for Economy, Environment and Employment) proposal to boost manufacturing in the biotechnology sector. While India has made significant strides in areas like vaccine development, the



country has yet to fully capitalize on the broader potential of biotechnology. The BioE3 policy focuses on six verticals, including bio-based chemicals, functional foods, precision biotherapeutics, climate-resilient, agriculture, carbon capture, and marine/space research. While well-intentioned, the policy's success depends on long-term financial and infrastructural support from both the central and state governments.

While the BioE3 policy is a promising step, it is essential to create a conducive environment for long-term capital investment and foster collaborations between the central and state governments. Without these enabling conditions, the policy's impact may be limited. India needs to progress more in the field of biotechnology to fully realize its potential and contribute to global advancements in this sector.

Current Status of India's Biotechnology Sector

- Status: India ranks among the top 12 destinations for biotechnology worldwide.

- It is the 3rd largest destination for biotechnology in the Asia-Pacific region.
- India's Bio economy reached an estimated value of USD 130 billion in 2024.
- Biotechnology is recognized as a sunrise sector, playing a crucial role in India's ambition to become a USD 5 trillion economy by 2024.
- With about 3% of the global biotechnology market share, India is becoming a hub for delivering innovative and affordable healthcare solutions.
- Biotechnology Categories in India
 - Biopharmaceuticals: India is a leading global supplier of low-cost drugs and vaccines.
 - The country is also a pioneer in bio similar, with the highest number of bio similar approved in the domestic market.
 - Bio-Agriculture: With approximately 55% of Indian land dedicated to agriculture, India holds the 5th largest area of organic agricultural land globally.
 - The Bio-Agriculture sector has the potential to nearly double its Bio Economy contribution from USD 10.5 billion to USD 20 billion by 2025.
 - Bio-Industrial: Biotechnology is transforming industrial processes, manufacturing, and waste disposal across the country.
 - Bio IT & Bio Services: India has strong capabilities in contract manufacturing, research, and clinical trials.
 - The country hosts the highest number of US FDA-approved plants outside the United States.
 - Government Initiatives:

- 100% FDI is allowed under the automatic route for green field pharma and for the manufacturing of medical devices.
 - FDI policies are favourable, with specific routes for brownfield pharma and medical devices.
 - National Biotechnology Development Strategy 2021-25 aims to make India globally competitive in biotechnology research, innovation, translation, entrepreneurship and industrial growth and be a USD 150 billion Bio economy by 2025.
 - The Department of Biotechnology has funded 51 Biotech-KISAN hubs to connect farmers with scientists and institutions, focusing on sustainable agricultural practices, soil health, irrigation, and new agri-technologies.
 - Under the Union Budget 2023-24, the government announced the establishment of 500 new 'waste to wealth' plants under the GOBARdhan scheme, with a total investment of INR 10,000 crore.
 - Genome India Project aims to sequence and analyze the genomes of a representative Indian population to understand genetic diversity and its implications for public health.
 - The Department of Biotechnology (DBT), Government of India, announced the First National Biotechnology Development Strategy in September 2007.
- Significance of Biotechnology for India**
- Economic Powerhouse-Biotech's Billion-Dollar Promise: India's biotech industry is poised for explosive growth, with projections suggesting it could reach USD 150 billion by 2025.
 - Success stories like Biocon, demonstrate the potential for Indian biotech firms to compete globally.
 - The government's push through initiatives like BioE3 and the Biotechnology Industry Research Assistance Council (BIRAC) aim to catalyze this growth, potentially creating millions of high-skilled jobs and significantly contributing to India's GDP.
 - Vaccine Prowess: India's prowess in vaccine production has earned it the moniker "pharmacy of the world."
 - India accounts for 60% of global vaccine production, contributing 40-70% of the WHO demand for Diphtheria, Tetanus and Pertussis (DPT).
 - During the Covid-19 pandemic, India's Serum Institute became the world's largest vaccine manufacturer.
 - This capacity not only ensures India's health security but also positions it as a crucial player in global health initiatives, enhancing its soft power and diplomatic influence.
 - Agricultural Revolution 2.0: Biotechnology offers solutions to India's pressing agricultural challenges, from climate-resilient crops to enhanced nutritional content.
 - Bt cotton, India's first genetically modified crop, now accounts for 95% of cotton cultivation, significantly increasing yields and farmer incomes.
 - Ongoing research into drought-resistant rice varieties and bio fortified crops like golden rice could revolutionize food security for India's growing population
 - Environmental Safeguard: Biotechnology offers promising solutions to India's environmental challenges.
 - Bioremediation techniques are being developed to clean up polluted sites, with successful pilot projects like the cleaning of Versova Beach in Mumbai.

- The development of biodegradable plastics and bio-based materials could help address India's waste management crisis.
- Furthermore, biotech approaches to carbon capture, as outlined in the BioE3 policy, could play a crucial role in meeting India's ambitious climate targets under the Paris Agreement.
- The government's push for climate-resilient agriculture under BioE3 could be a game-changer in adapting to climate change impacts.
- **Innovation Ecosystem:** India's biotech sector is fostering a vibrant innovation ecosystem.
- The country now boasts over 5,000 biotech startups, with hubs like Bangalore Bio innovation Centre and Hyderabad's Genome Valley driving research and commercialization.
- Government initiatives like the Atal Innovation Mission and the establishment of bio-foundries under BioE3 aim to further catalyze this ecosystem.
- This could lead to breakthrough innovations and potentially position India as a global biotech innovation leader.
- **Self-Reliance in Critical Sectors:** Biotechnology is key to reducing India's import dependence in critical sectors.
- Environmental biotechnology aids in creating eco-friendly alternatives to imported plastics and developing efficient waste management solutions.
- In the energy sector, biotech advances support the production of biofuels and bio-based materials, reducing dependence on imported fossil fuels.
- Additionally, industrial biotechnology facilitates the domestic production of enzymes, biocatalysts, and other bio-based products, minimizing imports for industries like textiles, leather, and food processing.
- In the pharmaceutical sector, increasing domestic production of active pharmaceutical ingredients (APIs) through biotechnology could enhance India's health security and reduce vulnerability to supply chain disruptions.
- **Futuristic Frontiers- Marine and Space Biotechnology:** India's focus on futuristic marine and space research in biotechnology opens up exciting new frontiers.
- Marine biotechnology could unlock the potential of India's vast coastline, leading to discoveries in biofuels, novel materials and conservation of key marine species like coral reefs.
- In space biotechnology, research on extremophiles and closed-loop life support systems could not only support India's space ambitions but also lead to innovations applicable on Earth, such as in waste management and resource efficiency.
- **Biotech-A Catalyst to Achieve Sustainable Development Goals:** Biotechnology serves as a powerful tool in India's pursuit of the UN Sustainable Development Goals (SDGs).
- It addresses SDG 2 (Zero Hunger) through biofortified crops and GM varieties that enhance food security.
- For SDG 3 (Good Health), affordable biopharmaceuticals and diagnostics improve healthcare access.
- Biotech solutions contribute to SDG 6 (Clean Water) and SDG 7 (Clean Energy) through advanced water treatment and biofuel production.
- Moreover, it aids in climate action (SDG 13) via carbon capture technologies and climate-resilient crops, while also

supporting marine and terrestrial biodiversity (SDGs 14 and 15).

- By aligning with these goals, biotechnology positions itself as an essential driver of India's sustainable future.

Key challenges hindering the growth of Biotechnology in India

- **Regulatory Maze-** Navigating the Bureaucratic Labyrinth: India's complex and often slow regulatory environment poses a significant challenge to biotech innovation.
- The approval process for genetically modified organisms (GMOs) is particularly cumbersome, with the moratorium on Bt brinjal since 2010 serving as a prime example.
- Multiple agencies involved in regulation, including the Genetic Engineering Appraisal Committee (GEAC) and the Review Committee on Genetic Manipulation (RCGM), often lead to overlapping jurisdictions and delays.
- **Funding Famine-The Capital Crunch in Biotech:** Despite government initiatives, access to adequate funding remains a major hurdle for Indian biotech firms.
- Long gestation periods and high risks associated with biotech research deter many investors.
- India's funding in 2022 for the biotechnology sector is critically low, as the entire Ministry of Science and Technology receives only 0.05% of India's GDP as funding from the Central Government.
- **Infrastructure Inadequacies-The Facilities Fallout:** Despite improvements, India's biotech infrastructure lags behind global standards in many areas.
- High-end research equipment, state-of-the-art laboratories, and bio containment facilities are often in short supply or concentrated in a few urban centers.
- The lack of reliable cold chain infrastructure poses challenges for pharmaceutical distribution, as highlighted during the Covid-19 vaccine rollout.
- While initiatives like the National Bio pharma Mission aim to address these gaps, the scale of investment required is substantial, with estimates suggesting a need for over USD 10 billion in the next decade to bring facilities up to global standards.
- **IP Insecurity-Protecting Innovation in a Global Market:** Intellectual property protection remains a concern for biotech innovators in India.
- Patent application filing increased by 24.64%, from 66440 in 2021-22 to 80211 in 2022-23, still enforcement challenges persist.
- The ongoing debate over patent protection for Covid-19 vaccines highlights the delicate balance between innovation incentives and public health needs.
- **Global Gate crashing-Competing in an Established Market:** Indian biotech firms face stiff competition from well-established global players, particularly in lucrative markets like biopharmaceuticals.
- Breaking into these markets requires not just innovative products but also significant investments in clinical trials, regulatory compliance, and marketing.
- While initiatives like the Production Linked Incentive (PLI) scheme aim to boost competitiveness, Indian firms still have ground to cover in terms of global market presence and brand recognition.
- **Talent Tug-of-War - Brain Drain and Skill Gaps:** India produces a large number of biotech graduates annually, yet faces a paradoxical shortage of skilled professionals in cutting-edge areas.

- Brain drain remains a persistent issue, with many top talents seeking opportunities abroad.
- Moreover, the industry cites a significant gap between academic training and industry needs, particularly in areas like bioinformatics, computational biology, and bioprocess engineering. This skills mismatch hampers the sector's growth and innovation potential.
- **Ethical Challenges- Navigating Moral and Social Dilemmas:** Biotechnology often intersects with complex ethical issues, creating roadblocks to research and commercialization.
- The ongoing debate over genetically modified crops exemplifies this, with public opposition stalling the introduction of GM mustard despite regulatory approvals.
- Recent advancements in gene editing technologies like CRISPR have reignited discussions on the ethical implications of human genome modification.
- The lack of clear ethical guidelines and public engagement mechanisms often leads to regulatory paralysis, hindering progress in potentially beneficial areas of research.

Measures can India Adopt to Enhance the Biotechnology Sector

- **Regulatory Reimagining-Streamlining for Innovation:** India should establish a single-window clearance system for biotech projects, similar to the successful model used in the IT sector.
- This could be achieved by creating a unified Biotechnology Regulatory Authority of India (BRAI), consolidating the functions of multiple existing agencies.
- Implementing a risk-based assessment approach, as opposed to the current one-size-fits-all model, would accelerate approvals for low-risk innovations while

maintaining stringent oversight where necessary.

- Recent initiatives like the DNA Technology Regulation Bill (withdrawn) can provide a framework that could be expanded to cover broader biotech regulations.
- **Capital Catalyst-Innovative Funding Mechanisms:** To address the funding gap, India should create a dedicated Biotechnology Investment Fund, leveraging a public-private partnership model.
- This fund could offer a mix of grants, soft loans, and equity investments tailored to different stages of biotech development.
- Recent success stories like the government's Covid Suraksha mission, which accelerated vaccine development through targeted funding, provide a template for future crisis-responsive funding mechanisms.
- **Talent Transformation-Bridging Academia and Industry:** Launch a National Biotechnology Skill Development Program, focusing on emerging areas like synthetic biology, bioinformatics, and precision medicine.
- Mandate industry internships as part of biotech curricula and incentivize companies to offer these opportunities.
- Encourage interdisciplinary education by integrating biotech modules into engineering, computer science, and business programs to create a versatile workforce.
- **Infrastructure Imperative-Building World-Class Facilities:** Develop a network of shared high-end research facilities across the country, accessible to both academia and industry on a pay-per-use basis.
- Establish specialized biotech manufacturing zones with plug-and-play facilities, streamlined approvals, and

- shared utilities to reduce setup costs for companies.
- Invest in upgrading and expanding the cold chain infrastructure critical for biopharmaceuticals.
- IP Empowerment-Nurturing a Culture of Innovation: Strengthen the intellectual property rights (IPR) regime by increasing the number of patent examiners specializing in biotechnology and reducing patent processing times.
- Establish a Biotech Patent Pool to facilitate collaborative research and technology transfer, especially for neglected diseases and agricultural innovations.
- Leveraging Make in India for Biotech Manufacturing: Expand the Production Linked Incentive (PLI) scheme to cover a wider range of biotechnology products, including enzymes, bio plastics, and bio fortified crops.

- This aligns with the Make in India initiative and addresses the BioE3 policy's focus on boosting domestic manufacturing.
- Establish Biotech Manufacturing Corridors in states with strong biotech presence (e.g., Karnataka, Telangana, Maharashtra) with specialized infrastructure and single-window clearances.

The BioE3 initiative represents a significant step towards harnessing India's biotechnology potential. For its success, robust financial and infrastructural support is crucial. This initiative could drive economic growth, enhance environmental sustainability, and create employment, but it requires effective collaboration between central and state governments to overcome existing challenges. India's continued progress in biotechnology will be pivotal for its global standing and sustainable development goals.

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WORLD AFFAIRS

WHO granted the first mpox vaccine approval for Africa

The World Health Organization (WHO) has approved using a vaccine against mpox in



adults in Africa. The pre-qualification of the vaccine by Bavarian Nordic means that donors such as GAVI, the Vaccine Alliance, and UNICEF

can buy it. This first pre-qualification of a vaccine against mpox is an important step towards fighting against this disease. As per the WHO, the vaccine can be administered to people aged 18 or above in a two-dose regimen. According to the Africa Centre for Disease Control (CDC) and Prevention, 70% of the cases were in Congo, which is the hardest hit by mpox. As per the Africa CDS, 107 new deaths and 3160 new cases have been recorded in the past week. Mpox belongs to the same family of viruses as smallpox. It has symptoms such as fever, chills, and body aches.

Algeria became a new member of the BRICS New Development Bank (NDB)

Algeria's membership to the BRICS New Development Bank (NDB) has been approved. This was announced by the NDB chief DilmaRoussef at a meeting in Cape Town, South Africa. Algeria has taken an important step towards integrating into the global financial system. Algeria is a leading exporter of natural gas in the African continent. BRICS New Development Bank (NDB): It was formed in 2015 to mobilise resources for projects in emerging markets and developing countries. Brazil, Russia, India, China and South Africa are the founding

members of the BRICS New Development Bank. Its main aim is to offer an alternative to international financial institutions like the World Bank and IMF.

Mexico became the first country in the world to allow voters to elect judges at all levels

The decision came after protesters stormed the Upper House and debate on the issue was postponed. Outgoing President Andrés Manuel LópezObrador had pushed hard for reform and criticized the current judicial system for serving the interests of political and economic elites. With 41 votes against and 86 in favour, the reform was approved by the upper chamber, which is dominated by the ruling MORENA party and its allies. This is the two-thirds majority needed to amend the constitution. The debate over reform has sparked mass protests, diplomatic tensions and investor panic. Opponents, including court employees and law students, have staged numerous protests against the plan, which would see Supreme Court and other high-level judges, as well as local-level judges, elected by popular vote.

A minimum age law for social media use will be enacted by Australia

Australian Prime Minister Anthony Albanese announced plans to introduce a minimum age law for social media to protect children. This initiative aims to support parents and enhance child safety online. A national survey by the University of Michigan found that more than half of parents view mental health issues as the top health concern for their children and teens, surpassing childhood obesity. Two-thirds of parents are worried about the amount

of time children spend on devices, particularly on social media.

Super Typhoon Yagi hits southern China

Super Typhoon Yagi brought heavy rains and powerful winds to southern China, causing schools to close and flights to be canceled. With maximum sustained winds of 245 kph (152 mph), it is one of the strongest storms in Asia this year and ranks as the world's second-most powerful tropical cyclone of 2024. Yagi, which has intensified since hitting the northern Philippines, is expected to make landfall on Hainan Island and then move towards Vietnam and Laos. This marks the strongest storm to hit Hainan since 2014.

The United States, the European Union, and the United Kingdom took a historic step by signing the first legally binding international treaty on Artificial Intelligence (AI)

The Council of Europe Framework Convention on Artificial Intelligence, Human Rights, Democracy, and the Rule of Law was signed at a conference in Vilnius, Lithuania. This treaty aims to regulate AI technologies by balancing innovation with the protection of human rights and democratic values. It resulted from years of negotiations among 57 countries, including major AI developers like the US, UK, and EU. The agreement focuses on addressing the risks of AI while promoting responsible innovation, ensuring that AI systems align with fundamental human rights and the rule of law.

For the first time in the world, trials of the lung cancer vaccine launched in seven countries

Doctors are testing the world's first mRNA lung cancer vaccine, BNT116, developed by BioNTech. This vaccine aims to treat non-small cell lung cancer (NSCLC) by instructing the body to target and eliminate cancer cells while preventing their return. Lung cancer is

the leading cause of cancer deaths, with about 1.8 million fatalities each year, particularly among patients with advanced stages of the disease. Phase 1 clinical trials have begun at 34 research sites across seven countries, including the UK, US, Germany, and others. Experts have highlighted its potential to save thousands of lives.

A six-month global plan has been launched by WHO to combat Mpox outbreak

This plan aims to curtail human-to-human transmission of Mpox. For this, the plan involves coordinated global, regional, and national efforts. The plan will start from September 2024 to February 2025. It envisions 135 million U.S. dollars in funding. The plan includes strategic vaccination efforts for those at highest risk to interrupt the transmission chain. Healthcare personnel and close contacts of recent cases are examples of this. Mpox was declared a Public Health Emergency of International Concern by the World Health Organization (WHO) on 14th August. The World Health Organisation reports that since 2022, 208 deaths and over 99 thousand cases of mpox have been documented worldwide from 116 different countries.

North Korean leader Kim Jong Un unveiled new 'suicide drone'

Suicide drones are unmanned drones designed to carry explosives and strike enemy



targets like guided missiles. North Korean leader Kim Jong-un emphasized the need to develop more suicide drones alongside other types of drones for strategic reconnaissance and attacks. North Korea's drone fleet, capable of carrying nuclear weapons, aims to hit targets on land and at sea. Recent tests showed that these

drones can accurately identify and destroy designated targets after following predetermined routes, with a flight range exceeding 1,000 km (600 miles). They resemble Israeli and Russian suicide drones like the Harop and Lancet-3.

World Bank issued the world's first carbon removal bond to raise funds for Amazon reforestation

The World Bank has issued a \$225 million bond aimed at saving the Amazon rainforest by linking investor returns to the amount of carbon removed from the atmosphere. This nine-year note will fund reforestation efforts in the Amazon, with returns based on the climate impact of newly planted trees. Investors will receive a guaranteed coupon rate of about 1.745% per year, lower than typical World Bank bonds. The funds will help Mombak acquire or partner with landowners to replant native trees. Carbon credits generated from these projects will be sold to Microsoft, with bondholders earning additional revenue based on credit sales, potentially leading to a total annual yield of 4.362%.

A powerful typhoon 'Ampil' hit Japan

A powerful typhoon 'Ampil' struck the eastern region of Japan. Japan grounded hundreds of flights and urged people to evacuate. Typhoon Ampil has been categorized as very strong" by the Japan Meteorological Agency (JMA). Japan Meteorological Agency has two higher categories - "very strong" and "violent" for typhoons. Ampil had wind speeds of 45

metres per second with a maximum gust of 60 metres per second (216 kph/134 mph). A cyclone is called a 'hurricane' in the American continent. In Japan, it is called a 'typhoon'. A cyclone is a very low-pressure system with very high-speed winds revolving around it.

Paetongtarn Shinawatra has been elected by Thailand's Parliament as country's new Prime Minister

Paetongtarn Shinawatra is the youngest daughter of former leader Thaksin Shinawatra. Paetongtarn Shinawatra is the leader of the ruling Pheu Thai party. Paetongtarn Shinawatra is the youngest prime minister of Thailand. The nomination of Paetongtarn came about as a result of Prime Minister Srettha Thavisin's dismissal on August 14, 2024, having served for less than a year. He was found guilty by the Constitutional Court of a serious ethical breach related to an alleged attempt at bribery. The progressive Move Forward party, which won the general election of the previous year, was dissolved by the same court last week. Paetongtarn is third leader from the Shinawatra family. Thailand is a Southeast Asian country. Its capital is Bangkok. Thai Baht is its currency. Type of government is unitary parliamentary constitutional monarchy.

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NATIONAL AFFAIRS

Ministry of Environment organized a dialogue on the Montreal Protocol

The Ministry of Environment, Forest and Climate Change held a dialogue on "Montreal Protocol: Advancing Climate Action" to mark the 30th World Ozone Day. The Montreal Protocol aims to protect the ozone layer by reducing ozone-depleting substances. World Ozone Day emphasizes the importance of protecting the ozone layer for future generations. Increased use of cooling systems has raised temperatures, negatively impacting the ozone layer. India has been part of the Montreal Protocol since June 1992 and has phased out several harmful substances, currently working on phasing out hydrochlorofluorocarbons (HCFCs).

The Ministry of Commerce and Industry's Jan Sunwai portal was launched by Union Minister Piyush Goyal

The portal's purpose is to support exporters in resolving their problems online and to enable direct, transparent contacts between dealers. It consists of various departments, including the Directorate General of Foreign Trade, APEDA, Coffee Board, Spices Board, Rubber Board, and Tea Board. Mr. Goyal also inaugurated the Export Credit Guarantee Corporation's redesigned SMILE-ERP facility. Mr. Goyal also chaired a meeting of the Board of Trade. The meeting was attended by ministers from 10 states. The discussion included a range of export-related projects from states like Tamil Nadu, Gujarat, Uttar Pradesh, Karnataka, Madhya Pradesh, and Telangana.

