GOVERNMENT OF INDIA
MINISTRY OF ELECTRONICS AND INFORMATION TECHNOLOGY
LOK SABHA
UNSTARRED QUESTION NO. 1799
TO BE ANSWERED ON: 30.07.2025

DEVELOPMENT OF 3NM SEMICONDUCTOR CHIP

1799. DR. HEMANG JOSHI:

Will the Minister of ELECTRONICS AND INFORMATION TECHNOLOGY be pleased to state:

(a) the details of the key objectives and strategic importance of India unveiling its first 3- nanometre semiconductor chip;
(b) the role of the Ministry in facilitating the 3nm chip development through policy support, Government initiatives or industry collaborations;
(c) the expected impact of 3nm chip on the semiconductor and electronics ecosystem, particularly under 'Make in India' and 'Digital India'; and
(d) the details of the steps being taken by the Government to strengthen semiconductor R&D and chip design in the future?

ANSWER

MINISTER OF STATE FOR ELECTRONICS AND INFORMATION TECHNOLOGY
(SHRI JITIN PRASADA)

(a) to (d): Semiconductor manufacturing is a foundational industry. Semiconductor chips are the most critical part of every electronic device ranging from mobile phones to fridge and cars to advanced missiles.

In the last 11 years, Government has undertaken consistent measures to develop electronics manufacturing in India. As a result, electronics production has increased 6 times to reach 3.3 Lakh Cr and mobile production has increased 28 times to reach 5.5 Lakh Cr. India has emerged as an important global electronics manufacturing hub.

Government's semiconductor strategy: builds on the success of electronics manufacturing and aims to develop the entire semiconductor ecosystem in the country. It follows the Prime Minister's vision of Make in India and Atmanirbhar Bharat.

India Semiconductor Mission: Launched in 2022. In a short span of three years, it has attracted investment of nearly 1.55 Lakh Cr. Six projects have been approved and the construction of these units is progressing rapidly. These units are expected to produce 6 lakh wafers and 245 crore chips per year. These chips will be used in mobile devices, tablets, computers, automobiles, etc.

Semiconductor ecosystem: includes designing, fabrication and packaging of chips. All of these require capital investment for a sustained period and highly skilled manpower. Chip manufacturing processes need more than three hundred different types of specialized gases and chemicals.

Design ecosystem: India has around 20% of the global chip design talent. Government aims to train 85 thousand additional engineers. Under Design Linked Incentives, 22 start-ups are being supported. Almost every major semiconductor company has now set up their design centres in India. These centres are designing the most advanced 7 nm, 5 nm and 3nm chips.

Chips to Start-up program: Government has provided cutting edge design tools to more than 350 universities, institutions and academia. More than 45 thousand students and researchers have benefitted from access to these tools.

In May 2025, new offices of Renesas Electronics were inaugurated Bengaluru and Noida. A 3nm System-on-Chip (SoC) designed by the teams in India was also unveiled during the event.

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