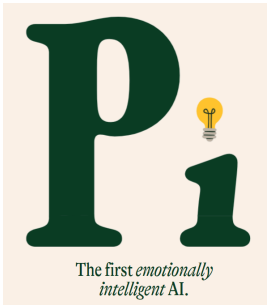
12 March 2024
National and International News

Liberal Democracy Decline in India 	**Context:** India's democratic status has deteriorated significantly, according to the **"Democracy Report 2024"** by the **V-Dem Institute.** **Key points:** ● In 2018, India was labeled an **"electoral autocracy,"** but it has since worsened, becoming one of the most autocratic nations. ● The report classifies countries into **four regime types based on the Liberal Democratic Index (LDI): Liberal Democracy, Electoral Democracy, Electoral Autocracy, and Closed Autocracy.** ● India, despite **having 18% of the world's population, now hosts about half of the population residing in countries experiencing autocratisation**. ● The state of liberal democracy in **South and Central Asia, particularly India,** has regressed significantly, reaching levels comparable to those seen in 1975 during Indira Gandhi's emergency declaration. ● The Modi-led government is criticized for suppressing freedom of religion, intimidating political opponents and protesters, and stifling dissent in academia. ● The report warns that a third consecutive term for the BJP and Prime Minister Modi could exacerbate autocratisation, considering the substantial decline in democracy under his leadership and ongoing crackdowns on minority rights and civil society. ● The V-Dem's Democracy Report involves 4,200 scholars from 180 countries and draws on 31 million datasets covering 202 countries from 1789 to 2023.
PI AI	**Context:** ● **Inflection AI recently unveiled Inflection 2.5, an upgraded version of its language model, designed to enhance the functionality of its**



user-friendly chatbot, Pi, serving as a personal assistant.

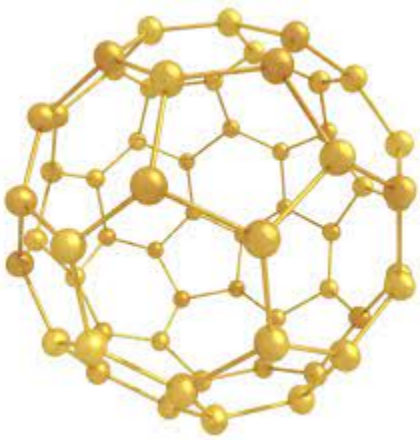
Key points:

- Pi is an **AI chatbot specifically designed for engaging in deep and meaningful conversations**.
- Pi is promoted as having a personality, making it more relatable and companion-like.
- Pi offers **six distinct voices,** providing depth and variety to user interactions.
- Pi is trained on billions of lines of text from the open web, enhancing its conversational abilities.

About Inflection 2.5:

- **Model Upgrade:** Inflection 2.5 features an upgraded in-house model, now comparable to global leading LLMs.
- **Signature Features:** Inflection 2.5 maintains its unique personality with added empathetic fine-tuning.
- **Real-Time Web Search:** Inflection 2.5 is equipped with world-class real-time web search capabilities, providing access to timely, high-quality information.
- **Versatile Conversations:** With the upgrade, users can engage Pi in discussions on a broad array of topics, including current events, local dining options, academic assistance (e.g., biology exam prep), business plan creation, programming, coding, leisure activities, and hobbies.

Gold Nanoparticles



Context:

- Often referred to as **'gold bhasma,' gold nanoparticles are recognized for their therapeutic and beautifying properties in skincare.**
- They protect the skin from external infestations, combat aging, improve metabolism, and rejuvenate the body.

Key points:

- Gold nanoparticles (AuNPs) are **tiny particles made of gold atoms, typically ranging from 1 to 100 nanometers in size.**
- They possess unique optical, electronic, and catalytic properties due to their small size and shape.

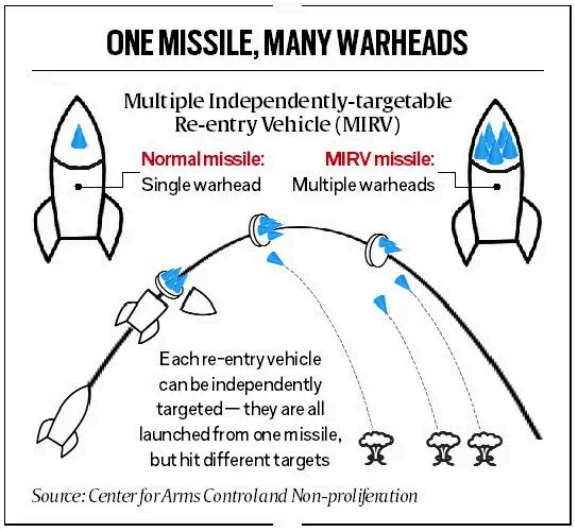
Benefits

- Easily absorbed by the skin, they act as a **rejuvenator, potentially benefiting various systems of the human body.**
- Integral to various Ayurvedic preparations, they are known for their rejuvenating, immuno-modulating, beautifying, and healing properties.
- They **slow down collagen depletion, stimulate cell regeneration, improve metabolism, and tone up muscles.**
- They strengthen underlying tissue, bones, and nerves, contributing to a youthful appearance.
- Innovative formulations like sparkling gold face washes enriched with gold nanoparticles and natural ingredients offer potent skincare solutions.

Applications

- **Biomedical:** Used in imaging, therapy, and diagnostics, serving as contrast agents in X-ray, computed tomography (CT), and photoacoustic imaging, and facilitating photothermal therapy and drug delivery.
- **Catalysis:** Exhibit remarkable catalytic activity in various chemical transformations.
- **Electronics:** Used in nanoelectronic devices, conductive inks, and sensors.
- **Environmental Remediation:** Employed in detecting and removing pollutants from water and soil.