A scheme worth Rs 12,461 crore has been approved by the Cabinet to promote hydropower

The Union Cabinet approved a revised budgetary support scheme for hydropower projects (HEPs) with an allocation of ₹12,461 crore, running from FY 2024-25 to FY 2031-32. The scheme aims to enhance infrastructure and support hydropower development in India by addressing challenges like remote locations and inadequate infrastructure. It will cover additional costs for transmission lines, substations, ropeways, and communication infrastructure. The scheme will support projects with a cumulative capacity of about 31,350 MW. The budgetary support is set at ₹1 crore per MW for projects up to 200 MW and ₹200 crore plus ₹0.75 crore per MW for larger projects, potentially increasing to ₹1.5 crore per MW in exceptional cases.

The adoption of the Delhi Declaration on Civil Aviation has been announced by PM Modi

The Declaration was unanimously adopted at the 2nd Asia Pacific Ministerial Conference in New Delhi. It aims to enhance regional cooperation and address challenges in the civil aviation sector in the Asia-Pacific region. The Prime Minister stated that India is progressing toward becoming a major aviation hub by the end of the decade, noting that the number of airports has doubled in the last ten years. The conference took place from September 11 to 12, 2024, and was organized by the Government of India in collaboration with the International Civil Aviation Organization (ICAO).

The Union Cabinet approved the fourth phase of the PradhanMantriGraminSadakYojana (PMGSY)

The flagship rural road program has an estimated budget of ₹70,125 crore over five years, aiming to construct about 62,500 km of rural roads. It will provide new connectivity to 25,000 unconnected settlements and upgrade bridges. The central government will contribute approximately ₹49,087.5 crore, while states will provide ₹21,037.5 crore. The scheme aims to generate 40 crore human-days of employment. It targets settlements with specific population thresholds based on the 2011 census. Since its launch in 2000, the PMGSY scheme has constructed around 800,000 km of rural roads and connected 180,000 habitations.

PradhanMantriMatsyaKisanSamridhiSah-Yojna will be launched by Union Minister for Fisheries, Animal Husbandry and Dairying, Rajiv Ranjan Singh

He will release the Standard Operating Procedure for Production and Processing Clusters in the Fisheries Sector during the 4th Anniversary celebration of the PradhanMantriMatsyaSampadaYojana (PMMSY). This event will highlight national priority projects under PMMSY for the financial year 2024-25. Launched in May 2020 by the Ministry of Fisheries, Animal Husbandry and Dairying, PMMSY aims to improve fish production and productivity, enhance quality and technology, modernize infrastructure, and support fishers' welfare.

Government relaxed exclusion criteria under the PradhanMantriAwasYojana-Gramin (PMAY-G)

The government has revised the "automatic exclusion" criteria for the PradhanMantriAwasYojana-Gramin (PMAY-G). Families earning up to Rs 15,000 per

month can now benefit from the scheme even if they own items like two-wheelers, fishing boats, refrigerators, or landline phones. However, those with motorized three- or four-wheelers, certain agricultural equipment, or a Kisan Credit Card with a limit of Rs 50,000 or more are excluded. Households with government employees, registered non-agricultural businesses, or any income tax payers are also excluded. This revision aims to facilitate the construction of two crore additional houses under the scheme by 2028-29. PMAY-G was launched in 2016 to promote "Housing for All."

GST council has decided to reduce rate of Goods and Service Tax (GST) on cancer drugs from 12% to 5%

The 54th GST Council meeting, chaired by Union Finance Minister Nirmala Sitharaman on September 9, 2024, resulted in several key decisions. The GST on selected snacks was



reduced from 18% to 12%, and grants to certain universities are now exempt

from GST. A Group of Ministers was established to recommend a tax reduction on health and life insurance, with a report due by the end of October 2024. The council also approved a Group of Ministers on Compensation Cess and received status reports on rate rationalization, real estate, and online gaming, which saw a 412% revenue increase in six months. Additionally, GST on car seats increased to 28%, and RMPU air conditioning machines for railways will also be taxed at 28%. Certified flight training courses by DGCA-licensed organizations will be exempt from GST.

Government has decided to launch rankings for working women's hostels

The government will launch a nationwide ranking system for working women's hostels to enhance security, following recent violence against women, including a tragic incident in Kolkata. This initiative aims to create a one-stop portal listing all hostels, whether run by private entities, institutions, or government bodies, to promote female workforce participation, especially in urban areas. The Quality Council of India (QCI) will establish ranking criteria based on security, cleanliness, and other essential facilities. Additionally, the portal will include rankings for creches in each city. The initiative builds on the existing 'SakhiNiwas' scheme under Mission Shakti, which provides hostel facilities for working women.

Union Minister Ram Mohan Naidu inaugurated the DigiYatra facility at nine more airports

Union Minister Kinjarapu Ram Mohan Naidu inaugurated the DigiYatra facility at



Visakhapatnam International Airport and other eight airports. The launch covered eight other airports managed by the Airports Authority of India (AAI),

including Coimbatore, Dabolim, Indore, Bagdogra, Ranchi, Patna, Raipur, and Bhubaneswar. DigiYatra was introduced in December 2022 at three airports—New Delhi, Varanasi, and Bengaluru. The total number of DigiYatra-enabled airports rises to 24. DigiYatra is a digital initiative by the government to improve passenger experience through Facial Recognition Technology (FRT). It will allow travellers to pass through airport checkpoints with contactless and paperless processing.

Government has launched the Vishvasya-Blockchain Technology Stack

The Ministry of Electronics and Information Technology (MeitY) has launched the Vishvasya-Blockchain Technology Stack. It will offer blockchain-as-a-Service with a geographically distributed infrastructure designed to support various permission Blockchainbased applications. MeitY also unveiled the NBFLite-Lightweight Blockchain Platform, Praamaanik. It is an innovative blockchain-enabled solution for verifying mobile app origin and the National Blockchain Portal. To create trusted digital platforms, the National Blockchain Framework was formed to promote research and application development. NBFLite is a blockchain sandbox platform. It is developed for startups/academia for rapid prototyping of applications and carrying out research and capacity building.

30 crore registrations have been made on the eShram portal in last three years

Launched on August 26, 2021, the eShram portal by the Ministry of Labour and Employment has registered 30 crore unorganized workers in three years. It serves as a one-stop solution for addressing workers' issues and aims to provide access to various social security schemes for unorganized workers. The portal also raises awareness about these schemes. The Ministry is working to integrate major programs like the PradhanMantriJeevanJyotiBimaYojana and PradhanMantriSurakshaBimaYojana into the eShram Portal to further benefit these workers.

The constitution of the 23rd Law Commission for three-year term sanctioned by President

The 23rd Law Commission of India has been constituted by President DroupadiMurmu, with its term running from September 1, 2024, to

August 31, 2027. The commission will include a full-time Chairperson, four full-time Members (including a Member-Secretary), two ex officio Members from the Legal Affairs and Legislative Departments, and up to five part-time Members. Its role is to review and recommend legal reforms to enhance the Indian legal system. The previous commission, which ended on August 31, operated without a chairperson for several months, and important reports on issues like the Uniform Civil Code and simultaneous elections are still pending. The former Chairperson, Justice Ritu Raj Awasthi, resigned in March 2024.

AgriSURE Fund and KrishiNivesh Portal will be launched by Union Agriculture and Farmers' Welfare Minister Shivraj Singh Chouhan

Shivraj Singh Chouhan will present the Agriculture Infrastructure Fund (AIF) Excellence Awards to recognize the best-performing states and banks, encouraging improved operations and overall program success. Established in 2022, the AIF aims to develop community farming assets and post-harvest management infrastructure. The awards celebrate collaborative achievements and motivate future performance under the AIF. Additionally, the government announced plans to support start-ups and agripreneurs through the 'Agri Fund for Start-Ups & Rural Enterprises' (AgriSURE) and launched the "KrishiNivesh" Agriculture Investment Portal in December 2022 to boost agricultural investment.

Union Cabinet approved seven schemes to improve farmers' lives and increase their incomes

The Union Cabinet approved the Digital Agriculture Mission with a budget of ₹2,817 crore to support digital agriculture initiatives like creating Digital Public Infrastructure and

the Digital General Crop Estimation Survey. Additionally, the Cabinet allocated ₹1,702 crore for sustainable livestock health and production to boost farmers' income, and over ₹1,129 crore for the sustainable development of horticulture. It also approved ₹1,202 crore for strengthening KrishiVigyanKendras and ₹1,115 crore for natural resources management. The seven schemes include the Digital Agriculture Mission, Crop Science for Food Security, Agricultural Education Strengthening, Sustainable Livestock Production, Horticulture Development, KrishiVigyan Kendra Strengthening, and Natural Resource Management.

DGTR has recommended anti-dumping duty on aluminium foils imported from China

China's aluminium foil imports now account for 30% of the Indian market, impacting domestic manufacturers like Hindalco, which has urged the government for protection. The



influx of cheap aluminium foil, especially those under 80 microns, has forced Indian

producers to lower their prices below production costs. Aluminium foil is essential for packaging food products. Proposed anti-dumping duties range from \$619 to \$873 per tonne. Additionally, imports from China have exceeded \$60 billion in the first seven months of 2024, a 10% increase from \$55 billion in the same period last year.

Government launched the Retired Sportsperson Empowerment Training (RESET) Programme

The "Retired Sportsperson Empowerment Training" (RESET) Programme was launched by Union Minister Dr.MansukhMandaviya on National Sports Day. Its aim is to empower retired athletes who have achieved significant

honors for the nation by providing them with the skills and knowledge needed for career development. The program will also facilitate the transfer of their unique skills to younger aspiring athletes. Eligible participants include retired sportspeople aged 20-50 who are international medal winners or national and state medallists. RESET will be implemented at two educational levels: Class 12 and above, and Class 11 and below, with the Lakshmibai National Institute of Physical Education (LNPE) leading the initiative.

ASSOCHAM Environment and Carbon Conference has been inaugurated by Union Minister KirtiVardhan Singh in New Delhi

The conference theme is “Fostering a collaborative ecosystem for achieving net zero by 2070.” Minister Mr. Singh emphasized that while climate change is a global issue, the government is actively working to protect the nation. The aim is to achieve net zero emissions by 2070 and to fulfill Prime Minister NarendraModi's goal of a developed India by 2047. He highlighted the positive impact of the JalJeevan Mission on rural communities, alleviating water crises for farmers and residents. The government is committed to supporting businesses and stakeholders in addressing environmental challenges.

She-Box portal has been launched by the government to make workplaces safer for women

The portal has been launched by Women and Child Development Minister Annpurna Devi in New Delhi. She-Box portal is a centralized platform for the purpose of monitoring and registering complaints of sexual harassment of women at the workplace. This platform offers the facility to register complaints, monitor their progress, and guarantee that internal committees process them within a certain amount of time. This effort, according

to WCD Minister Annpurna Devi, is a crucial step towards offering a more effective and secure forum for handling complaints of sexual harassment at work.

Union Cabinet approved the expansion of the Agriculture Infrastructure Fund

The expansion of the Agriculture Infrastructure Fund (AIF) has been approved by the Union Cabinet.



The main aim of this step is to boost

agricultural infrastructure across India and to make it more attractive, impactful, and inclusive. The scheme, worth ₹1 lakh crore, would be redesigned to include financial support for Farmers' Producers Organisations (FPOs). Rs 47,575 crore has been sanctioned for 74,508 projects under AIF till date. These sanctioned projects have mobilised an investment of ₹ 78,596 crore in the agriculture sector. The infrastructure projects sanctioned under AIF have helped in generating more than 8.19 lakh rural employment opportunities in the agriculture sector.

ICAR-CIFE and VAMNICOM signed MoU to enhance Cooperative management in Fisheries

The Central Institute of Fisheries Education (ICAR-CIFE) and the Vaikunth Mehta National Institute of Cooperative Management (VAMNICOM) signed a Memorandum of Understanding (MoU) to enhance collaboration in cooperative management within the fisheries sector. This partnership aims to improve synergies between the two institutions through joint research, training, and development initiatives. VAMNICOM operates under the Ministry of Cooperation,

while ICAR-CIFE is a leading fisheries university.

The Spices Board of India has launched the SPICED scheme

The scheme "Sustainability in Spice Sector through Progressive, Innovative and



Collaborative Interventions for Export Development" aims to improve cardamom productivity and post-harvest quality, while

boosting exports of spices and value-added products. With a budget of ₹422.30 crore, it will run until 2025–2026. The Spices Board of India, established in 1987 and based in Kochi, Kerala, will focus on enhancing market expansion, trade promotion, and technological interventions to support the spice sector.

A new smart sensor developed by Indian medical scientists to accommodate drug doses for management of Parkinson's disease

A new smartphone-based sensor for detecting L-Dopa concentrations in the body has been developed, using a silk-fibroin protein nanolayer on graphene oxide. This affordable and user-friendly device aims to help determine the right L-Dopa doses for managing Parkinson's disease, which involves a loss of dopamine-producing neurons. While L-Dopa helps increase dopamine levels, improper dosing can cause serious side effects or worsen Parkinson's symptoms.

Centre issued new guidelines for public grievance redressal within 21 Days

The Center has issued new guidelines for handling public grievances on the CPGRAMS portal, reducing the redressal timeline from 30 to 21 days. Nodal Officers will be appointed in each Ministry and Department to ensure prompt attention to grievances, with dedicated Grievance Cells established to provide

support. A monthly assessment index will rank ministries on their grievance handling. From 2022 to 2024, the CPGRAMS portal has resolved nearly 60 lakh grievances.

Teghbir Singh became the youngest Asian to conquer Mt Kilimanjaro

Five-year-old Teghbir Singh from Ropar has become the youngest person in Asia to scale the 5,895-metre Mount Kilimanjaro. Mount Kilimanjaro is the highest peak in Africa, located in Tanzania. Teghbir started the climb on August 18 and reached Uhuru peak on August 23. He received the mountain climbing certificate issued by the conservation commissioner of Tanzania National Parks. He equals the world record of conquering Mt Kilimanjaro at the age of five by Serbian boy Ognjen Zivkovic on August 6, 2023.

The Ministry of Education defined 'literacy' and 'full literacy'

The Ministry of Education has clarified the definition of 'literacy' and the concept of 'full literacy' in a letter to all states, as part of the New India Literacy Program (NILP). This five-year program (2022–27) aims to educate one crore learners over 15 each year. Literacy includes reading, writing, and comprehension skills, as well as digital and financial literacy. A state is considered to achieve full literacy when it reaches 95% literacy, equating to a standard of 100%. Under NILP, individuals can be declared literate after passing the Foundational Literacy and Numeracy Assessment Test (FLNAT). For 2024–25, Rs 160 crore has been allocated for the program.

The scheme 'VigyanDhara' of the Department of Science and Technology was approved by the Union Cabinet

The Union Cabinet has approved the continuation and merging of three major schemes into the integrated Central Sector Scheme 'VigyanDhara' under the Department of Science and Technology (DST). This

scheme includes three main components: capacity building in science and technology, research and development, and technology development and deployment. With an outlay of ₹10,579.84 crore for 2021-26, 'VigyanDhara' aims to enhance research, innovation, and technology while improving fund utilization and coordination among various programs. It focuses on basic and applied research, as well as international collaboration, aligning with the DST's goals for a Developed India by 2047.

Union Minister AshwiniVaishnav launched 25 challenges under the 'Create in India Challenge-Season 1'

At the World Audio Visual and Entertainment Summit (WAVES), Union Minister AshwiniVaishnav launched 25 challenges under the 'Create in India Challenge—Season 1,' covering areas like animation, filmmaking, gaming, music, and visual arts. These challenges are hosted by various industry associations, including the Anime Challenge by the Media and Entertainment Association of India and the Comics Creator Championship by the Indian Comics Association. The Minister highlighted the emergence of a new creator economy, recognized by the Prime Minister, and noted that the first national Creators Awards were held in March 2024. Additionally, the draft Broadcasting Bill 2024 now includes social media accounts and online video creators.

According to the latest Food & Drink 2024 report, Amul has been ranked as the strongest food brand in the world

Amul has been ranked as the number one dairy brand in the world, with a brand strength index of 91 out of 100 and an AAA+ rating. Its brand value increased by 11% to \$3.3 billion, according to Brand Finance's annual report on food and drink brands. Amul performed well in familiarity, consideration, and

recommendation metrics. In comparison, Nestlé is the most valuable food brand at \$20.8 billion, followed by Lay's at \$12 billion. Coca-Cola leads the non-alcoholic drinks market, with Pepsi in second place.

Supreme Court constituted a 10-member national task force to ensure the safety of doctors

The Supreme Court has established a 10-member national task force to create protocols



for the safety of healthcare workers following nationwide protests over the rape and murder

of a doctor in Kolkata. This task force includes senior doctors and four ex-officio members: the Cabinet secretary, health secretary, chairperson of the National Medical Commission, and president of the National Board of Examiners. It will develop a national action plan to prevent gender-based violence and is required to submit an interim report in three weeks and a final report in two months.

UPSC cancelled advertisements related to lateral entry into the bureaucracy

The advertisement related to lateral entry into the bureaucracy has been cancelled after receiving directions from the Department of Personnel and Training. UPSC issued an advertisement to appoint 45 Joint Secretaries, Directors, and Deputy Secretaries in Central Ministries. The government has cancelled these planned recruitments due to a lack of quotas for Scheduled Castes (SCs) and Scheduled Tribes (STs).

Union Minister, ManoharLalKhattar launched online portal DRIPS (Disaster Resilient Infrastructure for Power Sector)

Quick resource deployment and identification would be possible with the help of the DRIPS portal. In the event of a disaster, the DRIPS

portal would ensure that disturbances in the power sector are handled quickly and effectively. According to the Minister, the implementation of the DRIPS will facilitate the efficient, well-coordinated, and transparent operation of the nation's power sector in any unfavourable circumstance. For all of the authorised nodal offices of the power sector departments and other agencies in the impacted area, DRIPS will act as a single point of contact.

Indira Gandhi International Airport (IGIA) is India's first airport to get the net zero carbon emission status

IGIA has achieved this status under the Airport Council International's accreditation programme. Indira Gandhi International Airport (IGIA) in Delhi is operated by GMR Group-led DIAL. The airport's initial target was to have net zero carbon emissions by 2030. Through a number of measures, the target has been reached well ahead of schedule. Delhi airport has attained the level 5 net zero emission accreditation in 2024. The highest accreditation level is level 5, out of a total of five. The ACA program offers an extensive framework for active carbon management at airports. ACI is a global trade association representing world's airports.

Union Minister JP Nadda launched the 'First Policy Makers' Forum' in New Delhi

Union Minister J.P. Nadda inaugurated the 'First Policy Makers' Forum, hosted by the



Indian Pharmacopoeia Commission in collaboration with the Ministry of Health, welcoming drug regulators and policymakers from 15 countries. The forum aims to promote discussions on the Indian Pharmacopoeia (IP) and the Pradhan Mantri Bhartiya Janaushadhi Pariyojana (PMBJP). It features the IP Online

Portal to digitalize the pharmacopoeia and the ADRMS software, India's first indigenous medical product safety database developed as part of the Pharmacovigilance Programme.

'Kisano Ki Baat' radio programme will be launched by the government

The government will launch a monthly program called 'Kisano Ki Baat' to ensure farmers receive scientific benefits promptly. Union Agriculture Minister Shivraj Singh Chouhan announced that the program, starting next month, will be broadcast on radio with participation from scientists and agriculture officials. The initiative aims to strengthen connections between farmers and KrishiVigyanKendras. Additionally, the budget for farmers has been increased from Rs 27,000 crore to Rs 1.52 lakh crore.

Geospatial Decision Support System for Agriculture launched by the Government

The Centre launched the Krishi-Decision Support System (K-DSS) portal, a satellite-based platform providing farmers with information on weather, groundwater levels, soil health, and reservoir storage. Union Minister Bhagirath Choudhary unveiled the portal during a conference on space solutions for agriculture. This event is part of celebrations for the first National Space Day on August 23, commemorating India's moon landing anniversary.

Government to include AYUSH in the Ayushman Bharat scheme

The Union Government will include the AYUSH (Ayurveda, Yoga, Naturopathy, Unani, Siddha, and Homeopathy) package under the Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB PM-JAY). Discussions are ongoing regarding package design, hospital onboarding, treatment guidelines, and financial implications. AB PM-JAY offers health coverage of ₹5 lakh per family per year for secondary and tertiary care, benefiting 55

crore people across 12.34 crore families. The Ministry of Ayush launched the National AyushMission in 2014, and the Central Government Health Scheme currently operates 110 Ayush Wellness Centers and one Ayurvedic Hospital in India.

Sperm or Egg donor cannot claim to be Children's biological parent: High Court

The Bombay High Court ruled that a sperm or egg donor has no legal rights over a child and cannot claim to be its biological parent. The court granted visitation rights to a 42-year-old woman for her five-year-old twin daughters, who were born via surrogacy and are living with her husband and his sister, the egg donor. The court clarified that while the sister is a genetic mother, she has no legal claim to parenthood. The Surrogacy (Regulation) Act, 2021, prohibits commercial surrogacy and aims to regulate surrogacy practices in India.

India has added three new Ramsar sites to wetlands network

With this, the number of total Ramsar sites in India has increased to 85. Nanjarayan Bird Sanctuary and Kazhuveli Bird Sanctuary in Tamil Nadu have been added to the list of India's Ramsar sites. Tawa Reservoir of Madhya Pradesh has also been added to the list of India's Ramsar sites. As of June 2024, India had a total of 82 Ramsar sites. A Ramsar Site is a wetland site that has been designated as being of international importance by the Ramsar Convention. Ramsar Convention is an intergovernmental treaty that provides the framework for national action and international cooperation for the conservation of wetlands. It was signed on 2 February 1971 in Ramsar, Iran, for the protection of wetland sites in the world.

