

GOVERNMENT OF INDIA
MINISTRY OF ELECTRONICS AND INFORMATION TECHNOLOGY
RAJYA SABHA
UNSTARRED QUESTION NO. 724
TO BE ANSWERED ON: 24.07.2026

DEVELOPMENT OF INDIGENOUS MRI ECOSYSTEM

724. SHRI JAGGESH:

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

- (a) whether it is a fact that India is developing a fully indigenous Magnetic Resonance Imaging (MRI) ecosystem under the Indigenous Magnetic Resonance Imaging (IMRI) project to reduce dependence on imported MRI machines and make imaging more affordable;
- (b) whether the IMRI project includes indigenous development of key MRI components such as superconducting magnets, gradient systems, RF hardware, cryogenic systems and imaging software;
- (c) whether the indigenous MRI initiative led by SAMEER, IUAC, and C-DAC aims to establish a domestic MRI manufacturing ecosystem and improve accessibility of MRI services in India; and
- (d) if so, the details thereof?

ANSWER

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

(a) to (d): The Ministry of Electronics and Information Technology (MeitY) has initiated a project titled "Design, Development and Testing of a 1.5 Tesla MRI Scanner". It is implemented by Society for Applied Microwave Electronics Engineering and Research (SAMEER), Mumbai as nodal agency, along with Centre for Development of Advanced Computing (C-DAC), Inter-University Accelerator Centre (IUAC) New Delhi, and Dayanand Sagar Institute (DSI) Bengaluru as the collaborating agencies.

Building an MRI scanner from the ground up is among the most complex initiatives in modern medical technology. The field is dominated globally by only a few established multinational corporations.

The task requires deep scientific expertise in many areas such as magnetic resonance physics, pulse sequences, high-precision electronics, radio-frequency (RF) systems, cryogenics, advanced software, and image reconstruction.

The team has undertaken multi-disciplinary research and development (R&D) of 1.5 Tesla MRI, towards improving affordability and accessibility of MRI in India over time.

The key subsystems of the MRI scanner have been indigenously developed and an R&D infrastructure and knowledge base has been created. These include the 1.5 Tesla superconducting magnet and its sub-systems such as cryogenic superconducting joints, data acquisition units, quench protection system and MRI electronics such as 15 KW RF Amplifier, spectrometer, control system, RF coils etc. and the MRI software suit including pulse sequences, image reconstruction, and visualisation software.

The developed subsystems have been integrated to develop 1.5 Tesla Magnetic Resonance Imaging (MRI).

Pursuant to the Memorandum of Understanding (MoU) signed between the All India Institute of Medical Sciences (AIIMS), New Delhi and SAMEER on 25.03.2025, the IMRI scanner installation is under way at AIIMS, New Delhi.

To take the technological development forward, seven Indian industry partners have been engaged to enable MRI manufacturing ecosystem in India.
