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TODAY'S IMPORTANT CURRENT AFFAIRS

UPSC PRELIMS

Date: 03.09.2025

Source: The Hindu

TODAY'S DROPS OF NEWS:

| <u>SUBJECT</u> | <u>IN NEWS</u> |
|--------------------------------------|-----------------------------------------------------------------|
| POLITY | --- |
| ECONOMY | --- |
| GEOGRAPHY | --- |
| HISTORY AND ART & CULTURE | --- |
| ENVIRONMENT | --- |
| SCIENCE & TECH | PM Modi receives first Made in India Vikram 32-bit chip. |
| MISCELLANEOUS | --- |

SCIENCE & TECH

In news: PM Modi receives first Made in India Vikram 32-bit chip.

Vikram 32-bit chip:

- **Overview:** India's first fully indigenous **32-bit space-grade microprocessor**, developed by **VSSC-ISRO** with **Semiconductor Laboratory (SCL)**, **Chandigarh**.

- **Lineage:** Successor of **16-bit VIKRAM1601** (used since **2009** in ISRO launch vehicles), designed for **avionics, navigation, guidance, and mission control**.
- **Applications:** Primarily for **space missions**, but also suited for **defence, automotive, and energy systems** due to its rugged reliability.

Developed by:

ISRO's Semiconductor Laboratory (SCL), Mohali, Punjab, under the **India Semiconductor Mission** launched in 2021.

Semiconductor:

A semiconductor is a material whose electrical conductivity falls between that of a conductor (like a metal) and an insulator (like rubber). This intermediate conductivity can be controlled by changing temperature, exposure to light, or adding impurities (a process called doping), making semiconductors crucial for building electronic devices such as transistors and diodes, which are fundamental to modern technology like computers and smartphones.

India Semiconductor Mission (ISM):

- The ISM was launched in 2021 with a total financial outlay of Rs76,000 crore under the aegis of the Ministry of Electronics and IT (MeitY).
- It is part of the comprehensive program for the development of sustainable semiconductor and display ecosystems in the country.
- The programme aims to provide financial support to companies investing in semiconductors, display manufacturing and design ecosystem.
- Envisioned to be led by global experts in the Semiconductor and Display industry, ISM will serve as the nodal agency for efficient, coherent and smooth implementation of the schemes.

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