GOVERNMENT OF INDIA
MINISTRY OF ELECTRONICS AND INFORMATION TECHNOLOGY
RAJYA SABHA
UNSTARRED QUESTION NO. 548
TO BE ANSWERED ON: 26.07.2024

PROMOTION OF RESEARCH AND DEVELOPMENT IN ELECTRONICS AND INFORMATION TECHNOLOGY

548.   SHRI PARIMAL NATHWANI:

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

(a) whether it is a fact that research and development in the field of Electronics and Information Technology is neglected in the country;
(b)   if so, the reasons therefore;
(c) steps taken by Government to promote research and development in the fields of Electronics and Information Technology; and
(d) the number of patents filed in this sector in the last five years;

ANSWER

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

(a) to (d): Ministry of Electronics and Information Technology ('MeitY') is promoting research and development in Electronics and Information Technology in the country through its Digital India Program. Under this programme, new and indigenous technologies/ system/ software/ tools are developed to address various societal, industrial and strategic needs. Government supports the R&D ecosystem which includes capacity building, creation of infrastructure for research through suitable policy intervention at academia/Research organisation/ startups and industry. Under IPR facilitation programme, nearly 102 patents (comprising of 73 Indian patents and 29 international patents) have been filed under various MeitY supported R&D projects during last 5 years in Electronics and Information Technology domain. In addition to this, researchers continue to file patents through their institutes/ industries.

The government is encouraging research effort in this sector. Some of the major government initiatives to boost research in the country are as below: -

*   Government has approved the 'Semicon India Programme' with a total outlay of INR 76,000 crore for the development of semiconductor and display manufacturing ecosystem in the country. The programme aims to provide financial support to companies investing in semiconductors & display manufacturing and design ecosystem. This paves the way for India's growing presence in the global electronics & semiconductor value chains. Following four schemes have been introduced under the aforesaid programme:

    i.   Modified Scheme for setting up of Semiconductor Fabs in India
    ii.   Modified Scheme for setting up of Display Fabs in India
    iii.   Modified Scheme for setting up of Compound Semiconductors / Silicon Photonics / Sensors Fab / Discrete Semiconductors Fab and Semiconductor Assembly, Testing, Marking and Packaging (ATMP) / OSAT facilities in India
    iv.   Design Linked Incentive (DLI) Scheme

In addition to the above schemes, Government has also approved modernization of the existing semiconductor manufacturing facility - Semi-Conductor Laboratory (SCL), Mohali as a brownfield Fab.

- **IndiaAI Mission:** The Cabinet has approved the IndiaAI Mission at a total outlay of Rs. 10,371.92 Crores as a comprehensive programme for leveraging Al for All. The India AI mission seeks to foster responsible and inclusive growth within India's AI landscape by democratizing access to computing resources, enhancing data quality, nurturing homegrown AI expertise, attracting top talent, fostering industry partnerships, supporting startup ventures, promoting socially impactful AI projects, and emphasizing ethical practices in AI.

- **National Quantum Mission:**The government has given priority to building quantum technology capabilities in the country. For advancement in this sector, the government has allocated Rs. 8,000 crores.

- **National Supercomputing Mission:** The mission was launched in 2015, to foster a robust ecosystem in High-Performance Computing (HPC). Under NSM, more than 30 Peta-Flop (1015) capacity supercomputers have been deployed across academic institutions, R&D labs like IISc, IITs, etc. enabling over 8000 researches from 200 institutes to execute more than 94 lakh application codes. These supercomputers are pivotal in developing national-level applications in genomics, drug discovery, flood forecasting, disaster management, and seismic data processing. Capacity building efforts have trained over 20,000 individuals in HPC and AI.

  To become 'Atmanirbhar' (self-reliant) in HPC and AI, development of indigenous supercomputing sub-components i.e. Server Board, High Speed Interconnect, Complete Software Stack, Direct contact liquid Cooling (DCLC) cooling technology etc. have been undertaken through the mission.

- **National Mission on Interdisciplinary Cyber Physical Systems (NM-ICPS):** The Mission was approved by the Union Cabinet in 2018 with an total outlay of Rs.3,660 Crores. With an aim for convergence with all stakeholders by establishing strong linkages between academia, industry, Government and International Organizations. The Mission is working with all the concerned Ministries/ Departments to identify their technology needs, develop solutions and technical support. The Mission aims at development of technology platforms to carry out R&D, Translational Research, Product Development, Incubating & Supporting Start-ups as well as Commercialization.

- **BHASHINI:** MeitY has launched Mission Digital India Bhashini in the year 2022 with an outlay of Rs 495.51 crore for three-year duration. The aim is to develop core language technologies for speech and text translation for 22 scheduled Indian languages in open source to help transcend language barriers in the digital medium. A national public digital platform http://bhashini.gov.in has been developed to proliferate language technology solutions.

- **GENESIS:** MeitY has envisaged an umbrella scheme GENESIS (Gen-Next Support for Innovative Startups) with a budget of 490 Crores to discover, support, grow and accelerate successful startups in electronics and IT Sector in smaller cities and towns with emphasis on collaborative engagement among startups government, and corporates for promoting digitization based on the principals of inclusivity, accessibility, affordability, leading to growth in employment and economic outputs. The program envisages impacting and consolidating 10,000+ tech start-ups to pave the road for an inclusive startup ecosystem, one that evenly represents the aspirations

of our ambitious entrepreneurs for inclusive techno-socio-economic development of the country. The Program was launched in July 2022.

In addition to above, several policies intervention and schemes are initiated by government from time to time.

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