In terms of states having AYUSH facilities, Madhya Pradesh leads the nation

According to the 'Health Dynamics of India - Infrastructure and Human Resources' report, Madhya Pradesh ranks second in India with 52 district hospitals, following Uttar Pradesh's 125 hospitals. Delhi is third with 40 hospitals. The state has 228 AYUSH doctors in primary and community health centers, ranking third, while Odisha and Chhattisgarh rank first and second, respectively. Since 2005, Madhya Pradesh has significantly expanded its rural health infrastructure, being seventh in primary health centers and among the top six in community health centers, with 332 facilities. The report highlights that Madhya Pradesh is also one of the top three states for sub-divisional hospitals.

Sri Vijaya Puram - the new name of Port Blair in the Andaman and Nicobar Islands

Union Home Minister Amit Shah stated that the government aims to eliminate colonial



heritage, emphasizing the significance of Sri VijayaPuram in India's freedom struggle. The Andaman and Nicobar

Islands, historically a naval base of the Chola Empire, are key to national growth and strategy. The capital of this Union territory is Sri VijayaPuram. A ₹72,000 crore project for Nicobar Island has raised concerns about the potential displacement of the native Shompen tribe, who are mostly nomadic hunters. In honor of ParakramDiwas, Prime Minister Modi named 21 unidentified UT islands after ParamVir Chakra recipients and announced a national memorial for NetajiSubhas Chandra Bose on Ross Islands, now called NetajiSubhas Chandra Bose Dweep.

Telangana State government has decided to celebrate 17 September as Praja Palana Day

September 17th is the day on which Hyderabad State was integrated into the Indian Union in 1948. The national flag will be hoisted at all government offices, urban local bodies and gram panchayats on September 17. Chief Minister A Revanth Reddy will hoist the Tricolour in Hyderabad at an official programme. Earlier, the Union government had decided to celebrate September 17 as Hyderabad Liberation Day. On 17 September 1948, the state of Hyderabad got its independence from Nizam's rule. The liberation of Hyderabad was possible due to the action by the first Minister of Home Affairs of India, Shri Sardar Vallabhbhai Patel under Operation Polo.

Ladakh Zaskar Festival began in Sani

The picturesque Sani village in Zaskar is buzzing with excitement as the 9th Edition of Ladakh Zaskar Festival 2024 began on September 13. A large number of tourists,



locals, and officials have gathered to witness this two-day cultural festival. It celebrates the rich heritage and natural beauty of the Zaskar

region, where majestic glaciers meet age-old traditions. This festival is being celebrated on 13-14 September, 2024 in Sani village. A major highlight of the festival is the captivating traditional dance performances. This includes the Cham dance, which is performed by monks in elaborate masks and costumes.

Maharashtra to establish Tribal University in Nashik

A Tribal University with an 80 per cent reservation for students from tribal communities will be set up in Nashik. The

university will help in the social development of tribal communities. It will provide quality education and skills training from kindergarten (KG) to postgraduate (PG) level. The University with the highest standards of excellence, governance, and academic rigour will have accreditation from NAAC. A similar university has been set up in Odisha.

Gujarat government set up GRIT as a policy think tank

The Gujarat State Institution for Transformation (GRIT) has been established under Chief Minister Bhupendra Patel as a policy think tank similar to NITI Aayog. The Chief Minister serves as chairman, and the Finance Minister is the vice chairman, with Agriculture, Health, Education, and Industries Ministers as members. A 10-member executive committee will manage daily operations, and a resolution detailing GRIT's formation and scope will be published by the General Administration Department-Planning Division.

A critically endangered elongated tortoise species has been spotted in Haryana's Damdama area

During a research survey in the Aravallis, a critically endangered tortoise species was spotted in Haryana's Damdama area. The tortoise has been medium-sized with a yellowish-brown or olive shell and distinct black blotches at the centre. This tortoise has been found in the Sal deciduous and hilly evergreen forests. Sunil Harsana and Nitesh Kaushik have discovered this tortoise. This tortoise is generally found at wetter places but discovering in Aravallis is an aberration than a norm. Elongated tortoises were assessed for the International Union for Conservation of Nature's (IUCN) red list of threatened species in 2018. They are listed as critically endangered under the criteria A2cd.

Tamil Nadu unveiled its Cyber Security Policy 2.0

The Tamil Nadu government has released Cyber Security Policy 2.0, aimed at protecting its information assets, including infrastructure, software, and citizen services. The policy outlines guidelines and standard operating procedures for auditing, compliance, and monitoring cyber threats. It will replace the Tamil Nadu Cyber Security Policy 2020 and includes input from organizations like C-DAC and IIT Madras. All state government departments are required to appoint officials to coordinate with the Cyber Security Incident Response Team (CSIRT).

In the Union Environment Ministry's SwachhVayuSurvekshan 2024, Surat city achieved first place

Jaipur was named the "National Clean Air City" by Union Minister BhupendraYadav, with a prize of Rs 1.5 crore. Surat ranked 13th in the SwachhVayuSurvekshan 2023, while Indore topped the list. Surat, previously the cleanest city in the country, scored 194 out of 200 in Category 1 (cities with over 10 lakh population), followed by Jabalpur and Agra. Ferozabad led Category 2 (population 3-10 lakh), and Rae Bareilly topped Category 3 (population below 3 lakh).

10-day Onam festival started with Atham

Atham has been celebrated to mark the beginning of the ten-day Onam festivities. The 10-day festival at Thrikkakara Temple begins with kodiyyettam. The famous Athachamayam procession, which features various cultural displays and traditional art forms held at Thripunithura was organized. Onam festival will conclude with Thiruvonam. The other key days include Chithira, Chodi, Vishakam, Anizham, Thriketa, Moolam, Pooradam, and Uthradom. Onam is celebrated across Kerala in the month of Chingam, as per the Malayalam calendar.

Telangana, Tamil Nadu and Rajasthan registered the highest growth in real gross state domestic product (GSDP)

In FY24, Telangana, Tamil Nadu, and Rajasthan showed the highest growth in real gross state domestic product (GSDP) among the largest states. Telangana's economy grew by 9.2% to ₹7.9 lakh crore, outpacing the national GDP growth of 8.2%. Tamil Nadu's economy increased by 8.2% to ₹15.7 lakh crore, while Rajasthan's grew by 8%. The services sector drove growth in all three states, with Telangana's services growing by 11% and Tamil Nadu's by 9%. Maharashtra remains the largest economy in India, followed by UP and Karnataka.

President delegated powers to the Lieutenant Governor to constitute Boards and appoint members in Delhi

President DroupadiMurmu has delegated powers to Delhi's Lieutenant Governor, Vinai



Kumar Saxena, allowing him to establish authorities, boards, commissions, or statutory bodies under laws passed by Parliament. This decision, announced on

September 3, 2024, also enables the Lieutenant Governor to appoint members to these entities. This delegation is in accordance with the Constitution and the Government of National Capital Territory of Delhi Act, 1991. Additionally, the President has approved the formation of the 23rd Law Commission of India, which will operate from September 1, 2024, to August 31, 2027.

Government of India, Government of Tripura and representatives of NLFT and ATTF will sign a Memorandum of Settlement

Memorandum of Settlement will be signed in presence of Union Home Minister, ShriAmit Shah in New Delhi. During the signing of the

Memorandum of Settlement, Chief Minister of Tripura ManikSaha and senior officials of the Ministry of Home Affairs and Government of Tripura will also be present. 12 important agreements have been signed by the government to bring peace and prosperity in the Northeast. Out of these, three are related to Tripura. Due to signing of agreements, about 10,000 people have given up arms and joined mainstream. National Liberation Front of Tripura (NLFT) and All Tripura Tiger Force (ATTF) are two armed groups in Tripura.

The 7th Rashtriya PoshanMaah was launched at the Mahatma Mandir in Gandhinagar, Gujarat

The 7th Rashtriya PoshanMaah 2024 focuses on improving nutrition awareness and well-being. Union Minister



Annpurna Devi and other leaders attended the event, which started with the "EkPedMaaKeNaam"

plantation drive. The main function, held at Mahatma Mandir, saw Gujarat's CM Bhupendrabhai Patel deliver the keynote speech. Annpurna Devi emphasized Poshan 2.0's pillars: good governance, convergence, capacity building, and community participation. The campaign addresses anaemia, growth monitoring, feeding, and technology to fight malnutrition and promote holistic health nationwide.

An industrial City will be developed by Uttar Pradesh government between Jhansi and Kanpur

This city will be developed on an area of about 36 thousand acres to boost the industrial development in the region. Chief Minister Yogi Adityanath said that the city will get a special airport also. Incentives of about rupees 1300 crores have been distributed by the Chief Minister to over two dozen industrial units. Letters of Comfort certificates were

distributed for 28 investment proposals worth Rs 10,715 crore. Chief Minister personally handed out certificates to 10 proposals with investments of more than Rs 4500 crore. A special programme to distribute incentives to the state's industrial projects has been organised for the first time.

Cyclone Asna formed over the Kutch coast in Gujarat

Cyclone Asna has formed over the Kutch coast in Gujarat and adjoining areas of Pakistan. Cyclone Asna has brought heavy rainfall to different places in Gujarat. This is the first cyclonic storm in the Arabian Sea in August since 1976. Between 1891 and 2023, only three cyclonic storms formed in the Arabian Sea in August. Cyclone Asna is only the fourth such occurrence in August since 1891. The Arabian Sea's current temperature of 27–28 °C is around the threshold temperature required for cyclone formation.

Mega projects and fintech innovation launched in Maharashtra by PM Modi

On August 30, Prime Minister NarendraModi visited Maharashtra, where he laid the foundation for the Rs 76,000 croreVadhavan Port project in Palghar. This will be one of India's largest deep-water ports, boosting maritime connectivity. He also addressed the Global Fintech Fest 2024 in Mumbai, showcasing India's progress in fintech. Additionally, PM Modi inaugurated 218 fisheries projects worth Rs 1,560 crore to improve the sector's infrastructure. He also launched the National Roll Out of Ship Communication and Assistance System, with 1 lakh transponders to be installed on fishing vessels across 13 coastal states.

Goa shipyard launched India's first pollution control vessel, Samudra Pratap

India's first indigenously designed pollution control vessel, SamudraPratap, was built by Goa Shipyard Ltd for the Indian Coast Guard.

This vessel, along with another being constructed by GSL, will assist in oil spill response operations in the Exclusive Economic Zone (EEZ). SamudraPratap is 114.5 meters long, 16.5 meters wide, and displaces 4,170 tons. The project has over 60% indigenous content, showcasing India's growing ship-building capabilities.

In Himachal Pradesh, the minimum age of marriage for women has been increased from 18 to 21 years

Himachal Pradesh State Assembly passed a Bill for increasing the minimum age. According to Himachal Pradesh Chief Minister Sukhwinder Singh Sukhu, Himachal Pradesh is the first State to take such an initiative. The Prohibition of Child Marriage (Himachal Pradesh Amendment) Bill, 2024 was passed by voice vote. The Bill amends the Prohibition of Child Marriage Act, 2006. It also amends other related Acts in their application to the Himachal Pradesh. The Bill raises minimum age in order to provide for gender equality and opportunities of obtaining higher education.

Himachal Pradesh government has launched 'Mukhya Mantri Sukh Shiksha Yojana'

The Himachal Pradesh government launched the 'MukhyaMantriSukhShikshaYojana' with an annual budget of ₹53.21 crore to support widows, destitute women, divorced women, and disabled parents in educating their children. The scheme aims to prevent child abuse, trafficking, teenage marriages, and drug abuse by strengthening family-based child protection. Eligible families with children under 18 will receive ₹1,000 monthly for education, health, and nutrition. Children pursuing higher education, including undergraduate, postgraduate, diploma, or vocational courses, will get financial aid for tuition and hostel fees.

Maharashtra became the first state to adopt the Unified Pension Scheme for its employees

The Maharashtra government has decided to implement the Unified Pension Scheme (UPS). It will become effective from March 2025. UPS will offer 50% of an employee's average salary for the last 12 months as a pension. The Maharashtra Cabinet also approved several other initiatives, including a ₹7,000 crore Nar-Par-Girna river linking project. The river linking project will benefit agricultural land in Nashik and Jalgaon districts by providing irrigation to around 50,000 hectares. The state government will also raise ₹5,000 crore through equity and bonds for the Thane project. Cabinet also approved projects like a medicity, mangrove park, chemical hub, and digital university, requiring a combined expenditure of ₹10,000 crore.

Government announced five new districts of Ladakh

The central government announced the formation of five new districts in the Union Territory of Ladakh. Zaskar, Drass, Sham, Nubra, and Changthang are the new districts. These new districts would help to bring government services and opportunities closer to the residents. At present, Ladakh has only two districts Leh and Kargil. Each district is governed by its own autonomous district council. Before 2019, Ladakh was part of the Jammu and Kashmir state. Ladakh was separated from the erstwhile state of Jammu and Kashmir when the Centre revoked Article 370 in August 2019.

Sapno Ki Udaan has been released by Education Minister Dharmendra Pradhan

Sapno Ki Udaan is an e-magazine that has been released on the occasion of National Space Day (23 August). Sapno Ki Udaan is a mix of poetry, essays, stories, anecdotes, and

riddles. These have been contributed by students, teachers, and parents from around India. The current theme of the magazine is space. This e-magazine has been released by the Department of School Education and Literacy, in collaboration with NCERT. This has been released to commemorate the 1st anniversary of the landing of Chandrayaan-3 on the lunar South Pole.

National Conclave: Sangathan Swasthya Samridhi has been launched by Union Minister Shivraj Singh Chouhan in New Delhi

The National Conclave on Food, Nutrition, Health & WASH (FNHW) was organized by the Ministry of Rural Development under the Deendayal Antyodaya Yojana - National Rural Livelihoods Mission (DAY-NRLM). The event brought together women, including self-help groups (SHGs), from across the country. The focus was on collective action for economic transformation and health. The three core themes were: *Sangathan* (collective spirit), *Samridhi* (economic transformation), and *Swasthya* (health). Key ministries, state agencies, and civil society organizations participated in the conclave.

Karnataka has the highest number of public electric vehicle charging stations (PEVCS) in India

Karnataka leads India with the highest number of public electric vehicle charging stations (PEVCS), totaling 5,765, with 4,462 in Bengaluru Urban. The state, the first to introduce an EV policy in 2017, is developing model EV cities. Through schemes like FAME, Karnataka plans to add 2,500 new charging stations and invest Rs 35 crore in 100 charging centres as part of its 2024 budget.

Portal for Online Monitoring Of Projects – Thermal (PROMPT) launched by Union Minister Manohar Lal Khattar in New Delhi

The launch of the PROMPT portal will enable transparent, coordinated and effective functioning in the power sector in the country. The newly launched PROMPT portal is designed to facilitate real-time tracking and analysis of thermal projects. This online platform enables project managers and stakeholders to make informed decisions, ensuring that potential delays and issues are identified early and resolved promptly.

A major scheme to promote young entrepreneurs in the state announced by Chief Minister Yogi Adityanath on Independence Day

The Mukhyamantri Yuva Udyami Vikas Yojana will provide interest-free loans to young entrepreneurs in Uttar Pradesh. The goal is to support one lakh entrepreneurs each year for the next 10 years, helping establish or expand 10 lakh MSME units. This scheme aims to create jobs for over 50 lakh youth and boost state development. A budget of Rs 1,000 crore has been allocated for micro-unit promotion this year. Residents of UP aged 21-40, with a minimum qualification of class 8, are eligible for these loans.

Karnataka governor granted approval for the prosecution of the Chief Minister

Karnataka Governor Thaawarchand Gehlot approved the prosecution of Chief Minister Siddaramiah over an alleged Mysuru Urban Development Authority (MUDA) land allotment scam. The case involves the fraudulent allotment of 14 plots to Siddaramiah's wife, Parvathi, using forged documents. The land was originally intended for the Dalit community. A 3.2-acre parcel was gifted to Parvathi by her brother in 2010. The scam, involving MUDA officials, is claimed by

opposition parties to be worth Rs 3,000-4,000 crore.

First 'Solar Village' launched by Maharashtra with Manyachiwadi

Maharashtra Chief Minister Eknath Shinde inaugurated the state's first 'solar village,' Manyachiwadi in Satara district, on August 18. The government aims to promote renewable energy and reduce reliance on traditional energy sources. Under the Mukhyamantri Saur Krushi Pump Yojana, farmers receive a 90-95% subsidy for installing solar pumps. Maharashtra plans to generate 12,000 MW of solar energy in the next 1.5 years and provide 100% solar power to two villages in each district. Manyachiwadi is the first of over 70 villages to be part of this initiative.

An MoU signed to study augmenting water supply in Faridabad through sustainable groundwater development in Yamuna floodplains

An MoU was signed between the Central Ground Water Board (CGWB) and Faridabad Metropolitan Development Authority (FMDA) to address Faridabad's projected water supply gap by 2031. The agreement focuses on sustainable groundwater development in the Yamuna floodplains. A study will assess groundwater potential and quality, leading to a management plan that includes strategies for artificial recharge and groundwater development in Faridabad. The MoU is valid until March 31, 2025, and the study is expected to be completed by then.

National Workshop on Women Leadership in Panchayats organized in New Delhi

The Ministry of Panchayati Raj held a National Workshop on Leadership of Elected Women Representatives at Dr. Ambedkar International Centre in New Delhi. The event aimed to empower women leaders in grassroots governance and was part of the 78th Independence Day celebrations.

Approximately 400 Elected Women Representatives and other officials from Panchayati Raj Institutions attended. The workshop was inaugurated by Dr. Kiran Bedi, former Lector of Puducherry.

ODISHA NEWS

Odisha hiked sports budget to ₹1,315 Cr for this financial year

The Odisha Government increased the annual sports budget to ₹1,315 Crore for the financial year 2024-25, a hike by ₹98 Crore as compared to the last year. The Odisha Government increased the annual sports budget to ₹1,315 Crore for the financial year 2024-25, a hike by ₹98 Crore as compared to the last year. The State's annual sports budget was ₹1,217 Crore in the financial year 2023-24. Presenting the annual budget for sports and youth services in the Odisha Legislative Assembly, Chief Minister Mohan Charan Majhi earmarked ₹1,210 Crore for the programme budget and ₹105 Crore for the establishment, operations and maintenance budget. He reiterated his pledge towards development of sports, athletes and related infrastructure in the State. A budgetary outlay of ₹952 Crore was proposed for a new world-class stadium in Bhubaneswar, setting up of world-class sports academies in four zones across the state, establishment of district-level sports academies, activation of mini stadia and for the development of sports at a grass root level.

Odisha Cabinet approved 10% reservation for Agniveers in Uniform Services

Odisha Cabinet approved 10% reservation for ex-Agniveers in Uniform Services in the state. The reservation aims to provide opportunities for ex-Agniveers to secure jobs. The Odisha Cabinet today approved a 10% reservation for ex-Agniveers in Uniform Services in the state.

The reservation aims to provide ample opportunities for ex-Agniveers to secure jobs in Uniform Services like Police, Forest, Excise, Fire or any services as decided by the government from time to time.

Odisha Assembly passed Appropriation Bill of Rs 2.65 lakh cr for 2024-25

Odisha Assembly on Tuesday passed the appropriation bill of Rs 2.65 lakh crore for the financial year 2024-25. Odisha Assembly on Tuesday passed the appropriation bill of Rs 2.65 lakh crore for the financial year 2024-25. Chief Minister Mohan CharanMajhi on July 25 presented the first-ever budget of the ruling BharatiyaJanata Party after it came to power ending the 24-year rule of Naveen Patnaik-led BijuJanata Dal government.

PM Modi launched 'SUBHADRA' scheme in Odisha

Prime Minister NarendraModipaid a one-day visit to Odisha on September 17. This was the Prime Minister's second visit to Odisha after BJP came to power. Modi last visited the State on June 12 and attended Chief Minister Mohan CharanMajhi's swearing-in ceremony in Bhubaneswar.

3 more Vande Bharat Express trains run across Odisha

Three more Vande Bharat Express trains run across Odisha from September 15. The three new Vande Bharat Express trains run on the routes of Tata-Berhampur, Rourkela-Howrah and Durg-Visakhapatnam. At present, three Vande Bharat Express trains were running across Odisha.

Odisha will be the site of the first silicon carbide manufacturing facility in India

The establishment of the facility will require Rs. 620 crore expenditure over a three-year period. Mohan CharanMajhi, the chief minister of Odisha, graced the facility's groundbreaking ceremony. The facility at Bhubaneswar's EMC Park, Infovalley, will be developed by RIR Power Electronics Limited. The construction of RIR Power Electronics Limited's facility, according to CM Majhi, is another important milestone in our continuous effort to build Odisha as a premier semiconductor hub in India. Across all levels, this facility will generate roughly 500 new jobs.

Odisha became the third state to announce menstrual leave for working women

Odisha has become the third state to announce menstrual leave for working women in both public and private sectors. The Odisha government announced that a one-day menstrual leave will be granted to female employees. It can be taken either on the first or second day of the menstrual cycle. The BJP government had promised to initiate a 'Menstrual Health Policy' in all government offices. Bihar and Kerala are the only other two states that provide menstrual leave to women. Bihar has a two-day leave policy for women employees, and the Kerala government also provides a three-day period of leave for women students. The Kerala government has fixed the attendance limit for female students at 73 percent.

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INDIA AND THE WORLD

High Altitude Anti-Submarine Warfare (HAASW) sonobuoys worth \$52.8 million will be sold by the USA to India

The U.S. approved the sale of anti-submarine warfare sonobuoys to India, enhancing its



ability to conduct operations using MH-60R helicopters. This sale, valued at approximately \$52.8 million, includes AN/SSQ-530, AN/SSQ-

62F, and AN/SSQ-36 sonobuoys. It supports U.S. foreign policy and strengthens the U.S.-India strategic relationship, contributing to security in the Indo-Pacific and South Asia regions. The approval was announced by Secretary of State Antony Blinken on August 23.

