

GOVERNMENT OF INDIA
MINISTRY OF SCIENCE & TECHNOLOGY
DEPARTMENT OF SCIENCE & TECHNOLOGY
RAJYA SABHA
UNSTARRED QUESTION No. 1403
ANSWERED ON 09/12/2021

**PROMOTION OF SCIENCE TECHNOLOGY, ENGINEERING AND
MATHEMATICS**

1403. SHRI M. MOHAMED ABDULLA:

Will the Minister of SCIENCE AND TECHNOLOGY be pleased to state:

- (a) the measures implemented to promote Science, Technology, Engineering and Mathematics (STEM) in the country;
- (b) the steps taken to minimise or bridge the gender gap in STEM and the details thereof; and
- (c) the steps taken to prevent the brain drain of qualified STEM professionals to foreign countries and the details thereof?

ANSWER

MINISTER OF STATE (INDEPENDENT CHARGE) OF THE
MINISTRY OF SCIENCE AND TECHNOLOGY AND EARTH SCIENCES
(DR. JITENDRA SINGH)

(a): Government has taken several measures to promote Science, Technology, Engineering and Mathematics (STEM) in the country. The STEM fields are supported through targeted schemes focusing on strengthening human and institutional capacity at various levels. The support system includes the extramural funding schemes and Fellowship schemes such as Fund for improvement of S&T infrastructures in universities and higher educational institutions (FIST), Core Research Grant, Nano Mission, Technology Development Programmes, Innovation in Science Pursuit for Inspired Research (INSPIRE), Start-Up Grant for Young Scientists, Research fellowships. Council of Scientific and Industrial Research (CSIR) through its National S&T Human Resource Development Scheme has been providing doctoral and postdoctoral fellowships to young budding researchers to nurture the budding scientific talent and to nourish the objective of pursuit of scientific research in STEM Fields.

(b): Minimizing or bridging the gender gap in STEM is one of the prime focus areas of the Ministry. The Department of Science and Technology (DST) is implementing a dedicated scheme Women in Science and Engineering-KIRAN (WISE-KIRAN) to promote women in STEM fields through various programmes. 'Women Scientist Scheme' under WISE-KIRAN provides opportunities to women scientists and technologists, especially those who had a break in career under its three components namely, i) Women Scientists Scheme-A (WOS-A) for conducting

research in Basic & Applied Sciences, ii) Women Scientists Scheme-B (WOS-B) for research that entail S&T interventions for societal benefit, and iii) Women Scientists Scheme-C (WOS-C) for internship in Intellectual Property Rights (IPRs). ‘Consolidation of University Research through Innovation and Excellence in Women Universities (CURIE)’ Programme of DST provides support for development of research infrastructure in women universities to encourage women’s participation in R&D activities in STEM. ‘Vigyan Jyoti’ is a new programme to encourage meritorious girl students of Class 9-12 to pursue education and career in science and technology particularly in the areas where women are underrepresented. Another new initiative ‘Gender Advancement for Transforming Institutions (GATI)’ aims to transform institutions for more gender sensitive approach and inclusiveness with ultimate goal to improve the gender equity in STEMM (Science Technology Engineering Mathematics and Medicine). A scheme titled “SERB-POWER (Promoting Opportunities for Women in Exploratory Research)” has been launched recently to mitigate gender disparity in science and engineering research funding in various S&T programs in Indian academic institutions and research and development (R&D) laboratories. These Schemes have been launched primarily to address comparatively lower participation of women scientists in STEM Fields and also to identify and support competitive women researchers in the country.

(c): Several measures have been taken by the Government to retain qualified STEM professionals and thereby reduce brain drain from the scientific community. The extramural funding schemes of DST and Department of Biotechnology (DBT) and Fellowship schemes of DST, DBT and CSIR have been designed to encourage scientists to do quality research in the country. Several schemes / programmes for building research infrastructure for enhancing research capabilities have been instituted. Extramural Funding Schemes, Research fellowships such as JC Bose and Swarnajayanti are targeted at scientific community to empower them to pursue world-class research in cutting edge areas of science and technology. Special attention has been given to young scientists for making them independent and motivates them to continue their research in the country. A large number of young scientists have been supported through schemes like Start-up Research Grant, National Postdoctoral Fellowship of the Science and Engineering Research Board (SERB). The Flexible Complementing Scheme / Merit based promotion scheme positioned in scientific departments and introduction of Performance Related Incentive Scheme (PRIS) in strategic Departments have also been instrumental in recruiting and retaining the scientists. All these measures taken by the Government are aimed at retaining our scientific workforce in the country and thereby reduce brain drain.