Mission Divyastra



Context:

- DRDO, on 11th March 2024, conducted the first successful flight test of the Agni-5 missile with **MIRV(Multiple Independently Targetable Re-Entry Vehicle) technology.**
- The indigenously developed missile was launched from Dr APJ Abdul Kalam Island in **Odisha.**
- **Prime Minister Modi lauds the first successful test of Agni-5 with multiple warhead technology.**

Key points:

- **Agni, a long-range missile developed by DRDO, has been in the Indian armed forces' arsenal since the early 1990s.**
- The recent test of **Agni-5** demonstrates India's upgraded missile system, enhancing its **strike capability, including the nuclear option.**
- MIRV technology, allowing a missile to carry multiple warheads, is possessed by a **few**

	countries like the US, Russia, China, UK, and France. • Pakistan claimed to have tested a MIRV-equipped missile, **Ababeel, last year.** • **Agni-5 can carry nuclear warheads and hit targets over 5,000 km away, mainly aimed at countering China.** • Dr. V K Saraswat highlighted that MIRV technology significantly increases Agni-5's potency as a force multiplier. • The **MIRV-equipped Agni-5 missiles can carry three to four warheads and autonomously guide them to pre-determined targets.** • Agni-1 to 4 missiles have ranges from **700 km to 3,500 km** and are already deployed, including medium to intercontinental versions. • The next upgrade, **Agni-6, is expected to be an intercontinental ballistic missile with a range exceeding 7,000 km.** • The DRDO development team of MIRV-equipped Agni-5 was led by a woman, **Sheena Rani, and included many other women scientists.**
Centre Implements Citizenship Amendment Act (CAA) 	**Context:** The Citizenship Amendment Act (CAA), **passed in 2019, aims to expedite Indian citizenship for Hindus, Sikhs, Buddhists, Jains, Parsis, and Christians who migrated to India due to religious persecution in Pakistan, Afghanistan, and Bangladesh.** **Key points:** • On Monday, the Centre notified the CAA rules just before the Lok Sabha election schedule announcement and the Model Code of Conduct enforcement. • The Ministry of Home Affairs has launched an **online portal for applicants' convenience.** • The Act excludes Muslims from its purview, and applicants must declare their entry year into India without travel documents. • The delay in implementing the Act was due to protests, including in BJP-ruled states like Assam and Tripura, where Hindu communities opposed it for potentially legitimizing the influx of Bangladeshi migrants.

Kerala Regional News

Thiruvananthapuram International Airport wins ASQ award 2023 	**Context**: • Thiruvananthapuram International Airport has won the **Airports Council International's (ACI) Airport Service Quality (ASQ) Awards 2023 for the best airport at arrivals.** • Thiruvananthapuram shares the honour with two **other airports — Kempegowda International Airport, Bengaluru, and Zayed International Airport-Terminal A in Abu Dhabi, UAE.** • The ASQ awards are based on passenger feedback and are considered a testament to an airport's commitment to providing an outstanding customer experience. • The Thiruvananthapuram airport's successful efforts and dedication towards delivering superior customer experience and increased satisfaction for its passengers have been recognised with this global award.
Kerala govt deposits ₹335 crore in ring-fenced account for waste management projects	**Context:** • The Kerala government has allocated ₹335 crore for waste management projects to be undertaken by the Department of Local Self-Governments. • This money has been deposited in a special account, known as a **ring-fenced account, to ensure that it is used only for these designated projects.** • One of the main goals of this initiative is to build **sewage and faecal treatment plants to reduce pollution in Kerala's lakes, including Vembanad and Ashtamudi.**
7 sand mining sites identified in Periyar and Muvattupuzha	**Context:** • The **district survey draft report** for sand mining (riverbed mining) has **identified seven potential sites for mining of sand in Muvattupuzha and Periyar rivers in Ernakulam district.** • A total of **82,190 cubic metres of sand** is **available at the seven sites in the two major rivers, out of**

	which 25,500 cubic metres can be extracted for mining purpose **About:** • The **report was prepared by the CSIR-National Institute for Interdisciplinary Science and Technology** as per the direction of the state govt. • Of the seven sites, the **highest quantity of sand is available in Periyar's Kuttambuzha-Kavalangad panchayats.**
Cusat team to assist mangrove restoration plan	**Context:** • A team of **experts** from **Cochin University of Science and Technology (Cusat)** will **render technical assistance to a mangrove restoration project being implemented in and around Vypeen islands.** **About:** • They have been **engaged as technical consultants by NGO Plan@earth,** which is the **implementation agency of the Rs 2.4 crore CSR project on mangrove restoration and conservation (MARC), funded by DP World for three years.** • The project is also **aimed at enhancing the livelihoods of local communities**. • The **targeted areas** for intervention **include Kuzhuppilly, Njarackal, Kadamakkudy and Pallipuram panchayats.** **About:** • **Vypeen Island, also known as Vypin, is part of the city of Kochi in Kerala.** • **It's a long and narrow island, stretching for about 27 kilometers and acting as a barrier island between the Arabian Sea and the Kochi backwaters.**
KWA to launch prepaid water meters, beginning with major users	**Context:** • The **Kerala Water Authority (KWA)** is set to **introduce a prepaid water metering system, starting with high-volume users** • This initiative **aims to tackle financial challenges caused by outstanding bills, particularly from commercial entities.** • The **program will launch after a pilot phase where the functionality of the meters is assessed at various locations.** • Based on the pilot's findings, KWA will incorporate necessary adjustments before a wider rollout.

KWA Kerala Water Authority	• In the **initial phase, all commercial users will be transitioned to prepaid meters.** • Subsequently, **non-domestic users exceeding 15,000 liters and domestic users exceeding 25,000 liters of consumption will also be included.**

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