India will be a special partner for European Hydrogen Week in November 2024

The Ministry of New and Renewable Energy announced that India will be the exclusive partner for the European Hydrogen Week in November 2024. The partnership was revealed on the second day of the International Conference on Green Hydrogen (ICGH-2024) at Bharat Mandapam, New Delhi. The day highlighted India's intention to address EU green regulations to boost exports. In addition, a Letter of Intent (LOI) was signed between Chain Terminals of the Netherlands and ACME Cleantech of India for ammonia import terminals. The event also featured sessions bringing forth perspectives from the European Union, Australia, and the Netherlands on the opportunities and challenges in the green hydrogen sector.

Indian Army participated in the India-Oman Joint Military Exercise, Al Najah

The Indian Army contingent participated in the fifth edition of the India-Oman Joint Military Exercise, Al Najah, held from September 13 to 26 at the Rabkoot Training Area in Salalah, Oman. Organized biennially since 2015, the exercise included 60 personnel from the Mechanised Infantry Regiment and other arms and services. It focused on operations in a desert environment to enhance joint military capabilities for counter-terrorism operations. Tactical drills involved joint planning, cordon and search operations, and fighting in built-up areas.

In the first half of 2024, India surpassed the US to become the second-largest market for 5G smartphones, behind China, according to a Counterpoint Research report

According to Counterpoint Research, global shipments of 5G smartphones increased by 20% year-over-year in the first half of 2024. Apple led the market with nearly 25% share, thanks to the popularity of the iPhone 15 and 14 series, followed by Samsung with over 21% due to strong sales of the Galaxy A and S24 series. Xiaomi ranked third, experiencing triple-digit growth in India. Motorola showed the fastest growth among the top ten brands. The Caribbean and Latin America (CALA) region had a 63% year-over-year growth rate, accounting for 14% of global 5G handset net additions, while Asia-Pacific captured 58% of the shipment share and contributed 63% of worldwide net additions.

India and US Joint Military Exercise, Yudh Abhyas 2024, commenced in Rajasthan

The 20th edition of the India-USA Joint Military Exercise, YudhAbhyas 2024, took place from September 9 to 22 at the Mahajan Field Firing Ranges in Rajasthan. Since 2004, this annual exercise aimed to enhance the military capabilities of both countries in counter-terrorism operations. The Indian Army participated with 600 personnel, including a battalion from the Rajput Regiment, while the U.S. was represented by a similar number of troops from the 1-24 Battalion of the 11th Airborne Division. The exercise focused on operations in a semi-desert environment.

India and the UAE signed five agreements covering different fields

Agreements were signed between the Emirates Nuclear Energy Company and Nuclear Power Corporation of India for the operations and maintenance of the Barakah Nuclear Power Plant. Indian Oil Corporation Limited and Abu Dhabi National Oil Company (ADNOC) also signed a long-term LNG supply agreement. Additionally, ADNOC and India Strategic Petroleum Reserve Limited entered into an agreement, and Urja Bharat signed a production concession agreement for Abu Dhabi Onshore Block 1, allowing them to import crude oil into India. These agreements followed discussions between Prime Minister Narendra Modi and Sheikh Khaled bin Mohamed bin Zayed Al Nahyan, Crown Prince of Abu Dhabi, who expressed satisfaction with the progress of the India-UAE Comprehensive Strategic Partnership. President Droupadi Murmu also met with the Crown Prince at Rashtrapati Bhavan.

Minister of External Affairs S. Jaishankar is in Riyadh for the first India-Gulf Cooperation Council (GCC) Foreign Ministers' Meeting

Building stronger connections between India and the Gulf countries is the goal of the first India-GCC Foreign Ministers' Meeting. The goal of the first-ever GCC Foreign Ministers meeting is to improve collaboration in a number of areas, such as energy, trade, and investment. With the GCC region hosting around 8.9 million Indian expats, India's foreign policy greatly benefits from this diplomatic engagement. Dr. Jaishankar is anticipated to have bilateral discussions with his counterparts from the GCC member nations. On the first day of his two-day tour in Saudi Arabia, he went to some of the city's most important cultural landmarks. He visited the King Abdulaziz Foundation for Research and Archives (DARAH), Murabba Palace and the Saudi National Museum.

5th Defence Cooperation Dialogue held by India and Maldives in New Delhi

Defence Secretary Giridhar Aramane led the Indian delegation, while the Maldives delegation was led by Chief of Defence Force General Ibrahim Hilmy. The meeting provided



an opportunity for both sides to discuss matters relating to bilateral defence cooperation. This included expediting the implementation of various on-going defence cooperation projects. The two sides also discussed some other areas of mutual interest such as high-level exchanges and capacity building projects. It also discussed aspects of participation in the upcoming bilateral military exercises. In the Indian Ocean region, Maldives is one of India's key maritime neighbours and overall bilateral relations, including in the areas of defence and security, witnessed growth during the tenure of the previous Maldives Government.

India and Saudi Arabia enhanced defence ties in the 6th Joint Committee meeting

The 6th meeting of the India-Saudi Arabia Joint Committee on Defence Cooperation (JCDC) was held in Riyadh. The meeting was chaired by India's Joint Secretary (Armed Forces) Amitabh Prasad and Saudi Arabia's Deputy Minister of Defence for Strategic Affairs, Major General Salman Bin Awadh Al-Harbi. The officials from both countries conducted a comprehensive review of on-going defence engagements. The discussion included various aspects of military collaboration, including joint exercises, expert exchanges, training programs, and industry cooperation. Both sides reached a consensus to improve overall defence cooperation. The Joint Defence Cooperation Committee is a mechanism to promote the objectives of defence cooperation.

India and Singapore upgraded their bilateral ties to a comprehensive strategic partnership

PM Modi visited Singapore at the invitation of Lawrence Wong to mark the 10th anniversary of the India-Singapore Strategic Partnership established in 2015. The leaders reviewed their bilateral relationship, discussing advanced manufacturing, connectivity, digitalization, healthcare, skills development, and sustainability. They agreed to elevate their ties to a Comprehensive Strategic Partnership. India and Singapore signed Memorandums of Understanding (MoUs) in digital technologies, semiconductors, health cooperation, and skill development. An agreement between India's Ministry of Electronics and Information Technology and Singapore's Ministry of Digital Development will enhance cooperation in



areas like digital technologies, cyber security, and 5G.

India and Kenya held the 3rd Joint Defence Cooperation Committee meeting

India and Kenya discussed various avenues for defence cooperation during the third edition of the Joint defence Cooperation Committee meeting. The Kenyan delegation met Indian defence industry representatives in New Delhi. Both countries discussed issues related to defence cooperation in areas like military cooperation, training, defence industries, R&D, etc. The MoU on defence Cooperation was signed between India and Kenya in July 2016. This MoU provided a legal framework to cooperate in various areas of defence for mutual benefit.

Maritime Partnership Exercise conducted by Indian Naval Ship Tabar with Spanish Naval Ship Atalaya

The Indian Navy's frontline frigate, INS Tabar, had arrived in Malaga, Spain. It conducted Maritime Partnership Exercise (MPX) with Spanish Naval Ship Atalaya in the Mediterranean Sea. India and Spain are working in several areas towards enhancing existing bilateral relations, including in the maritime sector. The conduct of MPX between the Indian Navy and the Spanish Navy in the Mediterranean Sea symbolises the reach and sustainment of the Indian Navy. It is also an important milestone in maritime cooperation between India and Spain. The MPX included a series of advanced exercises such as Station Keeping, Replenishment at Sea Approaches (RASAPs), Flying Exercise (FYEX), Steam Past and PHOTOEX serials.

The Charter and an MoU for the setting up of the Colombo Security Conclave (CSC) Secretariat in Colombo have been signed by four countries

These four countries are India, Maldives, Mauritius and Sri Lanka. Government of Sri

Lanka hosted the signing ceremony in Colombo. The documents were signed on 30 August 2024 by the National Security Advisor AjitDoval and the representatives of the Maldives, Mauritius and Sri Lanka on behalf of the respective Member States. Core objective of CSC is to promote regional security through addressing transnational threats as well as challenges of common concern to the Member States. There are five pillars of cooperation under the CSC. The pillars are given below. Maritime Safety and Security Countering Terrorism and Radicalisation Combating Trafficking and Transnational Organised Crime Cyber Security and Protection of Critical Infrastructure and Technology Humanitarian Assistance and Disaster Relief On July 10, CSC's eighth Deputy NSA-level meeting was held virtually. India, Mauritius, the Maldives, and Sri Lanka welcomed Bangladesh as the fifth member state of the CSC. Seychelles participated as an observer.

An MoU signed by India and Saudi Arabia to enhance bilateral cooperation in public sector audit in Riyadh

ShriGirish Chandra Murmu, the Comptroller and Auditor General of India, and Dr.Hussam Al-Angari, President of the Saudi General Court of Audit, signed the agreement. The objective of the MoU is to promote cooperation and facilitate exchange of expertise between the two countries in the field of public sector audit. Under this, key areas of cooperation include conducting joint training programs on financial, performance and compliance audit, as well as exchange of audit manuals and methodologies. The signing of this Agreement is expected to further strengthen the already close working relationship between the Comptroller and Auditor General of India and the Saudi General Court of Audit. This development is significant because Saudi Arabia is preparing

to take over the chairmanship of the Association of Asian Supreme Audit Institutions (ASOSAI) from India next year. At present, India holds the Chair of ASOSAI.

India and Chile co-chaired the 2nd Joint Commission meeting in New Delhi

Chile's Foreign Minister Alberto Van Klaveren reached New Delhi. Mr.Klaveren co-chaired the 2nd India-Chile Joint Commission Meeting with External Affairs Minister Dr. S. Jaishankar. The guest distinguished person also attended the Chile-India Business (Agricultural) Summit and left for Mumbai. Chile is a key partner of India in the Latin American region. Minister Klaveren's visit gave both sides an opportunity to review progress in bilateral relations and find new avenues of cooperation, to further strengthen bilateral relations.

India and Singapore focused on new pillars of cooperation to elevate Strategic Partnership

The 2nd India-Singapore Ministerial Roundtable Conference (ISMR) was held in Singapore to review the strategic partnership and explore new cooperation avenues. The discussions assessed progress since the first ISMR in September 2022, focusing on digitalization, skill development, sustainability, and healthcare. A key outcome was the decision to add two new pillars to their partnership: Advanced Manufacturing and Connectivity. This addition aims to enhance industrial cooperation, technological innovation, and improve infrastructure connectivity, facilitating trade and movement between India and Singapore.

The 2 India-Singapore Ministerial Round Table Conference held in Singapore

The 2nd India-Singapore Ministerial Round Table Conference (ISMR) aimed to strengthen trade and economic relations between the two countries. Attended by four Union ministers,

including Nirmala Sitharaman and Piyush Goyal, the meeting allowed for discussions with Singaporean leaders. Established to set a new agenda for bilateral relations, ISMR had its inaugural meeting in September 2022. In 2023-24, Singapore became the largest source of foreign direct investment (FDI) in India, investing \$11.77 billion, with a cumulative inflow of \$159.94 billion since April 2000. In bilateral trade, Singapore ranked as India's sixth largest trading partner, with total trade reaching \$35.61 billion, accounting for about 29% of India's trade with ASEAN.

India surpassed China to become the world's largest importer of Russian oil

July saw a record import of 2.07 million barrels per day (bpd) of Russian crude. This accounted for 44% of India's total imports. This is a 4.2% increase from June and a 12% increase from the same month last year. That was more than China's 1.76 million barrels per day of oil imports from Russia through pipelines and shipments in July. Since Russia started its war against Ukraine in February 2022, India's trade with Russia has grown, mainly as a result of imports of oil and fertiliser. Last month, Iraq remained India's second-largest oil supplier, followed by Saudi Arabia and UAE. India's crude purchases from Middle East increased by 4% in July, bringing the region's share in India's overall mix to 40% from 38% in June.

Supply Security Agreement signed by India and the United States

India and the United States have signed a bilateral, non-binding Supply Security Arrangement (SOSA). It will enable the two countries to obtain essential industrial resources from each other to resolve unforeseen supply chain disruptions to meet national security requirements. The agreement was signed by Vic Ramdas,

Principal Deputy Assistant Secretary of defence for Industrial Base Policy, on behalf of the US Department of Defence, and Sameer Kumar, Additional Secretary and Director General (Acquisition), on behalf of the Indian Ministry of Defence. Through SOSA, the US and India have agreed to provide reciprocal priority support for goods and services that promote national defence. This arrangement will enable both countries to obtain required industrial resources from each other to resolve unforeseen supply chain disruptions to meet national security requirements.

2+2 Ministerial Dialogue between India and Japan held in New Delhi

The meeting was attended by Defence Minister Rajnath Singh and External Affairs Minister Dr S Jaishankar, Japanese Minister of Defence Kihara Minoru and Minister of Foreign Affairs Ms Yoko Kamikawa. On the side-lines of the 2+2 dialogue, a bilateral meeting was held between the Defence Minister and his Japanese counterpart. During the meeting, the Ministers reviewed the bilateral cooperation. They also exchanged views on global and regional issues of mutual interest. Defence Ministry said, India and Japan share 'Special Strategic and Global Partnership'. The second India-Japan 2+2 dialogue was organised in September 2022 in Japan.

Government initiated an anti-dumping investigation into steel from Vietnam

India has launched an anti-dumping investigation on certain steel products imported from Vietnam. The anti-dumping investigation will analyse the threat to the domestic industry. The probe is based on a request from domestic steel producers citing negative impacts on market performance. This decision has been taken after a significant downturn in the Indian steel market. India,

despite being the world's second-largest crude steel producer, became a net importer of steel in this fiscal year. The period of investigation is January 1, 2023, to March 31, 2024 (15 months). India has set a target of achieving 300 million metric tons (mt) steel capacity by 2030–2021.

India's CAG and Uzbekistan's Chamber of Accounts signed a MoU

The Comptroller and Auditor General (CAG) of India signed a Memorandum of Understanding (MoU) with the Chamber of Accounts, Republic of Uzbekistan. The aim of this agreement is to enhance collaboration and exchange of expertise in the field of auditing between the two nations. The signing of the MoU is a significant step in promoting closer ties and collaboration among the SAs of India and Uzbekistan. This MoU will establish a collaboration platform for the exchange of knowledge and experience amongst auditing professionals to develop capacity for conducting audits. This MoU will encapsulate the urgency for institutions to embrace a new phase of collaborative engagement.

India and Israel joined hands for a new water technology centre at IIT Madras

India and Israel have inked a pact to establish a new water technology centre at IIT-Madras. Both countries issued a Joint Statement of Intent to establish a Centre of Water Technology at IIT, Madras. This tripartite

agreement has been signed by the Embassy of Israel, IIT Madras, and the AMRUT mission of the Ministry of Housing and Urban Affairs. The Centre of Water Technology's aim is to become a hub for innovation, research, and capacity-building in water technologies.

BRICS partners launched a Centre for Industrial Competences

BRICS countries launched a Centre for Industrial Competences in collaboration with the United Nations Industrial Development Organisation (UNIDO) to support the development of industrial skills and capabilities. This center will promote partnerships under the New Industrial Revolution (NIR) and address interests, challenges, and opportunities in the evolving industrial landscape. The UAE Ministry of Industry and Advanced Technology also participated in the launch. The members committed to cooperating on industrial policy to support the United Nations' Sustainable Development Goals (SDGs).

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BUSINESS AND ECONOMY

Union Bank of India is first major Indian Bank to sign Partnership for Carbon Accounting Financials (PCAF)

Union Bank of India has shown its dedication to tracking and controlling its funded emissions by joining PCAF. RBI's recently released draft rules on 'Disclosure framework on climate-related financial risks, 2024'



(published on February 28, 2024) emphasise the significance of monitoring funded emissions. The RBI's proposed rules indicate a change in direction for Indian banks' climate risk reporting requirements. The framework requires information on four major categories to be disclosed by regulated companies. Governance, strategy, risk management, and measurements and targets are the four main categories. PCAF is a global alliance of financial institutions collaborating to create and execute a standard method for evaluating and disclosing greenhouse gas emissions related to investments and loans.

By 2030, technical textiles exports will surpass \$10 billion annually

Union Textiles Minister Giriraj Singh highlighted the National Technical Textiles Mission and the PLI Scheme for textiles at a conference in New Delhi. The government has approved 156 research projects under the Mission. Globally, technical textiles are valued at over \$300 billion, with India holding a \$25 billion domestic market and \$2.6 billion in annual exports. Technical textiles focus on functional properties rather than aesthetics and are categorized into 12 types, including Agrotech, Meditech, and Sportstech.

National Payments Corporation of India launched a new feature "UPI Circle"

A new feature, "UPI Circle," has been launched by the National Payments Corporation of India to enhance digital

payment accessibility. Under this, primary users can now delegate payment authorisation to secondary users, such as family members or employees, who can then perform transactions directly from the primary user's account. It will be beneficial for parents providing allowances to children, and senior citizens who are cautious about conducting digital transactions. This feature came with many layers of intervention and security measures. NPCI has set the maximum monthly limit at ₹ 15,000, where a single transaction cannot exceed ₹ 5,000. The primary user can monitor the activity of the secondary users on the app.

Scheme for trading and settlement of sovereign green bonds (SGrBs) in IFSC has been introduced by RBI

The scheme allows eligible investors in the IFSC to invest in sovereign green bonds issued by the Government of India. Investors can participate in primary auctions by the Reserve Bank and trade in the secondary market. However, they cannot repackage securities, write derivatives, or engage in repo transactions. IFSC Banking Units (IBUs) cannot participate in primary auctions but can trade in the secondary market with other investors. Transactions between two IBUs are not permitted, but they can trade with investors on a 'back-to-back' basis. The scheme is effective immediately, and the IFSC Authority will provide operational guidelines.

India's GDP growth forecast for FY24 raised to 7.2% by Moody's Ratings

Moody's Ratings has increased India's real GDP growth forecast for FY24 to 7.2%, up from 6.8%, and raised its 2025 projection to 6.6% from 6.4%. This growth is attributed to strong private consumption and improved business conditions. Despite tight monetary policy and fiscal measures, the Indian economy grew 7.8% year-on-year in Q1 2024.

The report notes that both industrial and services sectors are thriving, as shown by the Purchasing Managers' Index (PMI) remaining above 60. It also highlights an expected boost in capital expenditure due to rising capacity utilization and ongoing government infrastructure spending.

Jana Small Finance Bank won four awards at 2nd ICC Emerging Asia Banking Conclave

Jana Small Finance Bank won several awards, including Best Small Finance Bank in India, and accolades for profitability, asset quality, and risk management at the 2nd ICC Emerging Asia Banking Conclave & Awards 2024. GopalTripathi represented the bank at the ceremony. In 2024, it was also recognized as a Regional Winner: Asia by IBS Intelligence. Jana Small Finance Bank, launched in March 2018, is the fourth largest small finance bank in India. The conclave, held in New Delhi on August 22-23, 2024, focused on digital leadership and featured participants from the BIMSTEC region. The first conclave took place in Goa in May 2023.

Unified Lending Interface will be launched by RBI to provide 'frictionless credit'

The Reserve Bank is testing an application called Unified Lending Interface (ULI) for hassle-free lending. Governor Shaktikanta Das said that it will soon be launched across the country and that it will become UPI in terms of loans. The aim of this new technology is to reduce the time taken for assessment, especially for small borrowers in rural areas. ULI facilitates a seamless and consent-based flow of digital information, including land records, from various data providers to lenders. Its infrastructure is designed for a plug-and-play approach to enable quick access. ULI improves digital access for lenders from diverse sources. This ecosystem is based on the consent of

potential borrowers, and data privacy is protected.

Government cut down the windfall tax on crude to Rs 2,100/tonne

The central government has decided to reduce the windfall tax on petroleum crude from Rs 4,600 per tonne to Rs 2,100 per metric tonne. The government has also scrapped windfall tax on export of diesel and aviation turbine fuel (ATF). The central government started imposing a windfall tax on crude oil producers in July 2022. It was later extended to the export of gasoline, diesel, and aviation fuel. It encouraged private refiners to sell fuel internationally to get refining margins. Oil prices have dropped by about 2 per cent and Brent crude is trading at just below \$80 per barrel. A windfall tax is a higher tax levied by the government on specific industries when the industry experiences unexpected and aboveaverage profits.

Centre released rules to boost offshore mineral exploration & production

The central government introduced the Offshore Areas Mineral Trust Rules, 2024, to oversee mineral exploration and production in India's offshore areas. As per the new rules, offshore mine holders have to contribute to the Trust by paying 10 per cent of their royalty payments to the government. This amount will be deposited into India's public account. The regulations also set specific exploration norms for different deposits and minerals, including construction-grade silica sand, nonconstruction-grade calcareous sand, calcareous mud, phosphatic sediments, etc. The Ministry of Mines has identified 10 offshore mineral blocks for potential auction. As per the rules, the main objective of the trust is to promote sustainable exploration.

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SCIENCE AND TECHNOLOGY

The preliminary automotive trials of the Indian Light Tank, Zorawar have been successfully conducted by DRDO

The Light Tank, named Zorawar, performed well in desert field trials, meeting all targets



and demonstrating adaptability for high-altitude environments. Developed by the Combat Vehicles

Research and Development Establishment, it involved contributions from various Indian industries, including MSMEs. The Zorawar features a high power-to-weight ratio and is named after General Zorawar Singh from the 19th century.

A web portal launched by Union Minister Dr.Jitendra Singh to monitor progress of Special Swachhata Campaign 4.0 Progress

A new online portal has been launched to track the progress of Special Campaign 4.0, aimed at institutionalizing cleanliness in all Government of India offices from October 2 to 31 each year. The initial phase will run from September 16 to 30, 2024. Previous campaigns covered over 4 lakh SwachhataAbhiyan sites, freeing 355 lakh sq. ft. of space and generating ₹1,162 crore from waste disposal. During the initial phase, ministries will identify pending works, mobilize workers, and prepare site management plans. Best practices will be showcased during Good Governance Week 2024, from December 19 to 24.

Government launched the 'RangeenMachhli' App to meet the needs of the ornamental fisheries sector

Union Minister for Fisheries Rajiv Ranjan Singh launched the "RangeenMachhli" mobile

app at ICAR-Central Institute of Freshwater Aquaculture (ICAR-CIFA), Bhubaneswar. It has been developed by the ICAR-CIFA with support from the Pradhan Mantri Matsya Sampada Yojana (PMMSY). The app has been designed to meet needs of the ornamental fisheries sector. It will provide crucial knowledge resources to hobbyists, aquarium shop owners, and fish farmers. The ornamental fisheries sector has immense potential of generating employment and contribute to the economy. "RangeenMachhli" app provides multilingual information in eight languages. "Find Aquarium Shops" tool, which allows users to locate nearby aquarium shops, is the most unique feature of this app.

Indian Navy launched Anti-Submarine Warfare vessels Malpe and Mulki

The Indian Navy launched two anti-submarine warfare vessels, Malpe and Mulki, at Cochin Shipyard. Over 80% of their components are indigenous. The vessels are equipped with lightweight torpedoes, ASW rockets, a 30mm gun, and 12.7mm remote-controlled guns. They are 78 meters long, 11.36 meters wide, and have a maximum speed of 25 knots with an endurance of 1,800 nautical miles. Designed to include indigenously developed sonar, these Mahe-class ships will replace the Abhay-class ASW corvettes.

The procurement of 240 aero-engines approved by the Cabinet Committee on Security for the Sukhoi-30 MKI aircraft of the IAF

The Indian government approved the procurement of 240 AL-31FP aero-engines for the Sukhoi-30 MKI aircraft from Hindustan Aeronautics Limited (HAL) at a cost of over ₹26,000 crore. Delivery will start after one

year and be completed over eight years. The engines will have more than 54% indigenous content and will be manufactured at HAL's Koraput division. This supply will support the Indian Air Force's fleet operations and enhance national defense preparedness.

Indian Army launched Project Naman to support Veterans and their families

The Indian Army has launched the first phase of Project NAMAN. It will provide dedicated support and services to Defense pensioners, veterans, and their families. Under the first phase of Project NAMAN, 14 Common Services Centers have been established at different locations. Common Services Centres have been established at New Delhi, Jalandhar, Leh, Dehradun, Lucknow, Jodhpur, Bengdubi, Gorakhpur, Jhansi, Secunderabad, Saugor, Guntur, Ahmedabad, and Bangalore. The project will expand significantly and aim to establish approximately 200 centres nationwide over the next 2 to 3 years.

Scientists discovered human body's natural killer cells that protect from cancer

Scientists at the University of Southampton made a groundbreaking discovery in cancer research. It has discovered how the body's natural killer cells can identify and target cancer cells. As per scientists, the human body's immune system recognizes and attacks cancer cells. Killer cells are an emerging form of immunotherapy. As per the research team, a peptide derived from the XPO1 protein attracts natural killer cells which triggers the body's immune response against cancerous cells. Patients with cancer who had both active killer cells and high levels of XPO1 showed significantly better survival rates. It will help in developing targeted therapies that will use the body's own immune system.

India's 2nd nuclear missile submarine INS Arighat has been commissioned by Rajnath Singh

The Indian Navy commissioned its second nuclear submarine, INS Arighat (S-3), on August 29 in Visakhapatnam. An upgraded version of the first SSBN, INS Arihant, INS Arighat enhances India's naval capabilities and strategic nuclear deterrence. It is armed with K-15 nuclear ballistic missiles with a range of 750 km and can reach speeds of 12–15 knots on the surface and 24 knots submerged. INS Arighat is part of a project to build four SSBNs, with two more currently under construction.

Bharat Biotech International Ltd launched Hillchol (BBV131)

Hillchol (BBV131) is a new single-strain oral cholera vaccine developed by Bharat Biotech under a license from Hilleman Laboratories. There is a global shortage of oral cholera



vaccines (OCVs), with only one manufacturer supplying them and an annual deficit of about 40 million doses. Bharat Biotech has set up large-scale manufacturing facilities in Bhubaneswar and Hyderabad, capable of producing 200 million doses. The vaccine is administered in two doses on Days 0 and 14 and is suitable for children over one year old. It is stored at temperatures between 2 to 8°C and comes in both mono and multidose formats.

India unveiled Kamikaze drones with a range of 1000 km range

The National Aerospace Laboratories (NAL) unveiled indigenous Kamikaze Drones with a range of 1,000 kilometres. The 30HP Wankel engine in these drones enables them to carry 100-120kg weight, which includes 30-40 kg of explosives. They are controlled from a command centre. It can fly at a certain altitude and detonate the explosives once they hit the

target. It uses an Isro-developed navigation system. Marut Drone Academy has partnered with UnatiAgri Allied and Marketing Multi-State Cooperative Society to launch Punjab's first rural drone academy. NAL is a constituent of the Council of Scientific and Industrial Research (CSIR). It was established in 1959.

The Coast Guard's new Maritime Rescue Coordination Centre (MRCC) inaugurated by Defence Minister Rajnath Singh in Chennai

During an event, two new Coast Guard units were inaugurated via video conferencing: the Regional Marine Pollution Response Centre (RMPRC) in Chennai and the Coast Guard Air Enclave in Puducherry. The RMPRC will improve coordination for rescuing mariners and fishermen in distress, featuring advanced communication systems for distress monitoring. It will serve as a central hub for maritime rescue operations along India's East Coast. The Air Enclave will operate Chetak and Advanced Light Helicopters, equipped

with indigenous technology, for maritime patrol, search and rescue missions.

ICMR and Panacea Biotec started phase 3 trial of indigenous Dengue Vaccine

ICMR and Panacea Biotec have started the Phase 3 clinical trial of DengiAll, India's first indigenous dengue vaccine. This trial will evaluate the efficacy of India's indigenous tetravalent dengue vaccine, DengiAll, developed by Panacea Biotec. The first participant in this trial was vaccinated at PanditBhagwatDayal Sharma Post Graduate Institute of Medical Sciences (PGIMS), Rohtak. At present, there is no antiviral treatment or licensed vaccine for dengue in India. The tetravalent dengue vaccine strain (TV003/TV005) originally was developed by the National Institutes of Health (NIH), USA. ICMR and Panacea Biotec will conduct the Phase 3 clinical trial across 19 sites in 18 States and Union Territories of India.

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SPORTS

India's Shubhi Gupta clinched the girls U-16 gold medal in the Commonwealth Chess Championships in Kalutara, Sri Lanka

Shubhi Gupta won a bronze medal in the girls U-20 category at the Commonwealth Chess Championships in Kalutara, Sri Lanka. A Women FIDE Master and the current U-19 girls' national champion, she scored



eight points out of nine in the U-16 category, finishing ahead of Mrityu Mallick (7 points) and Yashvi Jain (6.5 points). Shubhi is from Ghaziabad, UP, and has previously won gold in the U-12 category at the Commonwealth Youth Chess Championship and the World Cadet Championship.

Jannik Sinner won his second Grand Slam title of the year in the US Open Tennis

Jannik Sinner won the men's singles final at the US Open, defeating Taylor Fritz 6-3, 6-4, 7-5, making him the first Italian man to win the tournament. This was his sixth title of the year. Aryna Sabalenka won the women's singles, beating Jessica Pegula 7-5, 7-5, becoming the first female Belarusian to win the US Open. In men's doubles, Max Purcell and Jordan Thompson triumphed over Kevin Krawietz and Tim Pütz. In women's doubles, Lyudmyla Kichenok and Jelena Ostapenko defeated Kristina Mladenovic and Zhang Shuai. Sara Errani and Andrea Vavassori won the mixed doubles final against Donald Young and Taylor Townsend. The US Open is held annually in Queens, New York City, and organized by the United States Tennis Association.

India ended its historic campaign at the Paris 2024 Paralympics with 29 medals

India won 29 medals, including seven gold, nine silver, and 13 bronze at the Paris 2024 Paralympics. India surpassed its medal tally of 19 medals at the Tokyo 2020 Paralympics. India crossed the total 50-medal milestone in the history of the Paralympic Games. A total of 84 Indian para-athletes participated across 12 disciplines at the Paris 2024 Paralympics. Some Important achievements: Avani Lekhara became the first Indian woman to win two Paralympic gold medals. Harvinder Singh became India's first Paralympic or Olympic archery champion. Mariyappan Thangavelu became the first Indian athlete to win medals at three consecutive Paralympic Games. Preethi Pal won India's first medal in a Paralympic track event. Sheetal Devi became the youngest Indian Paralympic medalist at the age of 17.

Preeti Pal and Harvinder Singh were the country's flag bearers in the closing ceremony of the Paris Paralympic Games

Gold medal-winning archer Harvinder Singh and sprinter Preeti Pal were the country's flag-bearers during the closing ceremony of the Paris Paralympic Games. This was announced by Satya Prakash Sangwan, Chief de Mission of India's Paris 2024 Paralympic contingent. A history was created by Harvinder by becoming the first Indian archer to win a gold medal at the Paralympics 2024. At the same time, Preeti created history by becoming the first Indian woman to win two medals at the Paralympics. She won bronze medals in the women's T35 100m and 200m events.

In the Under-20 World Championship, wrestler Jyoti Berwal won the gold medal

In wrestling, in the women's 76kg freestyle category, Jyoti Berwal won the gold medal at

the Under-20 World Championships in Pontevedra, Spain. On 5 September, Jyoti won the title by defeating Ukraine's Mariya Orlevich in the final without allowing her to score a single point. Jyothi defeated Mongolian, Chinese, and Turkish rivals on her way to the final. This was India's second consecutive World Under-20 title in women's 76kg after Priya Malik claimed it in the 2023 edition. Indian wrestlers won two more medals in the same category. Komal won the bronze medal in 59 kg, and Shrishti won the bronze medal in 68 kg. US, UK, and EU signed the world's first AI treaty.

History created by Harvinder Singh by becoming the first Indian archer to win a Paralympic gold medal

Harvinder Singh made history by winning gold in the men's individual recurve open final at the Paris 2024 Paralympics, becoming the first Indian archer to win a gold medal at the Paralympics or Olympics. Dharambir set an Asian record with a throw of 34.92m to win gold in the men's club throw F51 final, while Pranav Soorma took silver with a throw of 34.59m. Sachin Sarjerao Khilari won silver in the men's shot put F46 category with an Asian record of 16.32m. In the men's high jump T63 category, Sharad Kumar and Mariyappan Thangavelu won silver and bronze, respectively. Ajeet Singh secured silver in the men's javelin throw F46 event, with Sundar Singh Gurjar winning bronze.

Deepthi Jeevanji won the bronze medal in the women's 400m T20 event at the Paris Paralympics

Deepthi won a bronze medal in the T20 category at the Paris Paralympics with a time of 55.82 seconds, finishing behind world record holder Aysel Onder and Yulia Shuliar. Earlier, she had set a world record of 55.07 seconds at the World Para-Athletics Championships in Japan, where she also won gold. Deepthi is the second Indian to win a medal in a track event at the Paralympics,

contributing to India's total of six medals in para-athletics.

India won gold medal on the fifth day of the Paralympic Games in Paris

Nitesh Kumar won the gold medal in the men's singles SL3 class at the Paralympics, defeating Daniel Bethell of Great Britain. This marks India's second gold medal and brings the total medal count to nine. Yogesh Kathuniya also won a silver in the men's discus throw F56 final. The SL3 class includes players with moderate limb movement restrictions. Nitesh, who was injured in a rail accident at age 15, has since excelled in para badminton, ensuring India retains the SL3 gold from the Tokyo Paralympics.

Himanshi Tokas won the silver medal at the Asian Cadet Judo Championships

India's Himanshi Tokas won the silver medal in the women's 63-kilogram event at the Asian Cadet and Junior Judo Championships in Mungyeong, South Korea. This four-day Judo



Championship concluded at the Mungyeong Gymnasium. The Asian Cadet Championships 2024 were held from 29 August to 30 August in the Republic of Korea. 161 participants from 16 countries have taken part in this competition. 12 members from India took part in the competition.

At the Paris Paralympics 2024, a history was created by Preeti Pal by winning India's first bronze medal in the women's 200m race

The Indian athlete gave India its first medal in 200m by winning bronze in the women's T35 event. Preeti Pal of Muzaffarnagar in Uttar Pradesh gave India its second Paralympic medal in track, clocking a personal best of 30.01 seconds. With two medals in two events, she became only the seventh Indian to win more than one Paralympic medal. In addition, India's Nishad Kumar won the silver medal in the men's high jump T47 event at the

Paris Paralympics. Nishad Kumar had won a silver medal in the same event at the Tokyo Paralympics three years ago. Nishad jumped a season's best of 2.04m to finish behind Roderick Townsend of the USA, who also won gold in Tokyo.

Rajgir, Bihar will host 2024 Women's Asian Champions Trophy

Hockey India announced that the 2024 Hockey Women's Asian Champions Trophy will take place in Rajgir from November 11 to 20, marking a significant milestone in the development of sports facilities in Bihar.



The tournament will be held at the newly-built Rajgir Hockey Stadium, where India will defend its title against teams from China, Malaysia, Japan, Thailand and Korea. On August 30, Bihar Chief Minister Nitish Kumar inaugurated the Rajgir Hockey Stadium. This will be 8th edition of Hockey Women's Asian Champions Trophy. India has got the opportunity to host this event for the second consecutive time. Indian women's hockey team won the Women's Asian Champions Trophy 2023 title by defeating Japan by 4-0 in the final at Ranchi. Women's Asian Champions Trophy is organized by the Asian Hockey Federation.

Avani Lekhara won India's first gold medal in the women's 10m air rifle standing SH1 event at 2024 Paralympics in Paris

Avani Lekhara became the first Indian woman to win two Paralympic gold medals. At the 2020 Tokyo Paralympics, she became the country's first female shooter to win a medal in shooting. She successfully defended her title, setting a Paralympic Games record with 249.7 points in the final standings. At the same event, Indian para-shooter Mona Agarwal also won the bronze medal, finishing last with 228.7 points. Yunri Lee of the Republic of Korea team won the silver medal in this event.

The Paralympic Games 2024 will take place in Paris from 28 August to 8 September.

Bangladesh achieved a historic victory in the SAFF U-20 Championship football tournament

Bangladesh won the SAFF Under-20 Championship for the first time, defeating hosts Nepal 4–1 in the final on August 28 at the ANFA ground in Lalitpur. The tournament, which started on August 18, 2024, included teams from Nepal, Sri Lanka, India, Maldives, and Bhutan. Previously, India had won the championship in 2019, 2022, and 2023. The SAFF Under-20 Championship is a biennial tournament for male footballers under 20 years old, first held in Nepal in August 2015.

Karthik Venkataraman won the 61st National Chess Championship

Karthik, Ganguly, and Neelash Saha finished at nine points from 11 rounds at the 61st National Chess Championship. The tie was broken using the Buchholz System after they finished in that order. The 61st National Chess Championship was organized at RPS International School, Gurgaon, by the Haryana Chess Association. Karthik received a trophy and a cash prize of six lakh rupees (approximately USD 7,150). 341 players from all across India have participated in this tournament. The prize fund for this tournament was thirty lakh rupees (approximately USD 35,000). All India Chess Federation was the chief guest and awarded the prizes to winners.

Jay Shah has been elected as independent chair of ICC

Jay Shah, the current BCCI honorary secretary, has been elected unopposed. Shah was the sole nominee for the position. He will assume position on 1st December 2024. He will be youngest person ever to occupy the position at 35. Current ICC Chair Greg Barclay steps down after his term in November 2024. On 20 August 2024, it was declared that Greg Barclay would not seek a third term.

India secured a silver medal at the Maruhaba Cup at Asian Surfing Championships 2024 at Thulusdhoo, Maldives

Japan won the gold medal at the Maruhaba Cup during the Asian Surfing Championships 2024, with Taipei and China finishing third and fourth, respectively. The Indian team, consisting of Kamali P, Ajeesh Ali, Srikanth D, and Sanjay Selvamani, secured first place in the Heat 2 semi-final with a score of 32.16. India won a silver medal at the championships, marking their first-ever quota in surfing for the Asian Games. The event in Thulusdhoo serves as a qualifier for the 2026 Asian Games, which will be held in Aichi-Nagoya, Japan. Harish Muthu made history as the first Indian to reach the quarterfinals in the men's open event, although he did not advance to the semi-finals.

Rohit Sharma received the 'Men's International Cricketer of the Year' award at the Ceat Cricket Rating Awards 2023–24

At the Ceat Cricket Rating Awards 2023–24, Rohit Sharma was named 'Men's International Cricketer of the Year.' Virat Kohli received the 'Men's ODI Batter of the Year' award, while Mohammed Shami was named 'ODI Bowler of the Year.' Rahul Dravid received the 'Lifetime Achievement Award.' Yashasvi Jaiswal won 'Men's Test Batter of the Year,' and R. Ashwin was named 'Men's Test Bowler of the Year.' R Sai Kishore was awarded 'Domestic Cricketer of the Year,' and New Zealand's Tim Southee was named 'Men's T20I Bowler of the Year.' Phil Salt from England was recognized as the 'Best Batter of the Year' in T20 format.

International Cricket Council has decided to move the ninth women's T20 World Cup from Bangladesh to the UAE

This will be the ninth edition of the Women's T20 World Cup. The event will continue to be officially hosted by the Bangladesh Cricket Board (BCB). From October 3 to October 20, the Women's T20 World Cup will be held in Dubai and Sharjah, two locations in the United Arab Emirates. The event's dates are still unchanged. The event could not be held in Bangladesh as originally scheduled. Because of Bangladesh's political unrest, the event has been moved from Bangladesh to the United Arab Emirates. Zimbabwe and Sri Lanka also put forward bids to take over as hosts, but the UAE was chosen as the new location. 2023 ICC Women's T20 World Cup was the 8th edition of ICC Women's T20 World Cup.

Sumit Antil, Bhagyashree Jadhav named Indian flag bearers for the opening ceremony at Paris 2024 Paralympics

Reigning javelin throw champion Sumit Antil and leading shot put athlete Bhagyashree Jadhav have been selected to carry India's flag during the opening ceremony of the Paris Paralympics 2024. The Paralympic Games, to be held from August 28 to September 8, will be held at the same venues where the Olympics concluded on August 11 in the French capital. To compete across 12 sports, India is sending its largest Paralympic contingent to Paris 2024 with 84 athletes. This is significantly more than the 54 participants representing the country in Tokyo. For the first time, India will also compete in the sports of para cycling, para rowing and blind judo in Paris.

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AWARDS

Indian-origin lecturer Prasanthi Ram won the Singapore Literature Prize

Indian-origin lecturer Prasanthi Ram won the Singapore Literature Prize for her 2023 short



story book, *Nine Yard Sarees*, which explores generations of a Tamil Brahmin family spread across different countries. The prize

was awarded by a panel led by poet Cyril Wong. Indian-origin Shubigi Rao won the best English creative non-fiction prize for *Pulp III: An Intimate Inventory of the Banished Book* (2022), and the best English debut prize went to Professor Emeritus Peter Ellinger for *Down Memory Lane: Peter Ellinger's Memoirs* (2023).

TIME Magazine named AshwiniVaishnaw as one of the most influential people in Technology and AI

Information and Broadcasting Minister Ashwini Vaishnaw has been named one of the most influential people in Technology and AI by TIME Magazine under the "Shapers" category. Under his leadership, India aims to become a top five semiconductor manufacturer in the next five years. The list also includes notable figures like SundarPichai, Satya Nadella, Sam Altman, Mark Zuckerberg, and Nandan Nilekani for their contributions to AI and technology.

The Wokha SAATHI WhatsAppChatbot has been awarded the Gold Award at National Awards for e-Governance Scheme 2023-2024

The Wokha SAATHI WhatsAppChatbot, an initiative by the Wokha District Administration of Nagaland, won a Gold Award for e-Governance at the 27th National Conference

on e-Governance in Mumbai. This is the first time an initiative from Nagaland has received this recognition. The chatbot provides over 40 services and offers timely assistance to residents. The Open Network for Digital Commerce (ONDC) also won a Gold Award for its use of emerging technologies in citizen services. The awards, organized by the Department of Administrative Reforms, recognize excellence in e-Governance initiatives.

President DroupadiMurmu presented the first Vigyan Ratna Puraskar to Govindrajan Padmanabhan

President Droupadi Murmu awarded the first-ever Vigyan Ratna Puraskar to noted biochemist Govindrajan Padmanabhan for his lifetime contributions to science. The President also presented 13 Vigyan Shri Puraskar for path-breaking research, 18 VigyanYuva-Shanti Swarup Bhatnagar Prizes, and one Vigyan Team Award. The Vigyan Team Award was given to the Chandrayaan-3 team for successfully landing the spacecraft on the moon's south pole.

RGIA Hyderabad won the Best Airport Award for the third consecutive year

Hyderabad's Rajiv Gandhi International Airport (RGIA) won the Best Airport title at the India Travel Awards for the third consecutive year. It was also recognized for its social media engagement and airline support. In 2023, RGIA received the Skytrax 'Best Airport Staff in India & South Asia 2024' award. Opened in 2008, RGIA is located in Shamshabad, Telangana, and is India's largest airport by area, covering 5,500 acres. It was the first in India to introduce domestic

e-boarding in 2015 and international e-boarding in 2020.

India's student team has won several prestigious medals at the 17th International Earth Science Olympiad (IESO)

The 17th International Earth Science Olympiad (IESO) took place from August 8 to 16, 2024, in Beijing, China. A four-member Indian team won three gold, two silver, and three bronze medals in categories like Theory and Practical, Earth System Project, and International Team Field Investigation. The IESO, part of India's REACHOUT scheme under the Ministry of Earth Sciences, is a global competition for secondary students, aiming to promote Earth science awareness. This year, 35 countries participated, with 32 reaching the finals.

"Aattam" is named Best Film, while RishabShetty gets Best Actor for "Kantara" at the 70th National Film Awards

The 70th National Film Award ceremony was held in New Delhi on August 16. RishabShetty got the Best Actor prize for his role in the popular movie "Kantara." The film also won the award for 'Best Popular Film Providing Wholesome Entertainment'. In the Best Actress category, this honour was jointly given to Nithya Menen and Manasi Parekh. Nithya was recognised for her powerful

performance in the Tamil film 'Thiruchitrambalam', while Manasi impressed the audience with her role in the Gujarati film 'Kutch Express'.

103 Gallantry awards to Armed Forces and Central Armed Police Forces personnel have been approved by President DroupadiMurm

The President has approved several Gallantry awards, including four Kirti Chakras (three posthumous), 18 Shaurya Chakras (four posthumous), and one Bar to Sena Medal (Gallantry). Kirti Chakras were awarded to Major Malla Rama Gopal Naidu and posthumously to Colonel Manpreet Singh, Rifleman Ravi Kumar, and Himayun Muzzammil Bhat. Two Shaurya Chakras were given to Navy and Air Force personnel each, and five went to CAPF personnel. Other awards include 63 Sena Medals, 11 NaoSena Medals, six VayuSena Medals, and 39 Mention-in-Despatches, including one for Army Dog Kent. Additionally, medals were awarded to Indian Coast Guard personnel and for distinguished police service.

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MISCELLANEOUS

APPOINTMENT

Randhir Singh elected President of the Asian Olympic Council

Veteran sports administrator Randhir Singh was unanimously elected President of the Olympic Council of Asia (OCA) at its 44th General Assembly. He is the first Indian to hold this position and will serve for four years.



Singh, a former Olympic trap shooter and gold medalist at the 1978 Asian Games, has been involved with the OCA for decades, previously serving as secretary general and life vice-president. He became acting president in 2021 after the previous president, Sheikh Ahmed Al-Sabah, was banned by the IOC for ethics violations.

IAS officer Tuhin Kant Pandey has been appointed as the Finance Secretary

Senior bureaucrat Tuhin Kant Pandey was named as the new Finance Secretary by the Central Government. Pandey, a 1987 batch Indian Administrative Service (IAS) officer of Odisha cadre, was till now posted as Secretary, Department of Investment and Public Asset Management (DIPAM). The post of Finance Secretary fell vacant after the appointment of T.V. Somanathan as Cabinet Secretary in August. Tuhin Kant Pandey is known for his role in the privatization of Air India and the country's biggest IPO brought by LIC. Before joining the Finance Ministry, he worked as Principal Secretary in his home cadre Odisha.

Air Marshal Tejinder Singh took over as Deputy Chief of the Air Staff of the Indian Air Force

He is an alumnus of the National Defence Academy. He was commissioned in the

fighter stream of the IAF on 13 June 1987. He is a Category 'A' Qualified Flying Instructor with over 4500 hours of flying. He is an alumnus of Defence Service Staff College and National Defence College. He was given the VayuSena Medal in 2007 and AtiVishishtSeva Medal in 2022.

T.V. Somanathan took charge as Cabinet Secretary

He has served as Joint Secretary and Additional Secretary in the Prime Minister's Office (PMO). He took over as the Cabinet Secretary following the superannuation of Rajiv Gauba. He is an Indian Administrative Service (IAS) officer of Tamil Nadu cadre. He served as the Department of Expenditure's Secretary and Finance Secretary before joining as the Cabinet Secretary.

Satish Kumar has been appointed as Chairman and Chief Executive Officer (CEO) of the Railway Board

He has become 1st Dalit chairman and CEO of Railway Board. He is an Indian Railway Management Service officer. He is presently serving as a Member (Traction & Rolling Stock). He will succeed Jaya VarmaSinha. His tenure will begin from 1 September. Jaya VarmaSinha is the first woman to be appointed as the CEO of the board. Jaya VarmaSinha is superannuating on August 31. In an order on July 29, Jaya VarmaSinha was appointed as an administrative member in the Central Administrative Tribunal (CAT).

Government appointed B Srinivasan as the new NSG director general

An Indian Police Service (IPS) officer, B Srinivasan, has become the new director general of the National Security Guard (NSG). B Srinivasan is appointed after NalinPrabhat has been deputed as Jammu and Kashmir's Special Director General of Police. The Appointments Committee of the

Cabinet has approved the appointment of Srinivasan as Director General, NSG, until August 31, 2027.

Senior IAS officer Govind Mohan took charge as the new Union Home Secretary

Govind Mohan has replaced Ajay Kumar Bhalla as the new Union Home Secretary after Bhalla completed his five-year term. Before this role, Mohan was the Union Culture Secretary and had launched key programs like 'AzadiKaAmritMahotsav,' celebrating 75 years of India's independence, and the 'HarGharTiranga movement,' encouraging the hoisting of the national flag in every household. Mohan has also been appointed as Officer on Special Duty in the Union Home Ministry.

Rahul Navin has been appointed as Director of Enforcement Directorate

A 1993 batch Indian Revenue Service (IRS) officer, Rahul Navin, has been appointed as the new director of the Enforcement Directorate (ED). The Appointments Committee of the Cabinet has approved Navin's appointment for a period of two years. Before this appointment, Navin was serving as the Special Director of the Enforcement Directorate. Rahul Navin joined the ED in November 2019 as a Special Director (OSD). He was appointed acting director of the ED after the tenure of Sanjay Kumar Mishra ended in September 2023.

OBITUARIES

Sitaram Yechury passed away in New Delhi

He was receiving treatment for a severe respiratory tract infection at AIIMS in Delhi. He was General Secretary of CPI(M). He was born in Chennai. He was chosen three times to serve as the JNU Students Union President. After becoming a member of the CPI(M) in 1975, he was detained for his

political activity during the emergency. In 2015, he was chosen to serve as the CPI (M) General Secretary. He was chosen from West Bengal to serve two terms in the RajyaSabha from 2005 to 2017.

At 117 years old, Maria BranyasMorera, the oldest person in world, passed away

On March 4, 1907, Branyas was born in San Francisco. In 1915, her family returned to Spain. In Olot, Catalonia, Spain, Branyas was living in the Santa Maria del Tura nursing home. She passed away while sleeping. In January 2023, Guinness World Records formally recognised her as the oldest person in the world after the passing of French nun Lucile Randon. TomikoItookawa of Japan is now the oldest living person in the world after Branyas's demise. Itookawa was born on May 23, 1908. With 122 years and 164 days of life, Frenchwoman Jeanne Louise Calment holds the record of the longest-lived person.

RN Agarwal, 'Father of Agni missile', passed away at 84

The father of Agni missiles, RN Agarwal, died at the age of 84. He died due to old-age-related ailments. RN Agarwal was a recipient of the Padma Bhushan. He had served as the Agni program director and also as the director of ASL (Advanced Systems Laboratory) in Hyderabad. The Integrated Guided Missile Development Programme (IGMP) was launched by Former President A.P.J. Abdul Kalam, and Agni was a key program in it. Agni missile is a family of medium- to intercontinental-range ballistic missiles. Agni-I was developed under the Integrated Guided Missile Development Programme (IGMDP) and tested in 1989. Agni-5 can carry nuclear warheads and hit targets more than 5,000 km away. It uses a three-stage solid-fuel engine.

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MATCH POINT

- 'Rangin Machli' was recently launched by - **Union Fisheries Minister**
- Joint military exercise 'Al Najah' will be held between India and which country- **Oman**
- Recently, the immediate dissolution of the Legislative Assembly of this state has been announced- **Haryana**
- This country recently took seat as a member country of the United Nations in the 79th General Assembly session- **Palestine**
- The Government of India has approved health insurance of for senior citizens of - **5 lakh**
- Sitaram Yechury passed away, he was a famous personality in - **Politics**
- It has been recently announced to establish a tribal university in - **Maharashtra**
- For the C-130J Super Hercules program in India Tata Advanced Systems Limited has signed an agreement with - **Lockheed Martin**
- India's first center for the conservation of Asian King Vulture has been started in - **Uttar Pradesh**
- The number of people honored with the National Florence Nightingale Award by President Draupadi Murmu- **15**
- PM Modi inaugurated Semicon India 2024 in - **Uttar Pradesh**
- The Central Government has approved the proposal to appoint this number of Additional Solicitor Generals in the Supreme Court of India- **6**
- This personality has been recently elected as the Chairman of the Parliamentary Official Language Committee- **Amit Shah**
- These sports persons have been made the Indian flag bearers for the closing ceremony of Paris Paralympics 2024- **Harvinder Singh and Preeti Pal**
- This country will host the 2nd Asia Pacific Ministerial Conference on Civil Aviation- **India**
- In this city All India Institute of Medical Sciences (AIIMS) inaugurated a Tobacco Cessation Clinic (TCC)- **New Delhi**
- In the 54th GST Council meeting, the GST rate on cancer medicines has been reduced to – **5%**
- This personality will represent India and address the United Nations General Assembly 2024- **S. Jaishankar**
- This country is hosting the Asian Hockey Champions Trophy– **China**
- This sports person won the Men's Singles title at the US Open 2024 Championship - **Jannik Sinner**
- Number of medals India has won in the Paris 2024 Paralympic Games – **29**
- This personality is the first Indian elected President of the Olympic Council of Asia- **Randhir Singh**
- Winner of the Women's Singles title at the US Open 2024 Championship - **Aryna Sabalenka**
- Winner of the gold medal in men's high jump T64 event at Paris Paralympics 2024- **Praveen Kumar**

- In this city Prime Minister Shri Narendra Modi launched the 'Water Conservation Public Participation' initiative- **Surat**
- With this organisation the Ministry of Panchayati Raj tied up with the aim of strengthening systems for social change- **UNICEF India**
- This Union Minister has been included in Time Magazine's list of most influential people in AI- **AshwiniVaishnav**
- This Indian female wrestler won the gold medal in the U20 World Wrestling Championship- **JyotiBerwal**
- Recently this state government announced 33 percent reservation for women in police force- **Rajasthan**
- This sports person won the gold medal in women's long jump in the National Open Athletics Championship- **AncySojan**
- President Draupadi Murmu inaugurated Vishwashanti Buddha Vihar in - **Maharashtra**
- This country has made the highest powerplay total in T20I cricket history- **Australia**
- With this country India has recently partnered for the semiconductor sector- **Singapore**
- This personality is the oldest Indian to swim across the English Channel alone- **SiddharthAgarwal**
- The number of football stadiums Uttar Pradesh Chief Minister Yogi Adityanath has announced to build in the state – **18**
- Prime Minister Narendra Modi inaugurated the 'Water Conservation Public Participation' initiative at- **Surat (Gujarat)**
- The Indian Navy is conducting the 'Varuna' exercise with - **France**
- The first Joint Commanders Conference under the theme 'Strong and Secure India: Transformation of Armed Forces' was held in - **Lucknow.**
- The Vedic 3D Museum will be established in - **Varanasi, Uttar Pradesh**
- Sumit Antil won the gold medal in Paris Paralympics 2024 in - **Javelin Throw**
- Recently this state assembly passed the anti-rape 'Aparajita' bill- **West Bengal**
- India's rank in the 2023 edition of the Global Innovation Index- **40th**
- This country will host the ICC World Test Championship final in the year 2025- **England**
- Rural Doctors Movement was honoured with Ramon Magsaysay Award 2024. It is related to - **Thailand**
- The World Bank has raised India's growth forecast for FY25 to - **7.0%**
- The first Indian PM to make an official bilateral visit to Brunei- **PM Narendra Modi**
- Athlete Nishad Kumar won this medal in high jump at Paris Paralympics 2024- **Silver**
- Recently, the Finance Ministry has given 'Navratna' status to – **4 companies (Satluj Jal Vidyut Nigam Ltd, Solar Energy Corporation of India Ltd, Railtel Corporation of India Ltd and National Hydroelectric Power Corporation Ltd.)**
- Avni Lekhara won the gold medal in Paris Paralympics 2024 in - **Shooting**
- Recently India signed a Memorandum of Understanding with this country to enhance cooperation in the field of tourism- **Malaysia**

- Winner of the Under-20 SAFF Football Championship title- **Bangladesh**
- Recently 'AnubhavPuraskar' award was given by- **Department of Pension and Pensioners Welfare**
- New chairman of International Cricket Council- **Jay Shah**
- The flag bearers of the Indian contingent at the Paris 2024 Paralympics opening ceremony- **SumitAntil and BhagyashreeJadhav**
- Number of new Greenfield Industrial Smart Cities approved by the Union Cabinet- **12**
- This bank has launched a new savings bank account scheme named 'Avani' for women- **Bandhan Bank**
- International Mother Teresa Award ceremony was organized in - **Dubai**
- This country will host the ICC Women's T20 World Cup 2024- **UAE**
- 'Chief Minister SukhShikshaYojana' was recently launched by this state government- **Himachal Pradesh**
- Theme of World Water Week 2024- **“Bridging the boundaries: Water for a peaceful and sustainable future”**
- Number of new districts have been announced to be created in the Union Territory of Ladakh–**5 (Zaskar, Drass, Sham, Nubra and Changthang)**
- New President of Bangladesh Cricket Board- **Farooq Ahmed**
- This state has become the first one to implement the Unified Pension Scheme- **Maharashtra**
- India's first reusable hybrid rocket has been built by - **Space Zone India and Martin Group**
- Asian Surfing Championship 2024 was organized in - **Maldives**
- India's first reusable hybrid rocket successfully tested in - **Chennai**
- Maharashtra's first 'Solar Village' was inaugurated in –**Satara district**
- Theme of National Space Day 2024- **Touching Lives while Touching the Moon: India's Space Saga**
- India recently signed a Green Ammonia Export Agreement with - **Japan**
- Recently this Indian got A+ rating in Global Finance Central Banker Report Card- **Shaktikanta Das**
- Indian Navy recently signed an agreement for engineering equipment with - **BEML Limited**
- This personality has been named as the Chef de Mission of the Indian contingent for Paris Paralympics 2024- **SatyaPrakashSangwan**
- Joint military training exercise 'Mitra Shakti' was organized between India and - **Sri Lanka**
- Youngest Prime Minister of Thailand- **PatongtarnShinawatra**
- Best Actor Award winner under the 70th National Film Awards- **RishabShetty**
- This country will host the third Voice of Global South Summit- **India**
- Number of Ramsar sites in India announced recently – **3 (Nanjaraayan Bird Sanctuary - Tamil Nadu, Kazhuveli Bird Sanctuary - Tamil Nadu &Tawa Reservoir - Madhya Pradesh)**

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MCQ ON CURRENT AFFAIRS

1. The Chamran-1 Research Satellite, recently seen in the news, was launched by which one of the following countries?

(a) United Arab Emirates (UAE)
(b) Kazakhstan
(c) Iran
(d) India

2. Consider the following statements regarding INDUS-X:

1. It is an initiative of India and Japan to expand strategic technology partnerships and defense industrial cooperation between governments and businesses.
2. It aims to explore possibilities for co-producing jet engines, long-range artillery, and infantry vehicles.

Which of the statements given above is/are correct?

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

3. Consider the following statements regarding Bio-decomposer:

1. It is a microbial liquid spray which breaks paddy stubbles which can be easily absorbed into the soil.
2. It is developed by the Indian Institute of Science Bangalore.

Which of the statements given above is/are correct?

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

4. With reference to the Scheme of budgetary support for the cost of Enabling Infrastructure for Hydro Electric Projects (HEP), consider the following statements:

1. The scheme to be implemented from FY 2024-25 to FY 2031-32, aims to enhance infrastructure and support the development of hydropower in India.
2. It applies only to hydro projects over 100 MW, including private sector projects.
3. Budgetary support limits have been revised to Rs. 1 crore per MW for projects up to 200 MW.

How many of the statements given above are correct?

(a) Only one
(b) Only two
(c) All three
(d) None

5. Consider the following statements regarding World Heritage Sites (WHS):

1. These are cultural and/or natural sites inscribed on the UNESCO World Heritage List.
2. The country with the most number of World Heritage Sites is France.

Which of the statements given above is/are correct?

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

6. Consider the following statements regarding the United Nations Relief and Works Agency for Palestinian Refugees in the Near East (UNRWA):

1. It is a subsidiary agency created by the United Nations (UN) to provide support for Palestinians who lost their means of livelihood during the Arab-Israeli wars.
2. It is funded almost entirely by private individuals and NGO's.

Which of the statements given above is/are correct?

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

7. Consider the following statements regarding the RangeenMachhli App:

1. It provides multilingual information on popular ornamental fish species in eight Indian languages.
2. It is developed by the Indian Council of Agricultural Research and Central Institute of Freshwater Aquaculture.

Which of the statements given above is/are correct?

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

8. Consider the following statements regarding the Port Blair:
1. It is located on the West coast of the South Andaman Island.
 2. It was used by the Chola emperor as a strategic naval base during the 11th century AD.
- Which of the statements given above is/are correct?
- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
9. Consider the following statements about Salt Pan lands
1. These are parcels of low-lying lands where seawater flows in at certain times, and leaves behind salt and other minerals.
 2. Tamil Nadu boasts the largest expanse of such land followed by Andhra Pradesh.
- Choose the incorrect statements:
- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
10. Consider the following statements
1. Bhashini is India's Artificial Intelligence (AI)-led language translation platform.
 2. It seeks to enable easy access to the internet and digital services in Indian languages, including voice-based access.
 3. Recently Open Network for Digital Commerce in collaboration with Bhashini launched Saarthi app to assist businesses in creating their own customised buyer-side apps
- How many of the statements given above are correct?
- (a) Only one
 - (b) Only two
 - (c) All three
 - (d) None
11. Which of the following is a key ecological benefit of Myristica swamp forests, such as the one recently discovered near the Goa-Maharashtra border?
- (a) They serve as important agricultural lands for crop cultivation.
 - (b) They contribute to groundwater recharge and flood mitigation.
 - (c) They promote the spread of invasive species in the Western Ghats.
 - (d) They deplete soil nutrients, making the land unsuitable for plant growth.
12. Consider the following statements regarding Software-as-a-Service (SaaS):
1. It is a cloud-based method of delivering software where users subscribe to access applications on the Internet rather than purchasing them outright.
 2. It allows businesses/users to focus on their core activities without worrying about the technical complexities of software management.
- Which of the statements given above is/are correct?
- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
13. Exercise AL NAJAH, a joint military exercise, recently seen in news is conducted between India and:
- (a) Japan
 - (b) Russia
 - (c) Saudi Arabia
 - (d) Oman
14. Consider the following statements about 'Trade Connect e-Platform'
1. It is a digital initiative aimed at transforming the landscape of international trade for Indian exporters
 2. The platform has been developed in collaboration with Ministry of MSME, EXIM Bank and the Ministry of External Affairs (MEA)
- Select the correct statement(s)
- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
15. With reference to Gram Nyayalayas, consider the following statements:
1. The State Governments have been vested with the authority of setting up Gram Nyayalayas after proper consultation with the respective High Court.
 2. They are presided over by a Nyayadhikari who will have the same power and enjoy the same salary and benefits as a Judicial Magistrate First Class.

3. They can try only civil suits and not criminal cases.
- How many of the statements given above are correct?
- Only one
 - Only two
 - All three
 - None
16. Consider the following statements regarding the Mission Mausam:
- It is a transformative initiative to boost India's weather and climate-related science, research, and services.
 - It will be implemented by the Indian Space Research Organisation.
- Which of the statements given above is/are correct?
- 1 only
 - 2 only
 - Both 1 and 2
 - Neither 1 nor 2
17. Consider the following statements regarding the PM E-DRIVE Scheme:
- It is an electric mobility promotion scheme in India approved for a period of two years.
 - Under this scheme an adhaar-authenticated e-voucher will be issued to avail demand incentives.
- Which of the statements given above is/are correct?
- 1 only
 - 2 only
 - Both 1 and 2
 - Neither 1 nor 2
18. Consider the following statements about PradhanMantriKisanMaandhanYojana
- It is a Central Sector Scheme launched in the year 2019.
 - Small and Marginal Farmers, between the age from 18 to 40 years are eligible for the scheme.
 - It is administered by the Ministry of Agriculture & Farmers' Welfare in partnership with the Life Insurance Corporation of India (LIC).
- How many of the statements given above are correct?
- Only one
 - Only two
 - All three
 - None
19. Consider the following statements about Parliamentary Committee on Official Language
- It was set up in 1976 under the Official Languages Act, 1963.
 - Home Minister is the ex-officio chairman of the committee.
 - It has 30 members with 20 members from Lok Sabha and 10 members from Rajya Sabha.
- How many of the statements given above are correct?
- Only one
 - Only two
 - None
 - All three
20. Consider the following statements regarding the Cyber Fraud Mitigation Centre (CFMC), recently seen in the news:
- It has been established at the Indian cyber crime Coordination Centre (14C) in New Delhi.
 - It works for immediate action and seamless cooperation to tackle online financial crimes.
- Which of the statements given above is/are correct?
- 1 only
 - 2 only
 - Both 1 and 2
 - Neither 1 nor 2
21. Consider the following statements regarding the Standing Committee on Statistics:
- It was formed by the Union Ministry of Statistics and Programme Implementation.
 - It was mandated to explore the use of administrative statistics to improve data outcomes.
- Which of the statements given above is/are correct?
- 1 only
 - 2 only
 - Neither 1 nor 2
 - Both 1 and 2
22. Consider the following statements regarding Silicon carbide:
- It is synthetically produced crystalline non-oxide ceramic compound.
 - It has low thermal conductivity and high-temperature strength.
- Which of the statements given above is/are correct?
- 1 only
 - 2 only
 - Both 1 and 2
 - Neither 1 nor 2

23. Consider the following statements regarding Silicon Carbide (SiC):
1. SiC is known for its excellent thermal conductivity and mechanical strength.
 2. It is commonly used in semiconductor devices, heat exchangers, and ballistic armor.
 3. SiC is a natural crystalline compound found in Earth's crust.
- Which of the statements given above is/are incorrect?
- (a) 1 and 2 only
 - (b) 2 and 3 only
 - (c) 3 only
 - (d) 1, and 3 only
24. Consider the following statements regarding bio-plastics:
1. Bio-plastics are always biodegradable and compostable.
 2. Bio-plastics are derived from renewable biomass sources like corn starch and sugarcane.
 3. Bio-plastics help reduce the dependency on fossil fuels for plastic production.
- Which of the statements given above is/are correct?
- (a) 1 and 2 only
 - (b) 2 only
 - (c) 1 only
 - (d) 2 and 3 only
25. PahadiKorwa Tribe primarily resides in which one of the following states?
- (a) Odisha
 - (b) Meghalaya
 - (c) Karnataka
 - (d) Chhattisgarh
26. Consider the following statements regarding the District Agro-Meteorology Units:
1. These are established by the India Meteorological Department (IMD) in collaboration with the Indian Council of Agricultural Research.
 2. These serve as early warnings for extreme events like droughts and heavy rainfall.
- Which of the statements given above is/are correct?
- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
27. Consider the following statements regarding the Nilgiri Mountain Railway:
1. It is situated in the state of Tamil Nadu.
 2. It was designated as a UNESCO World Heritage Site in 2005.
- Which of the statements given above is/are correct?
- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
28. Consider the following statements about SwachhVayuSurvekshan Award
1. It is an initiative by the Ministry of Environment, Forest and Climate Change.
 2. It ranks cities on the basis of implementation of National Clean Air Programme.
 3. Indore emerged as the best performing city in population over 10 Lakhs category.
- How many of the statements given above are correct?
- (a) Only one
 - (b) Only two
 - (c) None
 - (d) All three
29. Consider the following statements about Teal Carbon
1. It refers to carbon stored in non-tidal fresh water wetlands.
 2. These ecosystems can store and sequester more carbon than any other type of terrestrial ecosystem.
 3. Major sources of Teal carbon are Peatlands and natural freshwater marshes.
- How many of the statements given above are correct?
- (a) Only one
 - (b) Only two
 - (c) All three
 - (d) None
30. Why is helium considered a non-renewable resource on Earth?
- (a) Once released into the atmosphere, it escapes into space
 - (b) It is chemically reactive and bonds with other elements easily
 - (c) It is continuously consumed in nuclear fusion on Earth
 - (d) It is only found in meteorites
31. Consider the following statements about helium:
1. Helium is primarily produced on Earth through nuclear fusion in stars.

2. Helium is a rare gas on Earth and is mainly produced through the radioactive decay of uranium.
 3. Helium is widely used in cryogenics and MRI scanners due to its low boiling point.
- Which of the above statements are correct?
- (a) 2 only
 - (b) 2 and 3 only
 - (c) 1 and 3 only
 - (d) 1, 2, and 3
32. Consider the following statements regarding the Suganya Bharat App, recently seen in the news:
1. It is an initiative of the Union Ministry of Social Justice and Empowerment.
 2. It aims to provide legal aid to persons with disabilities.
- Which of the statements given above is/are correct?
- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
33. With reference to the SukanyaSamriddhiYojana (SSY), consider the following statements:
1. It is a small-deposit scheme tailored specifically for the girl child.
 2. NRIs are not eligible to open SSY accounts.
 3. Premature withdrawals are not allowed under the scheme.
- How many of the statements given above are correct?
- (a) Only one
 - (b) Only two
 - (c) All three
 - (d) None
34. Consider the following statements regarding the BepiColombo Spacecraft:
1. It is a joint European Space Agency (ESA) and Japan Aerospace Exploration Agency (JAXA) mission.
 2. It aims to study planet Mercury's magnetic field and magnetosphere to gain insights into its internal structure.
- Which of the statements given above is/are correct?
- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
35. Consider the following statements about NIDHI Programme
1. It aims to nurture start-ups through scouting, supporting and scaling innovations.
 2. It is funded by the National Science & Technology Entrepreneurship Development Board (NSTEDB)
 3. NIDHI-PRAYAS and NNIDHI Accelerator are the key components of the Programme.
- How many of the statements given above are correct?
- (a) Only one
 - (b) Only two
 - (c) All three
 - (d) None
36. Consider the following statements International AI treaty, recently seen in news
1. This agreement is the first international legally binding treaty on the use of Artificial Intelligence (AI) systems.
 2. International AI treaty was originally framed and adopted by UNGA in 2023.
- Choose the correct statements:
- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
37. Consider the following statements about the Barakah Nuclear Energy Plant:
1. It is the first nuclear power plant in the Arab world.
 2. The plant will supply electricity to all Gulf Cooperation Council (GCC) countries.
 3. The facility contributes to the UAE's goal of achieving 50% renewable energy by 2050.
- Which of the above statements is/are correct?
- (a) 1 and 3 only
 - (b) 1 and 2 only
 - (c) 2 and 3 only
 - (d) 1, 2, and 3
38. Which states have a significant population of the Sahariya tribe?
- (a) Assam, Nagaland, and Manipur
 - (b) Uttar Pradesh, Bihar, and Jharkhand
 - (c) Madhya Pradesh, Rajasthan, and Chhattisgarh
 - (d) Karnataka, Kerala, and Tamil Nadu
39. Consider the following statements regarding the INDIASize Initiative, recently seen in the news:
1. It is an initiative of the Union Ministry of Textiles.
 2. It aims to develop eco-friendly textiles for sustainable fashion.

Which of the statements given above is/are correct?

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

40. BPaLM Regimen, recently seen in the news, is related to which one of the following?

- (a) Wildlife conservation
- (b) Multi-drug-resistant tuberculosis
- (c) Artificial Intelligence
- (d) Malaria prevention

41. Consider the following statements regarding the Enemy Property in India:

- 1. These properties are of those left behind by the people who took citizenship of Pakistan and China.
- 2. These properties are maximum in number in the state of Uttar Pradesh.

Which of the statements given above is/are correct?

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

42. Consider the following statements regarding the VisioNxt Initiative:

- 1. It focuses on delivering trend insights and forecasting for the Indian fashion and retail market.
- 2. It is supported by the Union Ministry of Textiles.

Which of the statements given above is/are correct?

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

43. Consider the following statements regarding Agni-4 Ballistic Missile:

- 1. It can carry a payload of 5,000 kg and can be fired from a road-mobile launcher.
- 2. It is a surface-to-surface and two-stage solid-fuel missile.

Which of the statements given above is/are correct?

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

44. Consider the following statements about SAMRIDH Scheme

- 1. It is a flagship programme of the Ministry of Electronics & IT (MeitY) for startups

acceleration under National Policy on Software Products.

- 2. It is being implemented by Digital India Corporation.
- 3. It aims to support existing and upcoming Accelerators to select and accelerate potential IT-based startups to scale.

How many of the statements given above are correct?

- (a) Only one
- (b) Only two
- (c) All Three
- (d) None

45. Consider the following statements

- 1. Semiconductors are made from pure elements, typically silicon or germanium, or compounds such as gallium arsenide.
- 2. At zero Kelvin, a semiconductor serves as an insulator.
- 3. As the temperature increases, the resistance of semiconductor materials decreases, and vice versa.

How many of the statements given above are correct?

- (a) Only one
- (b) Only two
- (c) None
- (d) All Three

46. Consider the following statements regarding the Loss and Damage Fund (LDF):

- 1. It aims to provide financial support to regions suffering both economic and non-economic losses caused by climate change.
- 2. It encourages voluntary contributions from developed countries.

Which of the statements given above is/are correct?

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

47. Consider the following statements regarding the Centralized Pension Payment System:

- 1. It allows a national-level centralized system allowing pension payouts through any bank or branch in India.
- 2. A person eligible to avail the benefit of this system should be a member of Employee Provident Fund Organisation (EPFO).

Which of the statements given above is/are correct?

- (a) 1 only

- (b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2
48. Consider the following statements about 'Vishvasya-Blockchain Technology Stack'
1. It is designed to offer Blockchain-as-a-Service (BaaS) with a geographically distributed setup to support blockchain applications.
 2. The stack is hosted across CERT-In Data Centers in Bhubaneswar, Pune, and Hyderabad.
 3. Consent Management Framework, IoT Device Security Management and cotton bale identification and tracking are some of its applications
- Which of the statements given above is/are correct?
- (a) 1 and 2
(b) 1 and 3
(c) 2 and 3
(d) All three
49. What is the main focus of the "VishanuYuddhAbhyas" mock drill?
- (a) Strengthening military response during biowarfare
(b) Evaluating India's preparedness for zoonotic disease outbreaks
(c) Testing the response to chemical disasters
(d) Improving Road accident emergency services
50. Parkinson's disease primarily affects which type of cells in the brain?
- (a) Glial cells
(b) Neurons
(c) Red blood cells
(d) Epithelial cells
51. With reference to the Central Industrial Security Force (CISF), consider the following statements:
1. It is a Central Armed Police Force (CAPF) directly under the Union Ministry of Home Affairs.
 2. It provides security cover to India's most critical infrastructure facilities.
 3. It also has a specialized VIP Security vertical, providing round-the-clock security to important protectees.
- How many of the statements given above are correct?
- (a) Only one
(b) Only two
(c) All three
(d) None
52. What is inscribed on the new insignia of the Supreme Court of India?
- (a) "Supreme Court of India" and "SatyamevaJayate"
(b) "Supreme Court of India" and "YatoDharmastatoJayah"
(c) "Supreme Court of India" and "Jai Hind"
(d) "Supreme Court of India" and "Justice for All"
53. Consider the following statements regarding the Poshan Tracker initiative:
1. It is an initiative of the Union Ministry of Women and Child Development.
 2. It identifies and addresses growth issues among children aged 0-14 years.
- Which of the statements given above is/are correct?
- (a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2
54. Exercise Varuna, recently in news is conducted between India and:
- (a) Japan
(b) Indonesia
(c) Russia
(d) France
55. Consider the following statements regarding Konyak Tribe:
1. They are Mongoloid origin tribal people reside in the state of Nagaland.
 2. They celebrate festivals like Aolingmonyu, Aonyimo and Laoungmo.
- Which of the statements given above is/are correct?
- (a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2
56. What is the primary objective of the KrishiNivesh Portal?
- (a) To track agricultural exports
(b) To improve crop yield forecasting
(c) To enhance transparency in agricultural investments
(d) To promote sustainable farming techniques
57. Consider the following statements regarding the Ocean Biodiversity Information System:
1. It provides detailed information on species distribution across the world's oceans including habitat and environmental parameters.

2. It is hosted by the Centre for Marine Living Resources and Ecology India.
Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2
58. Consider the following statements regarding the e-Shram Portal:
1. It was launched by the Union Ministry of Labour and Employment.
2. It allows an unorganised workers to register themselves on the portal on self-declaration basis.
Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Neither 1 nor 2
(d) Both 1 and 2
59. With reference to AgriSURE Fund, consider the following statements:
1. It is designed to fuel growth and foster innovation in the agricultural and rural start-up ecosystem.
2. It is funded by the Government of India and World Bank in the 90:10 ratios respectively.
3. It is managed by the NABVENTURES a fully owned subsidiary of NABARD.
Which of the statements given above is/are correct?
(a) 2 and 3
(b) 1 and 3
(c) 1 and 2
(d) All three
60. Consider the following statements about Saora Tribe
1. Saora is one of the ancient and particularly vulnerable tribal groups of Odisha state.
2. They have their own native language called Sora with a script called SorangSompeng.
3. They practice unique art of dying tattooing tradition called 'Tantangbo'.
How many of the statements given above are correct?
(a) Only one
(b) Only two
(c) All three
(d) None
61. Om Parvat, a revered Himalayan peak in news for losing its snow cover for the first time is located in which of the following state/UT?
(a) Sikkim
(b) Uttarakhand
(c) Himachal Pradesh
(d) Jammu & Kashmir
62. Consider the following statements regarding India Semiconductor Mission (ISM):
1. It is a specialized and independent Business Division within the Digital India Corporation.
2. It has all the administrative and financial powers and is tasked with the responsibility of catalysing the India Semiconductor ecosystem.
Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Neither 1 nor 2
(d) Both 1 and 2
63. Consider the following:
1. India
2. Maldives
3. Mauritius
4. Nepal
5. Myanmar
How many of the above countries are members of the Colombo Security Conclave (CSC)?
(a) Only two
(b) Only three
(c) Only four
(d) All five
64. Consider the following statements regarding ThanjavurVeena:
1. It is the first musical instrument in India to get the Geographical Indication (GI) tag.
2. The Rudraveena and Vichitraveena types are popular in Carnatic music.
Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2
65. Consider the following statements regarding the Digital Bus initiative:
1. It is a joint initiative between NITI Aayog and the NIIT Foundation.
2. It offers a career programme to help the beneficiary look for a job in the nearest city of town.

Which of the statements given above is/are correct?

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

66. With reference to Digital Agriculture Mission, consider the following statements:

- 1. It is conceived as an umbrella scheme to support digital agriculture initiatives.
- 2. Its main components include AgriStack and Krishi Decision Support System.
- 3. It will link geographic information on land records with their physical locations.

How many of the above given statements are correct?

- (a) One Only
- (b) Two only
- (c) All three
- (d) None

67. Consider the following statements

- 1. The Department of Public Enterprises, Ministry of Corporate Affairs declares the Navratna status CPSEs.
- 2. CPSEs must attain Miniratna Category-I designation and be listed in Schedule A of CPSEs to qualify for Navratna status.
- 3. Navratna CPSEs can invest up to ₹1,000 crore without seeking approval from the central government.

Which of the statements given above is/are correct?

- (a) 2 and 3
- (b) 1 and 3
- (c) 1 and 2
- (d) All three

68. Consider the following statements regarding the 'Aravalli' helicopter engine project:

- 1. The 'Aravalli' engine is being developed exclusively for the Indian Multi-Role Helicopter (IMRH).
- 2. The partnership between HAL and SAFHAL Helicopter Engines Pvt. Ltd. is part of India's strategy to enhance indigenous aerospace capabilities.
- 3. The 'Aravalli' engine project involves collaboration with Russian aerospace companies for technology transfer.

Which of the above statements is/are correct?

- (a) 2 only
- (b) 1 and 2 only
- (c) 1 and 3 only
- (d) 2 and 3 only

69. Consider the following statements regarding Project NAMAN:

- 1. Project NAMAN is an initiative by the Indian Army to streamline pension processes for Defence Pensioners and Veterans.
- 2. The project relies on the SPARSH digital pension system, which is managed entirely by the Indian government without any private sector involvement.
- 3. Common Service Centres (CSCs) under Project NAMAN are managed by veterans or their families, ensuring community involvement in service delivery.

Which of the statements given above is/are correct?

- (a) 1 and 2
- (b) 1 and 3
- (c) 2 and 3
- (d) All three

70. Consider the following statements about the characteristics of cyclones:

- 1. Cyclones are intense systems of air circulation around a low-pressure center.
- 2. Tropical cyclones can occur in both mid-latitude and tropical regions.
- 3. Cyclones rotate in opposite directions in the Northern and Southern Hemispheres due to the Coriolis effect.

Which of the above statements is/are correct?

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

71. Consider the following statements about the procedures under the e-Dispute Resolution Scheme (e-DRS) 2022:

- 1. The Dispute Resolution Committees (DRCs) can modify orders, reduce or waive penalties under this scheme.
- 2. The DRCs must issue decisions within nine months from the date of application.
- 3. The scheme is available across multiple regional jurisdictions in India.

Which of the above statements is/are correct?

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

72. Which of the following acts established the Central Ground Water Authority (CGWA) for framing policies and programs related to groundwater management?

- (a) Indian Easement Act, 1882
(b) National Green Tribunal Act, 2010
(c) Water (Prevention and Control of Pollution) Act, 1974
(d) Environment (Protection) Act, 1986
73. What was the primary objective of Rule 170 in the Drugs and Cosmetics Act, 1940?
- (a) To regulate the pricing of drugs
(b) To control the import and export of drugs
(c) To control inappropriate advertisements of Ayurvedic, Siddha, and Unani medicines
(d) To monitor the distribution of allopathic medicines
74. Consider the following statements regarding the Ramon Magsaysay Award:
1. It is awarded to celebrate greatness of spirit and transformative leadership in Asia.
 2. It is given to the Journalism and Creative Communication Art field.
- Which of the statements given above is/are correct?
- (a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2
75. Consider the following statements about 'World Gold Council'
1. It is a for profit association whose members comprise the world's leading and most forward-thinking gold mining companies.
 2. It co-sponsors research in the development of new uses for gold, or of new products containing gold.
 3. It is headquartered in Rio De Janeiro, with operations in India, China, Singapore, and the USA
- Which of the statements given above is/are correct?
- (a) 2 only
(b) 1 and 3
(c) 2 and 3
(d) All three
76. With reference to Anti-Dumping Duty, consider the following statements:
1. It is a protectionist tariff that a domestic government imposes on foreign imports that it believes are priced below fair market value.
 2. It is imposed to protect local businesses and markets from unfair competition by foreign imports.
3. In India, the Ministry of Commerce and Industry decides whether to impose anti-dumping duties.
- How many of the statements given above are correct?
- (a) Only one
(b) Only two
(c) All three
(d) None
77. The 'Poba Reserve Forest', recently seen in the news, lies in which state?
- (a) Uttarakhand
(b) Madhya Pradesh
(c) Assam
(d) Meghalaya
78. Consider the following statements regarding Guru Padmasambhava:
1. He lived in eighth century in India and one of the most-revered personalities in Buddhism.
 2. He was a member of the Yogācāra sect and taught at Taxila University.
- Which of the statements given above is/are correct?
- (a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2
79. Consider the following statements regarding the Dispute Resolution Scheme:
1. It covers the disputed amount of Rs. 10 lakh and the taxpayer's income for the relevant year below Rs. 1 crore rupees.
 2. It aims to reduce litigation and provide a faster and more cost-effective resolution for taxpayers.
- Which of the statements given above is/are correct?
- (a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2
80. Consider the following statements regarding the Research and Analysis Wing (R&AW):
1. It is tasked with handling India's international intelligence affairs.
 2. It works under the aegis of the Ministry of Home Affairs, Government of India.
- Which of the statements given above is/are correct?
- (a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2

81. Consider the following statements regarding Bonda tribes:
1. They are a particularly vulnerable tribal group mainly concentrated in the Western Himalayan Region.
 2. They belong to the Austro-Asiatic racial stock and speak the Remo dialect.
- Which of the statements given above is/are correct?
- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
82. Consider the following statements about SamudraPratap
1. It is the first indigenously developed pollution control vessel.
 2. The Ship has been built by Goa Shipyard Limited for the Indian Coast Guard.
 3. It features an advanced radar system for oil spill detection and facilities to recover and store various types of oil.
- How many of the statements given above are correct?
- (a) Only one
 - (b) Only two
 - (c) All three
 - (d) None
83. Consider the following statements regarding the SHe-Box Portal, recently seen in the news:
1. It is a centralized platform for registering and monitoring complaints of sexual harassment of women in the workplace.
 2. It will also enable real-time monitoring of complaints through a designated nodal officer.
- Which of the statements given above is/are correct?
- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
84. Consider the following statements regarding D-Voters:
1. Those persons whose citizenship was doubtful or was under dispute were categorized as 'D- Voters' during the preparation of the National Register of Citizens in Assam.
 2. They are allowed to vote and permitted to run for office in the nation's elections.
- Which of the statements given above is/are correct?
- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
85. Consider the following statements regarding the RESET Programme:
1. It is aimed at empowering retired athletes on their career development journey.
 2. The sports persons who are aged between 20-50 years and have been winners of an International Medal are eligible for this initiative.
- Which of the statements given above is/are correct?
- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
86. Consider the following statements regarding the Unified Payments Interface (UPI) block mechanism:
1. It is a facility that allows trading with blocked amounts similar to the Application Supported by Blocked Amount system.
 2. It helps clients to trade in the secondary market based on blocked funds in their bank accounts.
- Which of the statements given above is/are correct?
- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
87. Consider the following statements regarding the Pacific Islands Forum:
1. It is an intergovernmental organisation consisting of all Pacific Ocean bordering countries.
 2. It aims to push for economic growth and enhance political governance in the Pacific Ocean region.
- Which of the statements given above is/are correct?
- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
88. Consider the following statements about Pharma Export Promotion Council of India (PHARMEXCIL)
1. It is the nodal agency to represent Drugs, Pharmaceutical & Healthcare industry in the global arena.

2. The products and services falling under purview of it include active pharmaceutical ingredients (API), nutraceuticals and homeopathy.
 3. The International Exhibition for Pharma and Healthcare Exhibition, 2024 was organised by it and Ministry of Commerce and Industry.
- Which of the statements given above is/are correct?
- (a) 1 and 2
 - (b) 1 and 3
 - (c) 2 and 3
 - (d) All three
89. Which of the following is a key mandate of the Bureau of Police Research and Development (BPR&D)?
- (a) Overseeing foreign relations for Indian police forces.
 - (b) Promoting the use of appropriate technology in police work.
 - (c) Conducting international policing seminars.
 - (d) Handling public relations for the Indian Police Service.
90. How are deepfake videos typically created?
- (a) By editing video clips manually.
 - (b) By filming actors with similar features.
 - (c) By using simple photo-editing software.
 - (d) By using machine learning models and neural networks.
91. Consider the following statements regarding the Anubhav Awards:
1. It recognizes the contribution made by Retired Officials to nation-building while working in Government.
 2. It requires central Government pensioners to submit their Anubhav write-ups, 8 months before retirement and up to 1 year after their retirement.
 3. Anubhav Portal was launched by the Department of Pension & Pensioners' Welfare
- Which of the statements given above is/are correct?
- (a) 1 and 2
 - (b) 2 and 3
 - (c) All three
 - (d) 1 and 3
92. Consider the following statements regarding the National Awards to Teachers:
1. It is conferred on the exemplary teachers of higher education institutions and Polytechnics.
 2. All teachers of age above 55 years are eligible for this award.
- Which of the statements given above is/are correct?
- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
93. Consider the following statements regarding the National Industrial Corridor Development Programme (NICDP):
1. It aims to facilitate investments from both large anchor industries and Micro, Small and Medium Enterprises (MSMEs).
 2. It catalyzes to achievement of the government's ambitious goal of \$2 trillion in exports by 2030.
- Which of the statements given above is/are correct?
- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
94. Recently Zoological Survey of India discovered two new species named *Mimetusspinatus* and *Mimetuspavulus*. The newly discovered species belong to species of?
- (a) Spider
 - (b) Frog
 - (c) Snake
 - (d) Fish
95. Consider the following statements about Horseshoe Crabs
1. They are an extremely ancient group and are often referred to as living fossils.
 2. In India, it can be found all along the coast of India.
- Choose the incorrect statements:
- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
96. Consider the following statements regarding Nuclear Powered trains:
1. The first nuclear-powered train movements in India are expected to focus on circuits served by the Nabinagar Thermal Power Plant.
 2. Thorium-based reactors are considered for their lower radiation risks compared to other nuclear materials.
- Which of the statements given above is/are correct?
- (a) 1 only

- (b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2
97. Consider the following statements about PARIVESH 2.0 Portal
1. PARIVESH 2.0 is a web-based workflow application developed by Ministry of Environment, Forest and Climate Change (MoEFCC)
 2. It offers a single-window solution for managing all green clearances and monitors compliance across India.
- Choose the correct statements:
- (a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2
98. What is the primary objective of the PradhanMantriJanjatiAdivasiNyayaMahaAbhiya N (PM-JANMAN) campaign launched by the Union Ministry of Tribal Affairs?
- (a) To achieve 100% saturation of government schemes in Particularly Vulnerable Tribal Group (PVTG) areas.
(b) To promote tribal tourism across India.
(c) To introduce new education schemes for tribal children.
(d) To develop infrastructure in urban tribal settlements.
99. With reference to Eastern Equine Encephalitis (EEE), recently seen in the news, consider the following statements:
1. It is an extremely rare but serious and often fatal infection caused by a fungus.
 2. It is spread to humans through the bite of infected mosquitoes.
 3. There are no vaccines to prevent EEE infection in people and no specific treatments for EEE disease.
- How many of the statements given above are correct?
- (a) Only one
(b) Only two
(c) All three
(d) None
100. With reference to Quasars, consider the following statements:
1. They are an extremely active and luminous type of Active Galactic Nucleus (AGN).
 2. They are intense sources of X-rays as well as visible light.
 3. Most quasars have been found near the Solar system.

How many of the statements given above are correct?

- (a) Only one
(b) Only two
(c) All three
(d) None
101. Consider the following statements regarding the National Medical Register (NMR) Portal:
1. It is a portal of the National Medical Commission (NMC) for the registration of all allopathic (MBBS) doctors in India.
 2. It is linked with the Aadhaar ID of the doctors to ensure the individual's authenticity.
- Which of the statements given above is/are correct?
- (a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2
102. Consider the following statements regarding the New India Literacy Programme (NILP):
1. It aims to support the States and Union Territories in promoting literacy among non-literates in the age group of 15 and above.
 2. It is based on technology and implemented predominantly through online mode.
- Which of the statements given above is/are correct?
- (a) 1 only
(b) 2 only
(c) Neither 1 nor 2
(d) Both 1 and 2
103. With reference to Unified Lending Interface (ULI), recently seen in the news, consider the following statements:
1. It is a technological platform that aims to provide a friction-less credit by cutting down the time taken for appraisal.
 2. It facilitates a seamless flow of digital information, including land records of various states, from multiple data service providers to lenders.
 3. The entire system is based on the consent of the potential borrower.
- How many of the statements given above are correct?
- (a) Only one
(b) Only two
(c) All three
(d) None

104. With reference to Plea Bargaining in India, consider the following statements:
1. It is available for offenses that are punishable with imprisonment for a term of 12 years or less.
 2. It can take place at any stage of the criminal justice process, from the initial charge to the trial itself.
 3. The accused has the right to withdraw the plea at any time before the court pronounces the sentence.
- How many of the statements given above are correct?
- (a) Only one
 - (b) Only two
 - (c) All three
 - (d) None
105. Chile, one of the three countries of the Lithium Triangle, is in the news recently, regarding the fallout of lithium mining. With this reference, consider the following statements:
1. The brine evaporation method used to produce lithium requires massive quantities of fresh water.
 2. Chemicals like sulfuric acid and sodium hydroxide used in lithium extraction contaminate the soil and water.
 3. The lithium mining has led to a decline in the flamingo population in the Atacama region.
- How many of the above statements are correct?
- (a) Only one
 - (b) Only two
 - (c) All three
 - (d) None
106. Consider the following statements regarding the PradhanMantri Mudra Yojana, a flagship initiative to provide affordable credit to micro and small enterprises:
1. The borrowers can avail loans from Non-Banking Financial Companies also, under this scheme.
 2. The minimum amount of loan that a borrower can get under the scheme is Rs. 50000.
 3. There is no direct subsidy under this scheme.
 4. The maximum amount of loan that a borrower can get under the scheme is Rs. 10 lakhs.
- Which of the above statements are correct?
- (a) 1 and 2 only
 - (b) 3 and 4 only
 - (c) 1, 2 and 3 only
 - (d) 2, 3 and 4 only
107. Consider the following statements regarding Wular Lake:
3. It is the largest freshwater lake in India.
 4. It is fed by the Chenab River.
- Which of the statements given above is/are correct?
- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
108. Which if the following are the objectives of National Quantum Mission?
1. Developing intermediate-scale quantum computers with 50-1000 physical qubits in 8 years
 2. Satellite-based secure quantum communications
 3. Inter-city quantum key distribution
- Select the correct answer using the code given below:
- (a) 1 and 2 only
 - (b) 2 and 3 only
 - (c) 1 and 3 only
 - (d) 1, 2 and 3
109. Consider the following statements:
1. Polygraph tests can only be administered with the accused's consent.
 2. It measures the changes in the electrical field potentials produced by the sum of the neuronal activity in the brain.
 3. The confession of the accused is not admissible in court but the information or evidence with the help of such tests are admissible.
- Which of the above statements is/are correct?
- (a) 1 only
 - (b) 2 and 3 only
 - (c) 1 and 3 only
 - (d) 1, 2 and 3
110. Which of the following benefits are provided to a language is designated as a Classical Language?
1. Establishment of a Centre of Excellence for Studies
 2. Annual international awards for scholars of eminence in the language
 3. Creation of the Professional Chairs in Central Universities by the University Grants Commission
- Select the correct answer using the code given below:"
- (a) 1 and 2 only

- (b) 2 and 3 only
(c) 1 and 3 only
(d) 1, 2 and 3
111. 'A non-binding Security of Supply Arrangement (SOSA)' was signed recently between India and
(a) Russia
(b) Poland
(c) Australia
(d) United States of America
112. Consider the following statements regarding UDAN 5.0:
1. UDAN 5.0 introduces a new focus category for aircraft with more than 80 seats.
2. There is no longer any restriction on the distance between the origin and destination of flights under UDAN 5.0.
3. The viability gap funding cap is the same for all regions under UDAN 5.0.
Which of the statements given above is/are correct?
(a) 1 and 2 only
(b) 2 and 3 only
(c) 1 only
(d) 1, 2, and 3
113. Consider the following statements regarding the Shompen Tribe:
1. They reside in dense tropical rain forests of the Great Andaman group of Islands.
2. They are one of the least studied Particularly Vulnerable Tribal Groups (PVTGs) in India.
Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2
114. With reference to the BioE3 (Biotechnology for Economy, Environment and Employment) Policy, recently seen in the news, consider the following:
1. Biopolymers and enzymes
2. Marine and space research
3. Precision biotherapeutics
4. Climate resilient agriculture
How many of the above are included under the thematic sectors of the BioE3 Policy?
(a) Only one
(b) Only two
(c) Only three
(d) All four
115. With reference to the Unified Pension Scheme, consider the following statements:
1. It promises to government employees a guaranteed lifelong monthly pension.
2. There is a provision of minimum pension of ₹10,000 per month for those who complete at least 10 years of central government service.
3. The scheme is non-contributory like the OPS, which will put a burden on the Government's exchequer.
4. Employees do not have the option to switch from NPS to UPS.
Which of the above statements are correct?
(a) 1 and 2 only
(b) 2 and 3 only
(c) 1, 3 and 4 only
(d) 2, 3 and 4 only
116. With reference to the Virupaksha Temple, consider the following statements:
1. The temple is dedicated to Lord Shiva.
2. It was constructed by KrishnadevRai of the Vijayanagara Empire.
3. The current Virupaksha Temple was reconstructed by the Wodeyar Dynasty on the ruins of the earlier one.
4. It is a part of the larger Group of Monuments at Hampi, a UNESCO World Heritage Site.
Which of the above statements is/are correct?
(a) 1 and 2 only
(b) 3 and 4 only
(c) 1, 2 and 4 only
(d) 1 and 4 only
117. In the context of the Indian Economy, which one of the following best describes the term "green shoots"?
(a) Government initiatives for green energy development
(b) Signs of economic recovery during a downturn
(c) Investment in eco-friendly infrastructure projects
(d) Emergence of sustainable business models
118. Angkor Wat, the largest religious monument in the world, is located in which one of the following countries?
(a) Nepal
(b) Malaysia
(c) Vietnam
(d) Cambodia

119. Which of the following are related to the Right to Education in India?
1. Unnikrishnan vs. State of Andhra Pradesh, 1993
 2. Article 51A
 3. Article 21A
 4. 91st Constitutional Amendment Act
- Select the correct answer using the code given below:
- (a) 1 and 2 only
 - (b) 1, 3 and 4 only
 - (c) 3 and 4 only
 - (d) 1, 2 and 3 only
120. Consider the following statements regarding the PM-WANI Scheme:
1. It was launched to democratise broadband access via public Wi-Fi hotspots.
 2. Under the Scheme, the Public Data Offices set up Wi-Fi hotspots and provide internet access.
- Which of the above statements is/are correct?
- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
121. Consider the following statements about 'Joint Consultative Machinery'
1. It is a platform for constructive dialogue between the Government as employer and the employees.
 2. The scheme is statutory and is mutually agreed upon between the staff side and the official side.
 3. The scheme covers all regular civil employees of the Central Government
- Which of the statements given above is/are correct?
- (a) 1 and 2
 - (b) 1 and 3
 - (c) 2 and 3
 - (d) All three
122. 'GongronemaSasidharanii', that was discovered recently is a
- (a) Plant
 - (b) Dragonfly
 - (c) Wasp
 - (d) Rain frog
123. What is the significance of KAPS-4, the nuclear reactor at Kakrapar Atomic Power Station (KAPS) in Gujarat?
- (a) It is India's first nuclear reactor to achieve 1000 MW capacity.
 - (b) It is India's second indigenous 700 MW nuclear reactor to operate at full capacity.
 - (c) It is a foreign-designed nuclear reactor operating in India.
 - (d) It is the oldest nuclear reactor still in operation in India.
124. Which of the following correctly describe the objectives of the Open Network for Digital Commerce (ONDC)?
1. Inclusivity and access for sellers.
 2. Centralization of e-commerce activities.
 3. Independence and increased choices for consumers.
 4. Profit maximization for the ONDC platform.
- Which of the above statements is/are correct?
- (a) 1 and 2 only
 - (b) 1 and 3 only
 - (c) 2 and 4 only
 - (d) 1, 3, and 4 only
125. Which of the following statements is true regarding Quantum Nonlocality?
- (a) It only applies to particles within a small, confined space.
 - (b) It supports the idea that information can travel faster than the speed of light.
 - (c) It is consistent with Einstein's theory of relativity.
 - (d) It has no impact on classical physics concepts.
126. Consider the following statements regarding Glacial Lakes:
1. They typically form at the foot of a glacier but may form on, in, or under it.
 2. They are crucial sources of freshwater for nearby rivers.
- Which of the statements given above is/are correct?
- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2
 - (d) Neither 1 nor 2
127. Consider the following statements with reference to the sunspots:
1. It is a region on the Sun's surface where magnetic fields are extremely concentrated.
 2. It is driven by the continuous recycling of magnetic fields within the solar interior.
- Which of the statements given above is/are correct?
- (a) 1 only
 - (b) 2 only
 - (c) Both 1 and 2

- (d) Neither 1 nor 2
128. Which one of the following is often referred to as "living fossils," that inhabit shallow coastal waters with soft sandy or muddy bottoms?
- Sea Cucumbers
 - Horseshoe Crabs
 - Starfish
 - Jellyfish
129. "Karoo Diamond Mine" is located in which one of the following countries?
- Botswana
 - South Africa
 - Brazil
 - Australia
130. Recently, Chandrayaan-3's Pragyan rover has identified a rock type known as ferroanorthosite in the lunar south pole region. The finding of this rock type suggests which of the following theory regarding the evolution of Lunar surface.
- The early stage of the moon's surface was entirely molten.
 - Presence of life on the moon.
 - Initially, the moon was a part of the earth.
 - The composition of moon's surface is similar to that of the earth.
131. Similar to China's "panda diplomacy", which of the following countries has initiated the "Orangutan Diplomacy" to save the critically endangered species?
- Maldives
 - Malaysia
 - Indonesia
 - Papua New Guinea
132. Consider the following statements with reference to the Prime Minister Employment Generation Programme (PMEGP):
- It is a central sector scheme administered by the Ministry of Micro, Small and Medium Enterprises.
 - There will be no income ceiling for assistance in setting up projects under PMEGP.
 - It will be implemented by the Khadi and Village Industries Commission (KVIC).
- How many of the statements given above are correct?
- Only one
 - Only two
 - All three
 - None
133. Consider the following statements about 'Slow Loris'
- They are arboreal creatures characterised by their large eyes, which are adapted for night vision.
 - They are found exclusively in the Western Himalayas
- Select the correct statement(s)
- 1 only
 - 2 only
 - Both 1 and 2
 - Neither 1 nor 2
134. Teesta-V Hydropower Station, recently seen in the news, lies in which one of the following states?
- West Bengal
 - Sikkim
 - Assam
 - Arunachal Pradesh
135. In which year did the World Health Organization (WHO) declare India polio-free?
- 2014
 - 2016
 - 2018
 - 2020
136. Consider the following statements regarding Miyawaki Method:
- It is a method of afforestation based on natural reforestation principles.
 - It involves planting exotic species adapted to the local climate.
- Which of the statements given above is/are correct?
- 1 only
 - 2 only
 - Both 1 and 2
 - Neither 1 nor 2
137. Consider the following statements regarding National Geoscience Award:
- It is one of the oldest and most prestigious national awards in the field of geosciences.
 - It was instituted by the Union Ministry of Earth Science.
- Which of the statements given above is/are correct?
- 1 only
 - 2 only
 - Both 1 and 2
 - Neither 1 nor 2
138. With reference to 'Bhavishya Software', consider the following statements
- It is an online Pension Sanction & Payment Tracking System launched by the Department of Pension & Pensioners' Welfare

2. It is launched to auto register all newly joining employees and to disburse pension payments when they retire
- Select the correct statement(s)
- 1 only
 - 2 only
 - Both 1 and 2
 - Neither 1 nor 2
139. Consider the following statements regarding DNA profiling:
- DNA profiling involves analyzing the entire human genome to establish identity.
 - It is increasingly accurate but can be affected by sample contamination.
 - DNA profiling should not be the sole basis for establishing guilt or innocence in the justice system.
- Which of the above statements is/are correct?
- 2 and 3 only
 - 1 only
 - 1 and 2 only
 - 2 only
140. Consider the following statements regarding the RISE Accelerator Programme:
- It is a bilateral program led by CSIRO Australia and the Atal Innovation Mission (AIM), NITI Aayog.
 - It supports start-ups and MSMEs in validating, adapting and piloting their technologies for new markets.
- Which of the statements given above is/are correct?
- 1 only
 - 2 only
 - Both 1 and 2
 - Neither 1 nor 2
141. Consider the following statements about 'Krishi-Decision Support System'
- It is a first-of-its-kind geospatial platform specifically designed for Indian agriculture.
 - It is developed jointly by the Ministry of Agriculture and the Department of Space.
 - It provides near real-time information on soil moisture, water storage and crop conditions
- How many statement(s) mentioned above are correct
- Only one
 - Only two
 - None of the above
 - All three
142. What is the primary aim of the NandiniSahakarYojana?
- To provide loans to all cooperative societies
 - To promote agricultural cooperatives
 - To assist women cooperatives in business model-based activities
 - To offer subsidies to rural cooperatives
143. Consider the following statements regarding the AarogyaMaitri Health Cube, recently seen in the news:
- It is the world's first underwater hospital.
 - It was designed indigenously under Project BHISHM (Bharat Health Initiative for SahyogHita and Maitri).
- Which of the statements given above is/are correct?
- 1 only
 - 2 only
 - Both 1 and 2
 - Neither 1 nor 2
144. Consider the following statements regarding Eri Silk:
- It is renowned as the world's only vegan silk, mainly cultured in Assam.
 - It has recently obtained the prestigious Oeko-Tex certification.
- Which of the statements given above is/are correct?
- 1 only
 - 2 only
 - Both 1 and 2
 - Neither 1 nor 2
145. Consider the following statements regarding the Bhavishya Software:
- It is an online Pension Sanction & Payment Tracking System which was launched by the Union Ministry of Finance.
 - It has been integrated with the Public Financial Management System (PFMS) module of Central Pension Accounting Office.
- Which of the statements given above is/are correct?
- 1 only
 - 2 only
 - Both 1 and 2
 - Neither 1 nor 2
146. Consider the following statements regarding the Green Tug Transition Program:
- It is designed to phase out conventional fuel-based harbour tugs operating in Indian major ports.

2. The Jawaharlal Nehru Port Authority act as a nodal agency of this programme.
Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2
147. Consider the following statements regarding Solar Cycle:
1. It is the cycle that the Sun's magnetic field goes through approximately every 11 years.
2. The beginning of a solar cycle is a solar maximum, when the Sun has the most sunspots.
Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2
148. Consider the following statements regarding Multidimensional Vulnerability Index:
1. It is international quantitative benchmark to measure structural vulnerability and the lack of structural resilience.
2. It helps small island nations gain access to the concessional financing.
Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2
149. Consider the following statements regarding Small Satellite Launch Vehicle:
1. It is a two-stage Launch Vehicle configured with three Solid Propulsion Stages.
2. It can launch satellites weighing up to 500 kg.
Which of the statements given above is/are correct?
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2
150. Consider the following statements about 'Geneva Conventions'.
1. They are international humanitarian laws formalized by United Nations that establish international legal standards for humanitarian treatment in war.
2. They apply only in times of armed conflict and to governments who have ratified its terms.
3. India is party to all the treaties and protocols under it
Which of the statements given above is/are correct?
(a) 1 and 2
(b) 1 and 3
(c) 2 and 3
(d) All three
151. Consider the following statements about 'Prerana Programme'
1. It is a week-long residential program for selected students of class VI to XII
2. It was launched by the Union Education Ministry
Select the correct statement(s)
(a) 1 only
(b) 2 only
(c) Both 1 and 2
(d) Neither 1 nor 2
152. Consider the following statements regarding the AIM-174B Missile of US Navy:
1. The missile aims to counter China's aerial dominance in the Indo-Pacific region.
2. It is a long-range anti-ship missile, surpassing the range of China's PL-15 missile.
Which one of the following is correct in respect of the above statements?
(a) Both Statement-I and Statement-II are correct and Statement-II is the correct explanation for Statement-I
(b) Both Statement-I and Statement-II are correct and Statement-II is not the correct explanation for Statement-I
(c) Statement-I is correct but Statement-II is incorrect
(d) Statement-I is incorrect but Statement-II is correct

ANSWER KEYS

1	C	51	C	101	C	151	B
2	B	52	B	102	D	152	C
3	A	53	A	103	C		
4	B	54	D	104	B		
5	A	55	C	105	C		
6	A	56	C	106	C		
7	C	57	C	107	A		
8	B	58	D	108	D		
9	B	59	B	109	C		
10	C	60	C	110	D		
11	B	61	B	111	D		
12	C	62	D	112	A		
13	D	63	B	113	B		
14	C	64	A	114	D		
15	B	65	C	115	A		
16	A	66	C	116	D		
17	C	67	A	117	B		
18	C	68	A	118	D		
19	D	69	B	119	D		
20	C	70	C	120	C		
21	D	71	D	121	B		
22	A	72	D	122	A		
23	C	73	C	123	B		
24	D	74	C	124	B		
25	D	75	A	125	B		
26	C	76	B	126	C		
27	C	77	C	127	C		
28	D	78	A	128	B		
29	C	79	B	129	A		
30	A	80	A	130	A		
31	B	81	B	131	B		
32	A	82	C	132	C		
33	B	83	C	133	A		
34	C	84	A	134	B		
35	C	85	C	135	A		
36	A	86	C	136	A		
37	A	87	B	137	A		
38	C	88	B	138	A		
39	A	89	B	139	A		
40	B	90	D	140	C		
41	C	91	C	141	D		
42	C	92	A	142	C		
43	B	93	C	143	B		
44	C	94	A	144	C		
45	D	95	B	145	B		
46	C	96	C	146	A		
47	C	97	C	147	A		
48	B	98	A	148	C		
49	B	99	B	149	B		
50	B	100	B	150	A		

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